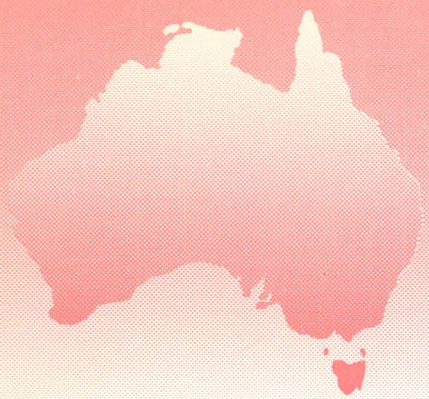

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COMMUNICABLE DISEASES NETWORK-AUSTRALIA
A National Network for Communicable Diseases Surveillance

ANNUAL REPORT OF THE NATIONAL NOTIFIABLE DISEASES SURVEILLANCE SYSTEM, 1992 - PART 2

(Robert Hall, AIDS/Communicable Diseases Branch, Department of Health, Housing, Local Government and Community Services, for the Communicable Diseases Network - Australia)

This is Part 2 of the Annual Report of the National Notifiable Diseases Surveillance System (NNDSS) for 1992. Part 1 was published in the last issue, *CDI* 1993;17:466-487. Details of methods and results for the system overall and references were included in Part 1. Also included were individual reports for diseases, in alphabetical order, from arboviruses (not elsewhere classified) to malaria. Part 2 reports on the remainder of the diseases which are notifiable as recommended by the NHMRC.

Meningococcal infection

Meningococcal infection was reported for 292 cases in 1992, for an overall annual incidence rate of 1.73 notifications per 100,000 population. There were 296 cases reported with onset dates in 1992 to 30 May 1993. The rise in annual notifications has continued with an increase in rate from 0.78 cases per 100,000 population in 1988. There was a strong seasonal trend with the peak occurring in July (Figure 46).

Figure 46. Notifications of meningococcal infection with onset in 1992, by month of onset

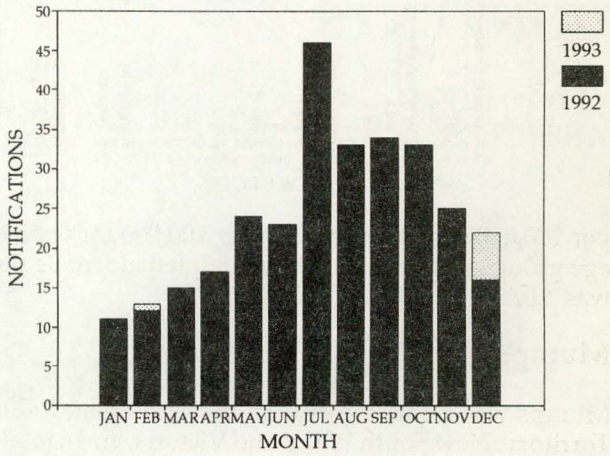
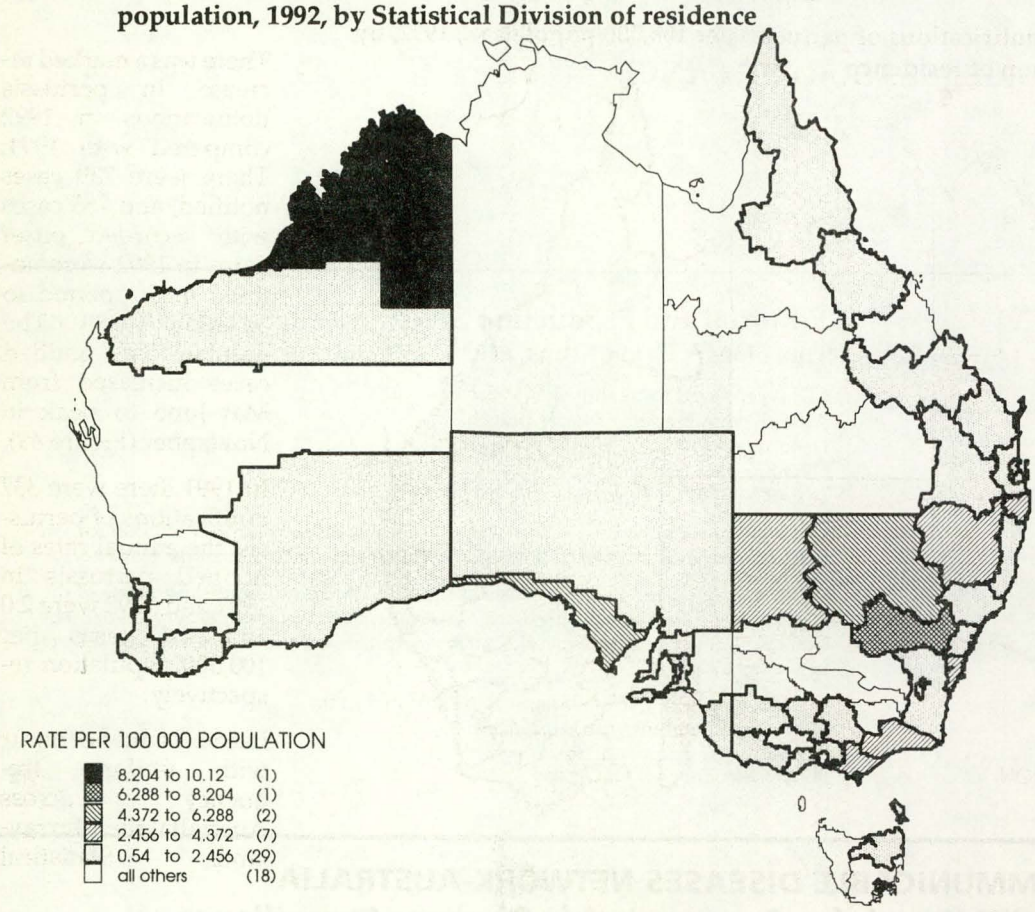


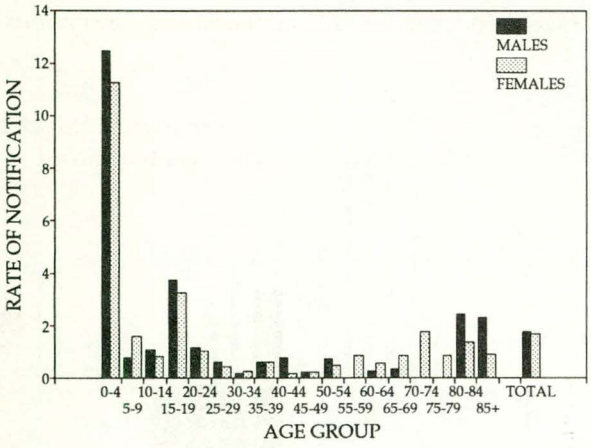
Figure 47. Annual rate of notifications of meningococcal infection per 100,000 population, 1992, by Statistical Division of residence



There was marked variation in incidence rates across Australia. The highest annual rate of notified meningococcal disease was reported in residents of the Kimberley Statistical Division in Western Australia (10.1 cases per 100,000 residents) (Figure 47). The NNDSS was unable to allocate data from the Northern Territory to Statistical Divisions of residence, but the annual rate for the Northern Territory as a whole was 6.8 per 100,000.

There was a trimodal age distribution of cases with peaks in the 0-4 years (12.5 per 100,000 population in the age group for males and 11.2 per 100,000 for females), 15-19 (3.7 per 100,000 for males and 3.3 per 100,000 for females) and 80-84 years (2.4

Figure 48. Annual rate of notifications of meningococcal infection per 100,000 population, 1992, by age group and sex



per 100,000 for males and 1.4 per 100,000 for females) age groups (Figure 48). The overall female/male ratio was 1.0/1.

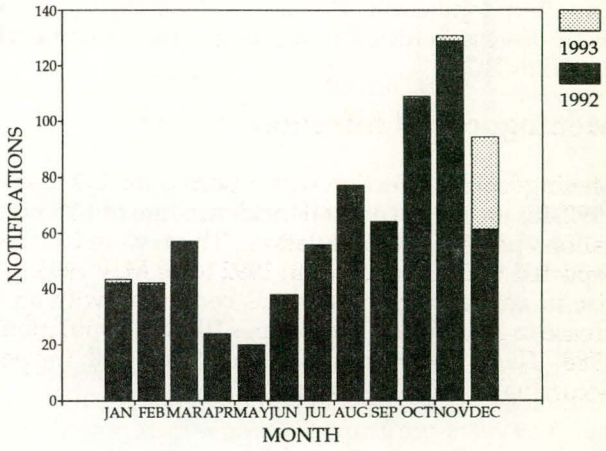
Mumps

Mumps was notifiable only in the Australian Capital Territory, New South Wales and Victoria, and a total of 23 cases was notified and included in the NNDSS dataset. A further 40 caases were subsequently notified from Victoria, but could not be included in the dataset.

Ornithosis

Ornithosis was notified for 94 cases in 1992 and a total of 106 cases was recorded to 30 May 1993 with onset dates in 1992. Annual rates of notified infection increased with age to peak in the 50-54 years age group for males (3.3 cases per 100,000 in this age group) and in the 70-74 years age group for females (2.3 cases per 100,000).

Figure 49. Notifications of pertussis with onset in 1992, by month of onset



Pertussis

There was a marked increase in pertussis notifications in 1992 compared with 1991. There were 739 cases notified, and 755 cases with recorded onset dates in 1992 were notified in the period to 30 May 1993. The number of notified cases increased from May-June to peak in November (Figure 49).

In 1991 there were 337 notifications of pertussis; the annual rates of notified pertussis in 1991 and 1992 were 2.0 and 4.4 cases per 100,000 population respectively.

Pertussis did not occur with uniform frequency across Australia; the Murray-lands Statistical

Figure 50. Annual rate of notifications of pertussis per 100,000 population, 1992, by Statistical Division of residence

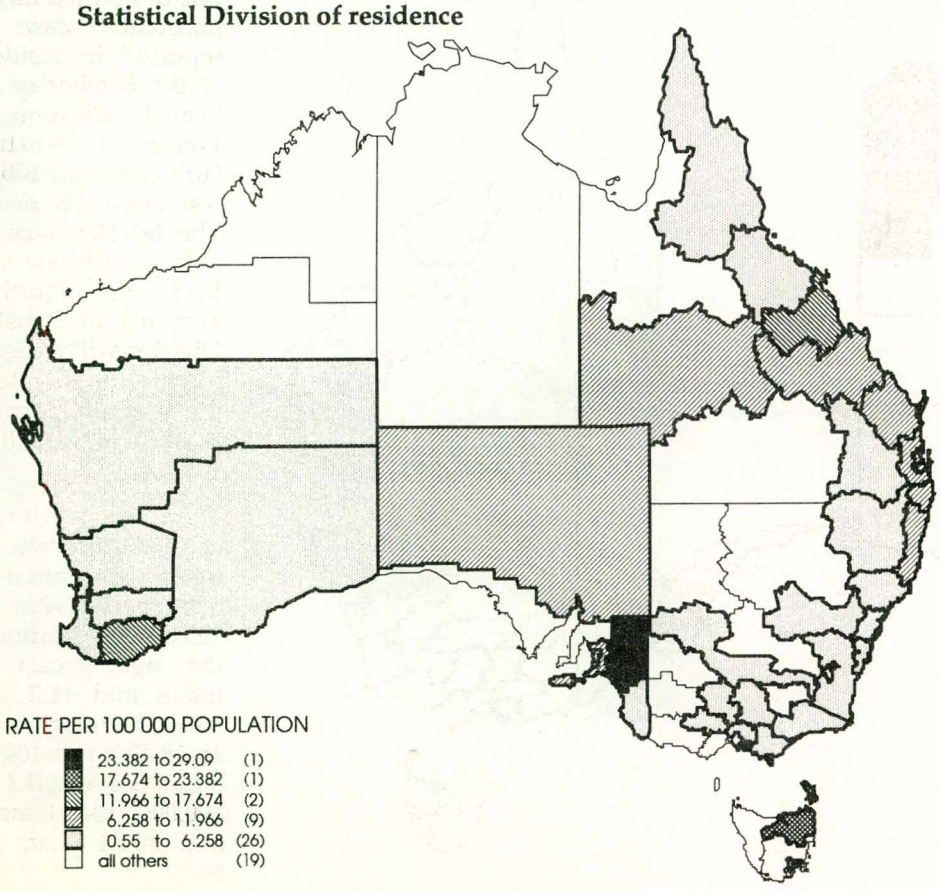


Figure 51. Annual rate of notifications of pertussis per 100,000 population, 1992, by age group and sex

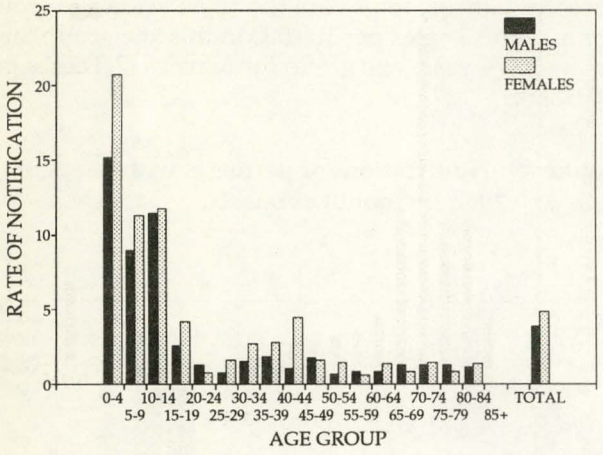
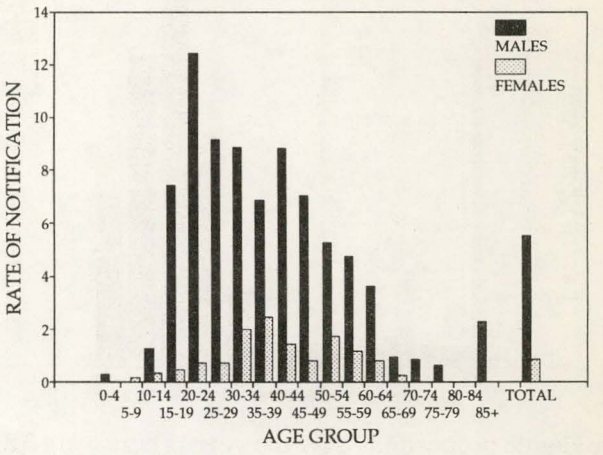


Figure 53. Annual rate of notifications of Q fever per 100,000 population, 1992, by age group and sex



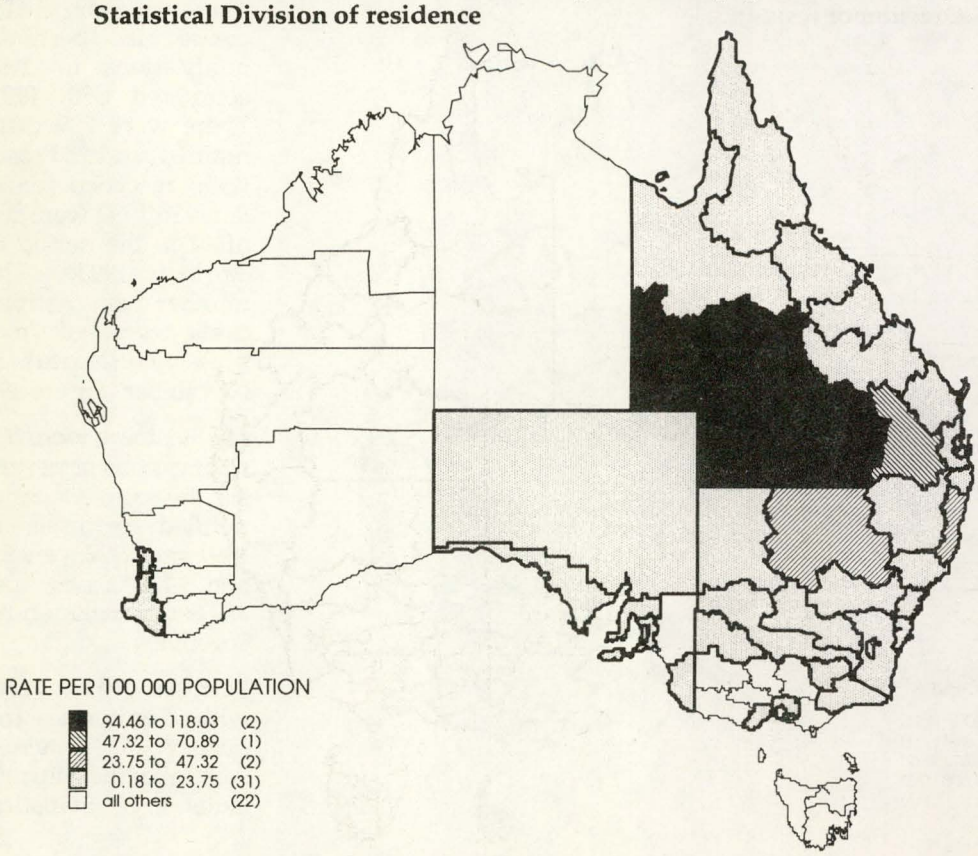
Division in South Australia reported the highest incidence of notified disease with 29.9 cases per 100,000 residents (Figure 50).

As in 1991, the peak incidence was in the 0-4 years age group (15.1 cases per 100,000 males in this age group and 20.7 cases per 100,000 females), but age specific incidence was also relatively high in the 5-9, 10-14 and the 15-19 years age groups. Cases were reported for all age groups (Figure 51) and the overall female/male ratio was 1.3/1.

Q fever

A total of 543 notifications of Q fever was received in 1992, and 563 cases with onset dates in 1992 were notified to 30 May 1993. The crude annual notification rate was 3.2 per 100,000 population and there was no seasonal trend. There was, however, a marked geographical trend, with high rates being reported for residents of south-west Queensland and northern New South Wales. Rates of 118.0 (South West), 94.8 (Central West) and 53.9 (Darling Downs) notified cases per 100,000 population were reported for residents of Statistical Divisions in southern Queensland (Figure 52). There were no cases reported from the Northern Territory.

Figure 52. Annual rate of notifications of Q fever per 100,000 population, 1992, by Statistical Division of residence



The overall female/male ratio was 0.16/1 and there was a marked predominance of working age males (Figure 53).

Rubella

Rubella was notifiable only as 'congenital rubella' in the Northern Territory, Tasmania and Western Australia and each of these States or Territories notified no cases in 1992. Elsewhere, the disease was notified in

Figure 54. Notifications of rubella with onset in 1992, by month of onset

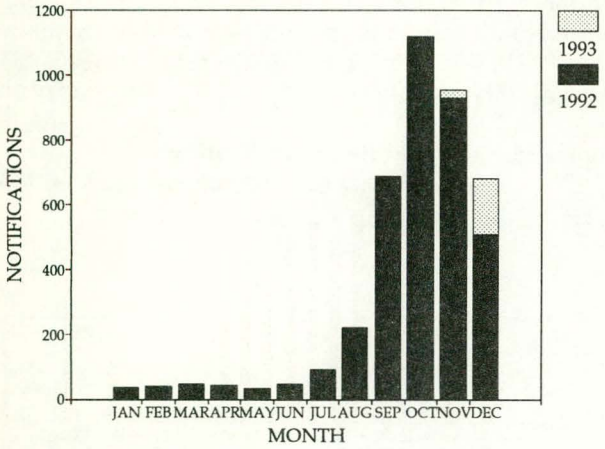
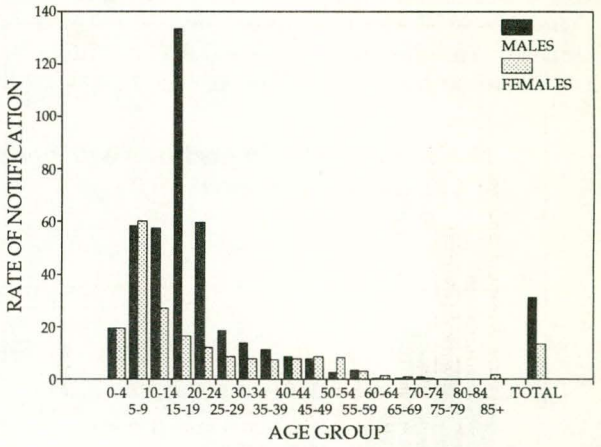


Figure 56. Annual rate of notifications of rubella per 100,000 population, 1992, by age group and sex

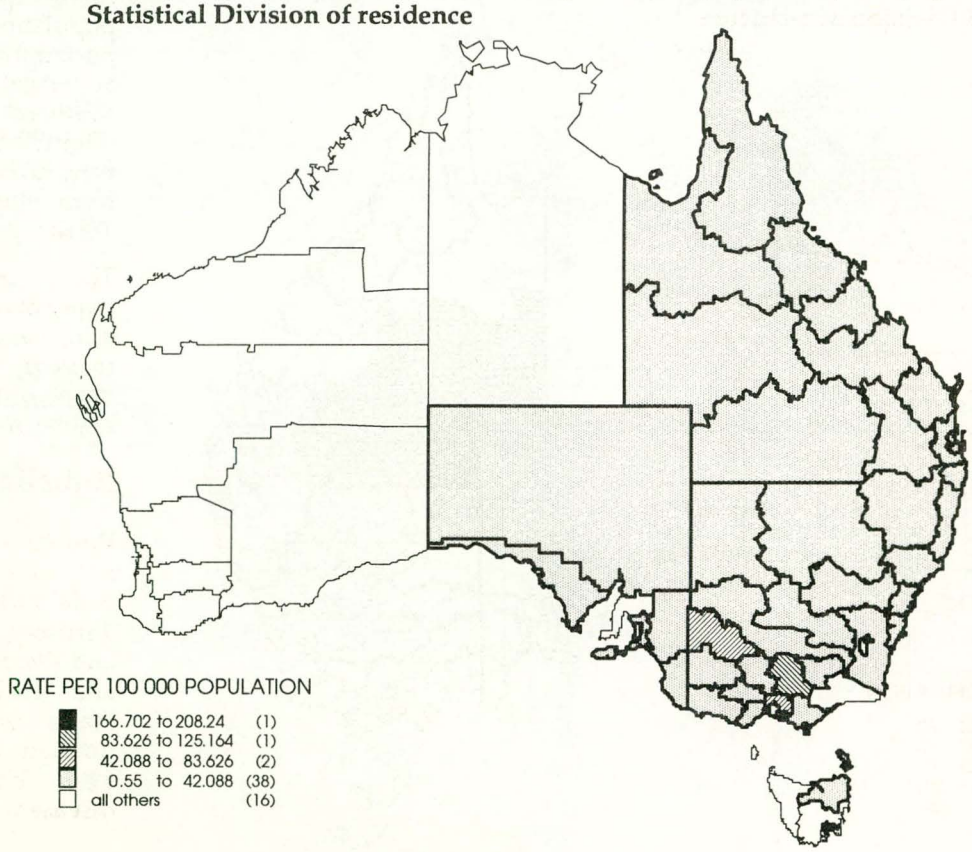


epidemic proportions over the year. There were 3,810 notified cases for a national crude annual rate (unadjusted for the States only reporting congenital rubella syndrome) of 22.6 per 100,000 population. In 1991 there were 620 notifications of rubella for a rate of 3.7 per 100,000. There were 4,015 cases with onset dates in 1992 notified to 30 May 1993. The increase began in July (93 cases, after 49 cases in June) and peaked in October (1,120 cases, Figure 54).

Rubella was notified for residents of the Statistical Division of Canberra in the Australian Capital Territory at an annual rate of 166.7 per 100,000 population. Almost all other Statistical Divisions where rubella (other than congenital rubella) was notifiable were affected (Figure 55).

Cases aged over 10 years were more often notified for males than for females, reflecting the policy of immunising girls aged 10-16 years only which was current until 1989. The overall female/male ratio was 0.4/1 and the peak incidence (133.2 per 100,000 population in the age group, unadjusted rate) was observed in males in the 15-19 years age group. There were 398 cases reported for females in the 15-44 years age group, 10.4% of all cases (Figure 56).

Figure 55. Annual rate of notifications of rubella per 100,000 population, 1992, by Statistical Division of residence



Salmonellosis (not elsewhere classified)

There were 4,614 notifications of salmonellosis (not elsewhere classified) in 1992, and there were 4,553 cases notified with onset dates recorded as being in 1992 to 30 May 1993. The crude annual rate of notifications nationally was 27.4 cases per 100,000 population, a small decrease over 1991. There was a peak in the number of cases notified per month in March, declining over winter to early summer (Figure 57).

The disease was notified at a higher rate in residents of northern Australia. The highest annual rate was reported for residents of the Kimberley Statistical Division in Western Australia, where the rate was 431.9 per 100,000 population. Relatively high rates were also recorded for residents of Statistical Divisions in northern Queensland (Figure 58).

Salmonellosis was overwhelmingly a disease of young children. The highest age specific annual rate of notifications was in the 0-4 years age group (181.6 cases per 100,000 males in this age group and 164.7 cases per 100,000 females (Figure 59). The female/male ratio was 1.0/1.

Figure 57. Notifications of salmonellosis with onset in 1992, by month of onset

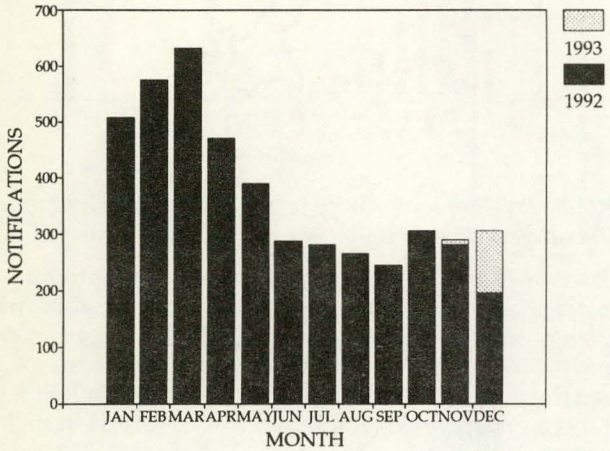


Figure 59. Annual rate of notifications of salmonellosis per 100,000 population, 1992, by age group and sex

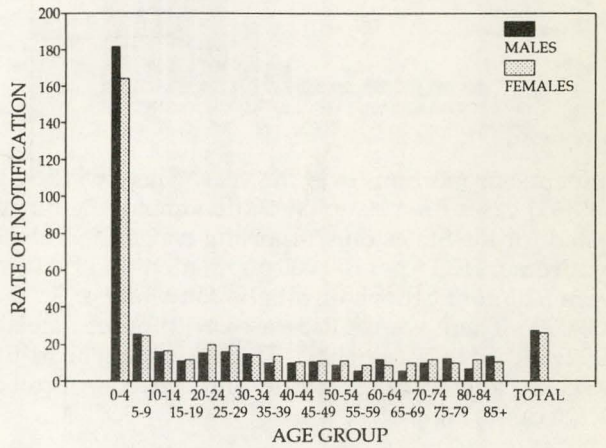


Figure 58. Annual rate of notifications of salmonellosis per 100,000 population, 1992, by Statistical Division of residence

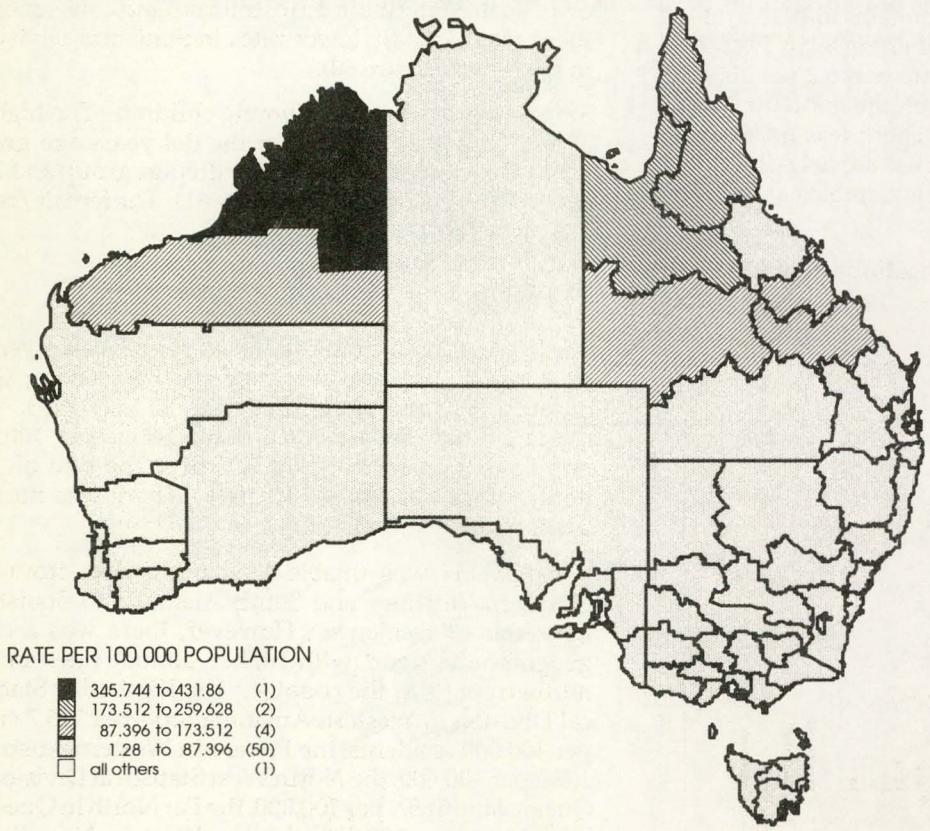
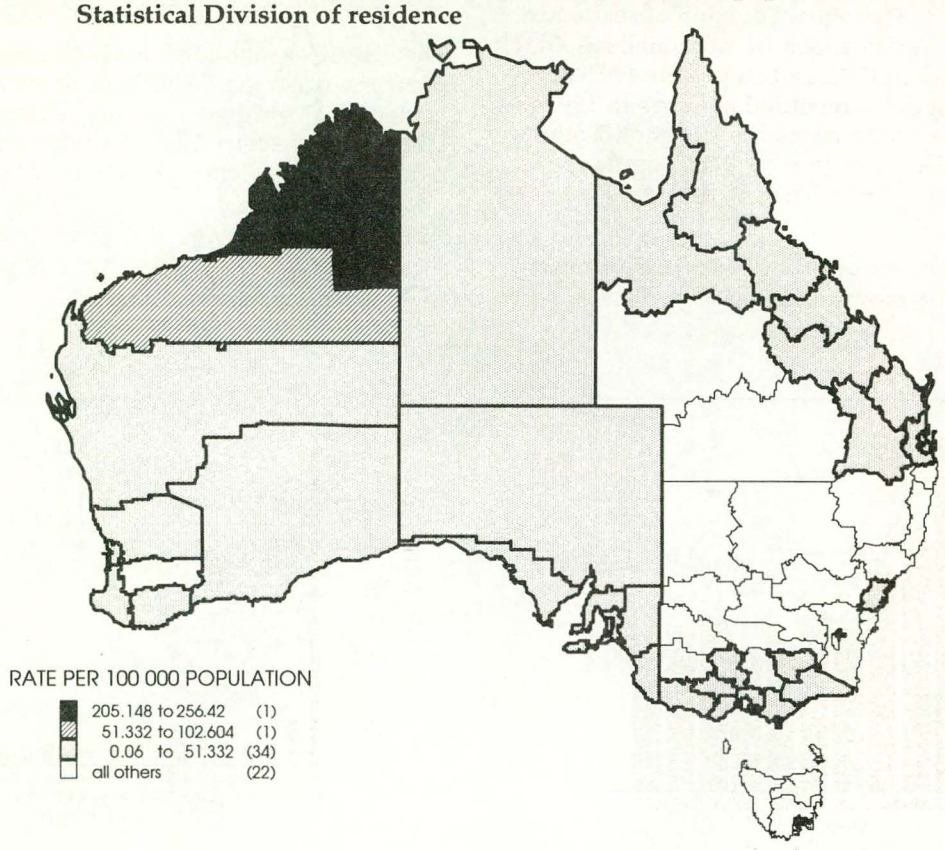


Figure 60. Annual rate of notifications of shigellosis per 100,000 population, 1992, by Statistical Division of residence

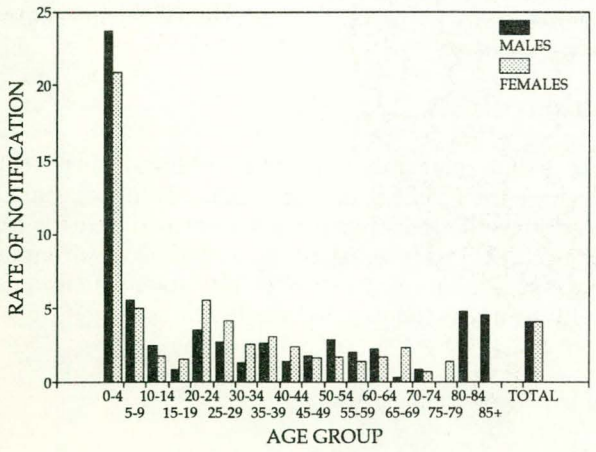


Shigellosis

Shigellosis was notified for 694 persons in 1992, and 702 cases were reported as having their onset in 1992 to 30 May 1993. The crude annual rate was 6.2 per 100,000, a small decrease from 1991, when the annual rate was 8.1 cases notified per 100,000. There was no seasonal trend. The disease was notified at a markedly higher rate in residents of the Kimberley Statistical Division (256.4 cases per 100,000 population). In New South Wales shigellosis is notified only as 'foodborne disease' or as 'gastroenteritis in an institution' and consequently there are markedly lower rates in Statistical Divisions in that State (Figure 60).

Shigellosis is a disease of young children. The highest annual rate was reported in the 0-4 years age group (23.7 cases per 100,000 males for this age group and 20.9 cases per 100,000 females (Figure 61). The female/male ratio was 1.0/1.

Figure 61. Annual rate of notifications of shigellosis per 100,000 population, 1992, by age group and sex

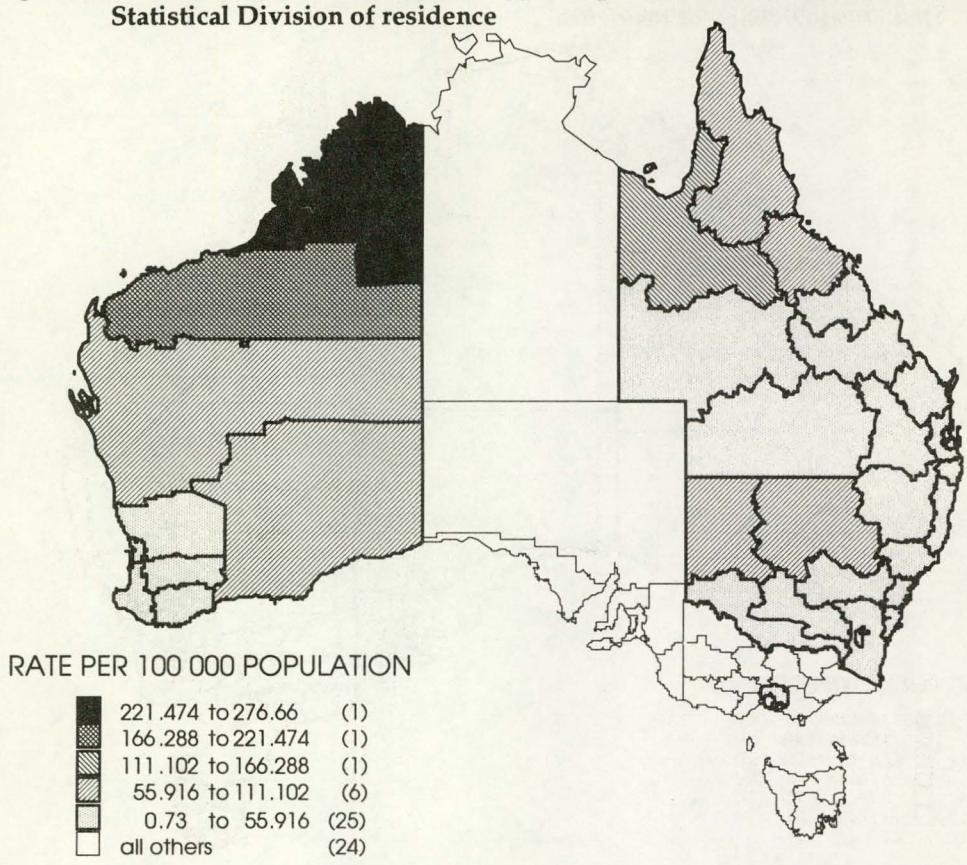


Syphilis

There were 2,695 notifications of syphilis received in 1992 and 2,656 cases were recorded as having their onset in 1992 and were notified to 30 May 1993. The crude annual rate was 16.0 notifications per 100,000 population, an increase of 31% over the rate of 12.2 notifications per 100,000 in 1991. There was no seasonal trend.

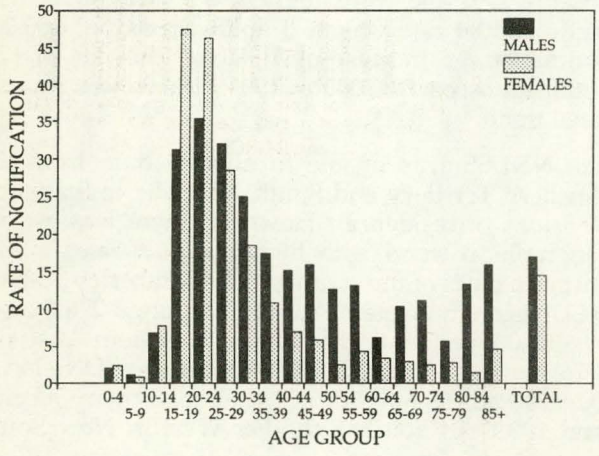
The NNDSS was unable to allocate data from the Northern Territory and South Australia to Statistical Divisions of residence. However, there was a clear geographical trend with higher annual rates in the northern parts of the country. The Kimberley Statistical Division in Western Australia reported 276.7 cases per 100,000 residents, the Pilbara in Western Australia 177.2 per 100,000, the North West Statistical Division in Queensland 165.9 per 100,000, the Far North in Queensland 103.1 per 100,000, the Far West in New South

Figure 62. Annual rate of notifications of syphilis per 100,000 population, 1992, by Statistical Division of residence



Wales 88.8 per 100,000, the Central Statistical Division in Western Australia 78.0 per 100,000, the North West Statistical Division in New South Wales 77.8 per 100,000, the Northern Statistical Division in Queensland 65.0 per 100,000 and the South Eastern Statistical Division in Western Australia 63.5 notified cases per 100,000 residents (Figure 62). The rate for the Northern Territory as a whole was 374.6 cases per 100,000 population.

Figure 63. Annual rate of notifications of syphilis per 100,000 population, 1992, by age group and sex



There were 22 notified cases of syphilis aged less than one year, however the data do not indicate whether these were cases of congenital syphilis. The peak age and sex specific rate of notified syphilis was in females in 15-19 years age group, with 47.5 cases per 100,000 females in this age group. For males the peak was in the 20-24 years age group with 35.5 cases per 100,000. Over the age of 25, male rates were higher than female rates (Figure 63). The overall female/male ratio was 0.9/1.

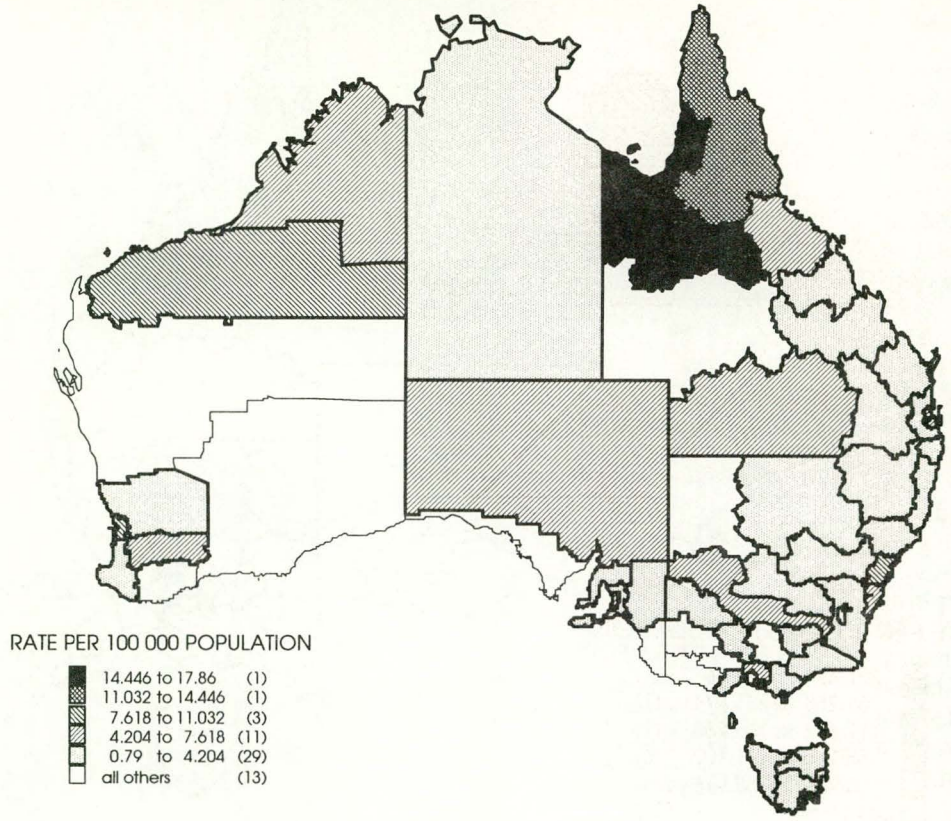
Tetanus

Tetanus was notified for 14 cases in 1992, double the number reported in 1991. They comprised nine females and five males and all bar two cases were aged over 40 years. The majority of cases were in residents of rural areas.

Tuberculosis

These data refer only to cases of tuberculosis reported through the NNDSS; data from the Mycobacterial Disease Surveillance Scheme are not yet available for 1992. The NNDSS data must be regarded as approximate, since case ascertainment may be lower and the case definition was unspecified for 1992.

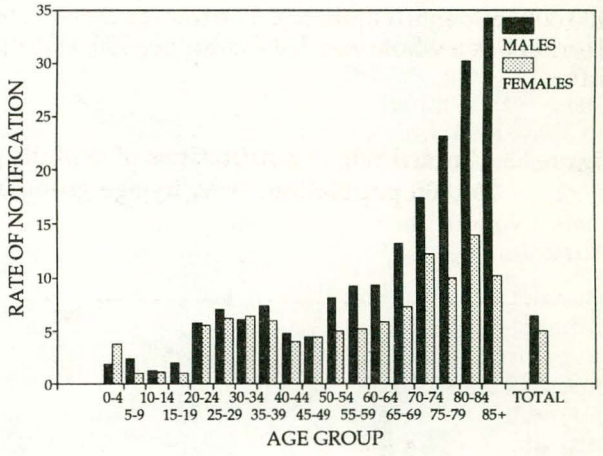
Figure 64. Annual rate of notifications of tuberculosis per 100,000 population, 1992, by Statistical Division of residence



A total of 970 cases of tuberculosis (including non-tuberculous mycobacterial disease) was notified to the NNDSS in 1992. There were 923 cases with onset dates recorded as occurring in 1992 notified to the NNDSS to 30 May 1993. The crude annual rate for 1992 was 5.8 cases per 100,000 population. There was no seasonal trend. The annual rates of tuberculosis notified to the NNDSS were generally higher in the more remote parts of Australia (Figure 64). The rate for the Northern Territory as a whole was 18.19 per 100,000 population.

Tuberculosis was a disease of advancing age, with the highest annual rates reported in the 85+ years age group for males (34.2 cases notified to the NNDSS per 100,000) and in the 80-84 years age group for females (14.0 cases notified to the NNDSS per 100,000, Figure 65).

Figure 65. Annual rate of notifications of tuberculosis per 100,000 population, 1992, by age group and sex

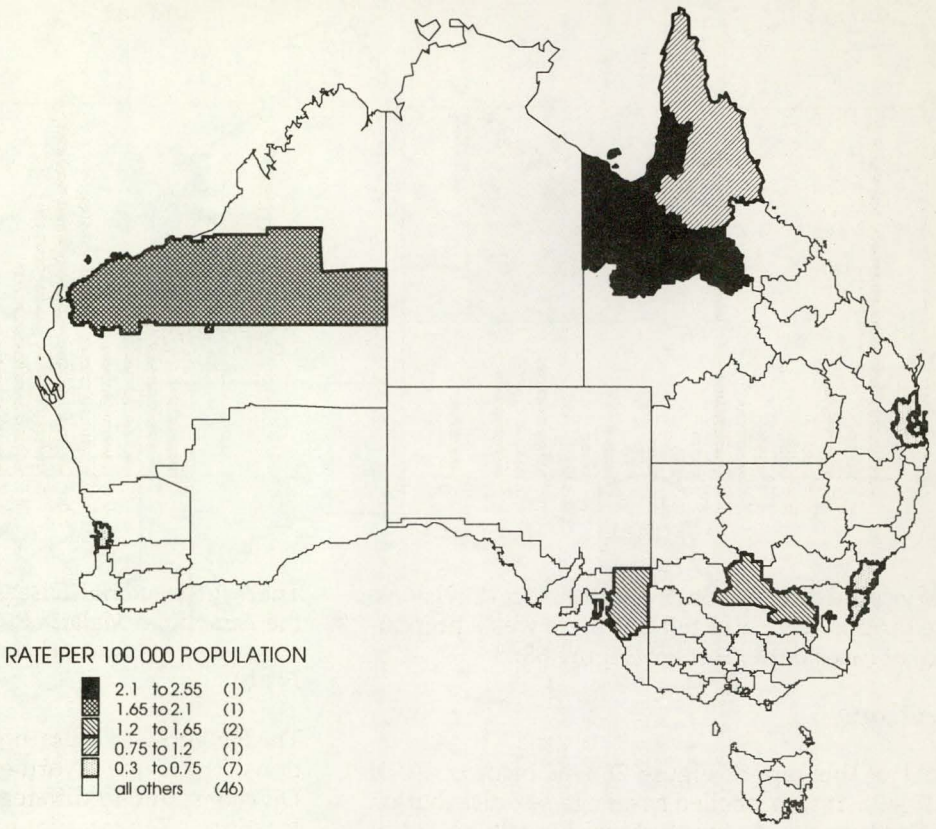


Typhoid

In New South Wales and Victoria the category 'typhoid' included paratyphoid. There were 50 cases of typhoid notified in 1992, and there were 49 cases recorded as having their onset in 1992 which were notified to 30 May 1993. There were 88 cases notified in 1991. Nineteen of the cases were recorded with onset dates in January or February. They were not evenly spread over the country (Figure 66). The relatively high rate of typhoid notifications in the North West Statistical Division of Queensland was due to one case notified from a small population.

All age groups were affected.

Figure 66. Annual rate of notifications of typhoid per 100,000 population, 1992, by Statistical Division of residence



Yersiniosis

Yersiniosis was notified for 567 cases, a 393% increase over the 115 cases reported in 1991. A total of 570 cases was notified to 30 May 1993 with recorded onset dates in 1992. Notification rates varied across Australia (Figure 67).

Much of this variation is due to differences in case definition and methods of case ascertainment and recording. Notifications in Queensland are based on laboratory reports. In New South Wales yersiniosis is notifiable only as 'foodborne disease' or 'gastroenteritis in an institution'. Cases from the Northern

Figure 67. Annual rate of notifications of yersiniosis per 100,000 population, 1992, by Statistical Division of residence

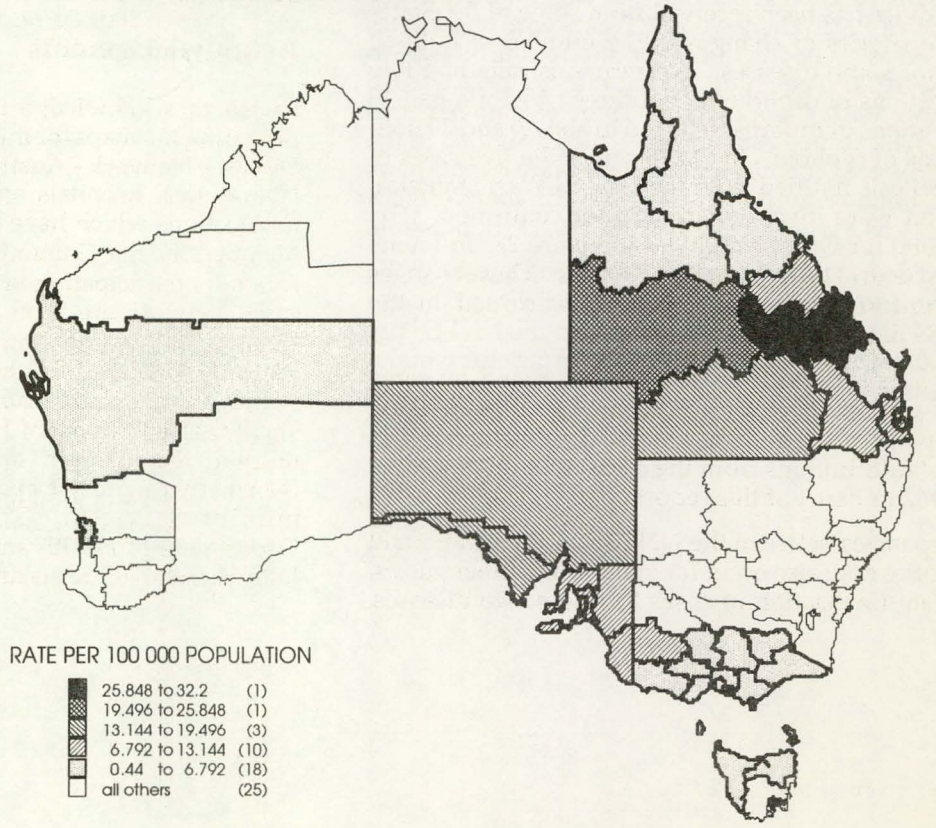


Figure 68. Annual rate of notifications of yersiniosis per 100,000 population, 1992, by age group and sex

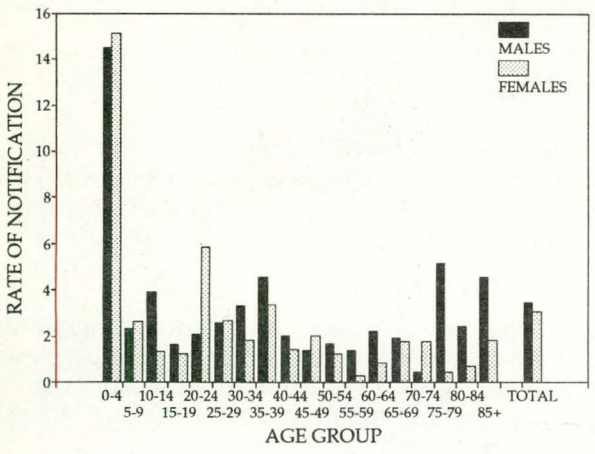
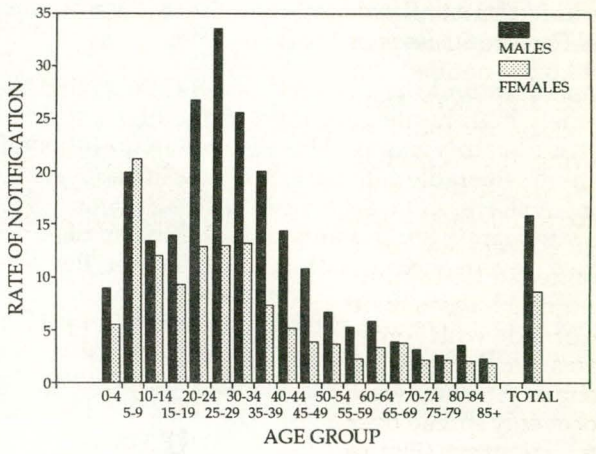


Figure 69. Annual rate of notifications of hepatitis A per 100,000 population, 1992, by age group and sex



Territory could not be allocated to Statistical Divisions. All age groups were affected but there was a preponderance of cases under 5 years (Figure 68).

Corrections

In Part 1 of this report, Figure 26 was incorrect (*CDI* 1993;17:480). It was labelled as an age-sex distribution of notified hepatitis A cases but was hepatitis A notifications by month of onset for 1992. The correct figure is included here (Figure 69).

Late advice has been received from some of the States and Territories of changes in the number of notified cases for some diseases. Western Australia had two notifications of diphtheria, not three. Victoria had 40 notifications of mumps (referred to above) and 29 notifications of typhoid. In Queensland, the five cases of legionellosis notified from the Central West Statistical Division were investigated and not confirmed. The final total for Queensland was therefore 27, and none for the Central West Statistical Division. These changes were unfortunately not able to be included in the NNDSS database for this analysis.

Other small discrepancies have been noted by some States and Territories for other diseases totals; these discrepancies are probably due to the deletion of 'duplicate' notifications from the dataset, as described on page 467 in Part 1 of this report.

Discrepancies between the NNDSS and the States and Territories may also occur for malaria and tuberculosis, with late finalisation of cases for these two diseases. The Mycobacterial Disease Surveillance Scheme and the Australian Malaria Register will report separately.

Note

The NNDSS was unfortunately unable to map notifications from the Northern Territory to Statistical Divisions, due to differences in methods of reporting locations. The rates for each disease for the Northern Territory are presented in Table 3 in Part 1 (*CDI* 1993;17:470) and can be compared with rates for Statistical Divisions elsewhere.

Acknowledgments

I wish to acknowledge the work of Toni Hogan in preparing the maps for this report. The Communicable Diseases Network - Australia thanks the practitioners, laboratories, hospitals and others for providing the notifications which have made this analysis possible. Members of the Communicable Diseases Network - Australia participating in the National Notifiable Diseases Network are Scott Cameron (South Australian Health Commission), Jag Gill (Health Department of Western Australia), Michael Levy (New South Wales Health Department), Cathy Mead (Australian Capital Territory Department of Health), Avner Misrachi (Tasmanian Department of Health), Mohamed Patel (Northern Territory Department of Health and Community Services), Graham Rouch (Victorian Department of Health and Community Services) and John Sheridan (Queensland Health).

FLOODING IN NORTHERN VICTORIA - SURVEILLANCE FOR HEALTH PROBLEMS

(Mark Veitch and Raina MacIntyre, Communicable Diseases Network - Australia, and Infectious Diseases Program, Health and Community Services Victoria)

On and around the weekend of 2-3 October 1993, extremely high rainfall occurred in the high country of north-eastern Victoria. This resulted in flash flooding with considerable damage to property in the Ovens and King valleys. On 4 October several towns further downstream from the area of highest rainfall experienced severe flash flooding. Benalla was the worst affected of these towns. Over the following days, rapidly rising rivers and extensive flooding of low lying ground threatened the cities of Shepparton and Wangaratta, and isolated many smaller rural communities. During the next week the river systems of north-eastern Victoria drained towards the Murray River, which rose to a near record height at Echuca. Overall, a large area of Victoria was affected (Figure).

Early State Government assessments were that damage to homes, businesses and farms was inestimable. In Benall alone, 1200 homes were flooded and hundreds of businesses and farms were devastated. Over 1000 cattle and several thousand other livestock were reported drowned as of 8 October 1993, with a large number of carcasses unable to be recovered. Several roads, including major highways, were inaccessible and many bridges were damaged. There was widespread disruption to water supplies and sewage systems. Immediate relief was provided by the State Emergency Services, which facilitated evacuations and arranged flood relief centres and recovery programs.

Severe flooding is associated with health problems which may be immediate or delayed[1]:

- Immediate
  - limitation of medical, pharmaceutical, and public health facilities
  - injuries (fractures, lacerations, burns, electrocution, animal bites)
  - hypothermia
  - exacerbation of chronic diseases
  - carbon monoxide poisoning (from the use of gas operated generators)
- Delayed
  - vectorborne disease (vectors include rodents and mosquitoes); in this context, we may expect an outbreak of Ross River virus infection
  - diarrhoeal illness
  - psychological and psychiatric illness (for example post traumatic stress disorder)
  - substance abuse

We wished to monitor the provision and utilisation of health services, and the direct and indirect health effects of flooding in the affected areas.

Methods

We established a surveillance system to run for six to eight weeks. Data are being collected from all 116 rural shires, cities and boroughs in Victoria, enabling comparison between affected and unaffected areas.

The system comprises:

1. Environmental Health Officer survey: monitoring of essential services including water supply, sewerage, garbage disposal, immunisation and Maternal and Child Health clinics, pharmacies, special health services, ambulance services.
2. Medical Officer of Health/General Practitioner survey: monitoring disease patterns through patterns of general practitioner attendance.
3. Hospital survey:
   a. Physical damage/threat to hospital, disruptions to hospital supplies, staffing and function.
   b. Casualty attendance and hospital admissions.
4. Monitoring notifications of gastrointestinal disease: hepatitis A, campylobacteriosis, salmonellosis, giardiasis.
5. Other: inquiries to the District Nursing Service.

Further data are being collected by the Water Technology Unit and the Arbovirus Task Force of Health and Community Services Victoria.

Preliminary results

There are 116 rural local health areas (shires, cities and boroughs) in Victoria. We identified 36 (31%) which were affected by flooding. A range of health services was disrupted or suspended in the affected areas (Table).

Figure. Flood affected area of Victoria

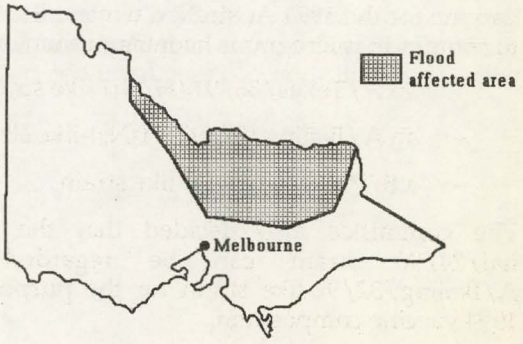


Table. Preliminary results from Environmental Health Officer surveillance questionnaires[1]

Health service	Local health areas affected	
	Number	Per cent
Cancelled immunisation clinics	4/36	11
Disrupted maternal and child health services	5/36	14
Disrupted hospital services and functioning	5/29	17
Disrupted general medical practice services	2/33	6
Disrupted or suspended pharmacy services	2/32	6
Disrupted or suspended road ambulance services	12/36	33
Suspended garbage disposal facilities	6/36	17
Disruption to other health services	1/9	11

1. Data are still being collected.

Sewerage and water supplies were particularly affected in Benalla. Residents of some flood affected areas were advised to boil drinking water, and bottled water was transported to Benalla from Melbourne. There was an increased demand for garbage disposal and several rubbish tips were partly flooded. Underground water tanks were flooded in several communities which lacked reticulated water and sewerage. Low lying water caused concern. Councils planned to drain persisting water, and treat residual water with vegetable oil to prevent mosquito breeding. Biting mosquitoes were reported to be very common in areas such as Nathalia. Snakes were noted on high ground.

Immunisation clinics which were not cancelled were poorly attended. Pharmacies were damaged by floodwater in Benalla. Doctors' surgeries suffered minor flood damage. Hospitals, District Nursing Services and councils experienced difficulties when staff were separated from their workplaces by floodwater. Patient transport to hospital was affected. Several clients of the District Nursing Service were isolated by floodwater for several days.

Injuries, including fractures, and exacerbation of chronic diseases, such as angina, were reported. Several weeks after the peak of the flooding, there were frequent reports of manifestations of stress and fatigue amongst the general population and health care and flood-related workers.

Conclusions

Our early data suggest that the recent Victorian floods caused significant temporary disruption of the public health infrastructure, but there were no reports of death or widespread major morbidity. Delayed health problems may still occur. Data will be collected and analysed prospectively to detect emerging health problems during the weeks following the flooding.

Reference

1. Atchison CG, Wintermeyer LA, Kelly JR, Currie R, Vogel C, Goddard JH, et al. Public health consequences of a flood disaster - Iowa, 1993. *MMWR* 1993;**42**:653-656.

COMPOSITION OF THE AUSTRALIAN INFLUENZA VACCINE FOR THE 1994 WINTER

Influenza vaccine composition is reviewed annually so that changes in the composition can be made to counter 'antigenic shift' and 'antigenic drift' in the viruses. In October, the Australian Influenza Vaccine Committee met and decided on the composition of the influenza vaccine for the 1994 Australian winter. The vaccine is to contain 15 micrograms haemagglutinin of each of:

- an A/Texas/36/91 (H_1N_1)-like strain
- an A/Beijing/32/92 (H_3N_2)-like strain
- a B/Panama/45/90-like strain.

The committee also decided that the A/Shanghai/24/90 strain can be regarded as an A/Beijing/32/92-like strain for the purposes of the 1994 vaccine composition.

During the last year, influenza B has dominated in most areas of the world, but there has also been influenza A (H_3N_2) activity in some areas. In the influenza season in the northern hemisphere, the vast majority of influenza B viruses isolated were reported to be B/Panama/45/90-like. A small number of isolates were characterised as like B/Quingdao/102/91, a strain closely related to B/Panama/45/90. The majority of influenza A (H_3N_2) isolates were A/Beijing/32/92-like.

In Australia, the season began later than usual. Influenza B dominated, especially earlier in the year. Influenza A (H_3N_2) isolates have become more common in the latter part of the season.

In February this year, the World Health Organization (WHO) recommended that the vaccine for the 1993-94 northern winter should contain:

- an A/Singapore/6/86 (H_1N_1)-like strain
- an A/Beijing/32/92 (H_3N_2)-like strain
- a B/Panama/45/90-like strain.

The United States' Food and Drug Administration updated their vaccine formulation to include A/Texas/36/91, which they considered to be significantly different from A/Singapore/6/86.

Influenza A (H_1N_1)

There have been few influenza A (H_1N_1) virus isolates worldwide and analyses indicate that the majority remain close to the A/Taiwan/1/86 (A/Singapore/6/86), A/Texas/36/91 or A/Victoria/36/88 reference strains. With the exception of New Zealand, there has been little incidence of influenza due to the A/Texas/26/91 strain and serological studies indicate that much of the Australian population would be susceptible to it. Serological data indicate that A/Texas/36/91 would provide a reasonable level of protection against the other H_1N_1 strains.

Influenza A (H_3N_2)

Small numbers of A/Beijing/353/89-like viruses have continued to circulate, however, the great majority of isolates, including those from the recent Louisiana outbreaks have been characterised as like A/Beijing/32/92, a strain closely related to the A/Shanghai/24/90 strain included in the 1993 Australian vaccine formulation.

While serological testing conducted in London has suggested that many Australian isolates are closest to A/Hong Kong/23/92, serological results indicate that the vaccine strains A/Shanghai/24/90 and A/Beijing/32/92 should provide good protection against a wide range of H_3N_2 including A/Hong Kong/23/92-like viruses.

It was therefore decided that the H_3N_2 strain for the 1994 vaccine should be an A/Beijing/32/92-like strain, as recommended by the WHO for the 1993-94 northern winter. After consideration of serological results, the relative performance of the two antigens and the evolution of the strains, it was recommended that the A/Shanghai/24/90 strain be regarded as an A/Beijing/32/92-like strain for the purposes of the 1994 vaccine composition. The EC had made a similar decision for the 1993-94 European vaccine.

Influenza B

Recent influenza B isolates react well with B/Panama/45/90 antiserum and there is no current indication of significant antigenic drift away from this strain. A B/Panama/45/90-like strain was therefore recommended for the vaccine.

NHMRC recommendations

The NHMRC recommends annual autumn influenza vaccination for individuals in the following categories:

- Individuals at particular risk of complications:
  - adults and children with chronic debilitating disease, especially those with chronic cardiac, pulmonary renal and metabolic disorders
  - persons over the age of 65 years
  - residents of nursing homes and other chronic care facilities
  - persons receiving immunosuppressive therapy.
- Persons engaged in medical and health services, and essentials public utilities, if they are at increased risk owing to medical disorders such as those above. In the event of a pandemic or other major outbreak, advice should be given about vaccination of staff particularly liable to exposure.

OVERSEAS BRIEFS

In the last two weeks, the following information has been supplied by the World Health Organization.

Influenza Update

This season, influenza activity has been moderate overall, with reported outbreaks due to influenza A (H_3N_2) viruses in Argentina, Brazil, Chile, New Zealand, South Africa and Uruguay. Influenza B has caused outbreaks in Chile and New Zealand.

Cholera Update

Newly cholera infected areas are Kohat, Mansehra and Swabi Districts in North West Frontier Province, Rawalpindi/Islamabad District in Punjab Province and Karachi City in Sind Province, Pakistan.

The last case of cholera in Tajikistan occurred on 26 September; the country has now been declared free of the disease.

Cases of cholera have been reported for August, September and October from Afghanistan, Belize, Brazil, Cambodia, Colombia, Djibouti, Ecuador, El Salvador, Ghana, Guatemala, Honduras, India, Iraq, Laos, Malaysia, Mozambique, Nepal, Pakistan, Peru, Tajikistan and the Russian Federation.

COMMUNICABLE DISEASES SURVEILLANCE

Virology and Serology Reporting Scheme

There were 1823 reports received in the *CDI* Virology and Serology Reporting Scheme this fortnight (Tables 7, 8 and 9).

- There were 34 reports of **measles** this fortnight, 22 from Queensland, 2 from New South Wales, 8 from Victoria and one each from the ACT and Tasmania. Included was a case of SSPE from the ACT, described below. Ages ranged from less than one year to the 25 to 44 years age group. Reports from New South Wales, Queensland and Victoria have increased recently.
- **Rubella** was reported for 45 patients this fortnight. Included were 2 pregnant females, both aged 23 years, and 7 other females in the 15 to 44 years age group. Reports were received from the ACT, New South Wales, Queensland, South Australia, Victoria and Western Australia. The number of reports from the ACT, New South Wales, South Australia and Western Australia has increased over the last few months.
- There were 2 reports of **hepatitis E**. One patient was an Indian seaman who had a 10 day history of nausea and being unwell. The second was a female patient who had been travelling in India and many other countries.
- There were 24 reports of **Ross River virus** this fortnight, 19 from Queensland, 3 from Western Australia and one each from New South Wales and the Northern Territory. One was confirmed, a 24 year old female from the Port Hedland area of Western Australia (September specimen collection). The remainder were presumptive (IgM), with specimen collection dates in August (6), September (16) and October (1).
- The 6 reports of **Barmah Forest virus** were all presumptive (IgM) and all from Queensland. Specimen collection dates were in August (one) and September (5).
- There were 18 **untyped dengue** reports, all presumptive and all reported from the Townsville area. Specimen collection dates were May (6), June (7), July (3) and August (2). There have been 413 reports of dengue 2 this year. They peaked in April, earlier than the June peak for the 297 reports last year.
- The 6 reports of **untyped flavivirus** were all presumptive. All were from the Townsville or Cairns area and had specimen collection dates in May (one), June (one), July (one), August (one) and September (2).
- **Echovirus type 11** isolates were reported for 3 patients from New South Wales, bringing the total for the year to 86 (Figure 1), more than for any year since 1986-87, when there were 369 cases reported from July 1986 to June 1987. This year, cases have been reported from the ACT, New South Wales, Queensland, South Australia, Victoria and Western Australia. The 3 cases reported this fortnight were a female aged less than one month (meningitis) and males aged one year (CSF isolate) and 33 years (skin disease).

Figure 1. Echovirus type 11 laboratory reports, 1993, by month of specimen collection

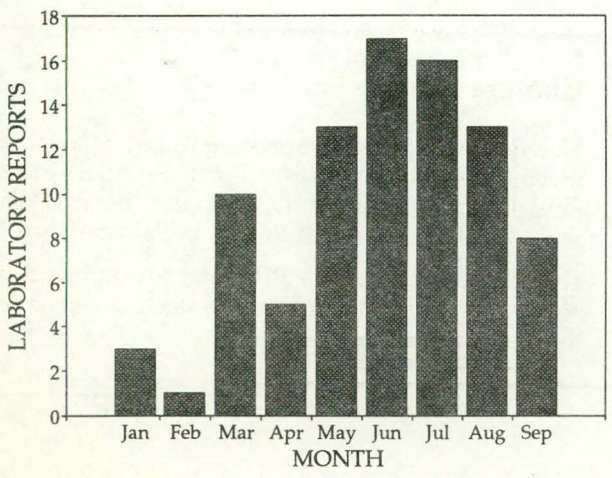
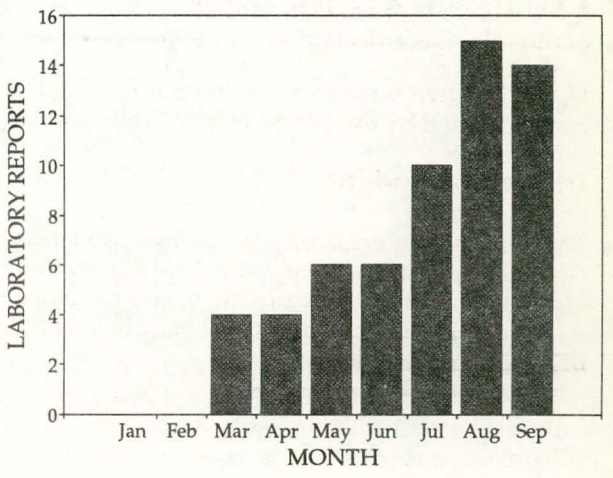


Figure 2. Echovirus type 30 laboratory reports, 1993, by month of specimen collection



- There were 15 reports of **echovirus type 30** this fortnight, 14 from Victoria and one from New South Wales. The virus has now been reported for 59 patients this year (Figure 2), more than for any year since 1988-89, when there was a summer outbreak and 409 reports. Fifty-one reports this year have been from Victoria. This fortnight, patients ranged in age from less than one month to 44 years. Meningitis was reported for 13 and general malaise/fever for 2. Overall for this year, 51 reports (86%) have been CSF isolates and/or meningitis.
- There were 147 reports of **influenza**, 53 of **untyped influenza A** (1 isolation, 3 antigen detections, 5 IgM, 4 fourfold changes, 40 single high titres), 5 of influenza A H_3N_2 (3 described as A/Shanghai/24/90-like) and 89 reports of **influenza B** (20 isolations including 1 reported as B/Panama/45/90-like, 4 antigen detections, 10 IgM, 4 fourfold changes and 51 single high titres). Thirteen influenza A reports and 6 influenza B reports were for patients aged over 65 years.

  One of the influenza B reports from Western Australia this fortnight was of a postmortem lung isolate. The patient was a 7 year old female.

  Influenza A reports are peaking much later than usual and at a much lower level than in other years in which influenza A predominated in Australia. There have been 399 reports so far, including 25 influenza A (H_3N_2). Isolates and other reports have become more common in recent months (Figure 3).

  There have been 544 reports of influenza B so far this year, including 140 isolates (Figure 4). Both isolates and other diagnoses peaked in August-September.
- There were 24 reports of **parainfluenza virus type 3** this fortnight, bringing the total for the year to 387. Reports were received from New South Wales, Queensland, South Australia, Victoria and Western Australia.
- **Rotavirus** was reported for 76 patients this fortnight. The peak in reports was earlier this year than the average for the last five years (Figure 5). Reports peaked in June for Western Australia, June-July-August for Victoria, August for the ACT and New South Wales, August-September for South Australia and September for Tasmania.
- There was a single report of a **norwalk-like virus**, associated with an outbreak of gastroenteritis in a restaurant. Diagnosis was by electron microscopy detection of the virus in faeces.
- There were 25 cases of **Q fever** reported this fortnight, bringing the total for the year to 410, including 157 from New South Wales and 203 from Queensland. The number of reports has been higher throughout this year than in 1992 (Figure 6). This fortnight, there were 22 males in the age range 19 to 67 years and 3 females aged 8, 18 and 41 years. Six patients were from the Ipswich area and 5 from

Figure 3. Influenza A laboratory reports, 1993, method of diagnosis

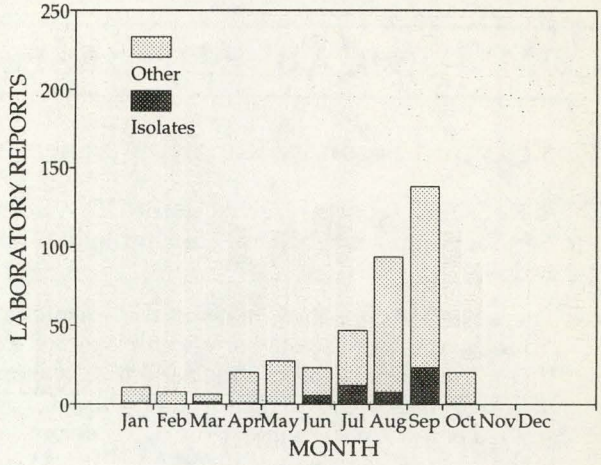


Figure 4. Influenza B laboratory reports, 1993, by method of diagnosis

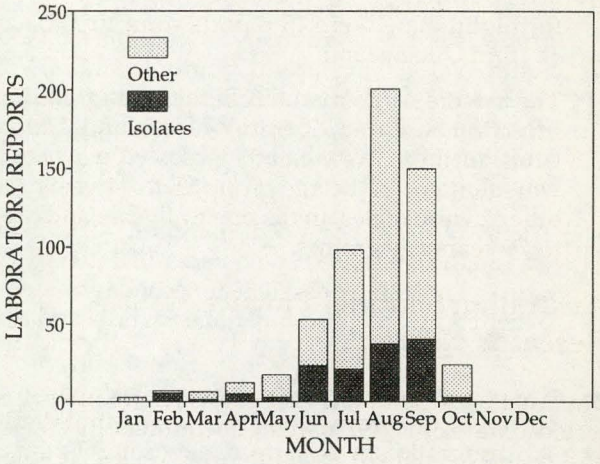


Figure 5. Rotavirus laboratory reports, 1993 and 1988-92 average, by month of specimen collection

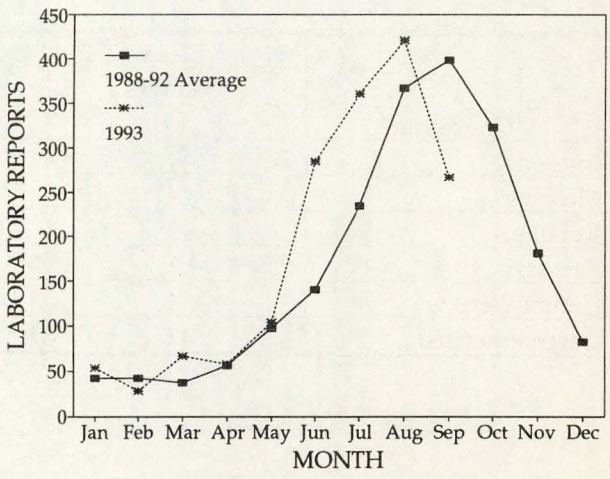
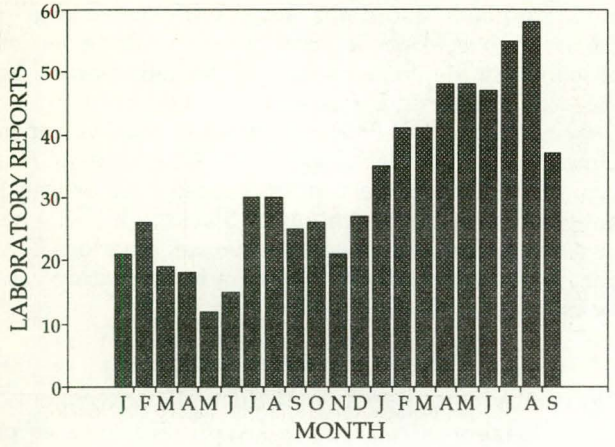


Figure 6. Q fever laboratory reports, 1992 to 1993, by month of specimen collection



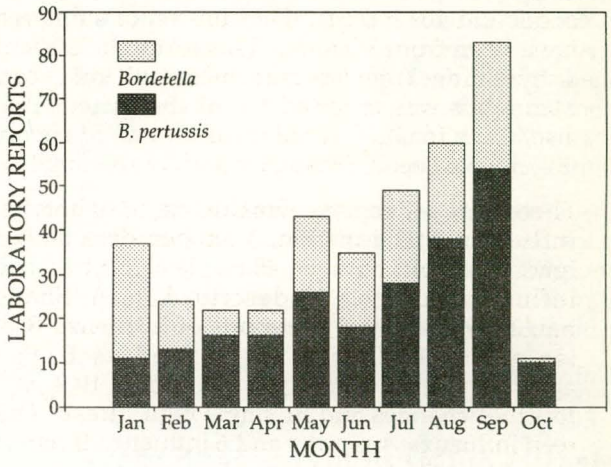
the Toowoomba area. Two patients were described as meat workers.

- ***Bordetella pertussis*** and ***Bordetella*** **species** reports continue to increase (Figure 7). This fortnight, there were 15 reports from Victoria and 12 from Queensland.
- There were 4 reports of ***Echinococcus granulosus*** **infection** reported, 3 from Queensland and one from northern New South Wales. Two patients were females in the age group 25 to 44 years. The other 2 were males, in the one to 4 years and the 65 to 74 years age groups.

Australian Sentinel Practice Research Network

The Australian Sentinel Practice Research Network collected data from 5797 patient encounters in Week 42 and from 4265 patient encounters in Week 43 (Table 1). The rate of reporting of influenza declined further this fortnight.

Figure 7. ***Bordetella pertussis*** **and** ***Bordetella*** **species laboratory reports, 1993, by month of specimen collection**



SSPE and a dual measles-rubella infection in the Australian Capital Territory

There have been two interesting measles cases at Woden Valley Hospital in the ACT recently. The first was a 14 year old male patient who was admitted with a deteriorating mental state of one month's duration. He had an abnormal EEG consistent with SSPE. Measles antibody titres by CFT were CSF 32, serum 1024. He was reported to have had clinical measles 6 years ago.

The second patient was a 20 year old female who was admitted with a rash. She was also reported to have had a different rash of short duration 3 weeks previously. A rising titre to measles virus was demonstrated by CFT, and EIA for rubella was IgM and IgG positive. These results were confirmed by a reference laboratory and are consistent with recent infections with both measles and rubella viruses.

(Virology, Woden Valley Hospital)

Table 1. Australian Sentinel Practice Research Network, Weeks 42 and 43 1993

Condition	Week 42, to 17 October 1993		Week 43, to 24 October 1993	
	Reports	Rate per 1000 encounters	Reports	Rate per 1000 encounters
Influenza	51	8.8	37	8.7
Measles	4	0.7	0	0
Rubella	2	0.3	2	0.5
Pertussis	1	0.2	0	0
Genital herpes	4	0.7	1	0.2
Gastroenteritis	47	8.1	73	17.1

Victorian Influenza Surveillance System

Included in this issue of *CDI* are results for 1993 fortnights 9 to 12 for the Victorian Influenza Surveillance System (Table 2). This system is conducted by the Infectious Diseases Unit of Health and Community Services, Victoria, and includes surveillance data supplied by sentinel general practictioners, diagnostic laboratories, hospitals, schools and industry. Total deaths (which usually increase during influenza epidemics) are also being monitored.

Cases seen in sentinel general practices, laboratory cases and hospital admissions for influenza and/or pnuemonia all peaked in Fortnight 10 (Figure 8), later than for 1992 (*CDI* 1992;**16**:430). Both influenza A and influenza B have been isolated this year.

(Raina MacIntyre, Health and Community Services, Victoria)

Measles outbreak in western Sydney

There has been a large measles outbreak in western Sydney. A total of 516 cases were notified between 13 June and 21 October and the Western Sector Public Health Unit of New South Wales Health Department continues to receive around 40 notifications per week. Already 43 children have been hospitalised, with 4 of these admitted to intensive care units with respiratory complications. Ten of those admitted to hospital have been infants less than one year old and a further 10 have been aged between one and two years. There has been one case of measles encephalitis, in a 14 year old male.

The majority of cases are occurring in the Blacktown and Penrith areas but the outbreak is spreading throughout Western Sydney. Forty per cent of the cases are in the 5-9 year old age group, followed by 30% in the 10-14 year old age group. Thirty-three cases have occurred in children under one year.

A large number of schools have been affected with measles. State, independent and Catholic schools provided numbers of students absent with measles during the first two weeks of September. Thirty-three per cent of schools in the Western Sector reported cases during the two week period. Our notifications system identified only 32 schools (9%) with cases of measles for the same period. In Blacktown Local Government Area alone, 62% of schools reported cases. According to notifications, only 24 schools in Blacktown (27%) had measles cases during the same two week period. Thus our notification system may be underestimating cases by as much as 25-35%.

Figure 8. Victorian Influenza Surveillance System, laboratory cases and sentinel GP cases per 100 patients, by reporting fortnight, 1993

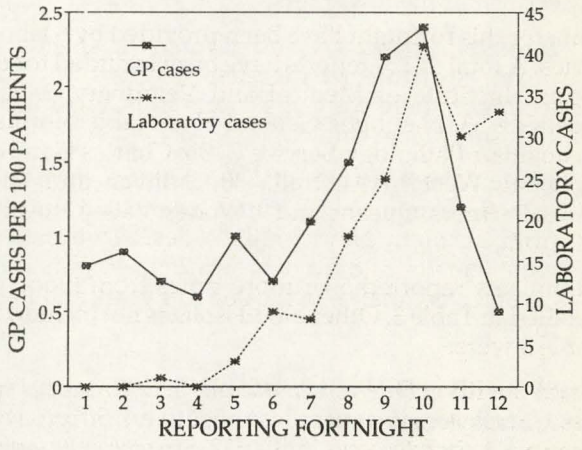


Table 2. Victorian Influenza Surveillance System, fortnights 9 to 12, 1993

	Fortnight 9 23 August to 3 September	Fortnight 10 6 to 17 September	Fortnight 11 20 September to 1 October	Fortnight 12 4 to 15 October
General practices (34) Influenza cases (per 100 patients)	88 (2.2)	107 (2.4)	44 (1.2)	16 (0.5)
Laboratories (2) Influenza cases (per 100 specimens)	25[1] (8.2)	41[2] (16.8)	30[3] (12.0)	33[4] (16.0)
Hospitals (3) Influenza and/or pneumonia admissions (per 100 admissions)	26 (1.1)	36 (1.1)	25 (0.8)	10 (1.0)
Industry (2) Total absenteeism (per cent)		33 (4.3)		
Schools (30) Total absenteeism, Tuesday (per cent)	1444 (17)	1504 (15)		540 (8.9)
Deaths, total from all causes (per 10,000 population)	1290 (3.0)	1352 (3.2)	1096 (2.6)	1396 (3.3)

1. Nine influenza A, 16 influenza B.
2. Twenty-one influenza A, 20 influenza B.
3. Twenty influenza A, 10 influenza B.
4. Twelve influenza A, 21 influenza B.

Despite media coverage and recent school and community immunisation clinics, large numbers of children remain susceptible to measles. The outbreak is likely to continue until the pool of susceptible children is exhausted. To control the outbreak all unimmunised children aged 1-19 years should be vaccinated. Because cases are occurring in young children the New South Wales Health Department is recommending that for the duration of the outbreak all children in the Blacktown and Penrith area aged 6-12 months receive a measles-mumps-rubella vaccination with a second vaccination at 12 months of age.

A considerable number of cases are reported to have received prior measles vaccination. The vaccination status of cases is ascertained during follow up of cases, mainly through parental recall, although some are doctor verified. A case control study is currently being considered to assess vaccine efficacy further.

(Western Sector Public Health Unit, New South Wales)

Sterile Sites Surveillance (LabDOSS)

Data for this fortnight have been provided by 6 laboratories. A total of 124 reports have been included for this report: Institute of Medical and Veterinary Science, Adelaide 53, Nambour General Hospital 5, Northern Tasmanian Pathology Service 7, Sir Charles Gairdner Hospital, Western Australia 30, Sullivan and Nicolaides Partners, Queensland 9, Woden Valley Hospital, ACT 20.

Organisms reported 5 or more times from blood are detailed in Table 3. Other blood isolates not included in Table 3 were:

Gram positive: *Enterococcus faecalis* 3, *Enterococcus* species 1, *Staphylococcus* coagulase negative 4, *Streptococcus* Group A 1, *Streptococcus* 'milleri' 2, *Streptococcus sanguis* 1, *Streptococcus* 'viridans' 3.

Gram negative: *Enterobacter* species 1, *Flavobacterium* species 1, *Haemophilus influenzae* type b 1 (4 year old male), *Klebsiella oxytoca* 2, *Serratia marcescens* 3.

Anaerobes: *Bacteroides fragilis* 2, *Bacteroides thetaiotaomicron* 1, *Clostridium* species 1, *Clostridium perfringens* 1.

Fungi: *Candida* species 3, *Candida* albicans 1.

Most reports were for patients over the age of 44 years (Figure 9).

CSF isolates and meningitis reports

Neisseria meningitidis untypeable 1 (14 year old male), *Staphylococcus aureus* 1 (51 year old female).

Isolates from sites other than blood or CSF

Peritoneal dialysate: *Staphylococcus epidermidis* 2, *Streptococcus* species 1.

Joint fluid: *Staphylococcus aureus* 1, *Escherichia coli* 1.

Pleural fluid: *Staphylococcus aureus* 2.

Figure 9. LabDOSS reports by blood isolates, by age group

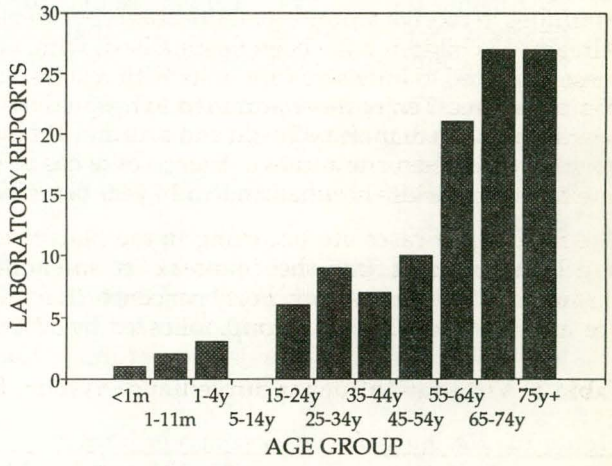


Table 3. LabDOSS reports of blood isolates, by organism

Organism	Clinical Information						Risk Factors					Total[1]	Total reported this year
	Bone/Joint	Lower respiratory	Endocarditis	Gastrointestinal	Urinary Tract	Skin	Surgery	Immunosuppressed	IV line	Hospital acquired	Neonatal		
Staphylococcus aureus	3	1		1		6	4	8	2	11		24	625[2]
Staphylococcus epidermidis				1		1	1	2	6	10		15	185
Streptococcus pneumoniae		6					1	1				8	143
Escherichia coli				4	5		1	3		3		19	635
Klebsiella pneumoniae					2		1	4	2	3		11	130
Pseudomonas aeruginosa		1				1		2	1	2		5	151

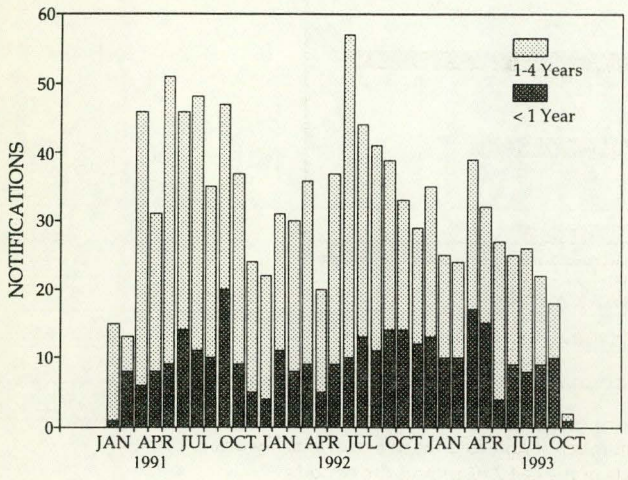
1. Only organisms with 5 or more reports are included in this table.
2. 75 MRSA.

National Notifiable Diseases Surveillance System, 3 to 16 October 1993

There were 2,220 reports received this period (Tables 4, 5 and 6, and Figure 13).

- **Ross River virus infection** was notified for 65 cases this period. There were 27 males and 38 females. Recorded ages were between the 5-9 years and the 85-89 years age groups. Onset dates were recorded as August (9), September (47), and October (9). Cases were reported for residents of statistical divisions in coastal Queensland, north coastal New South Wales and Perth in Western Australia.
- There were 7 cases of **dengue** notified. These reports comprised cases in 2 males and 5 females. Recorded ages ranged from the 35-39 to the 50-54 years age groups. All cases were in residents of Townsville and had recorded onset dates in May (4), July (2) and August (one).
- There was a single case of **brucellosis** in a male from rural Queensland in the 25-29 years age group.
- A single case of **diphtheria** was reported, bringing the total for the year to 47, many more than the 12 reported by this time last year. The notification was for a female of unrecorded age.
- **Gonococcal infection** was notified for 80 cases. Of these, 62 were males, 17 were females and sex was not reported in one case. The cases were aged between the 10-14 years and the 75-79 years age groups.
- There were notifications of 6 cases of ***Haemophilus influenzae* type b infection** to bring the total for the year to 338, compared with 402 cases for the equivalent year to date figure for last year (Figure 10).

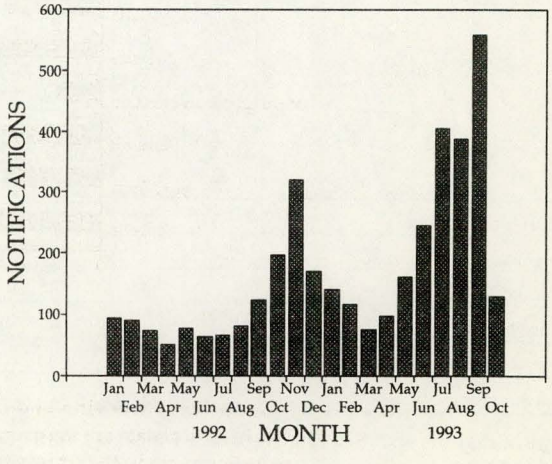
Figure 10. *Haemophilus influenzae* type b infection notifications, January 1992 to October 1993, by month of onset and age group



There were 2 males, 3 females and sex was not recorded in one case. Three cases were aged less than one year and 5 were less than 5 years. One case was in the 40-44 years age group. There were no apparent clusters of cases.

- There were 80 notifications of **hepatitis A** this period. They were for 43 males, 35 females and sex was not recorded for one case. Ages ranged from the 0-4 to the 65-69 years age groups. Peak ages were in the 5-9 (13 cases) and the 20-24 (10 cases) age groups.
- There was a single case notified of **hydatid infection** for a male in the 10-14 years age group in rural Queensland.
- There were 2 notifications of **legionellosis** received. One was female (in the 40-44 years age group) and one was male (age unrecorded). There was no apparent clustering of cases.
- A single case of **leprosy** was reported, in a male in the 65-69 years age group.
- Nine cases of **leptospirosis** were reported this period. They were 8 males, in the 30-34 (2 cases), 35-39 (3 cases), 45-49 (2 cases) and 70-74 (one case) years age groups; and one female in the 30-34 years age group. All bar one (for a resident of Brisbane) were residents of rural Queensland and rural Victoria.
- A total of 46 cases of **malaria** was notified; 29 were males, 15 were females and sex was not recorded in 2 cases. Ages ranged between the 0-4 and the 65-69 years age groups. Sixteen were for residents of the 'malaria receptive zone'. Onset dates were recorded as February (one), June (4), July (11), August (9), September (17) and October (4).
- **Measles** activity continues to increase, with 228 cases notified. The total for the year is now 2,342, compared with 789 for the equivalent period last year (Figure 11).

Figure 11. Measles notifications, January 1992 to October 1993, by month of onset



Of these cases, 107 were males, 117 were females and sex was not recorded for 4 cases. Twelve (5.3%) of the cases were aged less than one year, and the mean age was 11.9 years. There were 45 apparent clusters with up to 20 cases each in separate postcode areas. Apparent clusters were in New South Wales and the Australian Capital Territory (29 apparent clusters), Queensland (11 apparent clusters), Victoria (2 apparent clusters) and Tasmania (3 apparent clusters).

- There were 21 notifications of **meningococcal infection**, with 12 males and 9 females. Six cases had recorded ages in the 0-4 years age group and the oldest case was in the 40-44 years age group. There was one apparent cluster of 3 cases. The apparent secondary case occurred 7 days after the 2 apparent index cases.
- **Pertussis** activity also remains at high levels. A total of 172 cases was notified to bring the total for the year to 1,922, compared with 419 for the equivalent period last year (Figure 12).
- Eleven of these cases were aged less than one year, 24 were aged less than 5 years and ages ranged up to the 85-89 years age group. There were 29 apparent clusters with 2 to 5 cases each in separate postcode areas.
- There were 46 notifications of **Q fever**; 39 were recorded as males and 7 as females. Ages ranged from the 15-19 to the 75-79 years age groups. They were for residents of statistical divisions in rural New South Wales, Brisbane and rural Queensland, rural South Australia and rural Victoria.
- There is still a higher than usual level of **rubella** activity. There were 150 notified cases this period, 95 males, 53 females and sex was not recorded in 2 cases. The mean age of cases was 27.6 years and there were 22 reports for females in the 15-44 years age group. There were 23 apparent clusters of 2 to 10 cases each in separate postcode areas.
- There were 47 notifications of **syphilis** received this period. Of these, 25 were males, 19 were females and sex was not recorded in 3 cases. A single case was aged less than one year.
- There were 24 notifications of **tuberculosis**, 14 males and 10 females. Ages ranged from the 0-4 to the 85-89 years age groups.
- There was a single case of **typhoid** notified for a male in the 20-24 years age group in Sydney in New South Wales.

Figure 12. Pertussis notifications, January 1992 to October 1993, by month of onset

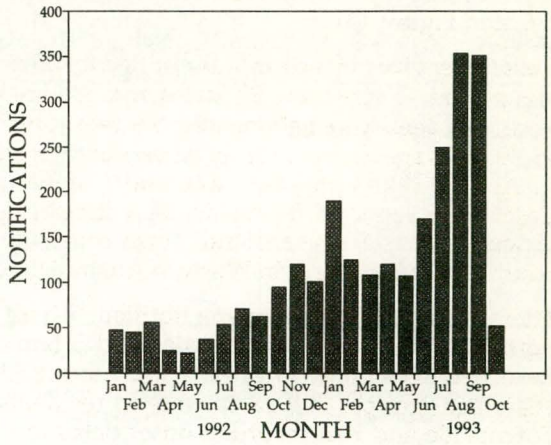
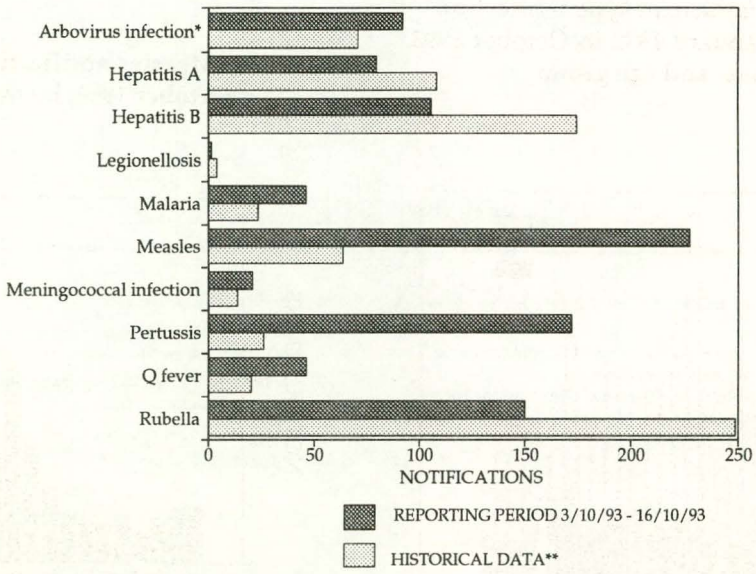


Figure 13. Selected National Notifiable Diseases Surveillance System reports, and historical data **



* Includes Ross River virus and Dengue

** The historical data are the averages of the number of notifications in 6 previous 2-week reporting periods: the corresponding periods of the last 2 years and the periods immediately preceding and following those.

Table 4. Notifiable Diseases preventable by vaccines recommended by the NHMRC for routine childhood immunisation for the reporting period 3 to 16 October 1993

DISEASES	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	TOTALS FOR AUSTRALIA[1] This Period 1993	This Period 1992	Year to Date 1993	Year to Date 1992
Diphtheria	0	0	1	0	0	0	0	0	1	0	47	12
Haemophilus influenzae b infection[2]	0	1	0	2	3	0	0	0	6	17	338	402
Measles	11	142	0	44	1	13	14	3	228	80	2342	789
Mumps	0	0	NN	NN	0	NN	0	2	2	2	13	20
Pertussis	1	51	1	22	62	0	27	8	172	42	1922	419
Poliomyelitis	0	0	0	0	0	0	0	0	0	0	0	0
Rubella[3]	3	23	0	84	14	0	14	12	150	543	2313	1558
Tetanus	0	0	0	NN	0	0	0	0	0	2	7	12

1. Totals comprise data from all States and Territories. Cumulative figures are subject to retrospective revision, so there may be discrepancies between the number of new notifications and the increment in the cumulative figure from the previous period.
2. NT, Tas: CRS only.

NN Not Notifiable.

Table 5. Other Notifiable Diseases[1], for the reporting period 3 to 16 October 1993

DISEASES	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	TOTALS FOR AUSTRALIA[2] This Period 1993	This Period 1992	Year to Date 1993	Year to Date 1992
Arbovirus infection (NEC)[3]	0	0	1	19	0	0	0	0	20	9	489	240
Ross River virus infection	0	4	1	58	-	NN	0	2	65	74	5070	5264
Dengue	0	-	0	7	-	NN	0	-	7	42	679	310
Campylobacteriosis[4]	5	-	3	105	101	38	79	31	362	506	6204	6675
Chlamydial infection (NEC)[5]	4	NN	70	100	0	1	36	27	238	274	5192	5154
Donovanosis	0	NN	1	1	NN	NN	0	1	3	0	53	62
Gonococcal infection[6]	0	6	26	24	0	0	4	20	80	117	2257	2338
Hepatitis A	1	17	4	51	2	0	5	0	80	68	1564	1646
Hepatitis B	6	3	2	73	1	0	3	18	106	201	1856	4176
Hepatitis C	16	1	7	191	0	1	100	40	356	391	5758	6902
Hepatitis (NEC)	0	1	0	0	0	0	0	NN	1	3	60	49
Legionellosis	0	0	0	0	1	0	1	0	2	6	127	161
Leptospirosis	0	0	0	5	0	0	4	0	9	8	131	98
Listeriosis	0	4	NN	1	0	0	2	0	7	4	41	34
Malaria	1	14	0	24	0	0	5	2	46	21	516	605
Meningococcal infection	0	3	0	11	1	1	4	1	21	16	277	226
Ornithosis	0	NN	0	0	2	0	1	0	3	5	68	76
Q fever	0	9	0	34	2	0	1	0	46	27	702	411
Salmonellosis (NEC)	2	14	15	47	10	7	21	7	123	118	3654	3856
Shigellosis[4]	0	-	3	2	1	0	4	3	13	25	594	509
Syphilis	1	12	16	12	0	0	0	6	47	152	1804	2188
Tuberculosis	0	6	3	2	1	1	11	0	24	75	724	722
Typhoid[7]	0	1	0	0	0	0	0	0	1	2	27	43
Yersiniosis (NEC)[4]	0	-	0	8	3	0	3	1	15	13	367	482

1. For HIV and AIDS, see Tables 2 and 3, *CDI* 1993;17:491. For rarely notified diseases, see Table 7.
2. Totals comprise data from all States and Territories. Cumulative figures are subject to retrospective revision so there may be discrepancies between the number of new notifications and the increment in the cumulative figure from the previous period.
3. SA, Tas: includes Ross River virus and dengue.
   WA: includes dengue.
4. NSW: only as 'foodborne disease' or 'gastroenteritis in an institution'.
5. WA: genital only.
6. NT, Qld, SA and Vic: includes gonococcal neonatal ophthalmia.
7. NSW and Vic: includes paratyphoid.

NN Not Notifiable.

NEC Not Elsewhere Classified.

\- Elsewhere Classified.

Table 6. Rarely Notified Diseases[1] for the reporting period 3 to 16 October 1993

DISEASES	Total This Period	Reporting States or Territories	Year to Date 1993
Botulism	0		0
Brucellosis	1	Qld	16
Chancroid	0		1
Cholera	1	Qld	3
Hydatid infection	1	Qld	21
Leprosy	1	Vic	10
Lymphogranuloma venereum	0		1
Plague	0		0
Rabies	0		0
Yellow fever	0		0
Other viral haemorrhagic fevers	0		0

1. Fewer than 50 cases of each of these diseases were notified each year during the period 1987 to 1992.

Table 7. Laboratory reports by State or Territory[1] for the reporting period 7 to 20 October 1993, historical data[2], and total reports for the year

	State or Territory [1]								Total this fortnight	Historical data [2]	Total reported this year
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA			
MEASLES, MUMPS, RUBELLA											
Measles virus	1	2		22		1	8		34	11.8	324
Mumps virus		1		5					6	1.3	65
Rubella virus	3	12		12	9		2	7	45	33.7	817
HEPATITIS VIRUSES											
Hepatitis A virus				8				1	9	18.3	457
Hepatitis B virus		27		29		1	18	16	91	92.7	2,113
Hepatitis C virus	8	29		32	29	2	5	76	181	80.5	3,633
Hepatitis E virus							2		2	.2	7
ARBOVIRUSES											
Ross River virus		1	1	19				3	24	9.5	1,719
Barmah Forest virus				6					6	2.2	181
Dengue type 2				18					18	9.0	421
Flavivirus (unspecified)				6					6	1.3	112
ADENOVIRUSES											
Adenovirus type 2							1		1	9.5	100
Adenovirus type 3		3					1		4	4.8	202
Adenovirus type 4							1		1	4.0	63
Adenovirus type 7							2		2	.2	10
Adenovirus type 8							2		2	3.5	22
Adenovirus not typed/pending		6		52	8		11	3	80	44.2	1,099
HERPES VIRUSES											
Herpes simplex virus type 1		6		78	18		32	25	159	133.7	3,456
Herpes simplex virus type 2	1	5		85	18		23	43	175	156.7	4,209
Herpes simplex not typed/pending	3			6			5		14	33.3	583
Cytomegalovirus		4	1	51	3		19	5	83	67.8	1,433
Varicella-zoster virus		2		11			12	8	33	28.5	822
Epstein-Barr virus		5		12	11		8	14	50	52.2	1,466
OTHER DNA VIRUSES											
Contagious pustular dermatitis (Orf virus)								1	1	.0	4
Parvovirus		1							1	4.3	102

Table 7. Laboratory reports by State or Territory[1] for the reporting period 7 to 20 October 1993, historical data[2], and total reports for the year, continued

	State or Territory [1]								Total this fortnight	Historical data [2]	Total reported this year
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA			
PICORNA VIRUS FAMILY											
Coxsackievirus A9	1	1							2	2.5	57
Coxsackievirus B3							1		1	.2	16
Coxsackievirus B5	2								2	1.3	45
Echovirus type 6		1							1	.8	3
Echovirus type 11		3							3	.2	90
Echovirus type 30		1					14		15	.3	61
Poliovirus type 3 (uncharacterised)		1							1	1.0	29
Rhinovirus (all types)		1		28			21	2	52	25.7	685
Enterovirus not typed/pending				92		1	7	2	102	19.0	717
ORTHO/PARAMYXOVIRUSES											
Influenza A virus		2		18	17		7	9	53	19.0	394
Influenza A virus H_3N_2				1			4		5	.0	25
Influenza B virus	2	4	3	39	15		21	5	89	26.3	549
Parainfluenza virus type 3		6		10	2		1	5	24	26.3	483
Parainfluenza virus typing pending							2		2	2.5	43
Respiratory syncytial virus		4		25	14	2	15	21	81	96.7	3,357
OTHER RNA VIRUSES											
HIV-1		1		10		1			12	1.8	65
Rotavirus	8	34	1		6	10	11	6	76	155.7	1,847
Norwalk agent							1		1	.7	20
Small virus (like) particle							1		1	3.2	37
OTHER											
Chlamydia trachomatis not typed	1	2		30	23	1	6	25	88	100.0	2,454
Chlamydia psittaci				1			5		6	4.2	71
Chlamydia species		1							1	.2	13
Mycoplasma pneumoniae	1	4		46	2	2	8		63	63.3	1,705
Coxiella burnetii (Q fever)				24	1				25	7.0	462
Rickettsia spp - other		1							1	.0	4
Streptococcus group A		2		7					9	.0	248
Yersinia enterocolitica				1					1	.0	5
Bordetella pertussis				1			15		16	.2	239
Bordetella species				11					11	1.7	200
Cryptococcus species		1		2					3	.8	27
Leptospira canicola				1					1	.0	1
Leptospira pomona				1					1	.0	6
Leptospira hardjo				1					1	.0	9
Leptospira australis				1					1	.0	5
Leptospira species				2					2	.2	16
Treponema pallidum		10		26					36	9.8	547
Entamoeba histolytica				1					1	.0	9
Toxoplasma gondii							1		1	1.2	49
Echinococcus granulosus		1		3					4	.5	19
TOTAL	31	185	6	834	176	21	293	277	1,823	1,375.3	38,032

1. State or Territory of postcode, if reported, otherwise State or Territory of reporting laboratory.
2. The historical data are the averages of the numbers of reports in 6 previous 2 week reporting periods: the corresponding periods of the last 2 years and the periods immediately preceding and following those.

Table 8. Laboratory reports by clinical information for the reporting period 7 to 20 October 1993

	Encephalitis	Meningitis	Other CNS	Congenital	Respiratory	Gastrointestinal	Hepatic	Skin	Eye	Muscle/joint	Genital	Other/unknown	Total
MEASLES, MUMPS, RUBELLA													
Measles virus			1		4			16	1			12	34
Mumps virus										1		5	6
Rubella virus					1			28				16	45
HEPATITIS VIRUSES													
Hepatitis A virus							5					4	9
Hepatitis B virus						1	13					77	91
Hepatitis C virus						3	8					170	181
Hepatitis E virus							2						2
ARBOVIRUSES													
Ross River virus							1			10		13	24
Barmah Forest virus												6	6
Dengue type 2			1									17	18
Flavivirus (unspecified)										2		4	6
ADENOVIRUSES													
Adenovirus type 2					1								1
Adenovirus type 3			1		3								4
Adenovirus type 4												1	1
Adenovirus type 7					2								2
Adenovirus type 8									2				2
Adenovirus not typed/pending			2		35	12			3	2		26	80
HERPES VIRUSES													
Herpes simplex virus type 1					7			69	6		53	24	159
Herpes simplex virus type 2					1			42			121	11	175
Herpes simplex not typed/pending											4	10	14
Cytomegalovirus			2	1	30	1	2	2		1	1	43	83
Varicella-zoster virus								27				6	33
Epstein-Barr virus					6		4	1				39	50
OTHER DNA VIRUSES													
Contagious pustular dermatitis (Orf virus)								1					1
Parvovirus												1	1
PICORNA VIRUS FAMILY													
Coxsackievirus A9		1			1								2
Coxsackievirus B3					1								1
Coxsackievirus B5												2	2
Echovirus type 6					1								1
Echovirus type 11		1						1				1	3
Echovirus type 30		13										2	15
Poliovirus type 3 (uncharacterised)												1	1
Rhinovirus (all types)					49			1				2	52
Enterovirus not typed/pending		2			52	4		3	2		2	37	102

Table 8. Laboratory reports by clinical information for the reporting period 7 to 20 October 1993, continued

	Encephalitis	Meningitis	Other CNS	Congenital	Respiratory	Gastrointestinal	Hepatic	Skin	Eye	Muscle/joint	Genital	Other/unknown	Total
ORTHO/PARAMYXOVIRUSES													
Influenza A virus	1		1		27	1						23	53
Influenza A virus H_3N_2					5								5
Influenza B virus	1	2			41	1				3		41	89
Parainfluenza virus type 3					22							2	24
Parainfluenza virus typing pending					1							1	2
Respiratory syncytial virus					77		1					3	81
OTHER RNA VIRUSES													
HIV-1												12	12
Rotavirus						76							76
Norwalk agent						1							1
Small virus (like) particle						1							1
OTHER													
Chlamydia trachomatis not typed					1				1		72	14	88
Chlamydia psittaci					3							3	6
Chlamydia species									1				1
Mycoplasma pneumoniae					30	1	2					30	63
Coxiella burnetii (Q fever)							1			1		23	25
Rickettsia spp - other												1	1
Streptococcus group A					1			1		2		5	9
Yersinia enterocolitica												1	1
Bordetella pertussis					16								16
Bordetella species					2							9	11
Cryptococcus species		1										2	3
Leptospira canicola												1	1
Leptospira pomona												1	1
Leptospira hardjo												1	1
Leptospira australis							1						1
Leptospira species	1											1	2
Treponema pallidum											9	27	36
Entamoeba histolytica												1	1
Toxoplasma gondii												1	1
Echinococcus granulosus					1		1					2	4
TOTAL	3	20	8	1	421	102	41	192	16	22	262	735	1823

Table 9. Laboratory reports by contributing laboratories for the reporting period 7 to 20 October 1993

STATE OR TERRITORY	LABORATORY	REPORTS
Australian Capital Territory	Woden Valley Hospital, Canberra	34
New South Wales	Institute of Clinical Pathology & Medical Research, Westmead	12
	Royal Alexandra Hospital for Children, Camperdown	17
	South West Area Pathology Service, Liverpool	109
Queensland	Queensland Medical Laboratory, West End	365
	State Health Laboratory, Brisbane	513
South Australia	Institute of Medical & Veterinary Science, Adelaide	176
Tasmania	Northern Tasmanian Pathology Service, Launceston	17
Victoria	Microbiological Diagnostic Unit, University of Melbourne	5
	Monash Medical Centre, Melbourne	11
	Royal Children's Hospital, Melbourne	84
	Victorian Infectious Diseases Reference Laboratory, Fairfield Hospital	196
Western Australia	Princess Margaret Hospital, Perth	40
	State Health Laboratory Services, Perth	244
TOTAL		1823