

INFECTIOUS DISEASES

TIMELINESS AND COMPLETENESS OF REPORTING

The following table lists the number of weekly reports made to the Epidemiology and Health Services Evaluation Branch in the past two months, i.e. from Epiweek 01 to Epiweek 07.

TABLE 3

NUMBER OF WEEKLY REPORTS MADE TO
EPIDEMIOLOGY BRANCH: JANUARY-FEBRUARY 1993

Public Health Unit	Number	Status
Central / Southern Sydney	6	Complete
Eastern Sydney	6	Complete
South Western Sydney	5	Complete
Western Sector	6	Complete
Northern Sydney	6	Complete
Central Coast	1	Complete
Illawarra	4	Complete
Hunter	5	Complete
North Coast	5	Complete
New England	4	Complete
Orana and Far West	5	Complete
Central West	6	Complete
South-West	6	Complete
South-East	6	Complete

ACQUIRED IMMUNODEFICIENCY SYNDROME

Eight hundred and twenty-five people were living with AIDS at November 1, 1992. This compares with 674 for the previous year. This figure is expected to continue to rise in the next few years, as we estimate that only about 20 per cent of those who are infected with HIV have progressed to AIDS. Improvements in treatment can also be expected to cause increases in subsequent AIDS case counts by continuing to improve the life expectancy of people with AIDS.

MALARIA INVESTIGATION IN NEW ENGLAND REGION

Five cases of malaria were notified to the New England Region Public Health Unit in January. The cases were from a group of 24 people who had visited Papua New Guinea.

The group was heavily exposed to malaria, some travelling down the Sepik River during the trip.

The five individuals were infected with *Plasmodium vivax* (benign tertian malaria). The group went to the Morobe and Madang provinces, areas of high malaria prevalence.

All members of the group were taking anti-malarial prophylaxis. Most were on doxycycline 100mg daily; several were taking maloprim one tablet weekly and/or chloroquine 300mg weekly. Four of the cases were on doxycycline, the fifth was on chloroquine alone. Other preventive measures that can be taken include:

- staying indoors between dusk and dawn;
- wearing long-sleeved clothing and long trousers made of light-coloured material;
- using insect repellent that contains either N,N-diethyl-m-toluamide (DEET) or dimethyl phthlate on all exposed skin; and
- using a mosquito net impregnated with permethrin or deltamethrin over sleeping mats/beds.

Recommendations

- While the use of doxycycline for prevention of the *P falciparum* malaria is appropriate, the addition of another anti-malarial is advised for the prevention of primary infections with *P vivax*. For example, individuals heavily exposed to *P vivax* should consider an eradication course of primaquine on their return to prevent delayed primary infections or relapses.
- A malaria prevention action plan should be designed for the individual traveller, taking into account age, sex, destination and planned activities.
- Advice from available sources of travel health information differs on the preferred medication. The World Health Organisation recommends mefloquine, or doxycycline, or chloroquine and proguanil. The Commonwealth Department of Health, Housing and Community Services Travel Health Info-Line recommends mefloquine, while the MASTA system recommends doxycycline.

Peter Massey

Public Health Nurse, New England Region Public Health Unit

TABLE 4

PERCENTAGE OF NOTIFICATIONS WITH
INCOMPLETE INFORMATION BY VARIABLE AND
PUBLIC HEALTH UNIT, JANUARY-FEBRUARY 1993.

PUBLIC HEALTH UNIT	AGE	SEX	ABORIGINALITY	ETHNICITY*
Central Sydney	Complete	Complete	Complete	Complete
Southern Sydney	Complete	Complete	22.2	22.2
Eastern Sydney	3.1	6.2	Complete	58.3
South Western Sydney	Complete	2.5	3.6	64.3
Western Sydney	Complete	Complete	7.7	3.8
Wentworth	Complete	Complete	Complete	7.1
Northern Sydney	5.3	Complete	Complete	89.5
Central Coast	Complete	3.0	Complete	Complete
Illawarra	Complete	Complete	Complete	93.3
Hunter	5.0	1.0	Complete	82.4
North Coast	0.9	3.6	16.7	33.3
New England	Complete	3.7	33.3	33.3
Orana and Far West	4.7	Complete	46.9	25.0
Central West	61.8	58.8	3.3	76.7
South-West	5.2	Complete	Complete	50.0
South-East	Complete	Complete	Complete	33.3

*Reportable only from medical practitioners and hospital Chief Executive Officers.

WORLD CONGRESS ON TOURIST MEDICINE AND HEALTH, SINGAPORE 1993

The key points from the conference were:

- the effectiveness of pre-travel health advice should be evaluated;
- collaboration between health professionals and the travel industry is imperative if more travellers are to have access to travel advice; and
- a personal health record should be part of a traveller's documentation.

Malcolm Rae

Public Health Nurse, Hunter Area Public Health Unit

ANTIBIOTIC SENSITIVITY OF GONOCOCCAL ISOLATES, SYDNEY, JULY-SEPTEMBER 1992

One hundred and eighty isolates of *Neisseria gonorrhoeae* were examined in this quarter. Only 23 of the strains were from females; the male:female ratio of infections was 6.8:1.

Twenty six isolates (14 per cent) were penicillin resistant – 16 by penicillinase production and 10 through intrinsic mechanisms.

In earlier summaries the presence of a clone (Wt/IB2) of fully sensitive gonococci, which accounted for a large proportion of all isolates in Sydney, was noted. Strains fully sensitive to penicillin again increased in absolute and relative terms in this quarter and comprised 37 per cent of the isolates examined. However, the rate of isolation of these strains, while particularly high early in the quarter, decreased later in the period under review. Again it was noted that infections with this clone were virtually restricted to male patients.

Little resistance to other antibiotics used in anti-gonococcal therapy was encountered in this quarter. All isolates were sensitive to spectinomycin and ceftriaxone. One strain, acquired in the Philippines, showed high level quinolone resistance and another (of unknown origin) decreased sensitivity to these agents. Six strains had high levels of tetracycline resistance (TRNG) and were acquired overseas, another two were probably imported, one was acquired locally and details were unavailable for the other case.

John Tapsall, Edna Limnios and Tracey Leslie, Prince of Wales Hospital

INFLUENZA SURVEILLANCE 1993

Sentinel surveillance for influenza will be conducted by all 14 Public Health Units this "flu season" using a combination of general practitioner (GP) networks, school-based surveillance, work absentee rates and laboratory surveillance. Thirteen will be using GP networks, while school absentee rates will be monitored by seven PHUs, and laboratory and workplace absentee rates in one.

Surveillance is being carried out in six Areas or Regions and the rest will begin in April/May.

INFLUENZA VACCINE

Influenza vaccine for 1993 is now available through retail pharmacies. All three components of the vaccine differ from that of previous years, namely:

- A\Shanghai\24\90 like H₃N₂
- A\Texas\36\91 like H₁N₁
- B\Panama\45\90

The National Health and Medical Research Council recommends influenza immunisation for individuals at particular risk of complications. They are:

- adults and children with chronic debilitating disease, especially those with chronic cardiac, pulmonary, renal and metabolic disorders;
- people over 65 years of age;
- residents of nursing homes and other chronic care facilities; and
- people receiving immunosuppressive therapy.

People engaged in medical and health services and essential public utilities should also be immunised if they are not at increased risk owing to medical disorders such as those above. In the event of a pandemic or other major outbreak, advice should be given about vaccination of staff particularly liable to exposure.

Individuals in the first three categories are at greater risk of complications or death from influenza than other members of the population.

Medical practitioners are encouraged to review the status of all immunisations when recommending influenza vaccine. This is particularly important for tetanus immunisation.

SENTINEL SCHOOL SURVEILLANCE OF INFLUENZA

Introduction

Influenza is not a notifiable disease and therefore other methods of surveillance need to be used to estimate the incidence of influenza activity in the community. Sentinel surveillance networks offer a mechanism for collecting relevant data. The function of influenza sentinel surveillance networks is to provide a "listening post" for timely reporting of increases of activity.

Influenza surveillance networks collect data from a variety of sources including general practitioners, laboratories, hospital A&E attendances and hospital admissions, absentee rates from industries and schools and mortality rates for pneumonia and influenza.

Illawarra sentinel school surveillance

The Illawarra Public Health Unit has been collecting weekly data on influenza from sentinel general practitioners since 1990. In July 1992 this surveillance was extended to include weekly absentee rates from selected schools. School-based surveillance has been found to be more sensitive to influenza epidemics than primary health care provider surveillance.

Four schools were chosen to be sentinel schools for their area. They were a primary school from the northern area, a high school from the central area, a primary school from the western area and a primary school from the southern Illawarra area. Weekly absentee figures were obtained from each school for the months of August, September and October.

Conclusion

It is difficult to assess how useful school absentee numbers are in estimating influenza activity because the school data were collected only during August, September and October when influenza activity was declining.

Comparing the two sets of data for August, September and October it appears that school absentee rates are not all that sensitive in estimating influenza activity. School absentee rates reflect a variety of situations and not all of them relate to infectious conditions. During October, when influenza activity was very low, the school absentee rates remained constant with the previous months' rates.

RUBELLA

The national rubella epidemic is reflected in NSW notification rates. The epidemic began in NSW in September 1992.

Twelve Areas/Regions have notified rubella in 1993. The notification rate for NSW is 5.4 notifications per 100,000 population. This compares with a rate of 1.4 notifications per 100,000 population for the same period in 1992. Northern Sydney reported a rate of 11.5 notifications per 100,000 population and North Coast Region notified at a rate of 12.6 per 100,000 population.

The highest attack rates are for males aged 15-24 years. Ten notifications have been received for females between the ages of 15-45 years. During 1992, Eastern Sydney reported the highest rates for rubella notification in 15-45-year-old females. (Figure 3.)

LEGIONNAIRES' DISEASE

Four cases of Legionnaires' disease have been notified in 1993. Three notifications have been received from Central Sydney Area Health Service. No common exposures have been found.

Three major outbreaks of Legionnaires' disease have been identified in NSW. Each occurred in April (1987, 1989 and 1992). The following steps will help to minimise the impact of Legionnaires' disease:

- local government should ensure that "approved" systems are registered, as required by the Public Health Act 1991;
- building owners should ensure that their air-conditioning plants are maintained to the required standards;
- Public Health Units should familiarise themselves with the *Legionnaires' disease Emergency Management Plan*;
- hospital staff should notify any unusual cluster of atypical pneumonia to their local PHU; and
- medical practitioners should be aware of the presentation of Legionnaires' disease and its early treatment with erythromycin.

WHOOPING COUGH (PERTUSSIS)

Whooping cough continues to be notified at a rate exceeding 1992 levels - 5.3 and 2.1 per 100,000 population respectively.

Northern Sydney has a notification rate of 14.7 per 100,000 population for 1993.

Seventy-nine per cent of notifications were received for people over the age of two years.

MEASLES

Eleven Areas and Regions have notified cases of measles during 1993. The notification rate for the State is 9.5 per 100,000 population. This compares with a rate of 8.9 per 100,000 population for the same period in 1992. Orana and Far West Region received notifications at a rate of 77.0 per 100,000 population.

Eighty-two per cent of measles notifications were for people older than 12 months. As measles immunisation is recommended at this age, the vast majority of cases in NSW could have been prevented by adherence to the NHMRC immunisation schedule. Only 14 per cent occurred after the age of 12 years, the recommended age of measles revaccination from 1994.

FIGURE 3

**RUBELLA NOTIFICATIONS, NSW 1992
FEMALES 15-45 YEARS, BY AHS/REGION**

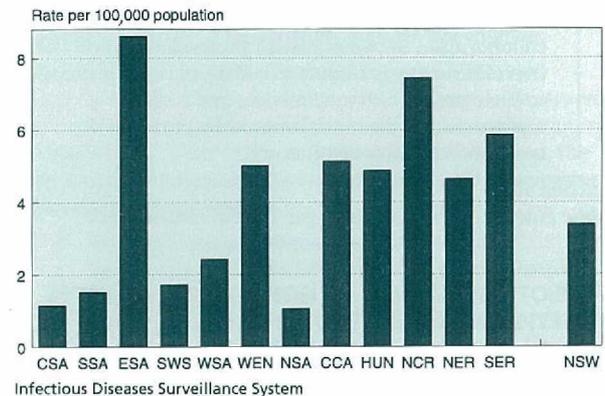


TABLE 5

**SUMMARY OF NSW INFECTIOUS DISEASE NOTIFICATIONS
FEBRUARY 1993**

Condition	Number of cases notified			
	Period		Cumulative	
	Feb 1992	Feb 1993	Feb 1992	Feb 1993
Adverse reaction	8	2	12	3
AIDS	15	4	42	14
Arboviral infection	42	35	56	69
Brucellosis	-	-	-	-
Cholera	-	-	-	-
Diphtheria	-	-	-	-
Foodborne illness (NOS)	25	-	80	2
Gastroenteritis (inst.)	7	-	95	23
Gonorrhoea	22	16	55	34
H influenzae epiglottitis	1	2	5	3
H influenzae B - meningitis	9	1	15	4
H influenzae B - septicaemia	1	1	3	1
H influenzae infection (NOS)	2	2	7	5
Hepatitis A	98	19	214	64
Hepatitis B	191	35	490	220
Hepatitis C	262	87	515	339
Hepatitis D	-	-	1	-
Hepatitis, acute viral (NOS)	3	1	3	1
HIV infection	74	26	169	74
Hydatid disease	-	-	2	-
Legionnaires' disease	11	-	13	4
Leprosy	1	-	3	-
Leptospirosis	2	-	5	1
Listeriosis	1	-	2	4
Malaria	5	3	18	4
Measles	31	24	88	93
Meningococcal meningitis	3	1	3	4
Meningococcal septicaemia	-	2	3	2
Meningococcal infection (NOS)	2	-	4	-
Mumps	5	-	8	-
Mycobacterial tuberculosis	31	3	127	7
Mycobacterial - atypical	33	-	67	2
Mycobacterial infection (NOS)	5	-	10	7
Pertussis	15	9	21	52
Plague	-	-	-	-
Poliomyelitis	-	-	-	-
Q fever	12	2	25	13
Rubella	7	3	14	54
Salmonella infection (NOS)	81	26	203	109
Syphilis	85	7	140	50
Tetanus	-	-	1	2
Typhoid and paratyphoid	4	-	10	7
Typhus	-	-	-	-
Viral haemorrhagic fevers	-	-	-	-
Yellow fever	-	-	-	-

TABLE 6

**INFECTIOUS DISEASE NOTIFICATIONS
BY HEALTH AREA AND REGION
CUMULATIVE 1993**

Condition	CSA	SSA	ESA	SWS	WSA WEN	NSA	CCA	ILL	HUN	NCR	NER	OFR	CWR	SWR	SER	U/K	Total
Adverse event after immunisation	1	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	3
AIDS	-	-	5	-	-	-	3	-	-	-	1	1	1	3	-	-	14
Arboviral infection	-	-	-	-	-	-	1	-	2	3	-	3	-	60	-	-	69
Foodborne illness (NOS)	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	2
Gastroenteritis (instit)	-	-	-	-	2	-	-	-	-	-	-	1	20	-	-	-	23
Gonorrhoea	1	-	18	-	4	-	3	-	2	1	4	1	-	-	-	-	34
H. Influenzae epiglottitis	-	-	1	-	-	-	1	-	1	-	-	-	-	-	-	-	3
H. Influenzae meningitis	-	1	-	-	-	1	-	1	-	1	-	-	-	-	-	-	4
H. Influenzae septicaemia	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
H. Influenzae infection (NOS)	-	-	-	-	1	1	-	1	-	-	-	2	-	-	-	-	5
Hepatitis A — acute viral	4	3	3	5	26	2	6	1	2	1	7	-	2	1	-	1	64
Hepatitis B — acute viral	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	5
Hepatitis B — unspecified	48	28	1	28	53	2	33	1	5	5	-	5	-	-	1	-	215
Hepatitis C — acute viral	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Hepatitis C — unspecified	61	21	43	11	24	3	29	20	7	52	42	7	3	2	10	3	338
Hepatitis, acute viral (NOS)	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
HIV	6	1	31	-	1	1	3	2	-	-	2	-	-	-	-	27	74
Legionnaires' disease	3	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	4
Leptospirosis	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
Listeriosis	2	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	4
Malaria	-	-	-	-	-	-	2	-	-	-	-	2	-	-	-	-	4
Measles	13	2	-	21	9	10	1	1	2	3	13	-	18	-	-	-	93
Meningococcal meningitis	-	-	-	1	-	-	1	-	-	-	-	-	-	-	1	-	4
Meningococcal septicaemia	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	2
Mycobacterial atypical	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	2
Mycobacterial tuberculosis	3	1	-	-	2	1	-	-	-	-	-	-	-	-	-	-	7
Mycobacterial infection (NOS)	5	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	7
Pertussis	-	1	1	2	-	9	22	1	1	3	2	1	2	7	-	-	52
Q fever	-	-	-	-	1	-	-	-	1	6	-	5	-	-	-	-	13
Rubella	2	7	3	-	8	2	14	2	-	3	8	1	-	1	-	3	54
Salmonella bovis morbificans	-	1	-	-	-	1	-	-	6	-	-	-	-	-	-	-	8
Salmonella typhimurium	-	2	1	2	-	3	-	-	7	-	-	6	-	-	-	-	21
Salmonella (NOS)	2	8	12	4	5	2	8	6	12	4	6	5	-	3	3	-	80
Syphilis	5	1	9	5	2	-	2	-	1	-	10	3	11	1	-	-	50
Tetanus	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	2
Typhoid and paratyphoid	1	-	-	-	-	2	2	-	-	2	-	-	-	-	-	-	7

TABLE 7

**NOTIFICATIONS OF NON-NOTIFIABLE
SEXUALLY TRANSMITTED INFECTIONS
JANUARY-FEBRUARY 1993
(Clinical diagnoses from sexual health centres unless otherwise stated in footnote)**

¹ 01/01/93-31/01/93
² 01/01/93-31/01/93
³ 01/01/93-31/01/93
⁴ No SHC in Region, data from GP network, 01/01/93-21/02/93

AHS Infection	CSA	SSA	ESA	SWS	WSA + WEN	NSA ¹	CCA	ILL	HUN	NCR ²	NER	OFR ³	CWR	SWR	SER ⁴	Total
Chlamydia trachomatis	Male	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Donovanosis	Male	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Genital herpes	Male	-	-	-	-	2	-	-	-	1	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	2	-	-	-	1	-	-	-	-	-	-
Genital warts	Male	-	-	-	-	7	-	-	-	2	-	1	-	-	-	-
	Female	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	12	-	-	-	2	-	1	-	-	-	4
Non-specific Urethritis	Male	-	-	-	-	2	-	-	-	1	-	2	-	-	-	-
	Female	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	3	-	-	-	1	-	2	-	-	-	-
Lymphogranuloma Venereum	Male	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 8**VACCINE PREVENTABLE DISEASE NOTIFICATIONS
BY HEALTH AREA AND REGION
CUMULATIVE 1993**

Condition	CSA	SSA	ESA	SWS	WSA	WEN	NSA	CCA	ILL	HUN	NCR	NER	OFR	CWR	SWR	SER	Total
Measles	13	2	—	21	9	10	1	1	2	3	13	—	18	—	—	—	93
Pertussis	—	1	1	2	—	9	22	1	1	3	2	1	2	7	—	—	52
Rubella	2	7	3	—	8	2	14	2	—	3	8	1	—	1	—	3	54
Tetanus	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	2

TABLE 9**RARELY NOTIFIED INFECTIOUS DISEASES
BY HEALTH AREA AND REGION
CUMULATIVE 1993**

Condition	CSA	SSA	ESA	SWS	WSA	WEN	NSA	CCA	ILL	HUN	NCR	NER	OFR	CWR	SWR	SER	Total
Leptospirosis	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1
Listeriosis	2	—	—	1	—	—	—	—	—	1	—	—	—	—	—	—	4

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 and 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.

Public health abstracts**► Continued from page 31**

were also present. The results support the findings from other studies of birth cohort effects in peptic ulcer mortality data from England, Europe and Japan, and provide support for the existence of environmental factors operating internationally which resulted in increased peptic ulcer mortality among specific birth cohorts.

Hypotheses regarding the causes of these cohort effects are presented. Birth cohort analysis provides a useful approach to examine trends in mortality, permits predictions about future mortality patterns to be made, highlights cohorts who may be at risk and provides some insight into the aetiology of diseases.

Johanna Westbrook and Louise Rushworth

HANDLING DATA DEFICIENCY IN ECONOMIC EVALUATION

There is increasing pressure to justify health care budget allocations by economic appraisal. Of concern to those seeking to evaluate the efficiency of programs is the deficiency of data in key areas, such as the measurement of final outcomes (changes in health state), attributing

changes in final outcome to particular programs and the identification of program costs.

The importance of data deficiency to the use of economic evaluation is addressed in this paper, with respect to road safety education (RSE). The approach to the problem of evaluating such a preventative program has been to make gross assumptions where the absence of data would otherwise prevent any rational consideration of its economic merits. The advantage of this approach is to make explicit, and therefore subject to examination, the value judgments which would otherwise influence decision making. Should they become available, better data can easily be substituted for assumptions which are rendered invalid.

The results represent a crude attempt to evaluate the cost utility of RSE. The results are sensitive to the method used to value health states and to the assumptions used to overcome deficiencies of data. The first of these is not of immediate concern, as cost utility analysis is still in its infancy and there is a considerable research agenda to complete before utility values will become operational. The second will be overcome in time as better data become available. The results suggest that one need not be paralysed by the difficulty of evaluating health-promoting activities.

Richard D Smith

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The Bulletin's editorial advisory panel is as follows:

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The editor is Dr George Rubin, Director, Epidemiology and Health Services Evaluation Branch, NSW Health Department.

The Bulletin aims to provide its readers with population health data and information to motivate effective public health action. Articles, news and comments should be 1,000 words or less in length and include the key points to be made in the first paragraph. Please submit items in hard copy and on diskette, preferably using WordPerfect 5.1, to the editor, Public Health Bulletin, Locked Mail Bag 961, North Sydney 2059. Facsimile (02) 391 9232.

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