



## KEY INITIATIVES IN CHILD HEALTH

**T**he 1990s promises to be a significant decade for children. In 1990 two major international initiatives set the context for national and State developments in child health in Australia. This article outlines these initiatives and developments as they affect NSW.

### INTERNATIONAL INITIATIVES

#### i) The Convention on the Rights of the Child

The Convention on the Rights of the Child was adopted by the United Nations General Assembly in November 1989 and came into effect in September 1990 — more quickly than any other human rights convention. It was ratified by Australia in December 1990.

Issues relevant to child health are contained in many of the Articles, and in particular Article 24: "State parties recognise the right of the child to the enjoyment of the highest attainable standard of health and to facilities for the treatment of illness and rehabilitation of health. State parties shall strive to ensure that no child is deprived of his or her right of access to such health care services<sup>1</sup>."

A convention is binding in international law and this convention provides mechanisms for enforcement. Australia must publicly report on the implementation of the convention to an independent committee of experts, which must in turn report to the United Nations.

#### ii) World Summit for Children

The historic World Summit for Children took place at the United Nations in September 1990. The summit strongly endorsed the convention and was the first major global step towards implementation. Seventy-one heads of state were led to their seats by children, and each spoke frankly about the status of children in his or her country. At the conclusion of the summit the World Declaration on the Survival, Protection and Development of Children was read by children.

The declaration includes a series of measurable goals for the year 2000. One of the key areas for specific action is as follows:

"Preventable childhood diseases — such as measles, polio, tetanus, tuberculosis, whooping cough and diphtheria, against which there are effective vaccines, and diarrhoeal diseases, pneumonia and other acute respiratory infections that can be prevented or effectively treated through relatively low-cost remedies — are currently responsible for the great majority of the world's 14 million deaths of children under five years and disability of millions more every year. Effective action can and must be taken to combat these diseases by strengthening primary health care and basic health services in all countries<sup>2</sup>."

Australia has signed the declaration and is thus committed to submit a national plan of action to the United Nations. Consultation on this is in progress. In an address at the World Congress and Exposition on Child Health — Child Health 2000 — in Vancouver in February 1992, the executive director of UNICEF, Mr James Grant, said of the summit: "It was the first ever gathering of leaders of North, South, East and West, the first great summit of the post-cold war period . . . No other document in history bears the signature and contains the personal commitment of so many top government leaders to carry out, in their own countries, a global social action program. This gives each and every one of us powerful political leverage as advocates for radically improving the health and wellbeing of children. The central challenge we face this decade will be seeing to it that the great promise of the World Summit for Children is kept<sup>3</sup>."

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## Key initiatives in child health

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### AUSTRALIAN INITIATIVES

#### i) The National Forum of Child Health Providers and Planners

In Australia the National Forum of Child Health Providers and Planners was established in November 1990. This is the first such group of its kind, with membership from each State and Territory and the Commonwealth Department of Health, Housing and Community Services. The Australian Institute of Family Studies is an observer. It was convened in response to the recent, rapid and radical changes to community child health practices and administrative arrangements throughout Australia. The objectives are to exchange information about the services in each State and Territory, to ensure that child health gains a higher profile on the national agenda, to offer support to other colleagues and to develop consistent policies and practices.

The forum has determined that the core priorities for an effective community child health service include: child protection, health promotion, injury surveillance, immunisation, maternal health, mental health and health-related initiatives in primary and secondary schools. It encourages and enhances interdisciplinary and intersectoral cooperation and evaluates the potential of joint national projects and reviews.

#### ii) NHMRC Review of Child Health Surveillance and Screening

The National Health and Medical Research Council (NHMRC) has set up a review to assess policies and practices relating to child health surveillance and screening by State and Territory health authorities. It will also make recommendations (based on published sources) on the nature and timing of health surveillance and screening programs in childhood, with particular reference to their scientific validity and cost effectiveness. These recommendations will be made to the NHMRC Health Care Committee and State and Territory health departments through the Australian Health Ministers' Council and Advisory Committee.

#### iii) NHMRC Child Health Care Committee – national child health goals and targets

The NHMRC has also initiated a project to develop national health goals and targets for children and young people with relevant indicators of health status. This will be achieved in consultation with professional and community groups. Five goals have been identified and targets and indicators within each are being developed.

The goals and targets will be for all children but will take into account children with special needs, for example Aboriginal children and young people, the homeless and those with chronic illness or disability.

### NSW INITIATIVES

The NSW Health Department is focusing on improving knowledge about the relative outcomes and costs of health services, ranging from diagnosis and treatment to prevention. Under the banner of this Health Outcomes Initiative, the Department has selected a number of priority health areas, including adverse pregnancy outcomes and

impaired child development, injury, infectious diseases and asthma. The Health Outcomes Initiative will shape policy direction for the next decade.

The Department's important projects in child health include:

- A **Personal Health Record (PHR)** distributed to all babies born in NSW. This booklet provides maternal and child health information and documents important health events such as immunisation and childhood illness. It also fosters a partnership of parents and health professionals in monitoring significant aspects of child growth and development, vision and hearing, thereby leading to early intervention. The PHR is currently being evaluated.
- **NSW Birth Defects Register** established to monitor the occurrence of birth defects in the State.
- **Childsafe NSW**, a joint initiative of the Department's Health Promotion Unit and participating Accident and Emergency Centres, facilitates the collection of injury data so targeted prevention can be implemented.
- **Early Childhood Injury Prevention Program** enables Early Childhood Health Centres to provide age-specific injury prevention information to parents at appropriate developmental stages.
- **NSW Public Health Act 1991** has greatly streamlined the notification of infectious diseases. Only those diseases which necessitate a public health response are notifiable, and the responsibility for notifications has been extended to laboratories and hospital administrators. Response protocols have been prepared and circulated.
- **Immunisation legislation** amended regulation under the Public Health Act 1991 requires parents to provide documented evidence of age-appropriate immunisation of all children enrolling in day care centres, occasional care centres, play groups, pre-schools and schools. This will be implemented from 1993.
- **Sudden Infant Death Syndrome (SIDS)**. Several steps have been taken to improve the consistency of diagnosis and monitoring of SIDS, and to implement recent information on risk factor reduction. These will be the subject of a separate article in a forthcoming issue of the *Public Health Bulletin*.

The Health Outcomes Initiative provides a structure for maximising the health of the population in relation to available resources. While building this structure, it is timely to heed the words of Dr Jonas Salk during his address at the Child Health 2000 conference in February 1992: "**Are we to consider the dollar value of the human or the human value of the dollar?**"

*Elisabeth Murphy, Medical Officer, Family and Child Health Service Development Branch  
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1. UNICEF First Call for Children. United Nations Children's Fund, New York, 1990.
2. *ibid.*
3. Grant, James P. Address to Child Health 2000 World Congress, Vancouver, B.C. Canada, 1992.

# ELIMINATING TUBERCULOSIS: WHERE IS THE STRATEGY?

New South Wales must produce a strategy for the control of tuberculosis (TB) in the State. Investigations of outbreaks in NSW do not follow any written protocol and are inadequately documented. An elimination strategy would focus control and prevention measures. It should address TB surveillance, screening, prophylaxis, case follow-up and evaluation.

Recent changes in tuberculosis surveillance in NSW include the development of a database for TB notifications. This has now been incorporated into the Infectious Diseases Surveillance System — IDSS.

Other developments toward a TB strategy are:

- formation of the Tuberculosis Advisory Committee, with members representing the NSW Health Department, the public health network, the Royal Australian College of Physicians, the microbiology laboratories and the Community Health and Anti-Tuberculosis Association;
- surveillance of tuberculosis in high risk groups;
- population-based prevalence studies;
- a review of the refugee and migrant screening program;
- rewriting all Departmental circulars related to tuberculosis; and
- a review of clinical services for tuberculosis.

The incidence of TB in developed countries has fallen dramatically over the past 150 years but, at least in NSW, this decline levelled out during the 1970s. Incidence rates fell only slightly in the 1980s; by 1988 the rate of TB was 6.2 per 100,000 people — lower than rates in the United States with 9 per 100,000<sup>1,2</sup> and in the United Kingdom with 12.5 per 100,000 in 1984.

In contrast to the situation 20 years ago, most TB cases in NSW now occur among people born outside Australia. Since the 1970s the incidence of TB among Australian-born people has continued to decline, while the incidence of TB among foreign-born people has not. Present trends suggest that with current practices TB could be eliminated from the Australian-born population within 10 years, but not from people born outside Australia now living in NSW.

About 10 per cent of people infected with *Mycobacterium tuberculosis* develop active TB. The risk of developing disease is highest soon after infection. Children are most likely to develop rapidly progressive disease. Age, sex, past TB, silicosis, human immunodeficiency virus (HIV) infection and a range of other medical conditions including cancers and renal failure alter an individual's susceptibility to developing clinical disease<sup>3,4</sup>.

There are insufficient data available on people infected with *Mycobacterium tuberculosis* in NSW. Such information is important for predicting the course of TB and for guiding screening procedures. All people migrating to Australia require a chest x-ray before immigration to exclude active TB. Apart from refugees and people immigrating directly from South East Asia and Latin America, migrants to NSW are not routinely screened for TB infection. In contrast, people migrating from high prevalence countries to the UK and the US are tuberculin tested.

In NSW, TB control is the responsibility of the Health Department. Forty hospital-based chest clinic sisters are engaged in the surveillance and control of TB through therapy supervision, the investigation of case contacts and by coordinating radiological screening of migrants.

The NHMRC has produced guidelines on TB management<sup>5</sup>, but not a strategy for the elimination of TB. Some States,

notably South Australia, Western Australia, Queensland and the Northern Territory, are developing strategies or protocols to control TB.

In 1988 the US Advisory Committee on Immunisation Practices recommended four strategies for the control of TB<sup>6</sup>:

- early identification and treatment of people with infectious TB;
- identification and treatment of people with non contagious TB;
- use of ventilation and ultraviolet lights to decontaminate infectious air in places where the risk of infection is exceptionally high; and
- BCG vaccination for uninfected children who are placed at unavoidable risk of TB for whom other methods of prevention and control are not feasible.

In 1989 the US Public Health Service produced a strategic plan for the elimination of TB by the year 2010<sup>6</sup>.

Elimination is defined as less than one case per million. The three steps toward elimination outlined included:

- more effective use of existing prevention and control methods;
- development and evaluation of new technologies for treatment, diagnosis and prevention; and
- rapid assessment and transfer of newly developed technologies into public health practice.

Based on a review of current practices and recommendations of TB authorities in Australia and the US, we suggest the following strategy for the elimination of TB from NSW by the year 2001.

## SURVEILLANCE

- Medical practitioners and laboratories should report provisional diagnosis of TB by telephone to the local Area/Regional Medical Officer of Health or the Director of the Public Health Unit (PHU) and follow up with a written notification.
- PHUs should maintain a local database for TB cases using a format developed by the Epidemiology and Health Services Evaluation Branch (EHSEB). The EHSEB should collate Statewide data, and in turn forward de-identified data to the Communicable Diseases Network Australia New Zealand.

## SCREENING

- Screening people for TB infection should involve a tuberculin test. Where a person has a positive tuberculin test, or any signs or symptoms suggestive of illness, a chest x-ray should be performed to exclude active disease.
- Chest x-rays should be used to detect people with active TB. Close case contacts and homeless people over 16 years of age should have a chest x-ray.
- To identify people who could benefit from chemoprophylaxis, the following people should be screened for TB:
  - contacts of people known or suspected to have clinical TB;
  - immigrants from high prevalence TB countries;
  - people with medical risk factors for TB;
  - people from the groups found to have an annual incidence of TB infection higher than that of the general community; and
  - people with HIV infection.

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## Eliminating tuberculosis

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■ Contacts should be screened according to risk group. Screening should be guided by the rate of infection in each group of contacts. Contacts of infectious cases should be divided into high, moderate and low risk groups. High risk would include household contacts and close associates. Moderate risk contacts may include close relatives, friends and school class or work colleagues. Low risk groups may include people from other classes or other work areas.

■ In contact tracing, the high risk group should be screened with tuberculin skin tests first. If the incidence of infection in this group is greater than that of the general population (until better data are available, 5 per cent in adults and 1 per cent in children), screening should progress to the moderate risk group. Again if the incidence is greater than the general population, screening should progress to the low risk group until all those at risk are tested. Screening may stop when the incidence of infection in the risk group screened is that of the general population.

■ Contacts with negative reactions should have repeat tuberculin tests after eight weeks. High risk contacts should also be retested within 12 months.

■ To determine community TB infection rates, the EHSEB should collate existing sources of data on TB infection among police cadets, medical students, nursing and other students.

■ Chest clinics should work with PHUs to collect and collate infection and disease data arising from contact tracing. These data should be recorded on a database related to the TB database. Reports on major investigations of TB should be made available to the EHSEB within one month of identification of the index case.

The NSW Health Department should undertake tuberculin surveys of subgroups at risk of infection, such as samples of residents of long-term care institutions (including prisons and nursing homes), Aborigines and intravenous drug users, as well as school children.

To assess the value of migrant and refugee chest x-ray screening, the EHSEB should arrange for the collection and analysis of data on TB cases diagnosed by these programs.

### BCG VACCINATION

- BCG vaccination should be considered only for children under 16 years of age with negative tuberculin reactions who:
- belong to groups with new infection rates of greater than 1 per cent per year;
  - cannot be placed on isoniazid therapy but have uninterrupted exposure to people with active disease; or
  - have continuous exposure to patients with organisms resistant to isoniazid and rifampicin.

### CHEMOPROPHYLAXIS

■ Unless specifically contraindicated, isoniazid chemoprophylaxis should be offered to all people at high risk of TB, including:

- tuberculin positive HIV infected people;
- tuberculin positive contacts of people with TB;

- tuberculin negative children under five years who are close contacts of people with TB. Prophylaxis should continue until a repeat test in 12 weeks is shown also to be negative;
- tuberculin positive people with medical risk factors for TB;
- tuberculin positive intravenous drug users;
- people who have recently converted tuberculin positive;
- people with positive tuberculin tests and chest x-rays suggestive of inactive TB;
- people in whom active disease is excluded and who have not completed treatment for TB;
- other tuberculin positive people under 35 years of age (including immigrants).

■ Preventive therapy should usually be with isoniazid for six to twelve months.

■ Rifampicin treatment should be considered for people at high risk of severe forms of disease who are likely to be infected with isoniazid resistant organisms. People receiving chemoprophylaxis should be reviewed at least monthly for side-effects and to assess compliance.

### CASE FOLLOW-UP

■ People with infectious TB (pulmonary TB with acid fast bacilli seen on direct examination of a sputum smear) should be treated in a single hospital room until at least two weeks of anti-TB treatment has been taken.

■ Treatment should be supervised by chest clinic staff for the duration of therapy, especially if there is any doubt about the patient's compliance.

■ Patients successfully treated for TB or infection need not be followed up routinely; they should be given a copy of their latest chest x-ray and advised about symptoms and to seek medical care immediately if symptoms suggestive of TB appear.

### EVALUATION

■ The value of screening should be assessed regularly. A cost-effectiveness analysis of the migrant screening program should be conducted and recommendations made about its usefulness.

The elimination of TB from NSW is an achievable goal. More emphasis is required in targeting appropriate screening efforts towards, and offering chemoprophylaxis to, those people most at risk of TB. The authors would welcome comments on this proposal through the *Public Health Bulletin*.

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1. Centers for Disease Control. Recommendations of the Immunization Practices Advisory Committee (ACIP). Use of BCG vaccines in the control of tuberculosis: a joint statement by the ACIP and the Advisory Committee for Elimination of Tuberculosis. *MMWR* 1988; 37:663-675.
2. Centers for Disease Control. Update: Tuberculosis elimination — United States. *MMWR* 1990; 39:153-156.
3. Reider HL, Cauthen GM, Comstock GW, Snider DE. Epidemiology of tuberculosis in the US. *Epidemiol Rev* 1989; 11:79-98.
4. Centers for Disease Control. Tuberculosis and human immunodeficiency virus infection: Recommendations of the Advisory Committee for the Elimination of Tuberculosis (ACET). *MMWR* 1989; 38:237-250.
5. National Health and Medical Research Council. Tuberculosis in Australia and New Zealand into the 1990s. 1989. Australian Government Publishing Service, Canberra.
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# SPECIAL ROLE OF PUBLIC HEALTH MEDICINE

Although public health medicine is only one of several professional disciplines working within the NSW public health network, its singular position at the interface between traditional clinical approaches and the more broadly based health, behavioural and environmental sciences, gives it the potential to make a special contribution to public health within this State.

A recent direction-setting "think tank", organised by the Australian Faculty of Public Health Medicine (AFPHM) to look at the challenges and opportunities facing public health medicine during the coming years, may therefore be of interest to a wider readership.

The formation of the Australian Faculty of Public Health Medicine within the Royal Australasian College of

Physicians is itself an event of some significance — reflecting an acknowledgement of the importance of population-based approaches within the mainstream of medicine. Established in late 1990, the faculty recognises the importance of a clear direction and a pro-active approach if it is to achieve recognition as a leading force within Australian public health.

The "think tank" was held at the old quarantine station at North Head, Manly — a venue with echoes of the early history of public health in Australia. The weekend attracted participants from all States and Territories in Australia, as well as representatives of the New Zealand College of Community Medicine, senior members of the RACP, full-time academics, public health practitioners working in both urban and rural environments and representative younger fellows and trainees. The New Zealand college is likely to amalgamate with the Australian faculty later this year to become an Australasian faculty.

Addressing such topics as "What are the opportunities for public health medicine in Australia in the coming years?", "What strategies need to be adopted to achieve these?" and "What skills will future public health physicians require?", participants generally took an optimistic approach.

The boundaries of public health medicine were both changing and expanding, and the public health physician of the future will undoubtedly have the opportunity to apply the basic "tools of the trade" — epidemiology, biostatistics and increasingly computer applications — to a wide range of problems, from the growing field of clinical epidemiology, to the health implications of ecologically sustainable development.

At the end of the two-day workshop, one participant described the proceedings as a "smorgasbord of good ideas". It was therefore necessary to select priorities, and the following were proposed as a desirable and achievable role for the faculty in the coming years:

- establishing a strong sense of self-identity among public health physicians;
- ensuring adequate training, continuing education and "quality assurance" opportunities for the public health medical workforce;
- enhanced communication skills leading to a proactive role in dealings with the media, all levels of government and the community;
- improved communication and increased understanding of the role and potential of public health medicine within the faculty, with the profession generally, and with the wider health constituency; and
- a stronger advocacy role for the health needs of identified sub-groups within the population such as Australian Aboriginals, and an acknowledgement of the opportunities and responsibilities in neighbouring South-East Asian countries.

There is little doubt that the development and implementation of such concepts will enhance not only the practice of public health medicine, but will also strengthen the evolving public health network within NSW.

*David Jeffs*  
 Honorary Secretary  
 The Australian Faculty of Public Health Medicine  
 The Royal Australasian College of Physicians.

## PLACEMENTS OF PUBLIC HEALTH OFFICERS, NSW, 1992

Public Health Officers (PHOs) have now been assigned to positions of their choice. The assignments are shown in Table 3.

TABLE 3

PHO	First six months	Second six months
<b>Final Year Officers</b> Peter Lewis Tim Churches Christine Roberts Mark Bek Thais Miles	HUN PHU NER PHU WSA PHU Chron dis Health serv	HUN PHU SWS PHU Health serv NSA PHU Health serv
<b>Second Year Officers</b> Tor Westley-Wise Marion Haas Lee Taylor Helen Moore Johanna Westbrook Susan Furber Glenn Close Margaret Williamson Marie-Louise Stokes	Inf dis Health serv Repro health Envir health CHERE ESA PHU WSA PHU Chron dis NSA PHU	Repro health Chron dis NCR PHU Envir health CHERE ESA PHU WSA PHU Chron dis NSA PHU
<b>First Year Officers</b> Cait Lonie* Justine Waters Isla Tooth	Illawarra PHU Envir health SWS PHU	Inf dis Envir health SWS PHU

\*Cait Lonie will be working in the Inf. Dis section of EHSEB until March 30, 1992. Wayne Smith left the program in February to complete his PhD.

Any comments on the Public Health Officer training program can be directed to Marion Haas, PHO coordinator, or George Rubin, Editor, *Public Health Bulletin*.

### Abbreviations

Inf dis	Infectious disease, Epi Branch
Chron dis	Chronic diseases, Epi Branch
Health serv	Health Services Evaluation, Epi Branch
Envir health	Environmental health, Epi Branch
Repro health	Reproductive health, Epi Branch
ESA	Eastern Sydney Area
HUN	Hunter
WSA	Western Sector (Area)
NSA	Northern Sydney Area
NCR	North Coast Region
NER	New England Region
SWS	South West Sydney
CHERE	Centre for Health Economics Research & Evaluation

# 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:

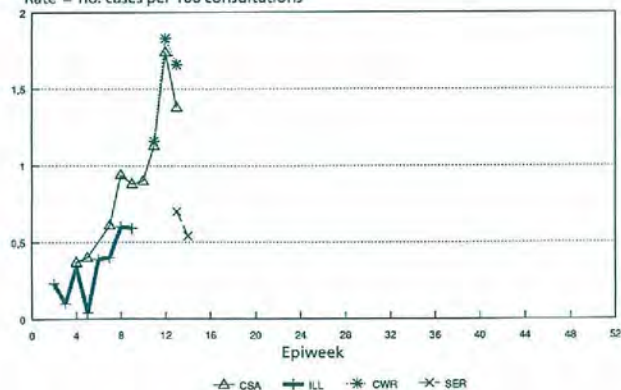
- all people over the age of 65 years;
- all people who are immunosuppressed;
- all people with chronic heart, lung or kidney diseases; and
- all people with diabetes.

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

**FIGURE 1**

INFLUENZA-GENERAL PRACTITIONER SENTINEL SURVEILLANCE NETWORK, NSW 1992

Rate = no. cases per 100 consultations



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

	Percentage of strains			
	Fully sensitive	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	-	-	-	-	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	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	-	1	-	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

Professor 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.

## INTERNATIONAL EPIDEMIOLOGICAL ASSOCIATION MEETING

**M**embers of the organising committee for "Health 2000: New Pathways in Epidemiology" — Sydney 1993 plan to deliver an outstanding international public health/epidemiology meeting which will address the major public health issues for the 1990s, the most significant accomplishments in public health and epidemiology in the 1980s, and public health in the next century.

The program aims to stimulate debate by highlighting progress in epidemiology, especially new pathways which have been followed recently. These pathways include genetic epidemiology, pharmacoepidemiology, disease surveillance, clinical epidemiology, applications in environmental health, nutrition, health services research, and veterinary and dental epidemiology.

Keynote speakers have been asked to formulate their presentations along two axes. The first, and the one with broad general appeal, would be a major topic such as asthma or cancer. The other would be the "new pathway" dimension, where they demonstrate how advances in relation to the major topic area have been made recently in epidemiology. With asthma, the presenter might expand on how the major epidemiologic advances in pharmaco-epidemiology — the "new pathway" — have improved the understanding, prevention and management of asthma.

With a cast including international health leaders, the program will address major concerns: cardiovascular disease, cancer, injury, environmental and maternal and child health, infectious disease, nutrition and substance abuse. Measuring efficacy and effectiveness of health services, research ethics, epidemiologic methods, setting goals and targets and epidemiology training programs will also feature. Opportunities will be made for public health professionals in training to present their work.

For further information, please contact the IEA Conference Secretariat, PO Box 746 Turramurra 2074. Telephone (02) 449 1525, fax (02) 488 7496.

## MEETING REVIEWS PROGRESS IN PHUS

Dr Sue Morey (Chief Health Officer), Dr Stuart Spring (CEO Northern Sydney Area Health Service) and Dr Owen Curteis (CEO Western Sydney Area Health Service) attended the meeting of Directors of Public Health Units (PHUs) at Royal North Shore Hospital. The forum provided an opportunity to review progress in PHUs around the State.

Dr Michael Levy summarised achievements in infectious disease. The new Public Health Act 1991 has seen a major revision of the list of notifiable conditions. The number of notifications has more than doubled in the past year as a result of a publicity campaign by the NSW Health Department and the new process of notification to, and response by, PHUs. Evaluation of the notification system is a priority. Dr Levy emphasised the value of the structure of public health services in NSW, which provides an efficient network for coordination of communicable disease control.

Dr Steve Corbett summarised achievements in environmental health. Activity has focused on environmental pollution, particularly water and air quality, lead and pesticides. The importance of working within a framework incorporating hazard identification, risk assessment, risk management and risk communication was emphasised. Most Areas and Regions are developing

environmental hazard profiles. The approach to intersectoral consultation taken in the Hunter Area was offered as a useful model for risk management.

The need for trend data for monitoring progress in health gain was stressed. The fact that most health indicators except suicide rates, are declining, has important implications for setting targets. Risk factor data are needed to monitor intermediate outcomes. The National Health Survey is not adequate to assess this at an Area/Regional level. The efforts of the Health Promotion and Epidemiology Branches of the NSW Health Department in pursuing a Statewide strategy for interval risk factor data collection were noted.

The concept of role delineation for PHUs was discussed. Although this approach may help to ensure a minimum level of public health service in each Area and Region, it may lead to confusion about the role of public health in the health system, which is not the same as those offering health care delivery. Each Area and Region should be striving to offer equivalent levels of public health services, because the services are population-based.

The role of PHUs in health services planning, development and evaluation to achieve the primary goals of the NSW health system, *viz.* improving health status, ensuring the delivery of appropriate health care services and ensuring value for money, was explored. The importance of a population perspective in decision-making at the Area and Regional Executive level was highlighted. The need for strategic planning to achieve improvements in health outcomes is a challenging area where PHUs should be able to make significant contributions in their respective Areas and Regions.

## FELLOWSHIP FOR RESEARCH OFFICER

Dr Bin Jalaludin, a research officer in the Western Sector Public Health Unit, has been awarded an NH&MRC Public Health Travelling Fellowship for 1992. The fellowship is awarded on a competitive basis and allows the recipient to travel overseas for several months to gain experience and training that is not available in Australia.

Dr Jalaludin, whose main interest is in environmental health, will spend three months in the United States working in the areas of quantitative risk assessment and environmental epidemiology.

## PUBLIC HEALTH EDITORIAL STAFF

The Bulletin's editorial advisory panel is as follows:

Dr Sue Morey, Chief Health Officer, Department of Health; Professor Stephen Leeder, Professor of Community Medicine, University of Sydney; Professor Geoffrey Berry, Professor of Epidemiology & Biostatistics, University of Sydney; Professor Ian Webster, Professor of Community Medicine, University of NSW; Dr Christine Bennett, Associate Director, Services Planning, NSW Health Department; Dr Michael Frommer, Epidemiologist, Epidemiology & Health Services Evaluation Branch; Ms Jane Hall, Research Officer, Department of Community Medicine, Westmead Hospital; and Mr Michael Ward, Acting Director, Strategic Marketing, NSW Health Department.

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

Design — Health Public Affairs Unit, NSW Health Department.

Please send your articles, news, comments or letters to Dr George Rubin — Locked Bag 961, North Sydney NSW 2059 or Fax (02) 391 9232.

Suggestions for improving the reporting of infectious diseases are most welcome.