Role of the Australian Paediatric Surveillance Unit in monitoring communicable diseases of childhood

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Abstract

The Australian Paediatric Surveillance Unit (APSU) conducts active national surveillance of conditions affecting children, including communicable diseases and their complications. By mailing over 900 clinicians each month the APSU gathers national information, not available from other sources, about the incidence, demographic and clinical features of these conditions. In some conditions APSU data supplements that available from existing schemes. The APSU has monitored 20 conditions to date. Eight of these are communicable diseases or their complications, two have a possible infectious aetiology and one frequently presents with infection. Since its inception in 1993 the return rate of monthly report cards by the mailing list has increased from 88 per cent to 94 per cent. Return rate of questionnaires for the communicable diseases studied ranged from 74 per cent to 100 per cent. Studies have enabled estimation of disease incidence, identification of risk factors and possible preventive strategies and provision of detailed clinical information. Although the APSU cannot serve a public health role by case identification and contact tracing it provides information that contributes to the communicable disease strategy for Australia. *Comm Dis Intell* 1998;22:283-287

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Introduction

The APSU, modelled on a similar scheme in Britain,[1] was established in 1992 with the aims shown in Figure 1. Since May 1993 it has conducted active national surveillance of conditions affecting children, including selected communicable diseases and their complications. Some of these are vaccine preventable. All result in considerable morbidity or mortality. For most, no data has previously been available to allow estimation of national incidence or provide a picture of current management or outcome. For other conditions the APSU provides data additional to that available through existing schemes.

Figure 1. Aims of the APSU

Primary aim:

- To accurately document the number of Australian children with specific diseases (or complications of diseases), their geographic distribution, clinical features, current management and outcome

Secondary aims:

- To provide a mechanism for national collaborative research
- To issue updated clinical and diagnostic information to clinicians caring for children with specific conditions being studied
- To disseminate information acquired by the unit which will guide best practice, appropriate prevention strategies and optimal health resource allocation

Methods

Information about APSU activities and individual studies is available in the 1997 annual report.[2] Each month clinicians on the mailing list are sent either a reply-paid report card or an e-mail which they are asked to return, indicating either the number of cases of listed conditions they have seen in the previous month or that they have "nothing to report" (Figure 2). A principal investigator is identified for each condition, and each principal investigator is notified monthly by the APSU of positive case reports and provided with contact details for the reporting doctor. The principal investigator is then responsible for obtaining demographic and clinical data on the case from the reporting doctor by postal questionnaire; for collating, presenting and publishing data and for regular feedback of information to paediatricians and the APSU. No identifying patient details are requested by the APSU or the researcher. Duplicate reports are detected by a unique identifier code.

The mailing list comprises nearly 900 paediatricians, paediatric subspecialists and other clinicians who work predominantly with children (eg paediatric surgeons, ophthalmologists and community child health clinicians). The mailing list attempts to include all paediatricians and other doctors who see children with the type of rare and serious conditions monitored through the APSU and who can ascertain cases seen as both outpatients and hospital inpatients.

Individuals or organisations may apply to study a condition through the APSU and applications undergo a process of peer review and revision before being listed on the monthly report card. To satisfy the criteria for study, a condition must be sufficiently uncommon that the system is not over-burdened; must invariably result in referral to a paediatrician or related specialist and must provide information that satisfies the study aims and that is not available from other sources. Conditions are usually studied for three years, although provision for on-going study may be granted for diseases of public health significance and for those for which case numbers are low.

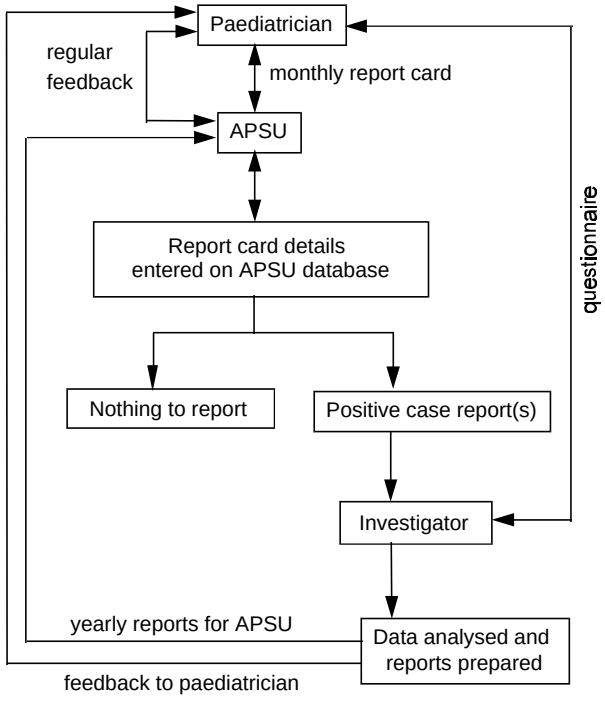
Estimated annual incidence has been calculated from valid (confirmed and probable) cases notified to the end of 1997. For incidence calculated per 100,000 births, only cases born in Australia have been included.

Results

Overview

The development and infrastructure funding for APSU has been derived primarily from competitive research grants totalling about $340,000 for 1993-1998 inclusive. Additional funding for communicable diseases studies has been received from the Commonwealth Department of Health and Aged Care or its precursors ($32,000). The NSW Department of Health ($10,000), the National Centre for HIV Epidemiology and Clinical Research ($10,000) and industry ($25,000) have also provided funding. The total APSU budget for 1997 was approximately $100,000 including salaries of three part-time administrators/ researchers ($73,000), postage ($11,000), printing ($7,000) and costs of the annual scientific meeting. Funding for the time spent by the Director and Assistant Director in APSU activities is not included in the budget because their salaries are provided by the University of Sydney and the New Children's Hospital. Establishing a new condition to be monitored through the APSU incurs no additional real cost because the time of reviewers and

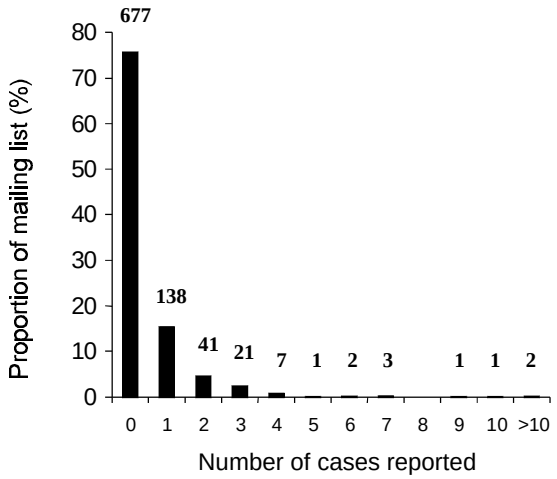
Figure 2. How the APSU works



APSU directors is unpaid. Investigators are asked to ensure that adequate funding is available to undertake their planned research. The amount of money required for mailing and research time varies for each investigator depending on the frequency of notifications for the condition they are monitoring.

A detailed evaluation of the APSU found it to be useful, simple flexible and acceptable to its users.[3] Most clinicians on the mailing list reported that completing monthly report cards was not a burden. For most clinicians it takes one to two minutes each month to simply tick 'nothing to report' or to write the number of cases of each condition seen in the previous month. In 1997 the majority (76%) of clinicians did not report a case and less than 2 per cent reported four or more cases (Figure 3). Most clinicians who had notified cases said that the length of questionnaires requesting further information was acceptable and that requested information was appropriate and available. The majority of the mailing list (62%) who responded to a recent survey said information provided by the APSU was educationally useful.

Figure 3. Respondent workload, 1997.



Since its inception there has been a progressive increase to 94% in the proportion of cards returned to the APSU each month (Figure 4), with all states and territories and specialty groups (general paediatricians, paediatric subspecialists, other community child health clinicians, other specialists, paediatric surgeons) having a response rate of 86% or more in 1997. In February 1997, APSU became the first paediatric surveillance unit to introduce e-mail reporting with 101 (11%) clinicians electing to report by this method by the end of the year. Response rate for e-mail reporting in 1997 was 99%.

Communicable diseases

To the end of 1997 the APSU has monitored eight communicable diseases or their complications (acute flaccid paralysis, congenital and neonatal varicella, congenital rubella, haemolytic uraemic syndrome, HIV/AIDS, subacute sclerosing panencephalitis, neonatal herpes simplex virus infection and invasive *haemophilus influenzae* disease). In addition, two conditions with possible infectious aetiology (Kawasaki disease and extrahepatic biliary atresia) have been studied and children

Figure 4. Overall response rate, 1993-1997.

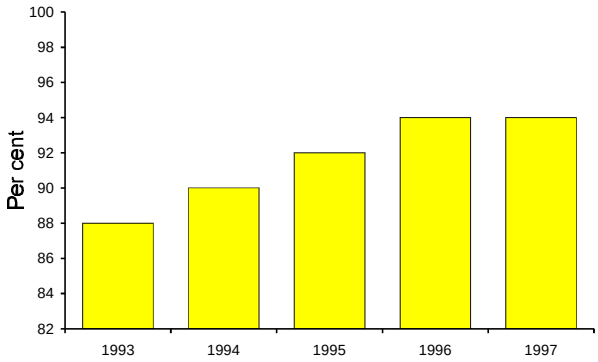


Table 1. Follow-up of notified cases, May 1993 to December 1997.

Conditions Under Surveillance	Total Reports	Confirmed or probable cases	(%)
Acute flaccid paralysis	125	80	(64)
Congenital & neonatal varicella	76	51	(67)
Congenital rubella[1,2]	80	42	(53)
Extrahepatic biliary atresia	273	110	(40)
Haemolytic uraemic syndrome	221	89	(40)
HIV/AIDS[1]	213	103	(48)
Kawasaki disease	366	149	(41)
Neonatal herpes simplex virus infection	11	5	(46)
Subacute sclerosing panencephalitis	9	4	(44)

1. Initially included old (prevalent) and new (incident) cases seen in last month
2. initial retrospective reporting to Jan 1993

notifications which were not confirmed or probable cases were either duplicate reports, an invalid reports or cases where insufficient information was provided to allow classification

notified to one study (primary immunodeficiency disorders) frequently present with infection. Table 1 shows the number of notifications to the APSU to the end of 1997 and the follow-up status of notified cases. Table 2 shows the estimated annual incidence of disease and the return rate of questionnaires sent to notifying clinicians requesting further information, to the end of 1997. Where alternative sources of cases were available the sensitivity of ascertainment of communicable disease through APSU was calculated. Sensitivity of APSU for identifying NSW cases of extrahepatic biliary atresia and haemolytic uraemic syndrome was 90 per cent and 80 per cent respectively. The APSU's sensitivity for identifying congenital rubella nationally was 92 per cent.[3]

Table 2. Estimated annual incidence of communicable diseases monitored, to the end of 1997.

Condition	Questionnaire response (%)	Incidence/ 100,000	95% Confidence Interval
Acute flaccid paralysis*	83	0.7	0.6, 0.9
Varicella Congenital[#]	95	0.8	0.2, 1.4
Neonatal		5.8	2.8, 7.8
Congenital rubella (with defects)	97	1.5	0.9, 2.4
HUS* (years)	98	1.4	1.1, 1.8
Perinatal HIV exposure	88	5.6	4.4, 7.2
Neonatal herpes simplex (HSV) infection	100	2.0	0.7, 4.9
Kawasaki disease (years)*	74	3.7	3.6, 3.8
Extrahepatic biliary atresia	92	5.4	4.0, 7.0
SSPE*	100	0.03	0.01, 0.09

* incidence is per 100,000 children aged less than 15 years; all other figures are expressed per 100,000 births

The *acute flaccid paralysis study* has provided a mechanism for Australia to participate in the global effort by the WHO to eradicate poliomyelitis and declare Australia polio-free.[4] This study, conducted by the National Centre for Disease Control in the Department of Health and Family Services, aims to identify all cases of *acute flaccid paralysis* and, through stool examination, sixty day follow-up and case review by an expert panel (the National Certification Committee), to exclude poliomyelitis as the cause. The rate of AFP identified is around the expected 1/100 000 and over half of children identified were confirmed as having Guillain-Barré syndrome. No cases of poliomyelitis have been confirmed. However, inadequate provision of information has meant that it has not been possible to exclude poliomyelitis in all cases.

Monitoring cases of *haemolytic uraemic syndrome (HUS)* with simultaneous examination of stool and serum from cases has given clinicians throughout Australia access to specialised centralised laboratory techniques and has identified the heterogeneous range of organisms responsible for HUS. Information from this study has contributed to efforts to prevent and control HUS including changes to the code for the manufacture of fermented meat products; requirement for notification of HUS cases to state health departments; and public education about food storage and preparation.[5]

The APSU provides a source of reporting of cases of perinatal exposure to HIV and cases of diagnosed HIV infection in children.[6] This supplements mandatory reporting of cases of diagnosed HIV infection and AIDS to state and territory health authorities. In 28 (46%) cases of perinatal exposure reported in Australia between 1994 and 1997, the APSU was the only source of case notification. Preventive interventions to reduce the risk of mother to child transmission, such as uptake of zidovudine during pregnancy and avoidance of breast-feeding, are being monitored among women diagnosed with HIV infection prior to delivery.

Although clinicians are asked to report any new case of HIV or AIDS in a child under 16 years of age, all notifications since 1995 have been cases of perinatal exposure. No new diagnoses due to blood transfusion in children born in Australia have been reported since 1990. All such products were given prior to 1985.[7]

A study of *congenital and neonatal varicella* has allowed assessment of the burden and clinical spectrum of congenital and neonatal varicella infection prior to the availability in Australia of varicella vaccination, which is currently being trialed in infancy. Data from this study has identified that congenital varicella is more common than previously recognised in Australia.[8] This may reflect increased recognition of a condition following a request for notification. Presentation may be with disseminated herpes zoster early in life and the range of defects includes skin scarring, central nervous system, cardiac and ocular deformity.

In the study of *congenital rubella*, comparison with population data confirmed that children born in Australia in 1995 and 1996 to mothers born outside Australia were at an increased risk of being affected. The need to pay particular attention to the vaccination status of this subgroup of women and to adequately investigate women with symptoms consistent with infection in pregnancy are seen as important preventive strategies.

Subacute sclerosing panencephalitis, though rare, continues to occur and the APSU is providing a mechanism to monitor this most devastating complication of measles. There may be an underascertainment of cases through the APSU because clinicians are asked to report only those diagnosed under the age of 16 years and older children may present to adult physicians.

The study of *neonatal herpes simplex virus infection (neonatal HSV)* aims to determine its incidence, morbidity and mortality in Australia, its modes of presentation and the timeliness of therapeutic intervention. In 1997, five cases were identified, all with disseminated rather than local (eye, skin or mouth) disease. Three cases had involvement of the central nervous system.

It has been suggested that a subgroup of e*xtrahepatic biliary atresia* may be due to an infectious agent. The APSU study has confirmed a seasonal (winter) distribution of cases that would be consistent with an infectious aetiology. It has also provided an estimate of the national requirement for paediatric liver transplantation and confirmed that late diagnosis is a risk factor for worse prognosis.[9]

Similarly the cause of *Kawasaki disease* has not yet been determined. Information from surveillance through the APSU has contributed to a developing literature about the role of streptococcal infection and highlighted diagnostic dilemmas for clinicians which may contribute to suboptimal management of this condition.[10] This study has also identified limitations of international disease classification systems and the effect of these on outcomes.

Invasive *H. influenzae* disease was monitored from January 1998. This study aims to provide an additional source of notification of cases of invasive *H. influenzae* disease in children and to determine the proportion of

cases of invasive *H. influenzae* disease which are due to vaccine failure. Information obtained through the APSU has provided details about both clinical and laboratory risk factors which are not available from laboratory or mandatory reporting schemes. Whether *H. influenzae* isolates from cases that are due to vaccine failure differ from those that are not due to vaccine failure is yet to be determined.

Discussion

After five years active surveillance the APSU is functioning well. High return rates of monthly report cards and questionnaires and feedback received from users during a recent evaluation confirm that the scheme is acceptable to its users. It is a simple and relatively cheap system to run. It is difficult to determine the cost-benefits of this system. However, direct costs are low, especially considering APSU facilitates simultaneous monitoring of several conditions. The APSU is not a disease register, but an anonymous case-finding system. It is neither sufficiently timely, nor has the resources or the expertise to function as a public health unit in following up disease contacts or tracing infective sources.

Studies conducted through the APSU on communicable and related diseases have provided previously unavailable national data that have allowed estimation of the incidence of these uncommon but important conditions as well as providing demographic and comprehensive clinical information. Some studies have identified risk factors, have determined the spectrum of morbidity and mortality, have identified current management or have provided information on factors affecting short-term outcome. Others have generated hypotheses that may be tested by further research or identified potential cohorts of cases that may be used for follow-up and intervention trials. In addition, studies have allowed the evaluation of alternative methods of case-finding, estimation of sensitivity of the APSU and highlighted problems with definition and classification of disorders studied.

APSU achievements include the promotion of collaborative research between scientific disciplines and workers in different states and the provision of an interface between clinicians, public health units, health departments and other national bodies collecting data on communicable diseases. APSU is a unique system that overcomes state barriers and allows prospective collection of national data. Availability of APSU data is more timely than that from some other systems, for many of which there are inherent administrative delays. Active surveillance combined with a high response rate is maximising case ascertainment. High level of cooperation of clinicians may relate to the information provided to them by APSU.

We anticipate that APSU will make an increasing and valuable contribution to monitoring communicable diseases in childhood in Australia in the future by continuing its current activities. Potentially it may also provide a mechanism for rapid surveillance in the event of an epidemiological emergency. This could be achieved by establishing a fast track for inclusion of a new condition on the card. APSU may also repeat previous studies to enable assessment of prevention strategies (eg new vaccines) or changes in disease patterns over time. Cohorts identified in APSU studies should be used for further research using follow-up, case-control and intervention methodologies.

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Resistance in gonococci isolated in the WHO Western Pacific Region to various antimicrobials used in the treatment of gonorrhoea, 1997

(Prepared by the WHO Western Pacific Gonococcal Antimicrobial Surveillance Programme - WHO WPR GASP)

Summary

The World Health Organization Western Pacific Region Gonococcal Antimicrobial Surveillance Programme (WHO WPR GASP) is a multicentric long term programme of continuous surveillance of the antibiotic susceptibility of *Neisseria gonorrhoeae*. In 1997 the programme examined the susceptibility of 8,594 isolates of gonococci to various antimicrobials in 15 focal points.

The trend toward increased antimicrobial resistance noted in earlier years continued. The proportion of quinolone resistant gonococci reported from most centres was either maintained or else increased. More than half of the isolates tested in China - Hong Kong, China, Japan, Korea, and the Philippines had altered quinolone susceptibility and increases in the number and percentage of quinolone resistant strains were noted in most, but not all, of the other centres.

Resistance to the penicillins was again widespread, and chromosomally mediated resistance was a significant factor. Penicillinase-producing Niesseria gonorrhoeae (PPNG) were present in all centres.

All isolates were sensitive to the third generation cephalosporins and only a very few isolates in China were spectinomycin resistant.

High level tetracycline resistance was concentrated in a number of centres including Singapore, Malaysia, the Philippines and Vietnam. The proportion of tetracycline resistant Neiserria gonorrhoeae (TRNG) in most of the remaining centres was less than 10 per cent.

Introduction

Effective treatment of gonorrhoea remains a priority for well founded reasons including prevention of morbidity in individual patients and reduction in the total disease burden associated with the disease. It is now also established that the rate of HIV transmission increases by three to five times in the presence of gonorrhoea.[1] With proper treatment HIV transmission rates can be reduced by up to 40 per cent.[2]

Appropriate antibiotic regimens for treatment of gonococcal disease may be established, modified and made more relevant by data on gonococcal susceptibility patterns. The WHO has sought to establish a global surveillance network to monitor antibiotic resistance in the gonococcus - the Gonococcal Antimicrobial Surveillance Programme (GASP). Such a GASP network is useful not only for the individual contributing countries and the Regions, but also has wider application as an indicator of emerging global resistance in *Neisseria gonorrhoeae.*[3]

The WHO WPR GASP commenced in 1992. Annual reports of WPR GASP findings have been published in a variety of sources designed to disseminate the data as widely as possible.[4-10] This report deals with data generated in the calendar year 1997.

Methods

Data were generated by participants in focal points in various countries throughout the WHO WPR and collated in the regional reference laboratory. A list of participating members of the programme is contained in the acknowledgements. These include countries with a small geographic area e.g. Singapore and China - Hong Kong where isolates were examined in a single centre. Data from other centres represents an analysis of strains referred throughout a country to a central setting as in Malaysia. Other countries (e.g. Australia, China) have a network of contributors supplying data from a national surveillance scheme. A full description of the methods used in the WPR GASP is available.[9] Briefly, participants were encouraged to examine susceptibility of gonococci to a recommended 'core' list of antibiotics using one of the standard methods nominated by the programme. A programme-specific quality assurance programme is conducted annually and a series of reference strains pertinent to the regional patterns of resistance were made available. Because of resource limitations, not all isolates are examined for sensitivity to all agents by all participants. Most strains examined are from non-selected sexually transmissible disease (STD) clinic patients, but some are obtained as a result of case finding.

Results

Approximately 8,600 isolates were examined in 15 focal groupings in 1997. Other centres were unable to supply data but maintained contact with the programme through participation in the quality assurance (QA) programme. Mongolia joined the programme in 1997, but data were not available from Brunei, Cambodia, Papua New Guinea or the Solomon Islands in this period. About 44,000 strains have been examined in this programme since 1992. The sensitivity of isolates to selected antimicrobials is shown in Tables 1 - 4.

Penicillins

The proportion of isolates resistant to the penicillin group by one or mechanisms ranged between 3.5 per cent (Japan) and 95 per cent of isolates (Philippines) in the 15

Table 1. Penicillin sensitivity of strains of *Neisseria gonorrhoeae* isolated in countries in the WHO WPR in 1997.

Country	Number tested	PPNG		CMRNG		All Pen R	
		No	%	No	%	No	%
Australia	2,817	180	6.4	36	12.8	541	19.2
China	908	101	11.0	406	44.0	507	55.0
Fiji	522	29	5.5	13	2.5	42	8.0
Hong Kong (China)	2,435	125	5.2	1,492	61.2	1,617	66.4
Japan	85	2	2.3	1	1.2	3	3.5
Korea	382	303	79.0	47	12.3	350	91.3
Malaysia	51	21	41.0	NT			
Mongolia	20	4	20.0	NT			
New Caledonia	16	0		1	6.0	1	6.0
New Zealand	309	23	7.4	22	7.1	45	14.5
Philippines	22	18	81.8	3	13.6	21	95.4
Singapore	691	424	61.3	5	1.0	429	62.3
Tonga	9	2	22.0	2	22.0	4	44.0
Vanuatu	171					28	16.4
Vietnam	156	100	64.1	20	12.8	120	76.9

contributing centres. Particularly high levels of penicillin resistance were also recorded in Korea (91.3%), China - Hong Kong (66.4%), Vietnam (76.9%) and Singapore (62.3%) (Table 1).

The programme seeks to identify separately the extent of penicillin resistance manifested through plasmid-mediated penicillinase production (PPNG) or through chromosomally controlled intrinsic resistance [chromosomaly-mediated resistant Neiserria gonorrhoeae (CMRNG)]. Both forms of resistance may exist simultaneously in the one isolate, but the latter type may be masked in PPNG.

PPNG were widely distributed throughout the WPR in 1997 but the proportion of PPNG was below 10% in a number of centres. PPNG were especially prominent in the Philippines (81.8% of isolates), Korea (79%) Singapore (61.3%) Vietnam (64.1%) and Malaysia 41%). An increasing proportion of CMRNG has also been detected over the life of the programme. In Hong Kong isolates of this type now represent 61.2 per cent of all isolates while the proportion of PPNG has declined to 5.2 per cent.

Quinolone antibiotics

About 8,400 isolates were examined for susceptibility to second generation quinolones in 12 centres in 1997 and quinolone resistant gonococci (QRNG) were detected in 10. Separate categories of “less sensitive” and “resistant” (to the second generation agents) are included in Table 2 because of their epidemiological relevance in long term studies of the evolution of quinolone resistance. The pattern of increasing quinolone resistance in gonococci first described in the WPR in 1993 and reinforced from 1994 to 1996 was present again in 1997.

The proportion of ‘less sensitive’ isolates has increased significantly in many centres since 1992, but there was little further change in 1997. The proportion of ‘less sensitive’ strains remained particularly high in China (51.5%), Hong Kong (42.1%) and Korea (46.8%) in 1997. In a large sample in Fiji and in a small one in Malaysia, no QRNG were detected.

Many centres reported an increase in the proportion of resistant isolates in 1997 or else maintained the high numbers seen in 1996. The highest proportions of fully quinolone resistant isolates were seen in the Philippines (50%), Japan (41.2%), China - Hong Kong (38.6%), China (28.5%) and Korea (20.4%). In other centres the increase in fully developed QRNG was slower. In Australia resistant strains account for 5.6 per cent of all isolates but most of these were concentrated in one city. The proportion of QRNG more than doubled in New Zealand in 1997.

Table 2. Quinolone resistance in strains of *Neisseria gonorrhoeae* isolated in countries in the WHO WPR in 1997

Country	Number tested	Less susceptible		Resistant	
		No.	%	No.	%
Australia	2,817	46	1.6	158	5.6
China	903	468	51.5	257	28.5
Fiji	522	0	0	0	0
Hong Kong (China)	2,435	1,026	42.1	939	38.6
Japan	85	17	20.0	35	41.2
Korea	382	179	46.8	78	20.4
Malaysia	9	0			0
New Caledonia	16	3	18.0	0	0
New Zealand	309	18	5.8	6	1.9
Philippines	22	0	0	11	50.0
Singapore	691	33	4.8	26	3.8
Vietnam	152	5	3.3	5	3.3

Ceftriaxone

This third generation cephalosporin was used as the representative agent for this group of antibiotics in this programme. No resistance to this agent was evident in 1997. As in previous years, some evidence of increasing MIC levels was present in some centres.

Spectinomycin

Just over 5,000 isolates were examined in 10 centres in 1997. Only in China was there a small number of resistant isolates. In particular, all 382 isolates tested in Korea were sensitive to this agent (Table 3).

High level tetracycline resistance (TRNG)

About 5,400 isolates were examined in 1997 in 10 countries and TRNG were present in all of these centres. Particularly high proportions of TRNG were again seen in Singapore (82%), Malaysia (55%) and Vietnam (35.9%) continuing a pattern observed in earlier years. In all other centres except the Philippines (45.4%) and New Caledonia (12.5%), the proportion of TRNG was below 10 per cent of isolates tested (Table 4).

Table 3. Spectinomycin resistance in isolates of *Neisseria gonorrhoeae* in countries in the WHO WPR in 1997

Country	Number tested	Number resistant	
Australia	2817	0	
China	905	4	(0.045%)
Japan	85	0	
Korea	382	0	
Malaysia	9	0	
New Caledonia	9	0	
Philippines	22	0	
Singapore	691	0	
Vietnam	156	0	

Table 4. High level tetracycline resistance - TRNG - in strains of *Neisseria gonorrhoeae* isolated in 10 countries in the WHO WPR in 1997

Country	Number Tested	Number TRNG	% TRNG
Australia	2817	162	5.8
China	901	21	2.3
Japan	85	1	1.2
Korea	382	4	1.0
Malaysia	9	5	55.0
New Caledonia	16	2	12.5
New Zealand	309	17	5.5
Philippines	22	10	45.4
Singapore	691	567	82.0
Vietnam	156	56	35.9

Discussion

There was a slight change in the composition of the focal points of the WHO WPR in 1997 with Mongolia joining the group. The Solomon Islands and Papua New Guinea were unable to supply data in 1997 but will do so in 1998. Data from Brunei and Cambodia were not available. However the majority of the focal points have contributed data continuously for a number of years. This continuous surveillance has facilitated analysis of the trends in gonococcal susceptibility in the region. The number of isolates examined in 1997 was the highest number tested since the programme began.

Particular interest is once more centred on emerging gonococcal resistance to the quinolone group of antibiotics. In 1995 the position with regard to QRNG in the WPR was summarised as a steady increase in the proportion of resistant isolates since 1992 when very few resistant isolates were observed.[7] The change was manifested as an increasing number of centres reporting the presence of these strains, an increasing number of strains showing quinolone resistance in those centres and increasing MICs in resistant isolates. This was again the pattern in 1997 and QRNG are now widely dispersed throughout the region.

It should be remembered that resistance to the quinolones in gonococci is chromosomally mediated and levels of resistance increase incrementally due to a number of complementary alterations in the organism. The first clinically manifested resistance observed was at a low MIC level and was accommodated by increasing the recommended dose of antibiotic administered. These strains, where identified, were those classified as less sensitive in Table 2. Subsequently strains with higher MICs were detected and these were not amenable to therapy with then available quinolones, even with higher dose regimens. These isolates are shown in Table 2 as the 'resistant' group. In 1997, one particular feature has been the increase or maintenance of high numbers of strains with fully developed quinolone resistance.

The data shown apply to resistance to the group of quinolones now called 'second generation' agents.[11] Newly released quinolones with activity against some of strains resistant to second generation agents are now available. Their activity and potential for use in the WHO WPR will need to be assessed.

Some interest remains within and without the region in the extent and type of resistance to the penicillins. Because of the very high levels of resistance, the clinical usefulness of this group of antibiotics has decreased significantly in the WPR. Consequently the testing for susceptibility to the penicillins is a decreasing priority. However this group of agents is still used effectively in a number of specific settings, and the data generated in the WPR continues to be of interest to other regions.

There was no resistance detected to the later generation cephalosporins and very little to the injectable agent spectinomycin. Significant levels of spectinomycin resistance were recorded in parts of the region some years ago. The inappropriate use of antibiotics, and availability of

agents in the informal health sector have both contributed to the development of antibiotic resistance in the past. The increasing availability of oral third generation cephalosporins and the consequent risk of inappropriate use suggests that continuing surveillance of these agents is prudent. Such surveillance is of greater importance now that the usefulness of the quinolones is rapidly declining in the WPR.

Tetracyclines are a multiple dose treatment for gonorrhoea and are not a recommended therapy for gonorrhoea. However the presence of a particular form of high level plasmid mediated tetracycline resistance - TRNG - has been recognised. The programme has therefore monitored the spread of TRNG in the region. Considerable regional variation in the distribution of TRNG was again noted. Singapore, Malaysia, the Philippines and Vietnam in particular have high numbers of TRNG.

The trend towards a decrease in susceptibility of gonococci to various antimicrobials in the WPR has continued over a number of years poses additional problems for successful treatment of gonococcal disease in the region.

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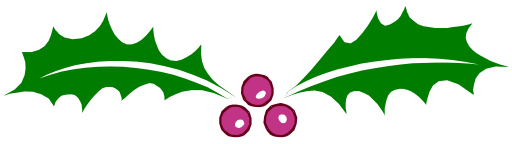

CDI Subject index, 1998

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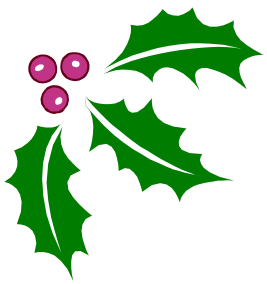

Shigella at a wake in Adelaide, June 1998

Rod Givney,[1] Jack Darzenos,[2] Dianne Davos[3]

Thirteen out of 32 persons from two states who attended a lunch after a funeral in Adelaide on 2nd June 1998 became ill with diarrhoea. Most had onset of illness within three days but one case occurred eight days after and one 28 days after the lunch. The person whose illness commenced eight days after was the sister of one of the early onset cases and it was her boyfriend who became ill after 28 days. The duration of illness ranged from three to 10 days (mean=6.2 days) with reported symptoms in addition to diarrhoea being abdominal pain (11), vomiting (7) and macroscopic blood in the stool (3).

Only one person had a history of recent travel outside Australia before the funeral. This had been a medically uneventful trip to the Philippines six weeks previous. Similarly in the two months before the funeral one person had returned from southern Queensland, one from a trip to Western Australia and the Northern Territory and one from Western Australia only. Of these travellers only the third had suffered any illness during their travel. Six people came from Melbourne to Adelaide to attend the funeral.

Most of the food for the function was purchased the day before from the refrigerated counter of a retail outlet, transported for 20 minutes in the boot of a car and then refrigerated overnight in the kitchen of the flat where the lunch was served. During that night one item (sliced ham) was removed from the fridge and some of it used. The remainder of the ham was returned to the fridge. The person who handled the ham during the night had recovered earlier that week from a diarrhoeal illness contracted in the Kimberleys. The cause of this diarrhoea had not been determined.

S. sonnei Biotype G was grown from the stool of three of the cases (onset 2 days (n=2) and 8 days), *S. sonnei* not biotyped from one case (onset 28 days after the funeral) and *S. dysenteriae* Type 2 from the stool of one other case (onset of diarrhoea 1 day after the funeral). None of the other cases provided a stool specimen.

A cohort study implicated only the sliced ham of the foods served at the funeral lunch as a possible vehicle for this outbreak. Even including a probable secondary case (8 day incubation) who did not eat ham as a primary case and counting one of the early cases (who was not completely certain that she had eaten the ham) as a non-consumer, the relative risk was 2.77 (95% confidence limits 1.05-7.27). With these conservative case definitions the attack rate for ham eaters was eight out of 13 (62%). The more likely situation with the late onset case as a secondary case and accepting the history that the uncertain person's belief that she probably had eaten ham gave a relative risk of 5.46 (95% confidence limits 1.40 -21.27).The attack rate with these definitions was nine of 14 (64%).

The retailer from whom the ham was purchased is a large supplier which turns over multiple legs each week. Inspection of this premises two weeks after the funeral by an environmental health officer of the Adelaide City Council revealed no poor food handling practices. Laboratory cultures of ham collected at that time did not grow Shigella. If there had been a problem at or before the retail stage we would also have expected more metropolitan cases of Shigella notified unrelated to the funeral.

Our suspicion is that the person recently recovered from diarrhoea acquired in the north west of Australia who handled the ham the night before the funeral contaminated it. This person also consumed the ham but did not suffer further illness.

Some person-to-person transmission at the lunch was also possible. The meal was served to a large group of people in a very small flat and one person reported that the hand towel in the bathroom became sodden from hand wiping during the afternoon. The multiple Shigella isolates, especially in a metropolitan outbreak, are surprising but it seems unlikely that there would be multiple sources. Nevertheless the one isolate of *S. dysenteriae* came from a person who did not eat ham and who had a flu-like illness on the day of the funeral but developed prolonged (10 days) of diarrhoea the day after.

This is only the second *S. dysenteriae* Type 2 infection notified in South Australia since 1990. By contrast in 1997 and 1998 *S. sonnei* Biotype G has been the commonest Shigella notified. Before 1996 most cases of *S. sonnei* Biotype G were acquired overseas but only four of the 30 notified so far in 1998 had recent travel histories outside Australia.

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Communicable Diseases Surveillance

Highlights

Communicable Diseases Surveillance consists of data from various sources. The National Notifiable Diseases Surveillance System (NNDSS) is conducted under the auspices of the Communicable Diseases Network Australia New Zealand. The *CDI* Virology and Serology Laboratory Reporting Scheme (LabVISE) is a sentinel surveillance scheme. The Australian Sentinel Practice Research Network (ASPREN) is a general practitioner-based sentinel surveillance scheme. In this report, data from the NNDSS are referred to as 'notifications' or 'cases', whereas those from ASPREN are referred to as 'consultations' or 'encounters' while data from the LabVISE scheme are referred to as 'laboratory reports'.

Vaccine Preventable Diseases

The number of notifications of pertussis infection which had been falling and then appeared to plateau have now risen with 395 reports for this period compared with 324 in the previous reporting period. Examination of the historical data (Figure 3) shows that pertussis notifications are relatively low, mainly because of the large numbers reported in late 1997 and early 1998. Laboratory reporting of pertussis for this period and for the year to date is lower in comparison with similar periods in 1997.

Laboratory reports of measles and rubella continue to decline this month with the lowest number of reports for year to date since the LabVISE scheme was started. The number of reports through the NNDSS is also low and is compared with historical data in Figure 3.

Respiratory Syncytial Virus (RSV)

The number of reports of RSV from the labVISE system continued to decline this month after peaking in August this year with 1,767 reports. Although overall laboratory reporting was similar to that for previous years this year's peak was both higher and later than previous peaks (Figures 1 and 2). Eighty-three per cent of reports were for infants in the under five-year age group.

Ross River Virus Infection

The total number of notifications for 1998 has been lower than in the previous couple of years but a rise has been seen for this reporting period (from 50 in the previous reporting period to 198 in the current one). When examined by onset date, number of cases has risen from 72 in October to 172 in November 1998. Most reports are from NSW and Qld. This may represent the beginning of the increase expected in the Summer months.

Figure 1. LabVISE reports of RSV, 1996 to 1998, by month

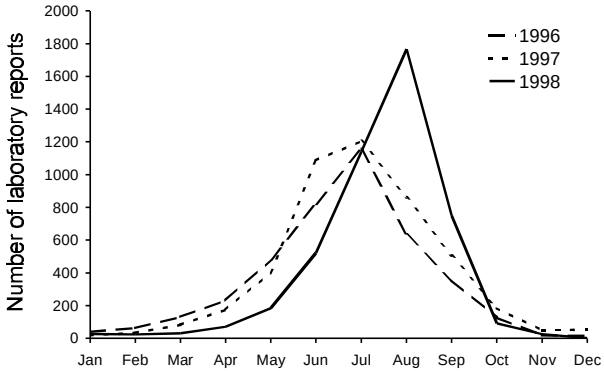
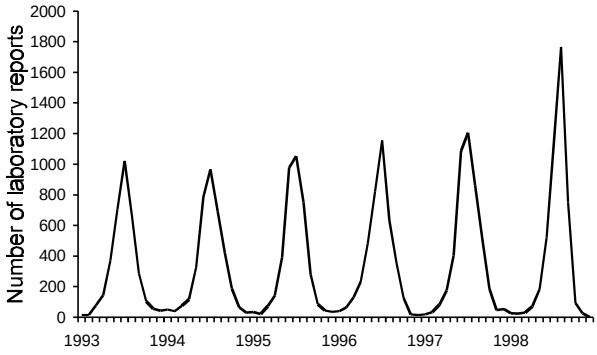


Figure 2. LabVISE reports of RSV, January 1993 to November 1998



Campylobacter

The total number of notifications with onset in October and November 1998 has risen compared with the numbers seen in previous years, particularly in Victoria and South Australia. This is reflected in the historical figure (Figure 3).

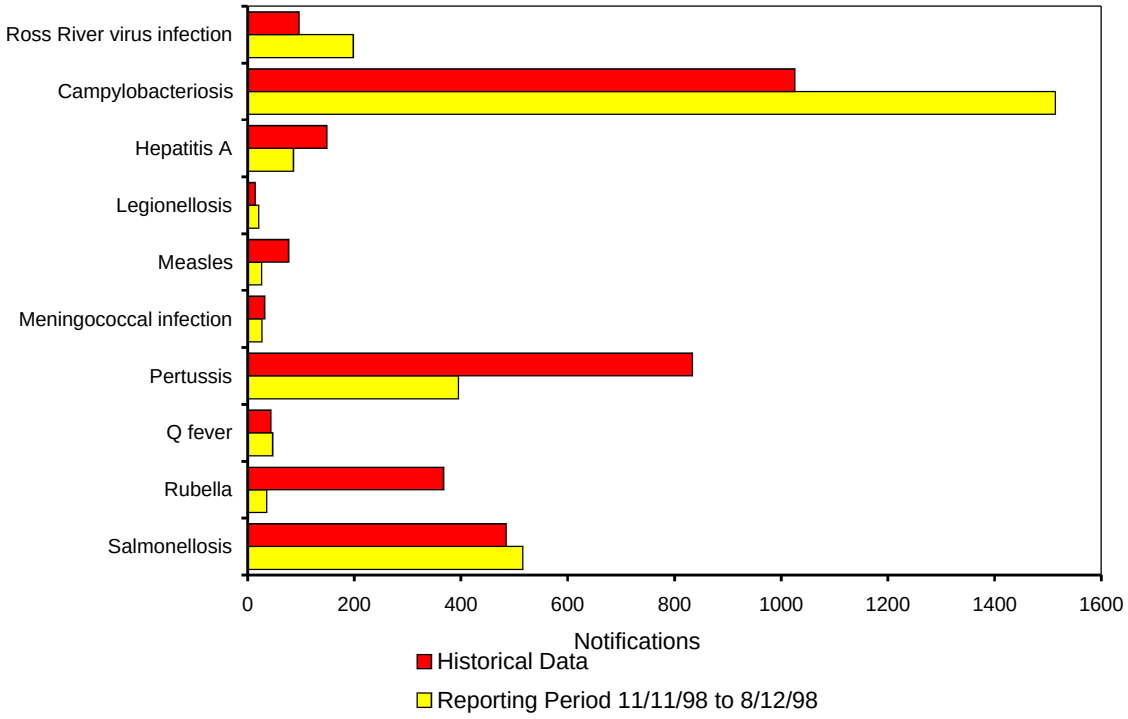
Tables

There were 5,530 notifications to the National Notifiable Diseases Surveillance System (NNDSS) in the four week period, 11 November to 8 December 1998 (Tables 1 and 2). The numbers of reports for selected diseases have been compared with historical data for corresponding periods in the previous three years (Figure 3).

There were 1,634 reports received by the *CDI* Virology and Serology Laboratory Reporting Scheme (LabVISE) in the four week period, 5 November to 2 December 1998 (Tables 3 and 4).

The Australian Sentinel Practice Research Network (ASPREN) data for weeks 44 to 47, ending 29 November 1998, are included in this issue of *CDI* (Table 5).

Figure 3. Selected National Notifiable Diseases Surveillance System reports, and historical data[1]



1. The historical data are the averages of the number of notifications in the corresponding 4 week periods of the last 3 years and the 2 week periods immediately preceding and following those.

Table 1. Notifications of diseases preventable by vaccines recommended by the NHMRC for routine childhood immunisation, received by State and Territory health authorities in the period 11 November to 8 December 1998.

Disease[1,2]	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 1998	This period 1997	Year to date 1998	Year to date 1997
Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0
H. influenzae type b infection	0	3	0	2	0	0	0	0	5	3	34	47
Measles[3]	6	6	0	1	0	3	8	2	26	114	332	782
Mumps	0	1	0	0	2	0	8	5	16	10	172	181
Pertussis	16	154	3	111	27	4	75	5	395	1,600	6,208	9,464
Rubella[4]	1	7	0	11	2	2	8	5	36	101	764	1,391
Tetanus	0	0	0	0	0	1	0	0	1	0	7	7

Table 2. Notifications of diseases received by State and Territory health authorities in the period 11 November to 8 December 1998.

Disease[1,2,3,4]	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 1998	This period 1997	Year to date 1998[5]	Year to date 1997
Arbovirus infection (NEC)[6]	0	1	0	4	0	0	9	0	14	0	80	36
Barmah Forest virus infection	0	12	3	18	0	0	0	1	34	30	534	676
Brucellosis	0	0	0	3	0	0	0	0	3	5	44	37
Campylobacteriosis[7]	30	-	13	456	349	23	506	137	1,514	1,035	11,928	10,980
Chlamydial infection (NEC)[8]	12	NN	57	345	67	19	197	124	821	676	10,272	8,547
Cholera	0	0	0	1	0	0	0	0	1	0	5	3
Dengue	0	2	1	67	0	0	0	0	70	2	500	207
Donovanosis	0	NN	0	0	NN	0	0	0	0	8	35	36
Gonococcal infection[9]	1	60	115	80	13	0	44	63	376	257	5,053	4,326
Hepatitis A	0	22	5	23	6	0	16	14	86	156	2,478	2,908
Hepatitis B incident	0	3	2	5	1	0	7	0	18	12	226	233
Hepatitis C incident[10]	0	3	0	-	6	0	-	-	23	13	323	74
Hepatitis C unspecified[5]	21	NN	26	268	NN	18	421	87	902	1,649	10,109	18,493
Hepatitis (NEC)	0	0	0	0	0	0	0	NN	0	0	4	5
Haemolytic uraemic syndrome[11]	NN	0	NN	1	0	0	NN	0	1	1	13	3
Hydatid infection	0	0	0	0	0	0	4	0	4	11	42	59
Legionellosis	1	4	0	0	9	0	4	3	21	20	245	145
Leprosy	0	0	0	0	0	0	0	0	0	1	2	11
Leptospirosis	0	1	0	7	0	1	7	2	18	11	179	117
Listeriosis	0	2	0	0	0	1	0	0	3	3	51	68
Malaria	2	6	1	22	3	0	4	1	39	17	665	710
Meningococcal infection	0	6	2	9	3	0	3	4	27	23	448	466
Ornithosis	2	NN	0	0	0	0	15	0	17	2	51	43
Q Fever	0	21	0	15	0	0	11	0	47	40	548	561
Ross River virus infection	1	76	5	72	9	0	29	6	198	67	2,757	6,571
Salmonellosis (NEC)	5	96	41	197	36	4	101	36	516	551	7,373	6,611
Shigellosis[7]	NN	0	NN	NN	0	0	NN	NN	0	2	15	17
SLTEC, VTEC[12]	2	-	7	13	4	0	9	13	48	55	582	757
Syphilis[13]	1	24	30	67	1	0	1	4	128	75	1,444	1,205
Tuberculosis	0	10	2	9	2	2	29	5	59	98	903	926
Typhoid[14]	0	0	0	1	0	0	2	0	3	3	68	70
Yersiniosis (NEC)[7]	0	-	0	6	3	0	1	0	10	20	197	235

1. Diseases preventable by routine childhood immunisation are presented in Table 2.
2. For HIV and AIDS, see Tables 6 and 7.
3. 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.
4. No notifications have been received during 1998 for the following rare diseases: botulism (foodborne), lymphogranuloma venereum, plague, rabies, yellow fever, or other viral haemorrhagic fevers. There have also been no cases of thromotic thrombocytopaenic purpura (TTP), which became nationally reportable in August 1998.
5. Data from Victoria for 1998 are incomplete.
6. NT: includes Barmah Forest virus.
7. Not reported for NSW because it is only notifiable as 'foodborne disease' or 'gastroenteritis in an institution'.
8. WA: genital only.
9. NT, Qld, SA and Vic: includes gonococcal neonatal ophthalmia.
10. Qld and Vic incident cases of Hepatitis C are not separately reported.
11. Nationally reportable from August 1998.
12. Infections with *Shiga*-like toxin (verotoxin) producing *E. Coli* (SLTEC/VTEC) became nationally reportable in August 1998.
13. Includes congenital syphilis.
14. NSW, Qld, Vic: includes paratyphoid.

NN Not Notifiable.

NEC Not Elsewhere Classified.

- Elsewhere Classified.

NA Not applicable, as reporting for this condition did not commence until 1998.

Table 3. Virology and serology laboratory reports by State or Territory[1] for the reporting period 5 November to 2 December 1998, and total reports for the year.

	State or Territory[1]								Total this period	Total reported in *CDI* in 1998
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA		
Measles, mumps, rubella										
Measles virus		1			1			1	3	57
Mumps virus								5	5	48
Rubella virus		1		4				4	9	112
Hepatitis viruses										
Hepatitis A virus		4	4	13				16	37	380
Hepatitis D virus				1	1				2	8
Arboviruses										
Ross River virus		4	5	39				7	55	667
Barmah Forest virus			1	7				1	9	39
Dengue type 3				7					7	7
Dengue not typed								4	4	40
Flavivirus (unspecified)				10					10	74
Adenoviruses										
Adenovirus type 1					6				6	69
Adenovirus type 3					7				7	54
Adenovirus type 6					2				2	17
Adenovirus type 7					2				2	19
Adenovirus type 40								2	2	15
Adenovirus not typed/pending		30		3	15		12	21	81	833
Herpes viruses										
Cytomegalovirus		17	2	20	10	1	16	5	71	778
Varicella-zoster virus		16	2	55	6	2	28	29	138	1,256
Epstein-Barr virus		14	10	69	29		12	51	185	1,781
Other DNA viruses										
Contagious pustular dermatitis (Orf virus)								1	1	9
Parvovirus			1	11	2		2	12	28	248
Picorna virus family										
Coxsackievirus B5		1							1	5
Echovirus type 11		7							7	33
Echovirus type 30		3							3	3
Echovirus not typed/pending							1		1	2
Poliovirus type 1 (uncharacterised)		4							4	11
Poliovirus type 2 (uncharacterised)		2					1		3	14
Rhinovirus (all types)	1	25					5	4	35	442
Enterovirus not typed/pending		3	3	8	2		5	53	74	502
Ortho/paramyxoviruses										
Influenza A virus		6		4	21		2	3	36	2,780
Influenza B virus					1		1	2	4	169
Parainfluenza virus type 1					7		1		8	284
Parainfluenza virus type 3		17		12	9		8	8	54	374
Parainfluenza virus type 4								1	1	1
Parainfluenza virus typing pending						1			1	5
Respiratory syncytial virus		22		5	57	2	7	16	109	4,797

Table 3. Virology and serology laboratory reports by State or Territory[1] for the reporting period 5 November to 2 December 1998, and total reports for the year (continued).

	State or Territory[1]									
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Total this period	Total reported in *CDI* in 1998
Other RNA viruses										
HTLV-1								1	1	19
Rotavirus	1	98			23	10	16	2	150	1,325
Astrovirus							1		1	10
Norwalk agent							1		1	38
Other										
Chlamydia trachomatis not typed		33	16	95	18	3	7	78	250	3,332
Chlamydia psittaci							10	1	11	64
Chlamydia species		1		5					6	58
Mycoplasma pneumoniae		20	1	25	10		33	9	98	1,314
Coxiella burnetii (Q fever)		10		10	1		6	1	28	137
Bordetella pertussis		4	1	36			34	3	78	968
Legionella pneumophila								1	1	6
Legionella longbeachae					1			3	4	33
TOTAL	2	343	46	439	231	19	209	345	1,634	23,237

1. State or Territory of postcode, if reported, otherwise State or Territory of reporting laboratory.

Table 4. Virology and serology laboratory reports by contributing laboratories for the reporting period 5 November to 2 December 1998.

State or Territory	Laboratory	Reports
New South Wales	Institute of Clinical Pathology & Medical Research, Westmead	81
	New Children's Hospital, Westmead	52
	Royal Prince Alfred Hospital, Camperdown	60
	South West Area Pathology Service, Liverpool	120
Queensland	Queensland Medical Laboratory, West End	478
	Townsville General Hospital	20
South Australia	Institute of Medical and Veterinary Science, Adelaide	230
Tasmania	Royal Hobart Hospital, Hobart	16
Victoria	Royal Children's Hospital, Melbourne	123
	Victorian Infectious Diseases Reference Laboratory, Fairfield	89
Western Australia	PathCentre Virology, Perth	314
	Western Diagnostic Pathology	51
TOTAL		1,634

Table 5. Australian Sentinel Practice Research Network reports, weeks 44 to 47, 1998

Week number	44		45		46		47	
Week ending on	8 November 1998		15 November 1998		22 November 1998		29 November 1998	
Doctors reporting	53		57		58		53	
Total encounters	6560		7401		6854		6546	
Condition	Reports	Rate per 1,000 encounters	Reports	Rate per 1,000 encounters	Reports	Rate per 1,000 encounters	Reports	Rate per 1,000 encounters
Influenza	2.8	17	2.6	9	1.2	16	2.3	14
Rubella	0.1	2	0.3	3	0.4	1	0.1	0
Measles	0.0	0	0.0	0	0.0	0	0.0	0
Chickenpox	2.0	13	2.0	13	1.8	15	2.2	14
Pertussis	1.1	0	0.0	0	0.0	0	0.0	0
HIV testing (patient initiated)	1.6	7	1.1	10	1.4	12	1.8	10
HIV testing (doctor initiated)	0.4	2	0.3	7	0.9	3	0.4	0
Td (ADT) vaccine	7.0	41	6.3	51	6.9	39	5.7	45
Pertussis vaccination	6.1	43	6.6	56	7.6	54	7.9	36
Reaction to pertussis vaccine	0.1	1	0.2	1	0.1	1	0.1	2
Ross River virus infection	0.0	1	0.2	0	0.0	1	0.1	2
Gastroenteritis	9.0	85	13.0	98	13.2	103	15.0	86

The NNDSS is conducted under the auspices of the Communicable Diseases Network Australia New Zealand. The system coordinates the national surveillance of more than 40 communicable diseases or disease groups endorsed by the National Health and Medical Research Council (NHMRC). Notifications of these diseases are made to State and Territory health authorities under the provisions of their respective public health legislations. De-identified core unit data are supplied fortnightly for collation, analysis and dissemination. For further information, see CDI 1998;22:4-5.

LabVISE is a sentinel reporting scheme. Twenty-one laboratories contribute data on the laboratory identification of viruses and other organisms. Data are collated and published in Communicable Diseases Intelligence every four weeks. These data should be interpreted with caution as the number and type of reports received is subject to a number of biases. For further information, see CDI 1998;22:8.

ASPREN currently comprises about 100 general practitioners from throughout the country. Up to 9,000 consultations are reported each week, with special attention to 12 conditions chosen for sentinel surveillance in 1998. CDI reports the consultation rates for all of these. For further information, including case definitions, see CDI 1998;22:5-6.

Additional Reports

HIV and AIDS Surveillance

National surveillance for HIV disease is coordinated by the National Centre in HIV Epidemiology and Clinical Research (NCHECR), in collaboration with State and Territory health authorities and the Commonwealth of Australia. Cases of HIV infection are notified to the National HIV Database on the first occasion of diagnosis in Australia, by either the diagnosing laboratory (ACT, New South Wales, Tasmania, Victoria) or by a combination of laboratory and doctor sources (Northern Territory, Queensland, South Australia, Western Australia). Cases of AIDS are notified through the State and Territory health authorities to the National AIDS Registry. Diagnoses of both HIV infection and AIDS are notified with the person's date of birth and name code, to minimise duplicate notifications while maintaining confidentiality.

Tabulations of diagnoses of HIV infection and AIDS are based on data available three months after the end of the reporting interval indicated, to allow for reporting delay and to incorporate newly available information. More detailed information on diagnoses of HIV infection and AIDS is published in the quarterly Australian HIV Surveillance Report, available from the National Centre in HIV Epidemiology and Clinical Research, 376 Victoria Street, Darlinghurst NSW 2010. Telephone: (02) 9332 4648 Facsimile: (02) 9332 1837.

HIV and AIDS diagnoses and deaths following AIDS reported for 1 to 31 July 1998, as reported to 31 October 1998, are included in this issue of CDI (Tables 6 and 7).

Table 6. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 to 31 July 1998, by sex and State or Territory of diagnosis.

										Totals for Australia			
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 1998	This period 1997	Year to date 1998	Year to date 1997
HIV diagnoses	Female	0	7	0	2	0	0	1	4	14	5	52	39
	Male	0	29	0	8	1	0	5	4	47	62	375	431
	Sex not reported	0	0	0	0	0	0	0	0	0	1	6	11
	Total[1]	0	36	0	10	1	0	6	8	61	68	433	482
AIDS diagnoses	Female	0	1	0	0	0	0	0	0	1	3	7	19
	Male	0	4	0	1	0	0	3	0	8	21	110	186
	Total[1]	0	5	0	1	0	0	3	0	9	24	117	205
AIDS deaths	Female	0	1	0	0	0	0	0	0	1	1	5	9
	Male	0	6	0	0	0	0	1	0	7	15	58	141
	Total[1]	0	7	0	0	0	0	1	0	8	17	63	151

1. Persons whose sex was reported as transgender are included in the totals.

Table 7. Cumulative diagnoses of HIV infection, AIDS and deaths following AIDS since the introduction of HIV antibody testing to 31 July 1998, by sex and State or Territory.

		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
HIV diagnoses	Female	22	559	7	130	54	4	195	94	1,065
	Male	183	10,366	98	1,840	637	77	3,712	864	17,777
	Sex not reported	0	259	0	0	0	0	25	0	284
	Total[1]	205	11,203	105	1,976	691	81	3,945	961	19,167
AIDS diagnoses	Female	8	160	0	45	20	2	64	23	322
	Male	82	4,388	32	766	324	41	1,551	337	7,521
	Total[1]	90	4,559	32	813	344	43	1,622	362	7,865
AIDS deaths	Female	2	113	0	28	15	2	46	16	222
	Male	62	3,062	23	533	220	27	,1213	241	5,381
	Total[1]	64	3,182	23	563	235	29	1,265	258	5,619

1. Persons whose sex was reported as transgender are included in the totals.

Overseas briefs

Source: World Health Organization (WHO)
This material has been condensed from information on the WHO internet site. A link to this site can be found under 'Related sites' on the CDI homepage.

Food poisoning in northern Mozambique

There have recently been reports of a small number of deaths and a larger number of cases of diarrhoea (with and without vomiting) in the province of Cabo Delgado. This outbreak has been attributed to the consumption of fish contaminated with pesticides, but little scientific data are available to substantiate these claims. Concurrently, there are outbreaks of both cholera and dysentery in the country and local health services have difficulty differentiating between symptoms of chemical poisoning and illness caused by microbial pathogens. Approximately 100 deaths have occurred and about 600 cases of illness have been reported by the provincial health authorities, but attributing these to either chemical or microbiological contamination of food or water consumed is not possible because of lack of reliable scientific data.

According to local health authorities in Cabo Delgado, there have been 2 deaths since 24 November, and the outbreak is under control. Data from the Ministry of Health suggest that most of the cases of diarrhoea reported in Cabo Delgado province have been associated with cholera and dysentery, rather than with pesticide poisoning. Thus caution is advised in the absence of reliable epidemiological data.

It would appear that the "toxic event" associated with pesticide poisoning has passed its peak. The consumption of dried fish may be a possible route of exposure to toxic levels of pesticides, as the use of non-food-grade pesticides has been frequently reported in different parts of the world as a method for reducing insect spoilage of dried fish. The fisheries services in Mozambique are taking the appropriate prevention and control measures, and are collecting samples to be forwarded to an international reference laboratory for analysis. WHO has assembled a multidisciplinary advisory team in consultation with the national government agencies concerned and FAO.

Cholera/acute diarrhoea in Somalia

A significant increase in the number of cases of acute diarrhoea has been reported to WHO by *Médecins sans frontières* (Spain), who have opened their cholera treatment centre in North Mogadishu as a result. An average of 14 cases are being admitted daily to this facility. There have also been reports of a considerable increase in the number of cases of acute diarrhoea admitted to Benadir hospital in South Mogadishu since mid-November. Of 22 stool samples tested, 20 were positive for cholera. In areas surrounding Mogadishu, there has been no significant increase in acute diarrhoea cases.

Cholera

Brazil

According to data from the National Centre for Epidemiology of the Ministry of Health in Brazil, 376 cases of cholera have been notified between 12 and 23 November 1998, 24 of which have been laboratory-confirmed. The cases are occurring in the urban area of Cortez municipality (which has a population of approximately 13 000) in the region of Mata-Sul, Pernambuco State, in north-eastern Brazil. The source of contamination is thought to be the Rio Sirinhaém, from which 80% of the water used by the population originates. The Health Department, in collaboration with water and sanitation authorities from the State of Pernambuco are coordinating epidemiological surveillance, health education activities, water chlorination and case management. The medical team will be reinforced with professionals from other States. Supplies for the treatment of patients are in place and the central laboratory is active in the area. Suspected cases have been notified in neighbouring areas, but without confirmation. This cholera outbreak is the first to be reported in Brazil in l998.

Sri Lanka

An increase in the number of cholera cases has been reported in the capital city Colombo. Of the 60 new cases reported in the week 16-22 November, 40 were registered in Colombo district (including 32 in the city itself). No deaths have been reported.

Public health inspectors have been mobilized to track down sources of infection in Colombo city. In addition, the Ministry of Health has already implemented many cholera control activities throughout the country. However, cholera has spread to several districts previously free of the disease, where sanitation remains inadequate.

Sri Lanka is suffering from a cholera outbreak which started at the end of September 1997. A total of 431 cases were reported for 1997. As of 13 November 1998, the total number of cases notified for 1998 is 1,264, with 36 deaths. On average, 125 cases per month have been reported this year, with a case-fatality rate of 2.7 %.

A note from the Editorial Team

The editorial team of *Communicable Diseases Intelligence (CDI)* would like to wish all our readers and contributors a very Merry Christmas, and all the best for 1999.

This is the last issue of *CDI* for 1998 and thus it is timely for us to express our thanks to all those who have contributed articles, surveillance reports, correspondence, commentaries, editorials, outbreak reports and data to *CDI* during 1998. We would also like to thank the article reviewers for their valued time and expert comment.

During 1998 we have lost the services of many of the people who helped to put CDI together. These include Ross Andrews, Scott Crerar, Graeme Oliver, Htoo Myint (our computer guru), Margaret Curran (who was the Assistant Editor), Corrine Rann (Deputy Editor) and Bronwen Harvey (Editor). We wish these people well in their later endeavours.

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Contributions

Contributions covering any aspects of communicable diseases are invited. All contributions are subject to the normal refereering process. Instructions to authors can be found in *CDI* 1998;22:11.