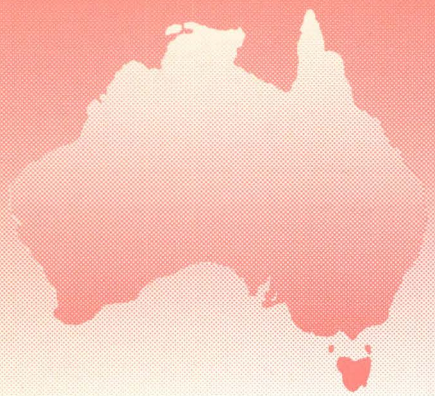

COMMUNICABLE DISEASES INTELLIGENCE

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CONTENTS

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

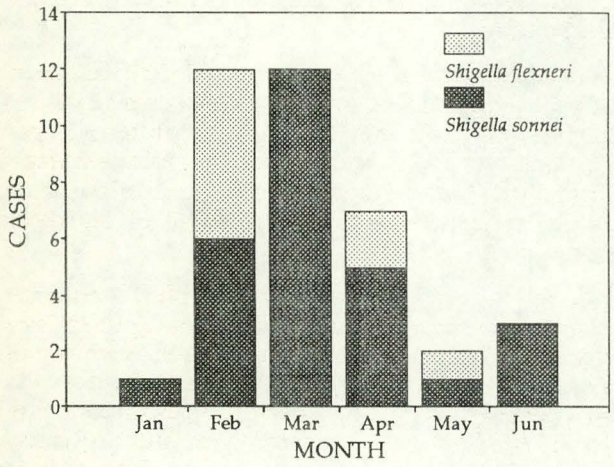
SHIGELLOSIS IN FAR NORTH QUEENSLAND, 1993

(C Streeton, National Centre for Epidemiology and Population Health, Canberra, and Centre for Disease Control, Cairns; J Hanna, Centre for Disease Control, Cairns)

In February there was a marked increase in the number of cases of shigellosis reported in Far North Queensland. There were only two cases reported between November 1992 and January 1993 (inclusive), but 36 proven cases occurred over the next five months (Figure 1). This report documents the cases that occurred in the first six months of 1993, concentrating mainly on two outbreaks.

Towards the end of February there was a cluster of five cases of *S. flexneri* 3 infection. All the patients were adults who lived in the Torres Strait, suggesting a common source exposure. This outbreak was not investigated.

Figure 1. Shigellosis cases in Far North Queensland, 1993, by month and species



The remaining shigellosis cases were caused by *S. sonnei*, mainly in two simultaneous but separate outbreaks. Altogether 28 proven cases of *S. sonnei* occurred over the six months. There were a further 8 probable cases, defined as household contacts of a culture-confirmed (proven) case with compatible symptoms occurring within a week of diagnosis of the proven case.

The first outbreak, of six cases, occurred in a small town south of Cairns. The *S. sonnei* isolated was ampicillin-tetracycline-trimethoprim sensitive and was apparently initially acquired by a young Aboriginal child whilst visiting the Northern Territory in February. Ultimately four members of the child's extended family became infected, and two were hospitalised on March 29. Unfortunately nosocomial transmission of *S. sonnei* occurred in the hospital; another child in the same ward and a nursing sister became infected, both in the first week of April. The importance of barrier nursing practices and hand washing was emphasised to the hospital staff and no further nosocomial transmission occurred.

The other *S. sonnei* outbreak occurred in a rural town (population approximately 7,000) on the Atherton Tablelands. The isolate responsible was resistant to ampicillin-tetracycline-cotrimoxazole. The index case was an Aboriginal child; the initial source of infection is unknown. A total of 26 cases occurred in the town over a five month period (Figure 2). The attack rate was greatest in preschool-aged children (Figure 3).

Figure 2. Cases of *Shigella sonnei* infection in the Atherton Tablelands outbreak town, 1993, by month and confirmation status

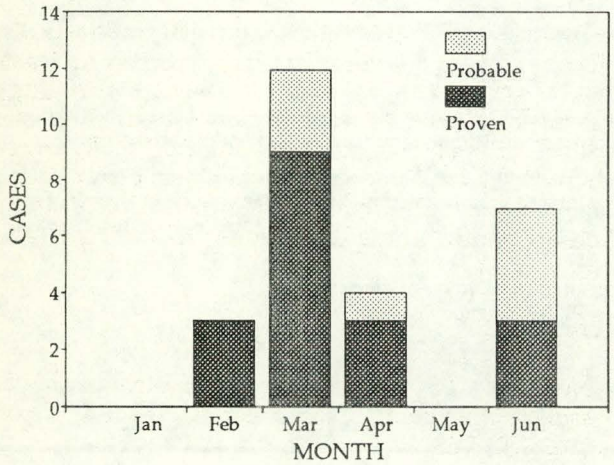
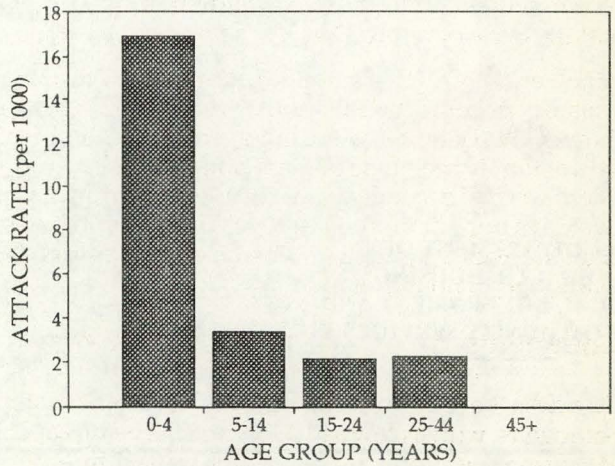


Figure 3. *Shigella sonnei* attack rates in the Atherton Tablelands outbreak town, 1993, by age group



By the time the second outbreak was identified, three circumstances that could have 'amplified' the transmission of *Shigella* in the community had already occurred:

(a) a young child, still requiring nappies, had attended a child day-care centre for several days with symptoms, prior to diagnosis and exclusion from the centre,

(b) a family day-care provider had become infected. This provider was caring for two toddlers in nappies with diarrhoea (neither proven cases) in the week prior to the onset of symptoms. As soon as the provider developed symptoms the 10 children in her care were re-located to other family day-carers in the community, and

(c) a child with confirmed *Shigella* infection had returned to preschool before her diarrhoea had completely ceased.

In an effort to prevent further transmission of *Shigella* in the community, the Centre for Disease Control encouraged the local doctors, hospital and diagnostic laboratories to assist in the identification and reporting of new cases. Information sheets about shigellosis and its prevention were distributed widely through child-care, the kindergarten and the preschool. Child carers at the facilities were reminded of the importance of supervising young children handwashing after the toilet and before meals, and of handwashing after changing nappies and before preparing or serving food.

For a period of nearly two months (early April to early June) there were no further cases, suggesting that the measures recommended for prevention were promptly implemented and maintained. However, in June a further three proven and four probable cases were identified; all seven cases occurred in four families that form a strong social network. This family network had been affected earlier in the outbreak, suggesting that reinfection was occurring from within the network, rather than from the general community. Four of the June cases were children who attended the day-care centre. No other cases occurred in the centre, supporting the hypothesis that the reinfection was occurring in the family network. Antibiotics (initially chloramphenicol but later in the outbreak ciprofloxacin) were recommended for the affected children in an attempt to halt the cycle of reinfection.

Nineteen (73%) of the patients in the outbreak town had a history of contact with another case. Although only thirteen households were involved in the outbreak, 44% of family members of these households became ill. There were 13 secondary cases (cases occurring at least two days but not more than seven days after the onset of an index case), giving a secondary attack rate of 28% within the 13 households.

Comments

Shigella is the most transmissible of the bacterial enteric pathogens, with as few as 100 organisms being capable of causing symptoms after ingestion by healthy adults[1]. The low infecting dose explains the ease of person to person transmission, the high secondary attack rates in household contacts of a confirmed index case[1], and why child day-care centres and schools are particularly vulnerable to outbreaks of shigellosis[1,2].

Because infants are not yet toilet-trained, and because they explore the environment with their mouths, young children who attend day-care facilities are at increased risk for diarrhoeal diseases including shigellosis[2]. Indeed, because there may be sub-optimal hygiene, child-care facilities can readily 'amplify' transmission of shigellosis into the community and should be targetted for intensive control efforts[2].

The highly infectious nature of *S. sonnei* was apparent during both outbreaks, with high attack rates among family contacts. It is probable that the intermittent and prolonged excretion of *S. sonnei* during convalescence - median duration 17 to 29 days[1] - contributed to the reinfection that is thought to have occurred within the family network in the larger outbreak. In accordance with the current United States' guidelines[3], antibiotics were used in an attempt to stop transmission within the network. However, recent United Kingdom guidelines de-emphasise the role of antibiotics for controlling *S. sonnei* outbreaks[4].

It is of note that the *S. flexneri* outbreak occurred among Torres Strait Islanders, and the index cases of the two *S. sonnei* outbreaks were Aboriginal children. *Shigella* infections are more frequent among disadvantaged communities[1], and Aboriginal children in particular have to cope with an intense burden of diarrhoeal disease[5].

Although the original source of the multiply-antibiotic resistant *S. sonnei* remains uncertain, multiply-resistant *Shigella* has been isolated from children from remote Aboriginal communities in north Queensland for several years (Dr R Messer, personal communication). Recent observations concerning multiply-resistant *Shigella* infections among Navajo Indian children in the United States indicate that use of antibiotics is a risk factor for symptomatic shigellosis caused by multiply-resistant strains[6]. This emphasises the need for a rational and standardised approach to the prescribing of antibiotics for children at risk for frequent, often severe, infections.

In summary, the two *S. sonnei* outbreaks emphasise the infectiousness of this organism, its propensity for transmission within families and within hospital settings, and the likelihood of transmission within child-care facilities. Effective control, although difficult, can be achieved by implementing meticulous personal hygiene practices. This requires the supervision of young children handwashing after going to the toilet and before meals.

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SHIGELLA BOYDII 1 IN WESTERN AUSTRALIA

(Reproduced with acknowledgment from Western Australian Notifiable Diseases Bulletin Volume 3, Number 5, July 1993. Data provided by the Clinical Enteric Laboratory, Western Australian State Health Laboratory Services, and the National Salmonella Surveillance Scheme, Melbourne)

Shigellosis is an acute bacterial disease caused by the genus *Shigella* and characterised by diarrhoea accompanied by fever and nausea. In typical cases the stools contain blood, mucus and pus. Illness is usually self-limited, lasting several days to weeks, with an average of four to seven days. Transmission is usually by the direct or indirect faecal-oral route.

Shigella boydii is a species of *Shigella* which, until recently, has been isolated only from patients who have a history of overseas travel or who are migrants or refugees.

On three consecutive days in September 1992, isolates of *S. boydii* 1 were made from patients in the Kimberley region of Western Australia who had no history of travel. No further isolates were made for almost a month, but then isolates were made from further patients in the Kimberley.

The outbreak continued and in the eight months from mid-September 1992 to mid-May 1993, 55 cases were confirmed. Of these 55 cases, 47 were residents of the Kimberley region, four were residents of the Goldfields, two were residents of the Pilbara, one was an English tourist who had been on a bus trip to the North-west of Western Australia, and one patient was a resident of the Perth metropolitan area but had recently been working at an Aboriginal community in the Goldfields. Most patients were Aboriginal.

There were no *S. boydii* infections reported in Western Australia during the period 1985 to 1990. Fifty-six have been reported since the beginning of 1992 (Table 1).

The case in 1991 was a Vietnamese migrant. Another case, in July 1992, was a traveller who had returned from Bali with an enteric infection. *S. boydii* 1 infections diagnosed during the remainder of 1992, and in 1993, were all locally acquired.

Elsewhere in Australia, most *S. boydii* 1 infections prior to 1992 had been in patients with a history of overseas travel (Table 2).

The 10 cases recorded from elsewhere in Australia in 1992 represent a similar outbreak in South Australia and the Northern Territory which began two weeks after the first cases were recognised in Western Australia.

Table 1. *S. boydii* 1 infections in Western Australia, 1 January 1985 to 15 May 1993, by year

Year	Total
1985	0
1986	0
1987	0
1988	0
1989	0
1990	0
1991	1
1992	27
1993	29

Table 2. *S. boydii* 1 infections in other Australian States and Territories, 1 January 1985 to 31 December 1992, by year and history of overseas travel

Year	Overseas travel history	No overseas travel history	Total
1985	0	1	1
1986	0	0	0
1987	0	0	0
1988	1	0	1
1989	1	0	1
1990	1	1	2
1991	2	0	2
1992	0	10	10

CDI Editorial Comment

The National Salmonella Surveillance Scheme has reported five recent cases of *Shigella boydii* 1 from South Australia[1], the first in November last year. They were reported from Ceduna, Oodnadatta, Port Augusta, Coober Pedy and Adelaide. The first of the eight recent Northern Territory cases was reported from Darwin in September. The others were reported from Alice Springs (4), Katherine (2), and for a person in Tennant Creek with contact with workmates from India.There was also one case reported from Mt Isa in Queenland in February.

This *Shigella boydii* 1 outbreak has also been reflected in shigellosis notifications this year. A total of 454 cases with 1993 onset was notified to the end of July this year, compared with 387 by the same time last year. Of these, 130 had been from Western Australia, compared with 93 last year.

Reference

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GONOCOCCAL SURVEILLANCE, AUSTRALIA, 1 JANUARY TO 31 MARCH 1993

Contributed by the Australian Gonococcal Surveillance Programme - AGSP. Co-ordinator Dr JW Tapsall, The Prince of Wales Hospital, Sydney)

This report provides details of the antibiotic sensitivity of 533 strains of *Neisseria gonorrhoeae* examined by participating laboratories in the first quarter of 1993. All of the strains were tested for their sensitivity to penicillin and 458 for their sensitivity to spectinomycin, ceftriaxone and ciprofloxacin and for high level resistance to the tetracyclines.

The penicillin sensitivities of the isolates have been tabulated as aggregated data for Australia, and also by region for four of the larger centres (Table). This demonstrates the not inconsiderable regional variation in sensitivity patterns which occurs in Australia. Resistance to the penicillins was most marked in Melbourne, with more than a quarter of the strains resistant by virtue of intrinsic resistance (CMRNG) or by production of penicillinase (PPNG). The percentage of strains which were penicillin resistant was not as high in other centres and, somewhat paradoxically, the proportion of strains in Melbourne which were fully sensitive to the penicillins was also higher than in other regions. As mentioned in previous reports, this considerable increase in penicillin sensitive strains in recent times has been found particularly in male patients. Information on the acquisition of PPNG was available only in 25 of the 44 infections. Eighteen of these patients acquired their disease overseas - in South-East Asia in all except one instance. Local acquisition of PPNG was recorded in four centres.

All of the 458 strains tested for susceptibility to other antibiotics were found to be sensitive to spectinomycin and ceftriaxone. Sixteen isolates (3.5%) showed a decreased sensitivity to quinolone antibiotics, and these were detected in four centres throughout Australia.

High level tetracycline resistance was present in eight strains (1.7%) of isolates tested and was found in Sydney, Melbourne and Adelaide. Four of these strains were acquired by local contact.

The total number of strains examined (533) is an increase on both the 498 strains examined in the last quarter of 1992 and on the 416 strains examined in January-March 1992.

Table. Penicillin sensitivity of *Neisseria gonorrhoeae* isolated in Australia, 1 January to 31 March 1993 (n tested = 533)

Centre	Percentage of Isolates[1]			
	Sensitive[2]	Less sensitive[3]	Relatively resistant[4]	PPNG[5]
Brisbane	19.8 (7.9)	73.6 (76.2)	0 (0)	6.6 (15.9)
Sydney	33.8 (33)	56 (40)	3.2 (10)	7 (17)
Melbourne	55.2 (36.8)	18.4 (36.8)	13.2 (5.3)	13.2 (21.1)
Adelaide	22.2	61.1	5.6	11.1
Australia	32.5 (23.6)	54.2 (58.2)	5.1 (4.6)	8.2 (13.7)

1. Figures in parentheses represent data from the corresponding period in 1992.
2. Sensitive, MIC ≤ 0.03 mg/L.
3. Less sensitive, MIC 0.06 - 0.5 mg/L.
4. Relatively resistant, MIC ≥ 1 mg/L.
5. PPNG = penicillinase producing *N. gonorrhoeae*.

PERTUSSIS OUTBREAK IN WESTERN AUSTRALIA

(Margaret Ashwell, Health Department of Western Australia and National Centre for Epidemiology and Population Health, Canberra)

The number of pertussis notifications made to the Health Department of Western Australia is unusually high for this time of the year and has been steadily rising since last winter (Figure 1).

The Health Department of Western Australia expected an outbreak over the summer months of 1992-93 on the basis of the previously documented pertussis cycle[1] and so warned the public. Since the numbers for that period were similar to previous years, we thought that our warnings had been heeded and parents had had their unvaccinated children vaccinated against pertussis, thus preventing the outbreak. This now does not seem to have been the case.

For 1993, there has been a total of 120 cases of pertussis notified to the Health Department of Western Australia, three times the number of notifications for the same period in 1991 or 1992. Of the 1993 cases, 102 (85%) were confirmed by a laboratory test, three (2.5%) were diagnosed on clinical grounds only and for the rest (12.5%) confirmation was not recorded. The male to female ratio of 0.93:1 is not significantly different from that for the general population.

The age range for the 1993 cases is one month to 78 years. The majority of cases (76%) are under 15 years (Figure 2) but adults of all ages have been afflicted. (The age was not recorded for one female.) Based on the 1992 estimated population of Western Australia, the highest age-specific attack rates occurred in both

Figure 2. Pertussis notifications, Western Australia, 1993, by age group

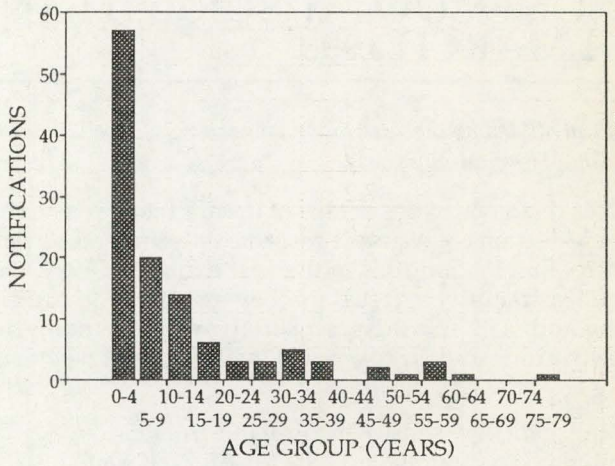
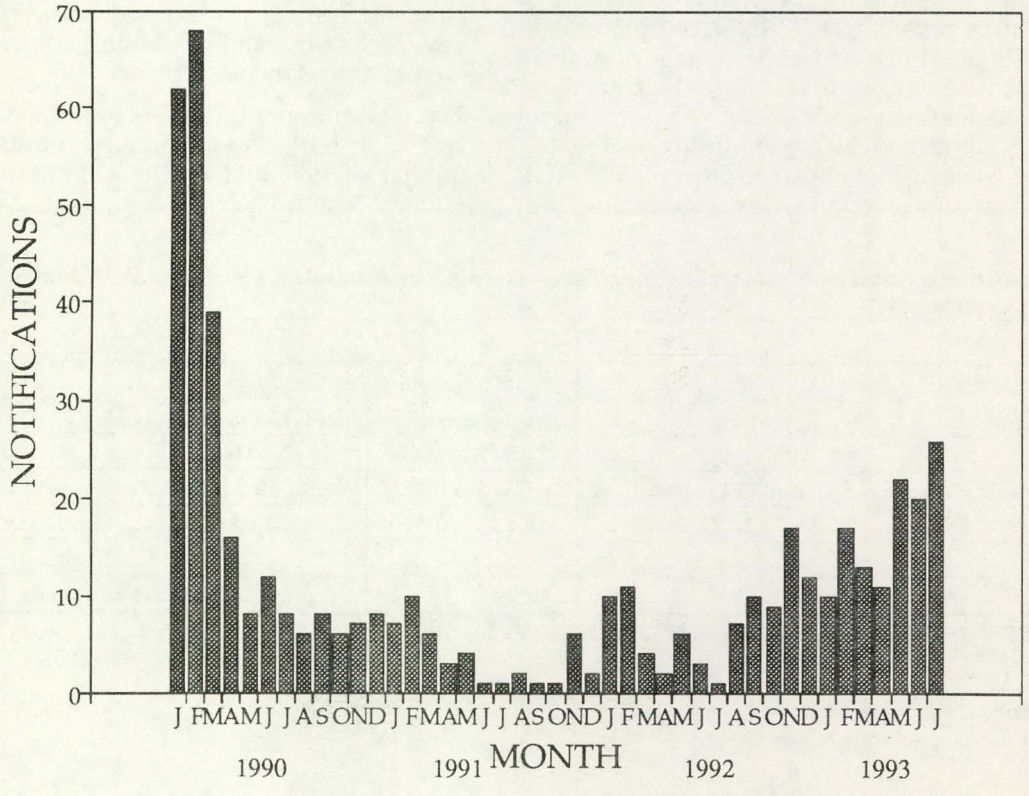


Figure 1. Pertussis notifications, Western Australia, January 1990 to July 1993, by month



sexes under the age of 15 years (Table 1), in males aged 15 to 19 and 75-79 years, and in females aged 25 to 34 and 55 to 59 years. The women of child bearing age and elderly people may have been infected when caring for young children ill with pertussis.

The attack rate for the whole State is 6.9 per 100,000 population. The highest attack rates have been in the metropolitan regions and the Central Health region (Table 2). There have been no cases reported from the Kimberley or Pilbara regions.

Table 1. Pertussis notification rates by age group and sex, Western Australia, 1993

Age group	Male	Female	Total
0-4	40.1	47.3	43.6
5-9	20.3	9.2	14.9
10-14	7.9	15.2	11.4
15-19	7.2	1.5	4.4
20-24	2.8	1.5	2.2
25-29	0.0	4.1	2.0
30-34	0.0	6.8	3.3
35-39	1.4	2.9	2.2
40-44	0	0	0
45-49	1.9	2.1	2.0
50-54	2.4	0.0	1.2
55-59	3.0	6.2	4.6
60-64	0.0	3.2	1.6
65-69	0	0	0
70-74	0	0	0
75-79	7.0	0.0	2.9

The last outbreak in Western Australia occurred in the summer of 1989-1990. If the three year cyclical pattern of pertussis outbreaks in Western Australia had continued, another outbreak would have occurred over the 1992-93 summer. This current increase in numbers has occurred later than expected, yet seasonally earlier than would have been predicted for an outbreak in the 1993-94 summer.

References

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CDI Editorial Comment

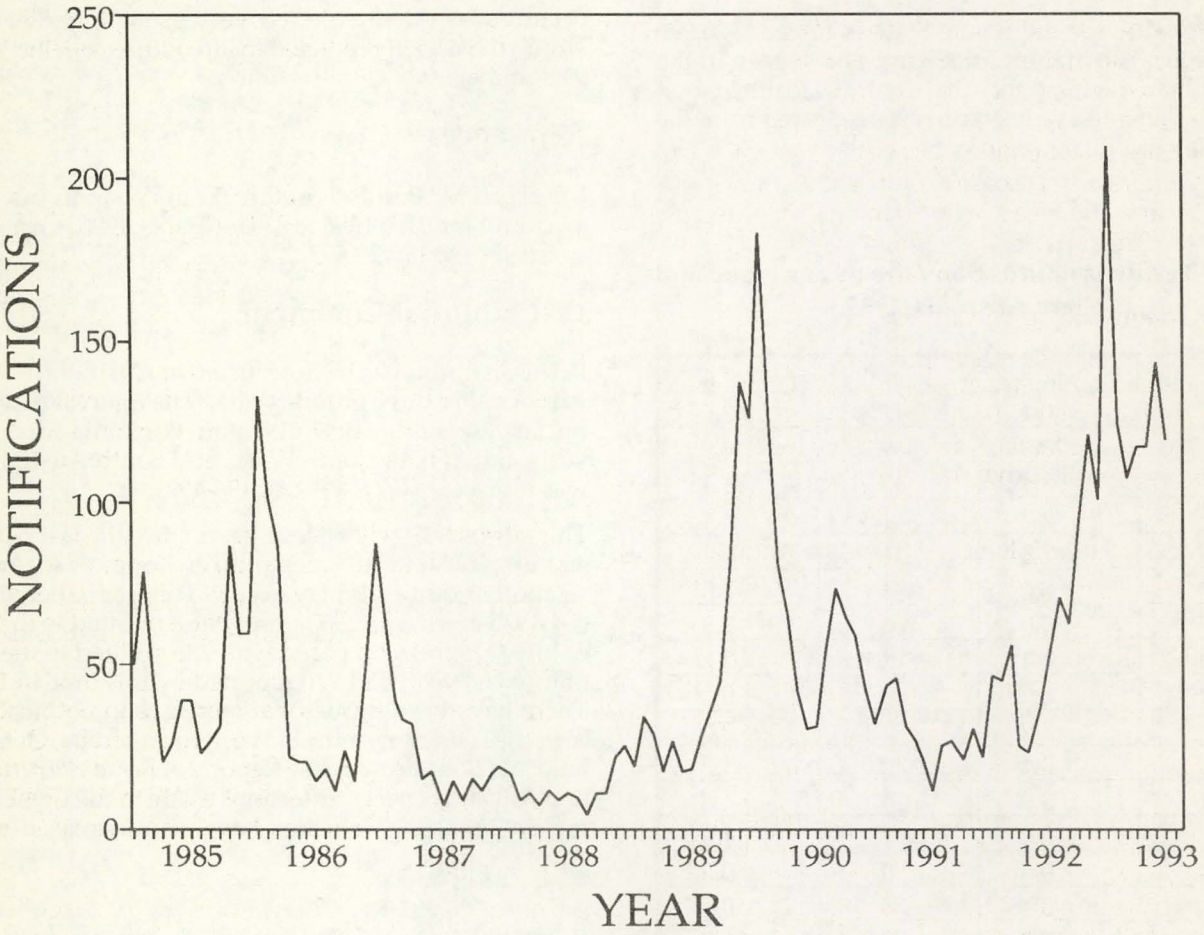
Pertussis outbreaks have occurred in Australia at intervals of either three or four years. The interval between the last two outbreaks in Western Australia was three years, but in New South Wales and South Australia, it was four years (*CDI* 1992;**16**:496-497).

This summer, it will be four years since the last pertussis outbreak in most States and Territories of Australia, so another outbreak may occur. This year, there have been 935 cases with 1993 onset dates notified to the end of July (Figure), compared with 285 notified to the end of July last year, and 220 reported by this time in 1991. There have been unseasonal increases in notifications over the last few months in Western Australia, Queensland and South Australia. Reports of *Bordetella pertussis* and *Bordetella* species infections made to the *CDI* Laboratory Reporting Schemes have also increased since April.

Table 2. Pertussis notification rates, by Western Australian Health regions, 1993

Region	Notifications	1992 population	Attack rate per 100,000
North Metropolitan	34	415302	8.19
East Metropolitan	29	407190	7.12
South Metropolitan	38	443063	8.58
Total Metropolitan	101	1265555	7.98
Mild West	3	66747	4.49
Central	4	51901	7.71
Goldfields	1	56390	1.77
South West	3	141770	2.12
Great Southern	2	68070	2.94
Total country	13	456825	2.85

Figure. Pertussis notifications, Australia, 1985 to 1993, by reporting period[1,2]



1. Pertussis became notifiable in Western Australia in May 1985, in the Northern Territory in June 1985, in Tasmania in September 1989, in Queensland in July 1990 and in the ACT in June 1992.
2. Four weekly reporting period, 1985 to 1990; month of onset 1991 to 1993.

OVERSEAS BRIEFS

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

Cholera Update

An outbreak of cholera has been reported from Djibouti, and the whole country has been declared infected. Cases and deaths were reported in July.

The outbreak in Afghanistan had included 9603 cases and 560 deaths by 25 July. The Provinces of Kabul, Badakhshan, Baghlan, Balkh, Helmand, Herat, Kandahar, Kunduz and Zabul have all been declared infected. Contaminated water supplies are thought to be the source of the epidemic.

Cases of cholera have been reported for June and July from Afghanistan, Belize, Bolivia, Brazil, Costa Rica, Djibouti, El Salvador, Guatemala, Honduras, Iran, Malawi, Mexico, Mozambique, Nicaragua, Peru, Tajikistan, Tanzania, Venezuela and Zimbabwe.

CDI NOTICE TO READERS

The United States' Centers for Disease Control and Prevention 1993 revised AIDS case definition: implications for Australia

In Australia, national surveillance for AIDS has been based on the case definition provided by the United States' Centers for Disease Control and Prevention (CDC), as first proposed in 1982 and as subsequently revised in 1985 and 1987[1]. In January 1993, CDC further revised the AIDS case definition[2].

The CDC definition now includes:

(i) adults and adolescents with diagnosed HIV infection who have a CD+ T-lymphocyte count of less than 200/μL of blood or a CD+ T-lymphocyte percentage of less than 14, with or without the diagnosis of disease(s) indicative of a defect in cell-mediated immunity, and

(ii) pulmonary tuberculosis, recurrent pneumonia and invasive cervical cancer as AIDS-defining conditions.

All AIDS-defining conditions included in the 1987 case definition are retained in the 1993 definition. The 1993 revision was introduced to provide a more accurate description of severe HIV-related immunodeficiency, and a broader description of HIV-related morbidity.

The countries of Europe have decided not to follow change (i), primarily because of concern that people without symptoms of advanced HIV disease would be incompletely enumerated in AIDS surveillance data[3], if they had not been diagnosed with HIV infection or regularly followed up. The European countries have agreed, however, to follow change (ii).

In Australia, national surveillance for HIV disease includes routine collection of CD4+ T-lymphocyte count at first diagnosis of AIDS, and at yearly intervals for people treated with zidovudine. Since May 1992, CD4+ T-lymphocyte count has also been reported at first diagnosis of HIV infection. These three strategies routinely provide an indication of the extent of immunodeficiency during the course of HIV disease in Australia.

The Intergovernmental Committee on AIDS, representing all Australian States and Territories, in consultation with the National Centre for HIV Epidemiology and Clinical Research (NCHECR) and the Communicable Diseases Network-Australia, has decided to add the clinical conditions specified under change (ii) but not to extend the AIDS case definition on the basis of CD4+ T-lymphocyte count. Australia is therefore adopting the same approach as the European countries, modifying the AIDS case definition only by the addition of the clinical conditions. The new definition is effective in Australia from 1 January 1993.

It is anticipated that the inclusion of tuberculosis and invasive cervical cancer in the AIDS case definition will have limited impact on the incidence of AIDS in Australia because of the relative rarity of these conditions in people with diagnosed HIV infection. The impact of the inclusion of recurrent episodes of pneumonia may be more substantial.

The Australian AIDS case definition is available from

NCHECR
376 Victoria Street
DARLINGHURST NSW 2010
phone (02) 332 4648
fax (02) 332 1837

or, with surveillance case definitions for the complete NHMRC recommended national list of notifiable diseases, from

NHMRC Publications Officer
GPO Box 9848
CANBERRA ACT 2601
phone (06) 289 7646 (24 hour answering machine)
fax (06) 289 7802.

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1. Ancelle-Park R, on behalf of Klein JP, Stroobant A, Smith E, Haikala O, Koch MA, Papaevangelou G, Walsh J, Rezza G, Huberry Krau P, Coutinho R, Paixão MT, de Andres Medina R, Böttiger M, Estermann J, Gill N, Brunet JB. Expanded European AIDS case definition. *Lancet* 1993;**341**:441.

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COMMUNICABLE DISEASES SURVEILLANCE

Virology and Serology Reporting Scheme

There were 1849 reports received in the *CDI* Virology and Serology Reporting Scheme this fortnight (Tables 6,7 and 8). This fortnight we welcome the Microbiology Department at the Monash Medical Centre, Melbourne to the Scheme.

From this issue of *CDI*, the presentation of the reports in the first table (Table 6) has been changed slightly. The reports are now sorted on the State or Territory of the patient's postcode, if reported, but otherwise on the State or Territory of reporting laboratory. Now that most laboratories are reporting the patient's postcode, this will enable reports and outbreaks diagnosed in interstate referral laboratories to be readily identified with the State or Territory of origin in the Table. Text references made to the State of Territory of a report will also now be to the State or Territory of the patient's postcode, if included in the report from the laboratory.

- **Measles** was reported for 18 patients, one from Tasmania, 8 from Queensland, 2 from New South Wales, one from the Northern Territory and 5 from Victoria. Ages ranged from one to 32 years.
- There were 19 **rubella** reports this fortnight. There were 2 females in the age group 15 to 44 years, including one who was pregnant and had been exposed to rubella vaccine at 5 weeks gestation.
- **Hepatitis C** was reported for 160 patients. One was a refugee applying for immigration, one was a nurse for whom occupational risk was reported, and 29 had a history of injecting drug use.
- There were 7 reports of **Ross River virus** infection this fortnight, bringing the total for the year to 1515. Six were presumptive (IgM, one from the Northern Territory, one from Western Australia and four from Queensland) and one from Queensland was confirmed (fourfold change). The peak in reports this year was in March.
- **Herpes simplex type 1** was reported for 130 patients. Included were one HIV positive patient, 4 transplant patients, one patient with a malignancy and an isolate from postmortem brain tissue of a 5 month old female who had suffered SIDS.
- **Herpes simplex type 2** was reported to the *CDI* Laboratory Reporting Schemes for the first time on the basis of nucleic acid detection, in a CSF sample. The patient was a 62 year old female. Two other patients were HIV positive and one had other immunocompromisation.
- There were 53 reports of **influenza**, 11 of **untyped influenza A** (2 isolates, 2 antigen detections, 3 IgM, 1 fourfold change, 2 single high titres, 1 other serological), 7 **influenza A H_3N_2** isolations and 35 reports of **influenza B** (5 isolations, 7 antigen detections, 1 fourfold change, 5 IgM, 11 single high titres, 6 other serological). Two influenza A reports and 4 influenza B reports were for patients aged over 65 years. This year, there has been a total of 22 reports in infants aged less than one year 36 in patients aged over 56 years.
- There has been a peak in the reports of **parainfluenza type** 2 reports received over autumn-winter. In Australia, this virus usually peaks every second year; the last peak was in 1991 (Figure 1).
- **Respiratory syncytial virus** infection was reported for 382 patients this fortnight, bringing the total for the year to 2325, more than the average recorded for the last 5 years (Figure 2). Three this fortnight

Figure 1. Parainfluenza virus type 2 laboratory reports, 1991 to 1993, by month of specimen collection

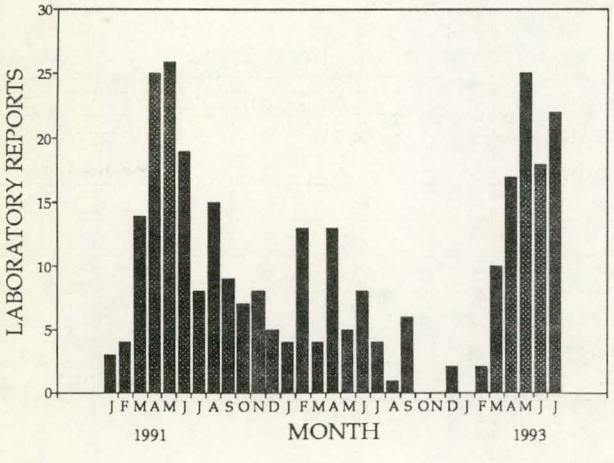
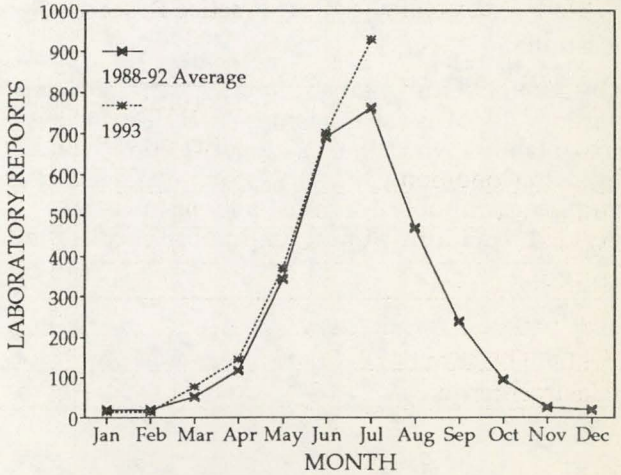


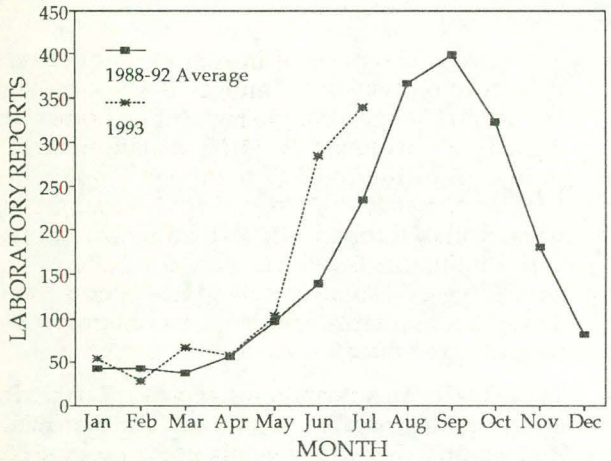
Figure 2. Respiratory syncytial virus laboratory reports, 1993 and 1988-92 average, by month of specimen collection



were reported as probably hospital acquired. The patients were males aged one week, 2 weeks and 4 months. They had been in the same special care nursery ward as another child who was admitted with the infection.

- There were 158 **rotavirus** reports this fortnight. One was a 2 month old male for whom encephalitis was the reported syndrome and another was a 2 year old female liver transplant patient. The number of rotavirus reports received so far this year is higher than the average recorded for the last 5 years (Figure 3).

Figure 3. Rotavirus laboratory reports, 1993 and 1988-92 average, by month of specimen collection



- There were 7 cases of **Q fever** reported this fortnight, bringing the total for the year to 281, more than for any year since 1987. All were males in the age range 17 to 49 years. This year, there have been 245 reports for males, and 36 reports for females. A total of 225 have been in males between the ages of 15 and 64 years. Six patients have been from South Australia, 10 from Victoria, 22 from Western Australia, 109 from New South Wales and 134 from Queensland.

Australian Sentinel Practice Research Network

The Australian Sentinel Practice Research Network collected data from 6532 patient encounters in Week 32 and from 5904 patient encounters in Week 33 (Table 1). This fortnight, influenza was reported at the highest rates for this year so far. Ten reports of rubella were received.

Sterile Sites Surveillance (LabDOSS)

Data for this fortnight have been provided by 6 laboratories. A total of 119 reports have been included: IMVS Adelaide 57, Woden Valley Hospital ACT 16, Northern Tasmanian Pathology Service 24, Royal Hobart Hospital 7, Central Queensland Pathology Service Mackay 4, Sullivan Nicolaides Queensland 11.

Organisms reported 5 or more times from blood are detailed in Table 2. Other blood isolates not included in Table 2 were:

Gram positive: 2 *Streptococcus sanguis*, 2 *Streptococcus* 'viridans', 2 Group B *Streptococcus*, 2 Group A *Streptococcus* (1 year old female and 55 year old female), 1 *Streptococcus* species, 1 coagulase negative *Staphylococcus*, 3 *Enterococcus faecalis*, 1 *Enterococcus* species.

Gram negative: 2 *Haemophilus influenzae* type b (both epiglottitis, 4 year old female and 5 year old male), 1 *Haemophilus influenzae* (no type, 22 year old male), 1 *Acinetobacter* species, 1 *Serratia marcescens*, 1 *Proteus mirabilis*, 1 *Enterobacter* species, 2 *Enterobacter aerogenes*, 1 *Enterobacter cloacae.*

Anaerobes: 1 *Fusobacterium* species, 1 *Bacteroides thetaiotomicron*, 1 *Clostridium perfringens.*

Fungi: 1 *Candida albicans*, 2 *Candida* species.

Table 1. Australian Sentinel Practice Research Network, Weeks 32 and 33 1993

Condition	Week 32, to 8 August 1993		Week 33, to 15 August 1993	
	Reports	Rate per 1000 encounters	Reports	Rate per 1000 encounters
Influenza	98	15.0	96	16.3
Measles	0	0	0	0
Rubella	3	0.5	7	1.2
Pertussis	3	0.5	0	0
Genital herpes	2	0.3	0	0
Gastroenteritis	82	12.6	74	12.5

Table 2. LabDOSS reports of blood isolates, by organism and clinical information

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			1	3	3		7		23[2]	365
Staphylococcus epidermidis								2	1	2		8	116
Streptococcus pneumoniae		4										5	78
Escherichia coli		1		6	5		1	5		1		20	454
Klebsiella species		1		3	1			1		1		7[3]	130
Pseudomonas aeruginosa				1	1			3	1	1		6	98

1. Only organisms with 5 or more reports are included in this table.
2. MRSA 1.
3. *Klebsiella pneumoniae* 5, *K. oxytoca* 1.

Most isolates were from patients over the age of 55 years (Figure 4).

CSF isolates and meningitis reports

One report of meningitis was received, *Cryptococcus neoformans* var *neoformans* in a 40 year old male with HIV.

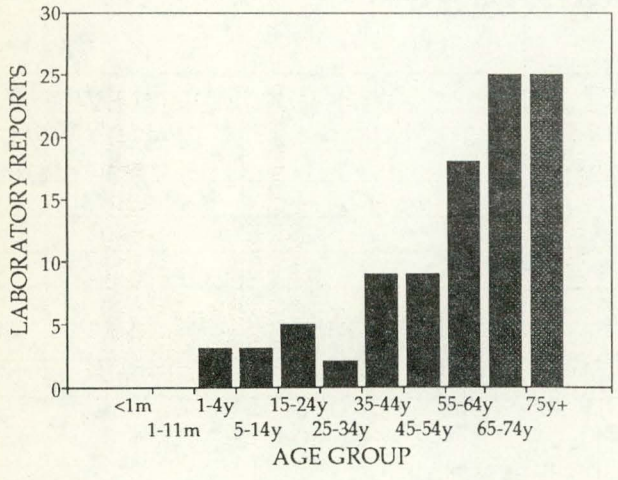
Isolates from sites other than blood or CSF

Peritoneal dialysate: 1 *Flavimonas oryzihabitans*, 1 *Staphylococcus epidermidis*, 1 coagulase negative *Staphylococcus*, 1 *Pseudomonas aeruginosa*.

Joint fluid: 1 *Haemophilus influenzae* type b, 6 *Staphylococcus* aureus, 1 *Escherichia coli*.

Other: 1 *Candida albicans*, 1 *Enterobacter cloacae*, 1 *Escherichia coli*, 1 *Klebsiella oxytoca*, 3 *Staphylococcus aureus*.

Figure 4. LabDOSS reports of blood isolates by age group



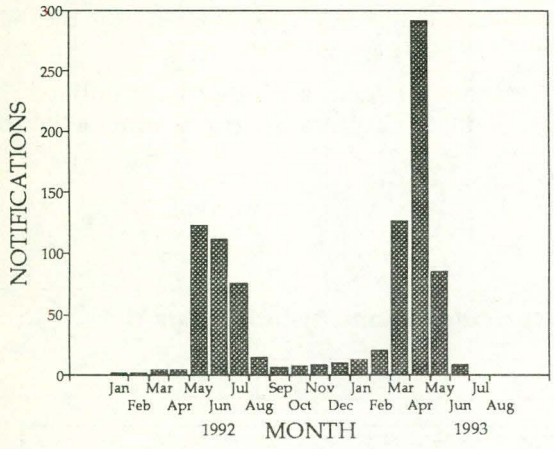
National Notifiable Diseases Surveillance System, 25 July to 7 August 1993

A total of 1,949 reports was received this period (Tables 4, 5 and 6, and Figure 8). Reports were not received from South Australia for the period 1 to 7 August.

- There were 98 notifications of **Ross River virus infection** this period. They comprised 49 males, 48 females and sex was not recorded for one case. Ages were recorded between the 0-4 and the 85-89 years age groups. Cases were reported from statistical divisions in much of Queensland, parts of rural Victoria, Pilbara and Perth in Western Australia and Mid North Coast in New South Wales. Onset dates were in May (4), June (61), July (30) and August (3).
- **Dengue** was notified for 169 cases, to bring the total for the year to 556 (Figure 5). Of these cases 102 had onset dates in April.

  Seventy-one reports were for males and 98 were for females. Ages reported ranged from the 0-4 to the 75-79 years age groups. A total of 166 cases was recorded in residents of Townsville and surrounding areas, one was from Cairns, one from Maryborough and one was from Narangba.
- There was a single case of **brucellosis** in a male from rural New South Wales in the 35-39 years age group.
- Fifty-four notifications of **gonococcal infection** were received. Forty-one were males and 13 were females aged between the 5-9 years and the 75-79 years age groups. One case was aged 6 years old and may have had non-genital disease.
- ***Haemophilus influenzae* type b infection** was reported for 15 cases to bring the total for the year to

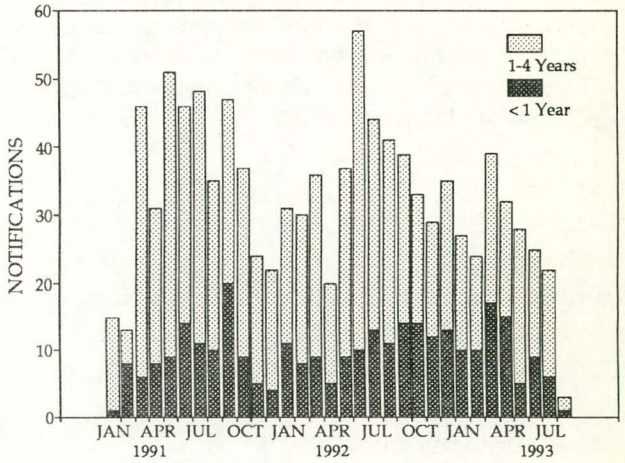
Figure 5. Dengue notifications, January 1992 to August 1993, by month of onset



date to 273, compared with 301 for the equivalent period last year (Figure 6). The cases comprised 9 males and 6 females. A single case was aged less than one year and 7 were less than 5 years. Other cases were in the 5-9 (3 cases), 65-69 (one case), 85-89 (one case) and 90-94 (3 cases) years age groups. There were no apparent clusters of cases. Five cases occurred in July and 2 in August.

- There were 45 notifications of **hepatitis A** received this period. They were for 21 males and 24 females. Ages ranged from the 0-4 to the 80-84 years age groups.
- Three case of **hydatid infection** were reported this period, 2 females and a male. Ages were 30-34, 50-54 and 60-64 years age groups. They were from rural areas of Queensland and Tasmania.
- Six notifications of **legionellosis** were received this period. Three were females and 3 males, cases were in the 15-19 years (one female), 25-29 (one male), 60-64 (one male), 65-69 (2 females) and 70-74 years (one male) years age groups. There were no apparent clusters.
- Four cases of **leptospirosis** were reported, for 3 males and one female, with ages ranging between the 15-19 and the 40-44 years age groups. They were from Brisbane and Northern Queensland and rural Victoria.
- There were 3 notifications of **listeriosis** received, in a male in the 15-19 years age group and in 2 females in the 20-24 and 85-89 years age groups.
- **Malaria** was notified for 24 cases, 15 males and 9 females. Ages ranged between the 15-19 and the 60-64 years age groups. Four were in the 'malaria receptive zone'.
- There were 193 reports of **measles**, bringing the total for the year to 1,219 (Figure 7). Ninety-nine were for males, 93 were for females and sex was not recorded for one case. Seven cases were aged less

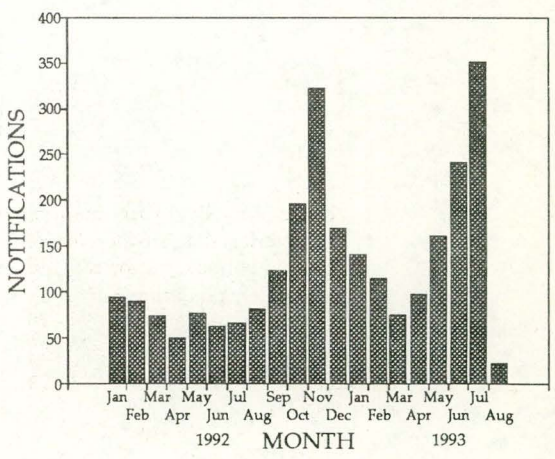
Figure 6. *Haemophilus influenzae* type b infection notifications, January 1991 to August 1993, by month of onset



than one year, and the mean age was 12.6 years. There were 11 apparent clusters in separate postcode areas in New South Wales and the Australian Capital Territory, one apparent cluster in Queensland and 19 apparent clusters in Tasmania. Clusters contained 2 to 26 cases each.

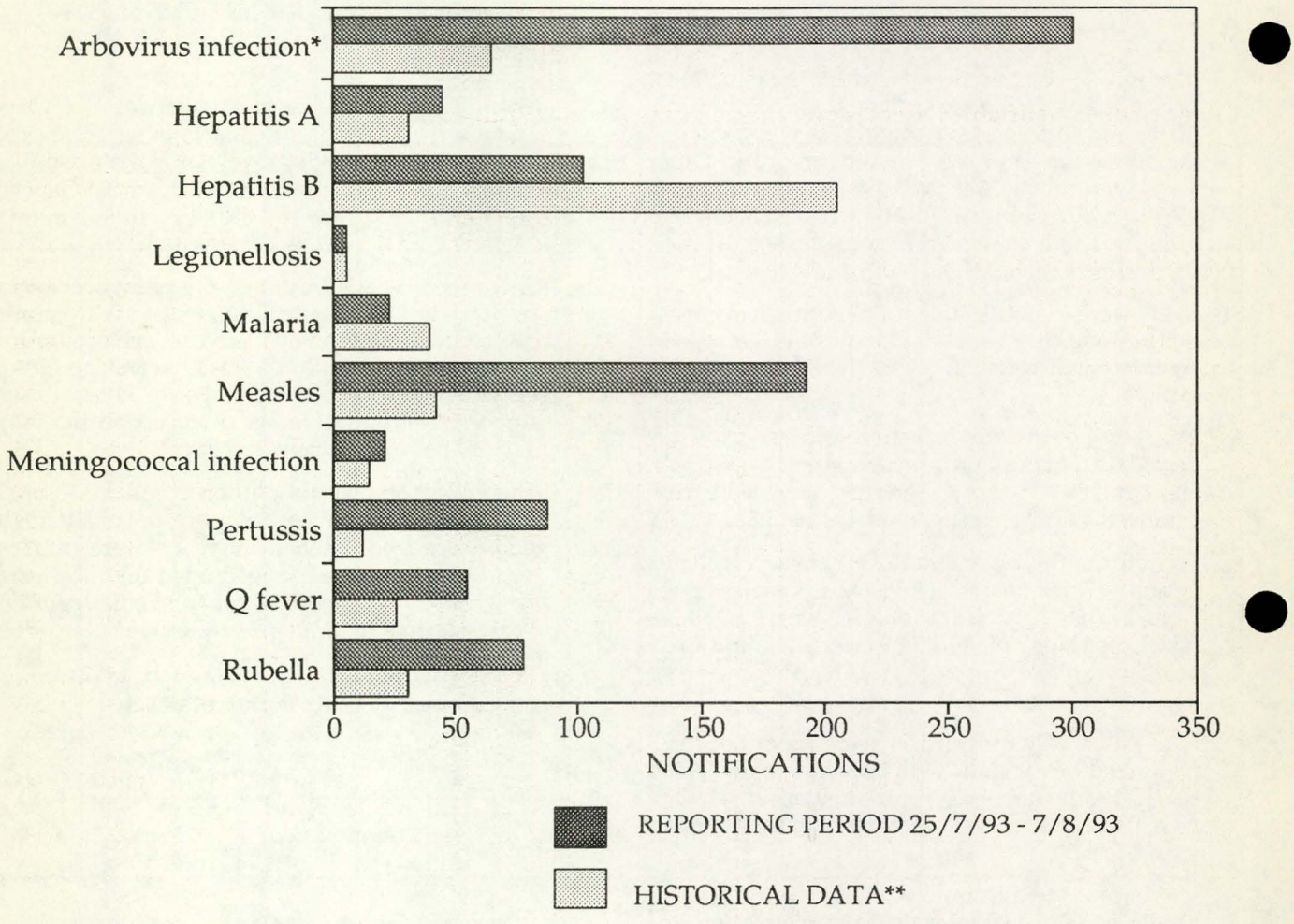
- There were 21 notifications of **meningococcal infection**, for 13 males and 8 females. Three cases had recorded ages in the 0-4 years age group, and the oldest case was in the 85-89 years age group. There were 4 apparent clusters of 2 cases each. Apparent secondary cases occurred on the same day or after intervals up to 5 days.
- There were 88 cases of **pertussis** notified to bring the total for the year to 986 (Figure, page 380). Eight cases were aged less than one year, 9 were aged less than 5 years and ages ranged up to the 90-94 years age group. There were 11 apparent clusters of 2 or 3 cases each in separate postcode areas.

Figure 7. Measles notifications, January 1992 to August 1993, by month of onset



- There were 55 notifications of **Q fever**, 49 for males and 6 for females. Ages ranged from the 5-9 to the 75-79 years age groups.
- There were 78 reports of **rubella**. There were 45 males, 32 females and sex was not recorded in one case. The mean age was 17.0 years and there were 13 reports for females in the 15-44 years age group. There were 12 apparent clusters of 2 to 7 cases each in separate postcode areas.
- There were 61 notifications of **syphilis** received this period. Twenty-seven were for males and 34 for females.
- There were 41 notifications of **tuberculosis**, 23 males and 18 females. Ages ranged from the 0-4 to the 75-79 years age groups.
- There was a single case of **typhoid** notified in a male in the 25-29 years age group from Melbourne.

Figure 8. 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 5. Notifiable Diseases preventable by vaccines recommended by the NHMRC for routine childhood immunisation for the reporting period 25 July to 7 August 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	0	0	0	0	0	0	0	0	34	11
Haemophilus influenzae b infection[2]	1	3	1	3	0	1	2	4	15	19	273	301
Measles	22	37	0	9	1	120	3	1	193	27	1219	535
Mumps	0	0	NN	NN	NN	NN	0	0	0	1	5	16
Pertussis	5	33	0	10	16	6	5	13	88	15	986	256
Poliomyelitis	0	0	0	0	0	0	0	0	0	0	0	0
Rubella[3]	5	2	0	49	4	0	17	1	78	24	1659	304
Tetanus	0	0	0	NN	0	0	0	0	0	1	5	8

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. SA: only as 'bacterial meningitis'; meningococcal infection is separately notified; Tas: only as 'non-meningococcal meningitis'; Vic: epiglottitis and meningitis only.
3. NT, Tas: CRS only; ACT, NSW, Qld: rubella only.

NN Not Notifiable.

Table 6. Other Notifiable Diseases[1], for the reporting period 25 July to 7 August 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	3	29	0	0	2	0	34	6	423	200
Ross River virus infection	0	1	5	85	-	NN	3	4	98	44	4766	4899
Dengue	0	-	0	169	-	NN	0	NN	169	27	556	189
Campylobacteriosis[4]	3	-	0	88	32	13	42	28	206	277	4650	4760
Chlamydial infection (NEC)[5]	3	NN	12	70	0	9	34	31	159	148	3865	3988
Donovanosis	0	NN	2	0	NN	NN	0	0	2	3	34	50
Gonococcal infection[6]	1	6	14	9	0	0	5	19	54	106	1769	1782
Hepatitis A	0	19	1	19	1	1	3	1	45	53	1168	1224
Hepatitis B	10	1	0	75	2	1	0	13	102	230	1366	3118
Hepatitis C	17	0	11	149	0	17	79	37	310	331	3897	5018
Hepatitis (NEC)	0	0	0	0	0	0	0	NN	0	1	44	38
Legionellosis	0	2	0	0	0	0	2	2	6	10	105	133
Leptospirosis	0	0	0	2	0	0	2	0	4	3	99	66
Listeriosis	0	0	NN	0	NN	0	2	1	3	2	32	25
Malaria	1	0	0	16	0	2	3	2	24	37	340	471
Meningococcal infection	0	5	0	8	1	0	3	4	21	17	157	153
Ornithosis	0	NN	0	0	3	0	0	1	4	2	55	59
Q fever	0	17	0	33	1	0	0	4	55	17	515	295
Salmonellosis (NEC)	2	23	3	33	4	5	15	21	106	130	3064	3251
Shigellosis[4]	2	-	0	10	1	0	4	5	22	25	480	377
Syphilis	0	28	7	24	0	0	0	2	61	102	1349	1583
Tuberculosis	0	18	9	5	0	2	4	3	41	45	561	469
Typhoid[7]	0	0	0	0	0	0	1	0	1	5	23	37
Yersiniosis (NEC)[4]	0	-	0	14	1	0	2	0	17	17	267	405

1. For HIV and AIDS, see Tables 2 and 3 *CDI* 1993;17:362-63. 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 7. Rarely Notified Diseases[1] for the reporting period 25 July to 7 August 1993

DISEASES	Total This Period	Reporting States or Territories	Year to Date 1993
Botulism	0		0
Brucellosis	1	NSW	13
Chancroid	0		1
Cholera	0		2
Hydatid infection	3	Qld, Tas	18
Leprosy	0		7
Lymphogranuloma venereum	1	Vic	2
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 6. Laboratory reports by State or Territory[1] for the reporting period 29 July to 11 August 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		2	1	8		1	5	1	18	9.5	220
Mumps virus				2	1		1		4	.8	44
Rubella virus		3		14	1	1			19	9.2	657
HEPATITIS VIRUSES											
Hepatitis A virus		2		11					13	17.5	392
Hepatitis B virus		36		48	6		16	15	121	99.8	1,712
Hepatitis C virus	5	7	1	28	66	3		50	160	111.8	2,632
Hepatitis D virus				1					1	3.0	38
ARBOVIRUSES											
Ross River virus			1	5				1	7	27.3	1,613
ADENOVIRUSES											
Adenovirus type 1		1					2		3	4.3	56
Adenovirus type 2	1	11				1			13	6.0	82
Adenovirus type 3		10					2		12	3.8	165
Adenovirus type 4							1		1	1.5	60
Adenovirus type 5		1				1			2	1.8	24
Adenovirus type 6							1		1	.8	4
Adenovirus type 8		2							2	1.0	14
Adenovirus type 11		1							1	.5	5
Adenovirus type 35							1		1	.0	1
Adenovirus not typed/pending		5		10	8	1	7	10	41	57.3	812
HERPES VIRUSES											
Herpes simplex virus type 1	1	11		39	12	2	42	23	130	154.8	2,748
Herpes simplex virus type 2	1	30	1	72	16		38	54	212	198.5	3,317
Herpes simplex not typed/pending	9	13		2			4	2	30	41.2	444
Cytomegalovirus	2	9		19	1	2	29	13	75	77.0	1,082
Varicella-zoster virus		5		17	1		13	6	42	23.2	650
Epstein-Barr virus		1	1	12	8		4	9	35	59.5	1,206

Table 6. Laboratory reports by State or Territory[1] for the reporting period 29 July to 11 August 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			
OTHER DNA VIRUSES											
Parvovirus		1			1				2	5.3	82
PICORNA VIRUS FAMILY											
Coxsackievirus A9	3	2							5	1.5	40
Coxsackievirus B1		1							1	1.2	68
Coxsackievirus B5	1								1	1.0	37
Echovirus type 7		1							1	.0	94
Echovirus type 9		1							1	4.8	47
Echovirus type 11		6					3		9	.7	63
Echovirus type 14		1							1	.5	24
Echovirus type 22							1		1	.8	12
Echovirus type 30							6		6	.0	28
Echovirus not typed/pending							1		1	.0	5
Poliovirus type 1 (uncharacterised)	1	2				2			5	2.8	36
Poliovirus type 2 (uncharacterised)		1							1	3.7	25
Poliovirus type 3 (uncharacterised)		1							1	2.5	22
Rhinovirus (all types)		7		8		1	5	3	24	30.0	489
Enterovirus not typed/pending		2		15		1		2	20	30.3	501
ORTHO/PARAMYXOVIRUSES											
Influenza A virus				1	4		5	1	11	67.5	145
Influenza A virus H_3N_2		4					3		7	6.3	9
Influenza B virus	1			4	9		1	20	35	16.3	180
Parainfluenza virus type 1		1					1		2	4.3	21
Parainfluenza virus type 2		1		5	5		2	2	15	3.2	99
Parainfluenza virus type 3		2			4		6	5	17	20.7	331
Parainfluenza virus typing pending							2		2	2.3	32
Respiratory syncytial virus	11	54		91	32	17	147	30	382	380.5	2,346
OTHER RNA VIRUSES											
HIV-1								1	1	1.3	49
HTLV-1								1	1	.0	10
Rotavirus	29	44			31		38	16	158	140.5	1,157
Norwalk agent		1							1	.8	15
Small virus (like) particle							1		1	2.3	32
OTHER											
Chlamydia trachomatis not typed	3	11		28	8	1	10	30	91	92.0	1,991
Chlamydia psittaci			1				1		2	3.7	57
Chlamydia spp typing pending					2				2	.7	7
Mycoplasma pneumoniae		9		20	4		25		58	36.3	1,288
Coxiella burnetii (Q fever)		3		3	1				7	13.7	332
Streptococcus group A		3		6					9	3.7	189
Bordetella pertussis							17		17	.5	134
Treponema pallidum		5							5	9.2	439
Toxoplasma gondii							1		1	.8	42
TOTAL	68	314	6	469	221	34	442	295	1,849	1,802.2	28,456

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 7. Laboratory reports by clinical information for the reporting period 29 July to 11 August 1993

	Encephalitis	Meningitis	Other CNS	Congenital	Respiratory	Gastrointestinal	Hepatic	Skin	Eye	Muscle/joint	Genital	Other/unknown	Total
MEASLES, MUMPS, RUBELLA													
Measles virus								4				14	18
Mumps virus					1							3	4
Rubella virus										1		18	19
HEPATITIS VIRUSES													
Hepatitis A virus							8					5	13
Hepatitis B virus							34					87	121
Hepatitis C virus							12					148	160
Hepatitis D virus							1						1
ARBOVIRUSES													
Ross River virus										3		4	7
ADENOVIRUSES													
Adenovirus type 1					1							2	3
Adenovirus type 2	1		1		5	2						4	13
Adenovirus type 3					4				2			6	12
Adenovirus type 4									1				1
Adenovirus type 5					1							1	2
Adenovirus type 6					1								1
Adenovirus type 8									2				2
Adenovirus type 11												1	1
Adenovirus type 35						1							1
Adenovirus not typed/pending					21	13		1				6	41
HERPES VIRUSES													
Herpes simplex virus type 1					8	1		81	5		23	12	130
Herpes simplex virus type 2								73			127	12	212
Herpes simplex not typed/pending					3	1		9	2		5	10	30
Cytomegalovirus		1		3	26			1		2		42	75
Varicella-zoster virus					1			29				12	42
Epstein-Barr virus					2		1					32	35
OTHER DNA VIRUSES													
Parvovirus										1		1	2
PICORNA VIRUS FAMILY													
Coxsackievirus A9	1	2			1	1							5
Coxsackievirus B1							1						1
Coxsackievirus B5					1								1
Echovirus type 7		1											1
Echovirus type 9												1	1
Echovirus type 11		2			4	2						1	9
Echovirus type 14												1	1
Echovirus type 22					1								1
Echovirus type 30		6											6

Table 7. Laboratory reports by clinical information for the reporting period 29 July to 11 August 1993, continued

	Encephalitis	Meningitis	Other CNS	Congenital	Respiratory	Gastrointestinal	Hepatic	Skin	Eye	Muscle/joint	Genital	Other/unknown	Total
Echovirus not typed/pending		1											1
Poliovirus type 1 (uncharacterised)		1			4								5
Poliovirus type 2 (uncharacterised)												1	1
Poliovirus type 3 (uncharacterised)						1							1
Rhinovirus (all types)					23							1	24
Enterovirus not typed/pending		1			8	3		3			1	4	20
ORTHO/PARAMYXOVIRUSES													
Influenza A virus					8							3	11
Influenza A virus H_3N_2					7								7
Influenza B virus					20					1		14	35
Parainfluenza virus type 1					2								2
Parainfluenza virus type 2					15								15
Parainfluenza virus type 3		1	1		13							2	17
Parainfluenza virus typing pending					2								2
Respiratory syncytial virus					371							11	382
OTHER RNA VIRUSES													
HIV-1												1	1
HTLV-1												1	1
Rotavirus	1				2	136						19	158
Norwalk agent						1							1
Small virus (like) particle						1							1
OTHER													
Chlamydia trachomatis not typed					2				1		52	36	91
Chlamydia psittaci					1							1	2
Chlamydia spp typing pending											2		2
Mycoplasma pneumoniae					39			1				18	58
Coxiella burnetii (Q fever)					1							6	7
Streptococcus group A								1				8	9
Bordetella pertussis					16							1	17
Treponema pallidum												5	5
Toxoplasma gondii												1	1
TOTAL	3	16	2	3	615	163	57	203	13	8	210	556	1849

Table 8. Laboratory reports by contributing laboratories for the reporting period 29 July to 11 August 1993

STATE OR TERRORITY	LABORATORY	REPORTS
Australian Capital Territory	Woden Valley Hospital, Canberra	63
New South Wales	Institute of Clinical Pathology & Medical Research, Westmead	174
	Prince Henry/Prince of Wales Hospitals, Sydney	8
	Royal Alexandra Hospital for Children, Camperdown	29
	South West Area Pathology Service, Liverpool	78
Queensland	Queensland Medical Laboratory, West End	332
	State Health Laboratory, Brisbane	167
South Australia	Institute of Medical & Veterinary Science, Adelaide	220
Tasmania	Northern Tasmanian Pathology Service, Launceston	11
	Royal Hobart Hospital, Hobart	22
Victoria	Fairfield Hospital, Melbourne	246
	Microbiological Diagnostic Unit, University of Melbourne	10
	Monash Medical Centre, Melbourne	10
	Royal Children's Hospital, Melbourne	177
Western Australia	Princess Margaret Hospital, Perth	72
	State Health Laboratory Services, Perth	230
TOTAL		1849