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HEPATITIS C — PROGRESS AT LAST

The term "non-A non-B hepatitis" was coined to describe cases of hepatitis which gave negative results in tests for hepatitis A and B and the other known viruses that affect the liver. It was recognised by the mid-70s that most post-transfusion hepatitis falls into this category and that the infection is also common in intravenous drug users.

Transmission of the disease was achieved by inoculating chimpanzees but conventional viral cultures and serological tests failed to identify the agent.

Hepatitis diagnosis and control have taken a great step forward with recent cloning of this elusive non-A non-B (NANB) hepatitis virus and the development of an assay which can be used to detect infected individuals.

A group of scientists from the Chiron Corporation in the United States applied recombinant DNA techniques to extract and clone the nucleic acid from a large pool of infectious chimpanzee plasma derived from the experiments which first demonstrated that NANB hepatitis was indeed caused by a virus.

This was followed by further molecular work which showed that the clone hybridises with RNA but not DNA in liver and serum from infected animals (confirming that the NANB agent must be an RNA virus) and does not react with uninfected human or chimpanzee controls. The best guess is that the new agent is probably similar to the flaviviruses (a group including yellow fever, and related to Ross River fever and Murray Valley encephalitis) because of its RNA and its size and sensitivity to organic solvents.

Chiron has managed to express a protein derived from its ("C-100") DNA clone, and has licensed this material to two well-known manufacturers of diagnostic kits whose first tests are now available. When serial samples from 20 patients who acquired post-transfusion NANB hepatitis were tested in an American series, 18 showed seroconversion.

As this particular panel from the National Institute of Health blood bank has been the downfall of many previous NANB tests, the results give powerful support to the company's claims. Most hepatitis scientists have readily translated NANB hepatitis as hepatitis C and the old name is fast disappearing from the literature.

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Hepatitis C — Progress at Last

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The new test measures antibody against a viral protein which appears to be derived from a non-structural part of a genome — it is not part of the virus particle but is an enzyme needed for the growth of the virus inside the infected cell.
It is perhaps not surprising that this test should have some serious limitations. First, the antibody measured by the current method rises rather slowly and seroconversion was delayed — on average anti-HCV appeared 15 weeks after the onset of hepatitis. This limits its diagnostic power at the time the patient presents with clinical illness.

Persistence of the antibody is also variable. Only 60 to 80 per cent of patients believed to have chronic hepatitis C have tested positive in reported studies. Preliminary analysis of tests on donated blood suggests that continuing viraemia may persist in the face of C-100 antibody production.

It is reasonable to expect that both the specificity and sensitivity of the tests will be greatly improved by future work, particularly if the glycoproteins of the viral envelope can be used as antigens. At present a high proportion of low-level and false positive results are encountered and better confirmatory tests are urgently needed.

What can be done with the test we now have? Blood banks throughout the world are introducing the new screening test for donated blood to supplement or replace other measures such as testing for elevated ALT levels or for anti-hepatitis B core antibody. The availability of a specific HCV test will make it possible to verify the different opinions about the significance of post-transfusion hepatitis for both donor and recipient.

On one hand there is much evidence that hepatitis after transfusion is usually mild or asymptomatic, and chronic liver disease has not been recognised as a major problem in poly-transfused patients in the past. However liver biopsy studies in patients with persistent slight serum alanine transferase elevation show disturbing features of cirrhosis. Even the prevalence of hepatitis in recipients of banked blood in different prospective studies has varied from as low as 2 to 40 per cent or even higher.

Reassessments in the light of anti-HCV testing have begun to appear. A study from the Netherlands transfusion service clearly shows the value of anti-HCV testing for identification of infectious donors but suggests that only high antibody levels reliably predict infectivity. As it stands, the test cannot provide the final answer to the problem since only about half the suspect clinical cases in the Dutch series were anti-HCV positive, and two of the nine hepatitis C cases had not received an antibody positive donation.

More recently an English group using a sensitive method for detecting the HCV genome using the polymerise chain reaction (PCR), found that only one in six of HCV antibody positive donors was positive on this indicator of viraemia. These results correlated well with the transmission of the disease to recipients.

Studies reporting the prevalence of anti-HCV in blood donors from around the world show remarkably consistent results ranging from about 0.25 to 2 per cent in different countries. This is in contrast to the much greater geographic variation known for hepatitis B and to the variation in the risk of post-transfusion hepatitis found in different areas.

Results of testing of groups with a high risk of blood-borne infections show hepatitis C infection rates of 65 to 80 per cent in intravenous drug users and haemophiliacs, 20 per cent in haemodialysis patients, and 8 per cent in homosexual men. These results suggest the epidemiological pattern of hepatitis C infection is different to that of hepatitis B and human immunodeficiency virus.

Investigation of patients identified as having "cryptogenic" chronic liver disease has revealed that a high proportion are anti-HCV positive, although many lack a history of blood transfusion. This hepatitis C group responds well to treatment with interferon, though the disease usually returns when treatment is stopped.

Until the natural routes of transmission are elucidated it will be difficult to advise either patients or blood donors with positive results in the first-generation tests about their risks of transmitting hepatitis to their contacts or about the likely consequences for their own health.

Nevertheless, the long impasse in understanding this disease has been overcome and rapid progress should follow.

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Editorial Comment

An expert committee with representatives from the Red Cross Blood Transfusion Service, gastroenterologists, infectious disease specialists, drug and alcohol workers and the NSW Health Department will report on the epidemiology of hepatitis C in NSW and develop a strategy to reduce transmission of the disease.

TRENDS IN MORTALITY RATES

The health of Australians has improved over the past 20 years. Evidence shows a fall in the all-cause mortality rate and striking reductions in the death rates from ischaemic heart disease, stroke and injury[1].

Although mortality is an important measure of health status, there have been few co-ordinated efforts in NSW to plot trends in death rates over time. The most significant recent piece of work on mortality in NSW was prepared by Bob Gibberd's group from the Hunter Region[2].

However that work concentrated on spatial variations in the major causes of death for 1979-83 rather than on trends over time. The need for a review of time trends in the major causes of mortality stimulated preparation of a report by staff of the Epidemiology Branch of the NSW Health Department.

Data were obtained from the NSW Registry of Births, Deaths and Marriages death record for the years 1971-1987. The analysis was confined to changes in the age- and sex-specific mortality rates for the major causes of death. For this report we present 1) trends in the all-cause death rates and 2) trends in selected cause-specific death rates, some of which have not declined over time.

CRUDE DEATH RATE

Since 1971 the total number of deaths has remained constant, at around 40,000 a year. This represents a fall in the crude death rate, as there has been an increase in the population of around 1 per cent a year since 1971. The crude death rate fell by 15 per cent in males (from 9.6/1000 in 1971 to 8.2/1000 in 1987) and 12 per cent in females (8.1/1000 in 1971 to 7.1/1000 in 1987). Similar trends occurred in all age and sex groups.

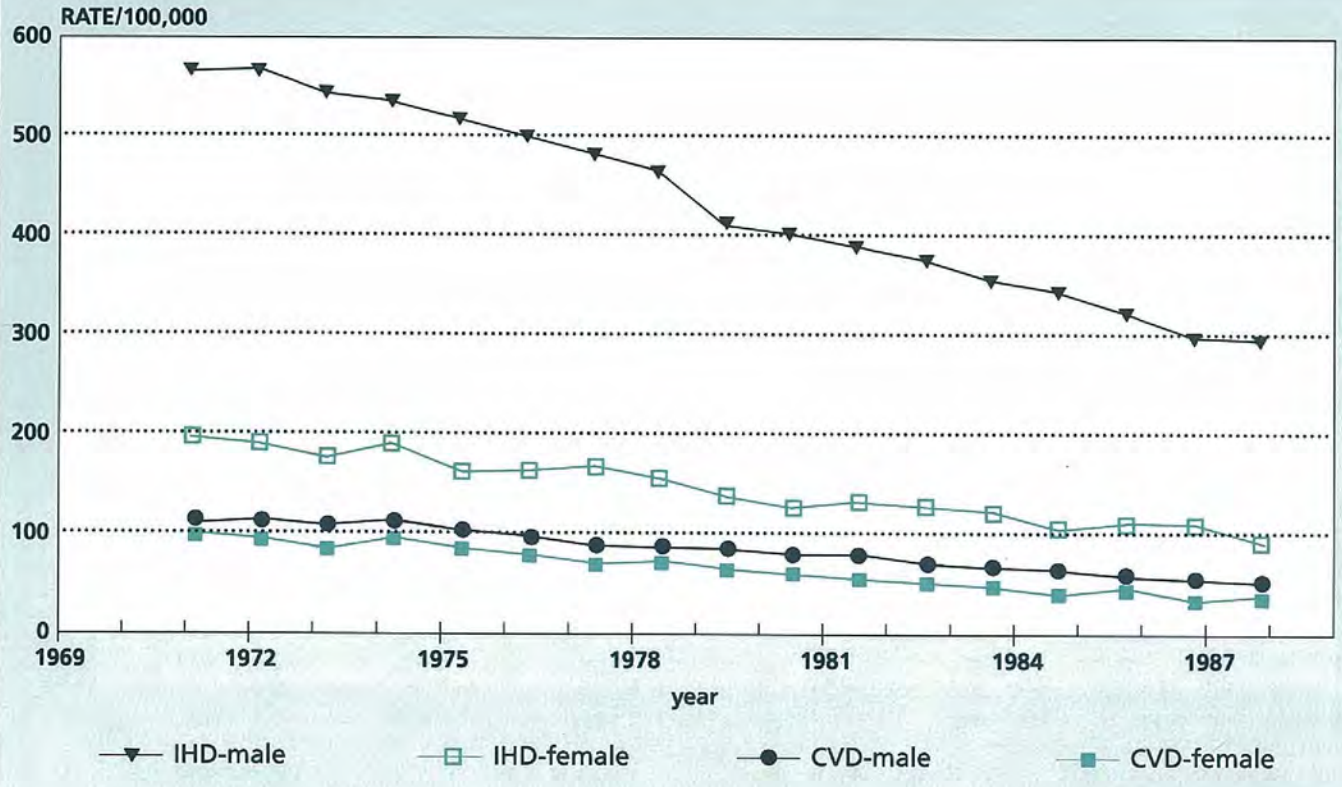
ISCHAEMIC HEART DISEASE AND STROKE

The decline in the death rate from ischaemic heart disease (IHD) in Australia began in the mid-1960s and has continued. The analysis of mortality data showed that all of the age- and sex-specific death rates from IHD (ICD-9 410-414) and cerebrovascular disease (CVD) (ICD-9 430-438) had fallen between 1971 and 1987. For example in the 45-64-year age group the death rate from IHD fell by 48 per cent in males and 55 per cent in females, and from CVD by 55 per cent in males and 64 per cent in females over the time period (see Figure 1).

The declining death rate has been linked to changes in lifestyle, most notably improved diet and a reduction in smoking. Despite these great strides, IHD and CVD remain the single most important cause of death in NSW (39 per cent of deaths in 1987).

FIGURE 1

IHD AND CVD DEATH RATES, 1971-1987 BY SEX: 45-64 YEARS



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INFANT DEATH RATE

The fall in the infant death rate since 1971 has been astounding. The number of deaths dropped from 1748 in 1971 to 747 in 1987 despite a relatively stable birth rate. Figure 2 shows that since 1971 the infant death rate has fallen by 55 per cent for males and 44 per cent for females.

Most of the decline occurred in the early and mid-1970s and has continued to a lesser extent since then. Reasons for this are not well understood, although the greatest changes have occurred during the neonatal period.

Of the many specific causes of death in the first year of life, Sudden Infant Death Syndrome (SIDS) (ICD-9 798.0) appears to be one of growing importance. SIDS was first recorded as a cause of death in NSW during 1979, after the adoption of the ninth revision of the International Classification of Diseases, Injuries and Causes of Death in NSW.

Against the trend, the death rate from SIDS has increased by 47 per cent for males and 53 per cent for females since 1979 (Figure 3). Reasons for this apparent increase in incidence are not known.

LUNG CANCER

Lung cancer (ICD-9 162) is the leading cause of death from cancer in men and the third commonest cause in women. While death from lung cancer is about four times more common among men than women, the gap is narrowing. In people aged 65 years and older the mortality rate from lung cancer rose between 1971 and 1987, doubling in females and rising to a lesser extent (20 per cent) in males. In the 45-64 age group the sex differences are more pronounced: the death rate for females increased nearly 50 per cent whereas the rate for men remained static (Figure 4). This disparity reflects the changing patterns of smoking.

It is probable that changes in smoking behaviour will continue to influence trends in the lung cancer death rate into the 21st century. Much of the decline in smoking rates observed during the 1980s has been attributed to the Quit For Life mass media anti-smoking campaign[3]. Between 1983 and 1987 the prevalence of smoking declined by 6 per cent in men, from 39 per cent to 33 per cent, and 2.6 per cent in women, from 31.6 per cent to 29 per cent[3,4].

Predictions suggest the mortality rate from lung cancer will begin to fall for men at the end of the century, particularly in the 45-64 age group, as the effects of the NSW anti-smoking campaigns become apparent.

The outlook is not so bright for women smokers who took up the habit in increasing numbers 20-30 years ago and now are moving into the high-risk age groups for lung cancer.

FIGURE 2

INFANT DEATH, 1971-1987
UNDER 1 YEAR

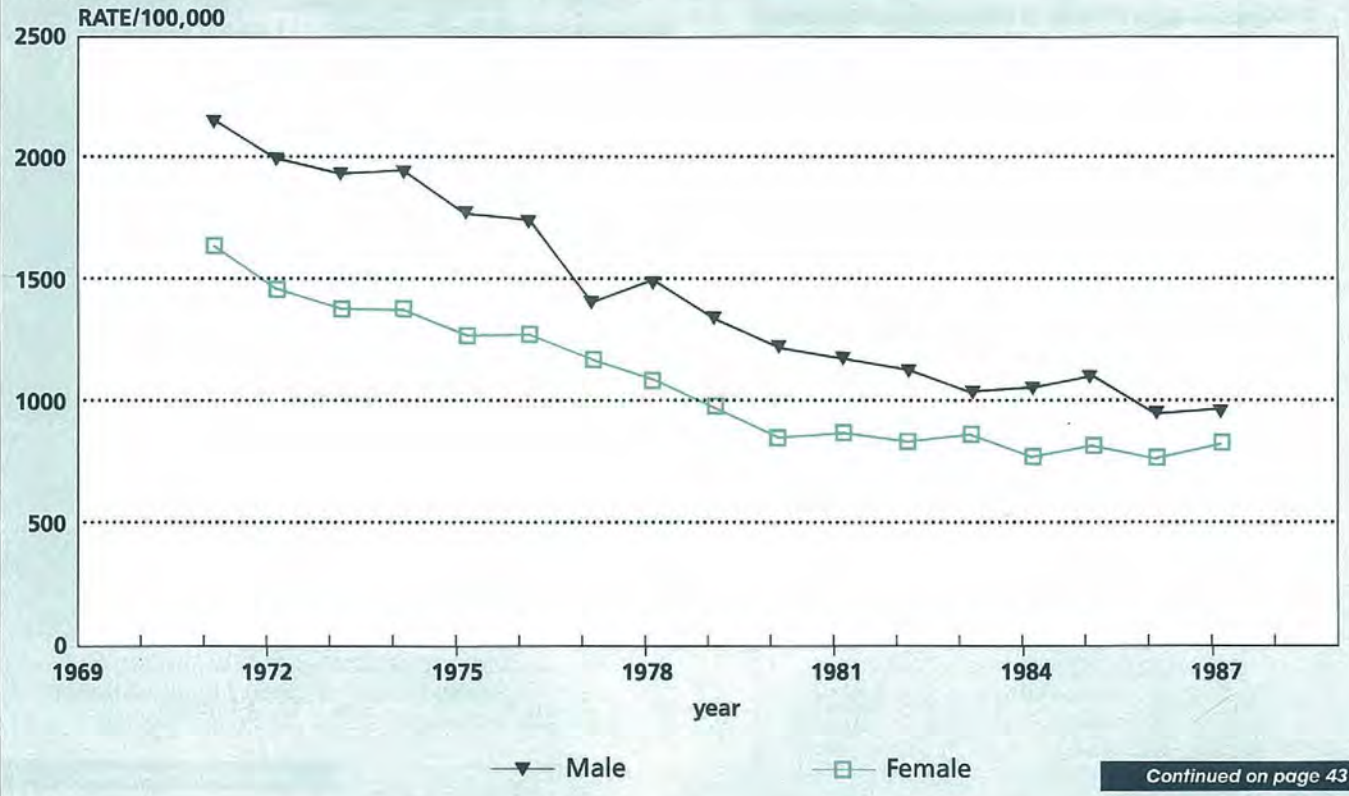

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FIGURE 3

SUDDEN INFANT DEATH, 1979-1987
UNDER 1 YEAR

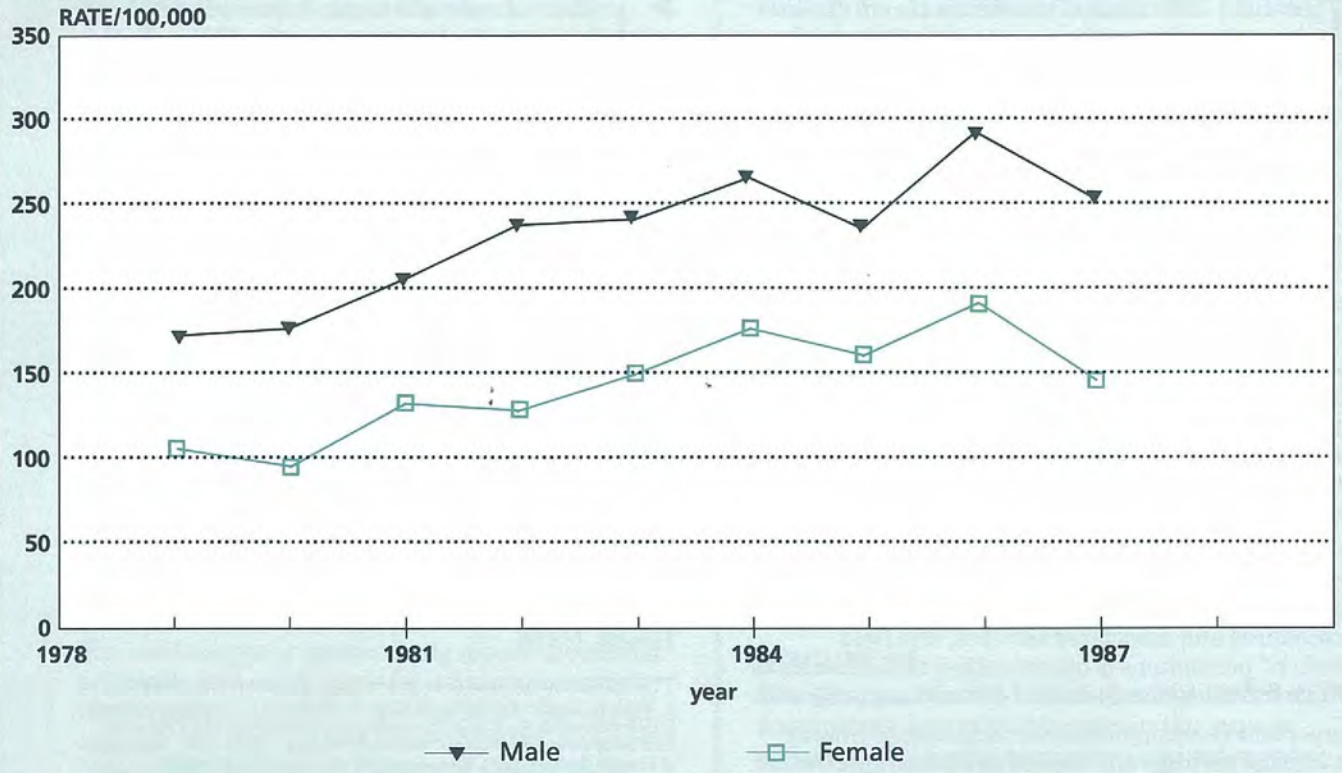
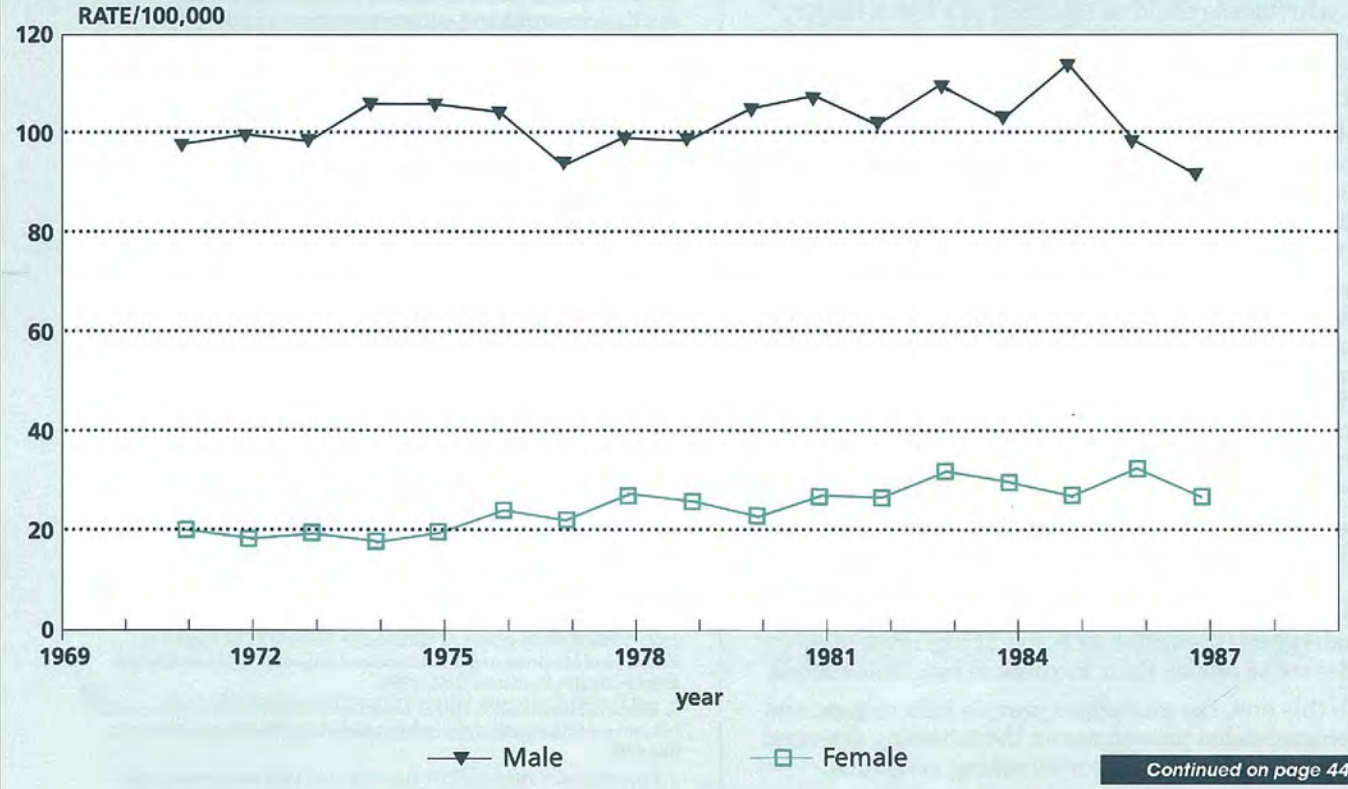


FIGURE 4

LUNG CANCER DEATH, 1971-1987
45-64 YEARS



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HEART DISEASE SCREENING

The June 1990 issue of the *Public Health Bulletin* drew attention to the recent publication by the NSW Department of Health of the monograph, Public Screening for Risk of Heart Disease: Guidelines and Procedures for Use by Area and Regional Health Services in NSW (principal author: Karen Webb)[1].

The guidelines are part of the department's response to the review of heart-disease prevention projects in NSW. The review identified that, with the increasing involvement of public-health agencies in risk factor screening, there was a need to standardise screening measurement and intervention procedures.

Guidelines for Statewide application help to ensure the public receives consistent and accurate advice and appropriate intervention, and that heart-disease risk-factor monitoring is accurate and consistent, both within NSW and nationally.

The guidelines are based on information from several sources. These include relevant policies from the USA, the UK and Australia, expert opinion, contemporary scientific knowledge of sound public screening procedures and associated services, and field workers' perceptions of opportunities and constraints which influence the operation of screening programs.

Important recommendations include case-finding in clinical settings and screening for multiple (rather than single) risk factors. In the case-finding approach, diagnosis and monitoring of treatment requirements and behavioural change can occur in a clinical setting. One of the prime reasons for suggesting the case-finding approach is that 75-80 per cent of the population visit general practitioners at least once a year; access could be obtained to a much larger number of people through general practitioners and occupational health services than would be possible through public screening.

Modifiable risk factors recommended for assessment include elevated serum cholesterol, elevated blood pressure, smoking, excess total dietary fat, saturated fat and cholesterol, obesity, and low levels of physical activity.

Information on the following non-modifiable risk factors should also be obtained: age, sex, occupation and education, ethnicity/Aboriginality, and a personal or family history of premature heart disease and/or diabetes mellitus. This information can be used to identify higher-risk groups, plan tailored interventions and motivate behaviour modification.

The guidelines emphasise that screening should be designed and conducted primarily as a strategy aimed at detecting people with elevated risk, not as a whole-population strategy (aimed at lowering the risk of the whole population). Screening should lead individuals identified as being at high risk of heart disease to reduce their modifiable risk-factor levels.

To this end, the guidelines provide information and recommended procedures on the following essential components of risk-factor screening programs:

- Recruitment strategies to ensure or improve utilisation of programs by the high-risk population.
- Risk-factor measurement and assessment methods and feedback procedures.
- The intervention components of screening — content and process guidelines.
- Procedures for referral to appropriate community and medical services for further assistance with risk reduction.
- Follow-up risk assessment to identify changes, encourage maintenance of positive change, and supply further intervention and referral for those who have not made positive changes.
- Monitoring of the utilisation of a screening program and change in risk status of high-risk participants.

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1. Webb K, Leeder S, Tupling H, Calvert D, Brown I, Carter B, Adams D. Public Screening for Risk of Heart Disease. Guidelines and Procedures for Use by Area and Regional Health Services in NSW. NSW Department of Health, Sydney, 1990. State Health Publication No HP89/096.

Lung Cancer: Continued from page 42

We should see the lung cancer rates in women continue to rise, a trend not likely to be altered dramatically in the short term by the moderate decline in smoking among women since 1983.

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EDITORIAL COMMENT

These three examples highlight how information contained in the mortality report can be used to: 1) focus attention on leading age-sex-specific causes of death, 2) take note of causes of death where there have been static or increasing trends, and 3) focus research and public health action.

The NSW Department of Health has made study of SIDS one of its public health priorities. Accordingly, a Statewide SIDS surveillance system is being established.

1. *Health For All Australians.* Report of the Health Targets and Implementation Committee. AGPS, Canberra, 1988.

2. O'Connell DL, Lam P, Gibberd RW. Mortality in New South Wales 1979-1983, A study of spatial variation in cause-specific mortality. Faculties of Medicine and Mathematics, University of Newcastle and Hunter Health Statistics Unit, 1987.

3. Pierce JP, Macaskill P, Hill D. Long term effectiveness of mass media-led anti-smoking campaigns in Australia. *Am J Pub Health* 1990, 80, 565-569.

4. Department of Health, NSW Quit For Life. 1990 Community and Workplace Resource Manual.

MENTAL HEALTH STRATEGY

In 1984, the then Federal Minister for Health, Dr Neal Blewett, was advised of the need for a national policy on mental health services through reports provided by the Royal Australian and New Zealand College of Psychiatrists and the Australian National Association for Mental Health.

As a result of this a consultancy was commissioned to report on mental health services in Australia. The document, *A National Mental Health Services Policy* (the Eisen/Wolfenden Report), was submitted to health ministers in March 1988.

The Australian Health Ministers' Advisory Council (AHMAC) established a mental health working party in May 1989 to develop a discussion paper as the basis for consultation around Australia. Consultation was held in all States and territories in December 1989 and January 1990, and consumers, carers, non-government organisations, and professional staff from both private and public sectors expressed support for the development of national mental health policy goals.

The working party presented its report on guiding principles and policy goals for a national mental health policy to AHMAC in May 1990. The report is called *National Mental Health Strategy Statement, Policy, Goals and Action Proposals*[1]. Copies of the statement are available from the Federal Department of Community Services and Health.

The statement endorses the following principles:

1. The definition of mental health is as follows: "Mental health embraces both inner individual experience and interpersonal group experience. Any definition of mental health therefore must reflect the kind of people we think we should be, the goals we consider desirable, and the type of society in which we aspire to live. Mental health has not been considered in terms of presence or absence of mental disorder."
2. The first priority in mental health policy and service delivery is consumer outcomes (consumers' needs and rights).
3. Preventive approaches to health care should receive high priority.
4. Public sector mental health services should give priority to the needs of those with serious mental disorder and the socially and economically disadvantaged.
5. Mental health is an intersectoral issue, and requires collaboration with such areas as housing, social welfare and employment and training.
6. A comprehensive national mental health data strategy should be developed.

Priority for action was identified in the following areas:

- Adoption of the National Mental Health Strategy Statement.
- Development of a consumers' charter of outcomes.
- Improvement of the range and quality of service delivery.
- Development of a national mental health data strategy.
- Renegotiated Federal/State roles in mental health.

The final version of the strategy statement is expected to be presented to the Australian Health Ministers' Conference in 1992.

CONCLUSIONS

The National Mental Health Strategy Statement foreshadows important changes in the ways in which mental health services will be delivered in Australia. The emphasis is on prevention, flexibility in service delivery, and consumer satisfaction. The socially disadvantaged and the most seriously mentally ill have been identified as those most in need of public mental health services.

A national mental health strategy will enhance cohesion in the provision of services in the monitoring of areas of service deficiency, and in encouraging more efficient co-operation across public, private and voluntary sectors.

The delineation of respective Federal and State roles in relation to mental health, and the development of an adequate national mental health data base, as well as the provision of services in remote areas, are major issues which require further definition and clarification.

It is encouraging, however, that Australia appears finally to be in the process of developing an integrated, nationwide policy in one of the most neglected of all areas in health.

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1. AHMAC Mental Health Working Party. National Mental Health Strategy Statement, Policy, Goals and Action Proposals. May 1990.

INFECTIOUS DISEASES

NOTIFICATIONS

The current list of scheduled medical conditions relates only to those notifiable by medical practitioners. It is noteworthy that even under this arrangement laboratories contribute 52.3 per cent of the total notifications for the State. Six areas/regions already register a higher laboratory notification rate than medical practitioner notification rate.

With the proposed innovations for Statewide laboratory-based communicable diseases surveillance, as approved by the Infectious Diseases Advisory Committee, notification rates can be expected to better reflect the pattern of infectious diseases-related morbidity experienced in NSW.

The following important findings have been obtained from the notifications for the calender month of September.

- Notifications for some enteric infections are higher than those received in the same period last year: campylobacter 200 per cent, salmonella 425 per cent.
- Pertussis notifications continue to decline to the lowest level since August 1988. This is probably a result of the cyclical nature of whooping cough in Australia. Having experienced a major epidemic in the past 12 months, NSW can expect fewer notifications in the coming year, as we enter an inter-epidemic period. Indications are that the publicity associated with the previous outbreaks stimulated pertussis immunisation programs; with the threat 'waning' immunisation rates have, in the past, lost momentum. The net result is our present situation, where the epidemiology of this potentially fatal disease is unaltered.
- The zoonoses leptospirosis and Q fever continue to be a source of morbidity among meat workers. Q fever will soon be preventable with the impending release of a vaccine, for at-risk individuals.
- Epidemiology and Health Services Evaluation Branch is aware of major outbreak of measles in the Hunter Area Health Service. Investigations revealed that 64 cases of measles had been diagnosed during September yet only three cases had been notified. This level of under-reporting highlights the difficulty in determining the true incidence and determinants of communicable diseases under the current arrangements.
- The number of hepatitis B notifications has fallen by about 23 per cent compared to 1989, this condition has been reported from all areas and regions throughout the year with Orana & Far West Region having the highest notification rate of 38.1 per 100,000 population.

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TABLE 1

INFECTIOUS DISEASE NOTIFICATIONS, NSW September 1990

CONDITION	Number of Cases Notified			
	Period		Cumulative	
	01-09-90 to 30-09-90	01-09-89 to 30-09-89	1990	1989
AIDS	12	27	191	226
Amoebiasis	1	2	9	6
Ancylostomiasis	–	–		–
Anthrax	–	–		–
Arboviral infection (NOS)	–	–	1	–
Brucellosis		–	5	–
Campylobacter infection	120	60	1304	1353
Chancroid	–	–	–	–
Chlamydia infection (NOS)	10	9	193	27
Cholera	–	–	1	–
Congenital rubella syndrome	–	–	–	–
Diphtheria	–	–	–	–
Donovanosis	–	–	–	–
Encephalitis (NOS)	–	–	1	1
Food poisoning (NOS)	–	–	21	7
Genital herpes	50	57	564	531
Giardiasis	23	30	470	537
Gonococcal ophthalmia neo.	–	–	–	1
Gonorrhoea	11	38	315	463
Hepatitis A	1	1	18	53
Hepatitis B	25	33	266	345
Hepatitis C	–	N/A	9	N/A
Hepatitis unspecified	–	1	3	12
HIV	N/A	N/A	N/A	N/A
Hydatid disease[1]	–	–	2	1
Infantile diarrhoea (NOS)	19	78	106	340
Legionnaires' disease	1	–	23	47
Leprosy	–	1	5	9
Leptospirosis	2	2	34	43
Lymphogranuloma venereum	–	–	–	–
Malaria	8	15	132	64
Measles	12	7	71	21
Meningococcal infection	10	5	71	44
Non specific urethritis	85	90	1164	1287
Ornithosis	–	–	–	4
Pertussis	5	22	117	77
Plague	–	–	–	–
Poliomyelitis	–	–	–	–
Q fever	4	4	113	81
Rabies	–	–	–	–
Ross River fever	1	13	244	378
Rubella	–	–	1	–
Salmonella infection	68	16	1076	922
Shigella infection	2	–	103	57
Syphilis	13	28	258	240
Tetanus	–	–	–	–
Trachoma	–	–	1	–
Tuberculosis	16	34	304	310
Typhoid & paratyphoid	2	5	25	18
Typhus	–	–	–	–
Vibrio infection (NOS)	1	–	9	14
Viral haemorrhagic fevers	–	–	–	–
Yellow fever	–	–	–	–
Yersinia infection	5	2	95	66

NOS – Not Otherwise Specified

[1] The previously published cumulative total of 4 cases to August 1990 was due to duplicate notification and has been corrected.

TABLE 2

INFECTIOUS DISEASE NOTIFICATIONS, BY HEALTH AREA & REGION, NSW, FOR MONTH OF SEPTEMBER 1990

CONDITION	CSA	ESA	SSA	SWS	WSA	WEN	NSA	CCA	ILL	HUN	NCR	NER	OFR	CWR	SWR	SER	IS	U/K	TOTAL
AIDS	2	5	–	–	1	1	1	–	–	–	–	–	–	–	–	1	–	1	12
Amoebiasis	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	1
Campylobacter inf.	10	8	9	10	11	25	7	3	1	7	4	12	2	1	–	–	8	2	120
Chlamydia inf.	–	3	–	–	–	–	–	–	–	–	2	5	–	–	–	–	–	–	10
Genital herpes	–	43	–	1	–	2	–	–	–	–	4	–	–	–	–	–	–	–	50
Giardiasis	–	1	1	–	1	–	4	–	–	2	10	3	–	1	–	–	–	–	23
Gonorrhoea	–	9	–	1	–	–	–	–	–	–	–	–	–	–	–	1	–	–	11
Hepatitis A	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	1
Hepatitis B	–	–	1	12	1	–	5	–	2	–	2	1	–	–	–	1	–	–	25
Infantile diarr. (NOS)	–	–	–	1	–	–	–	–	5	–	10	3	–	–	–	–	–	–	19
Legionnaires' dis.	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	1
Leptospirosis	–	–	–	–	–	–	–	–	–	1	–	–	–	–	1	–	–	–	2
Malaria	–	–	1	1	1	–	2	–	–	–	2	–	–	–	–	–	1	–	8
Measles	–	–	–	1	–	–	–	1	–	3	6	1	–	–	–	–	–	–	12
Meningococcal inf.	2	–	–	2	1	–	–	–	–	1	1	3	–	–	–	–	–	–	10
Mumps	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	1
Nonspecific urethritis	1	71	–	10	–	–	–	–	–	–	2	–	–	–	–	1	–	–	85
Pertussis	–	1	1	–	–	–	1	–	–	1	–	–	–	–	–	–	–	–	4
Q Fever	–	–	–	–	–	–	–	–	–	–	1	3	–	–	–	–	–	–	4
Ross River virus	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	1
Salmonella inf.	2	4	7	10	6	2	10	2	7	3	–	9	2	1	2	1	–	–	68
Shigella inf.	–	–	–	–	–	–	1	–	–	1	–	–	–	–	–	–	–	–	2
Syphilis	–	9	2	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	13
Tuberculosis	2	2	1	1	–	1	7	–	1	–	–	–	–	1	–	–	–	–	16
Typhoid & paratyphoid	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	1	2
Vibrio Parahaemolyticus	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
Yersinia inf.	1	–	1	–	–	1	1	–	–	1	–	–	–	–	–	–	–	–	5

TABLE 3

INFECTIOUS DISEASE NOTIFICATIONS, BY HEALTH AREA & REGION, NSW, January 1, 1990 to September 30, 1990

CONDITION	CSA	ESA	SSA	SWS	WSA	WEN	NSA	CCA	ILL	HUN	NCR	NER	OFR	CWR	SWR	SER	IS	OS	U/K	TOTAL
AIDS	45	85	14	5	5	4	18	1	–	–	3	2	–	1	2	1	–	–	5	191
Amoebiasis	–	2	–	1	–	1	–	–	–	2	3	–	–	–	–	–	–	–	–	9
Arboviral inf. (NOS)	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	1
Brucellosis	–	–	–	–	–	–	–	–	–	–	3	2	–	–	–	–	–	–	–	5
Campylobacter inf.	79	71	215	127	134	178	140	29	14	30	87	117	13	14	5	7	29	2	13	1304
Chlamydia inf.	1	40	2	5	3	–	–	–	25	10	54	42	3	–	2	1	–	–	5	193
Cholera	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
Encephalitis (NOS)	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	1
Food Poisoning (NOS)	1	–	–	–	5	1	3	–	–	–	–	–	–	1	10	–	–	–	–	21
Genital herpes	1	359	–	14	5	19	2	2	15	21	68	42	6	5	1	–	2	–	2	564
Giardiasis	13	19	45	17	23	24	36	25	–	28	185	30	6	7	–	2	1	–	9	470
Gonorrhoea	11	187	5	15	6	3	1	4	1	11	27	19	16	4	1	1	–	–	3	315
Hepatitis A	1	2	–	–	2	1	5	–	–	1	1	2	–	–	2	1	–	–	–	18
Hepatitis B	5	24	6	60	13	5	12	6	5	4	32	30	53	3	3	3	2	–	–	266
Hepatitis C	2	–	–	–	2	–	1	–	–	–	2	2	–	–	–	–	–	–	–	9
Hepatitis Unspecified	–	–	–	–	–	–	–	–	–	1	–	1	–	1	–	–	–	–	–	3
Hydatid disease	–	–	–	–	–	–	–	–	–	–	1	–	–	1	–	–	–	–	–	2
Infantile diarr. (NOS)	–	–	–	4	4	16	–	–	13	1	57	9	2	–	–	–	–	–	–	106
Legionnaires' dis.	–	1	4	3	2	–	4	–	1	3	1	–	–	1	–	1	2	–	–	23
Leprosy	1	1	–	2	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	5
Leptospirosis	–	1	1	–	3	–	–	–	4	2	5	4	–	1	4	3	2	–	4	34
Malaria	9	18	3	5	9	2	37	3	4	7	4	4	1	4	6	1	1	1	13	132
Measles	–	–	17	3	2	1	1	2	–	6	33	4	–	–	1	–	–	–	1	71
Meningococcal inf.	4	1	9	8	5	4	3	1	–	5	11	13	4	2	–	–	–	–	1	71
Nonspecific urethritis	1	827	2	126	3	1	2	1	85	83	14	8	3	–	1	1	1	–	5	1164
Pertussis	15	2	8	12	8	14	9	10	–	4	9	18	4	3	–	1	1	–	–	117
Q Fever	–	3	–	–	4	–	1	1	2	1	24	22	7	39	4	1	2	–	2	113
Ross River virus	1	4	1	–	–	1	2	1	5	26	95	46	14	7	23	–	12	1	5	244
Rubella	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	1
Salmonella inf.	72	54	87	133	118	83	140	25	45	47	77	64	34	17	27	23	18	0	12	1076
Shigella inf.	4	14	3	8	3	2	11	2	3	3	18	11	8	4	1	–	6	1	1	103
Syphilis	12	101	11	24	1	–	3	–	6	9	13	11	62	–	2	–	–	–	3	258
Trachoma	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	1
Tuberculosis	51	53	35	39	37	7	31	3	10	14	1	8	3	3	2	2	1	–	4	304
Typhoid & paratyphoid	1	6	1	1	1	–	3	–	3	1	6	–	–	–	–	–	1	–	1	25
Vibrio Parahaemolyticus	–	–	2	1	–	1	–	–	–	2	–	–	–	–	–	–	–	–	–	6
Vibrio SPP	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	1
Vibrio Vulnificus	–	–	–	–	1	–	–	–	–	–	–	–	–	1	–	–	–	–	–	2
Yersinia inf.	14	5	9	12	6	3	19	1	1	1	16	3	2	–	–	–	2	–	1	95

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

TABLE 4

INFECTIOUS DISEASE NOTIFICATIONS* BY HEALTH AREA & REGION, NSW, January 1 to September 30, 1990

HEALTH AREA/REGION	DOCTOR NOTIFICATIONS	RATE** PER 100,000	LABORATORY NOTIFICATIONS	RATE** PER 100,000	TOTAL NOTIFICATIONS	RATE** PER 100,000
Central Sydney Area	247	74.1	97	29.1	344	103.2
Eastern Sydney Area	625	193.4	1257	388.9	1882	582.3
Southern Sydney Area	274	52.1	206	39.1	480	91.2
South Western Sydney Area	415	67.7	210	34.3	625	102.0
Western Sydney Area	211	35.8	194	32.9	405	68.8
Wentworth Area	144	53.9	227	85.0	371	138.9
Northern Sydney Area	276	38.0	209	28.8	485	66.8
Central Coast Area	91	42.1	26	12.0	117	54.1
Illawarra Region	186	62.7	56	18.9	242	81.5
Hunter Region	252	52.9	71	14.9	323	67.8
North Coast Region	234	68.6	618	181.1	852	249.6
New England Region	182	74.0	332	134.9	514	208.9
Orana & Far West	158	113.6	83	59.7	241	173.3
Central West Region	63	38.3	57	34.6	120	72.9
South West Region	40	16.0	57	22.7	97	38.7
South East Region	23	12.1	28	14.7	51	26.8
Unknown	29	0.5	61	1.1	90	1.6
Total†	**3450**	**60.5**	**3789**	**66.5**	**7239**	**127.0**

† Notifications on interstate and overseas residents visiting NSW accounted for an additional 88 cases
* Excludes HIV
** Rate per 100,000 population

TABLE 5

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

HEALTH AREA/REGION	DOCTOR NOTIFICATIONS	RATE** PER 100,000	LABORATORY NOTIFICATIONS	RATE** PER 100,000	TOTAL NOTIFICATIONS	RATE** PER 100,000
Central Sydney Area	15	4.5	5	1.5	20	6.0
Eastern Sydney Area	27	8.4	130	40.2	157	48.6
Southern Sydney Area	18	3.4	7	1.3	25	4.8
South Western Sydney Area	37	6.0	14	2.3	51	8.3
Western Sydney Area	7	1.2	15	2.5	22	3.7
Wentworth Area	6	2.2	26	9.7	32	12.0
Northern Sydney Area	21	2.9	19	2.6	40	5.5
Central Coast Area	4	1.9	2	0.9	6	2.8
Illawarra Region	15	5.1	3	1.0	18	6.1
Hunter Region	16	3.4	5	1.0	21	4.4
North Coast Region	12	3.5	33	9.7	45	13.2
New England Region	8	3.3	34	13.8	42	17.1
Orana & Far West	0	0.0	4	2.9	4	2.9
Central West Region	2	1.2	2	1.2	4	2.4
South West Region	0	0.0	3	1.2	3	1.2
South East Region	3	1.6	2	1.1	5	2.6
Unknown	1	0.0	2	0.0	3	0.1
Total†	**192**	**3.4**	**306**	**5.4**	**498**	**8.7**

† Notifications on interstate and overseas residents visiting NSW accounted for an additional 9 cases
* Excludes HIV
** Rate per 100,000 population

UPDATES

The Computer Section of Epidemiology Branch has devised a set of relational databases to facilitate the entry of disease notifications and monitor public health responses. Public Health Unit staff are urged to take advantage of this development. Please contact Gavin Stewart for more information on (02) 391-9212.

The proposed new Public Health Act contains provisions for laboratory-based infectious disease notification. The list of notifiable conditions has been reduced from 53 to 21.

The NSW Department of Health is collaborating with the Royal Australian College of General Practitioners to devise strategies to maximise education of general practitioners on the new notification procedures.

PUBLIC HEALTH ABSTRACTS

GUNS AND SUICIDE

Experience in Canada and the United States indicates that gun control legislation may have led to decreased use of guns by suicidal men, but the difference was apparently offset by an increase in suicides by leaping.

However there does appear to be an advantage from the prevention of suicide point of view, to control availability of guns, particularly to people who have been diagnosed as having mental disorders.

Rich CL, Young JG, Fowler RC, Wagner J and Black NA, Guns and Suicide: Possible Effects of Some Specific Legislation, *American Journal of Psychiatry* 1990, 147, 342.

GUNS AND VIOLENCE IN AUSTRALIA

Guns are important because they make violence more violent. Unless one is very expert it takes a while to kill one with one's bare hands — there may be time for a second thought — but with a firearm intention becomes achievement in the blink of an eye. The more guns there are in a community the more shooting occurs, as for example, the homicide rate in the United States which is several times that of comparable but less heavily armed populations.

Common sense suggests a number of measures which might save lives. We should be more concerned about alcohol abuse and there should be more determined follow-up of the domestic arguments which are significantly tumultuous to attract the attention of the neighbours and the police. Since guns kill, we should limit their possession to those who can establish an iron-clad need for them.

Ellard J, Guns and Violence in Australia, *Med J Aust* 1990, 152, 394.

TASMANIAN HEART ATTACKS

Mortality from coronary heart disease has fallen by about 50 per cent in Australia over the past 20 years and now accounts for about 25 per cent of all deaths.

In Tasmania the rate of decline in mortality is significantly less for all causes and for coronary heart disease. Analysis demonstrates that Tasmanians have not been as prudent in adopting healthy lifestyles as have other Australians. They tend to smoke more and eat more fatty foods, including butter, than other Australians.

Sexton PT, Woodward DR, Gilbert N and Jamrozik K, Interstate Differences in Trends in Coronary Mortality and Risk Factors in Australia, *Med J Aust* 1990, 152, 531.

EFFECTS OF CHEMICAL WASTE

Recent years have seen increased concern over possible health effects of exposure to hazardous waste sites on Australian residential communities. Concern has been expressed by residents of Kingston, a town near Brisbane, about chemical wastes in three sites near their community.

Scientific examination of the health consequences has found:

- That people living close to the chemical waste site did not report an elevated level of serious physical disease, cancer or death.
- People in Kingston reported poorer general health, miscarriages, and considerably higher levels of stress and anxiety.
- The reported symptoms of poor physical health above correlate significantly with measures of stress arising as a reaction to the environmental problem and with the belief about direct exposure to the chemicals, but do not appear to be related to the proximity of the site or duration of residence in the area.

This lack of impact of chemical wastes in health, as distinct from environmental, terms is a common international finding.

Dunne MP, Burnett P, Lawton J and Raphael B, The Health Effects of Chemical Waste in an Urban Community, *Med J Aust* 1990, 152, 592.

EARLY TREATMENT FOR HIV

Millions of people are infected with HIV worldwide. In about half, the acquired immunodeficiency syndrome (AIDS) develops within a 10-year period. Thus the full force of the epidemic has not yet been felt.

In 1986 zidovudine (formerly AZT) was shown to decrease the frequency and severity of infections and the mortality rate in patients who had already been given the diagnosis of advanced HIV disease. For patients in the late stages of the disease, the hope of prolonged life has become a reality.

The next crucial question is whether it will be beneficial in the earlier stages in slowing the progression of HIV infection and prolonging health. Large-scale testing of this strategy has been undertaken in two major American trials, whose results are now available. They show there is a strong suppression of the effect of HIV infection at relatively low doses of zidovudine therapy.

This finding represents a major and extremely timely advance in the treatment of HIV infection and has profound implications for patients, physicians and health policy. In particular, the results should encourage people who may be at risk for HIV infection to be tested for the virus.

Friedland GH, Early Treatment For HIV, *N Eng J Med* 1990, 322, 14, 1000.

NEWS AND COMMENT

SECOND PUBLIC HEALTH UNIT MEETING

The second meeting of directors of the public health units was held at Rozelle Hospital on September 3, 1990. Some of the major issues discussed at the meeting were as follows:

- Public health units were introduced to the concept of standardised reporting rates for notifications. These data will be included in the Public Health Bulletin.
- Infectious disease reporting systems are under review. The input of public health units is necessary for a functional system to be devised. The Infectious Diseases Interest Group was formed at the meeting. Members include Rod Kennedy, Steve Christley, Julian Gold, Michael Stanford, David Jeffs, Syd Bell and staff of the Epidemiology and Health Services Evaluation Branch. The first task of this group will be to discuss details of the transfer of infectious diseases data from laboratories and medical practitioners, through the PHUs, and on to the Epidemiology and Health Services Evaluation Branch.
- Strategies to address the broad range of important environmental health issues. The meeting adopted the suggestion that each public health unit develop a particular area of environmental health expertise which could then be called on by other units as necessary. It was also recognised that the department's central office is the most appropriate body to negotiate with the other principal government agencies involved in environmental health. A meeting of representatives from all public health units to discuss the co-ordination of environmental health activities is being convened this month.
- The department's executive information system. An outline of the functions and capabilities of this system was followed by a demonstration.

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