Editorial

Containing antibiotic resistance: Australia's contribution to the global strategy

Antibiotics are undoubtedly one of the great legacies of the last 70 years of medical research. The effectiveness of many life-saving antibiotics is, however, being undermined by the emergence of antibiotic resistance, and concern over this has translated into action by Governments in many countries. In 1986 Sweden banned the use of growth promotants in animals, and in 1995 and 1996 Denmark and Germany respectively banned the use of the growth promoter avoparcin. World-wide debate has continued. Two major World Health Organization (WHO) meetings (in Berlin in 1997 and Geneva in 1998) made recommendations on the use of antibiotics in food-producing animals. In 1998 the UK House of Lords and House of Commons both released reports addressing antibiotic resistance issues, and in June 2000 the UK released its antimicrobial strategy.[1] The UK Health Minister has also just announced compulsory surveillance of hospital-acquired infections that pose a serious threat to the health of patients (eg methicillin-resistant *Staphylococcus aureus*); the system is expected to be in place by April 2001.[2] In the recently published *Overcoming Antibiotic Resistance,* the WHO calls for a global strategy to contain resistance and to build alliances involving all health care providers.[3] Comments on a draft WHO Global Strategy for Containment of Antimicrobial Resistance are also being sought by November 2000.[4] There has also been activity in the US; calls for comments on the Centers for Disease Control (CDC) and Prevention's *Draft Public Health Action Plan* closed in August of this year.[5]

In keeping with the global trends, Australia's Commonwealth Government has also taken action to address the growing problem of antibiotic resistance. In December 1997 the Minister for Health and Family Services and the Minister for Primary Industries and Energy established the Joint Expert Technical Advisory Committee on Antibiotic Resistance (JETACAR) to examine antibiotic resistance issues. The JETACAR report[6] was released in October 1999. It contained 22 recommendations for a resistance management program involving, within both animal and human arenas, five key elements: regulatory controls, monitoring and surveillance, infection prevention and hygiene measures, education, and research. On 12 October 2000 the Commonwealth Government released its response to the JETACAR report.[7]

Generally, the Government Response supports the antibiotic resistance management program proposed by the JETACAR and suggests mechanisms by which to refine, further develop or implement the recommendations in consultation with key stakeholders. The Government proposes the establishment, under the auspices of the National Health

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and Medical Research Council (NHMRC), of an Expert Advisory Group on Antibiotics (EAGA) to provide continuing advice on antibiotic resistance and related matters. It also proposes an interdepartmental implementation group to oversee and coordinate the continuing Government response to the JETACAR, respond to the policy advice received from the EAGA and to seek funding for implementation purposes. Establishment of these two groups is under way. Other progress includes the commencement of the review of virginiamycin use by the National Registration Authority (NRA) and the issue of the redrafted Special Data Requirements for submissions to the Working Party on Antibiotics (Part 10) by the NRA.[8] A scoping study has also been started by the National Centre for Disease Control to examine existing surveillance of nosocomial infections (hospital-acquired infections, or HAIs) in Australia.

The antibiotic resistance management program proposed by JETACAR has many of the components contained in the WHO strategy. The focus on reducing human consumption of antibiotics in developed countries, improving prescriber education and consumer information, reducing use of in-feed antibiotics for food-producing animals and reducing the incidence of antibiotic resistant HAIs (and HAIs generally) are all consistent with the WHO Action Plan.

The world market for antibiotics in 1997 was US$17bn.[9] Each year Australia imports about 700 tonnes of antibiotics; one third of this is destined for human use and the remaining two thirds for use in animals.[1] Australia is one of the world's highest users per head of population of oral antibiotics. Strategies to encourage prescribers of antibiotics to reduce antibiotic use have been initiated in Australia in the past. However, the issue of over prescribing and inappropriate use is still generating considerable concern in relation to both human and animal consumption of antibiotics. The use of antibiotics in animals for growth promotion or prophylactic use has been a topic of considerable debate in Australia over recent years, as it has globally. The JETACAR concluded that there was evidence for resistant strains of animal bacteria to cause human disease.[6] This could have important implications for Australia's position in world trade, particularly our clean and green image as a food producer. Should primary producers continue to use in-feed antibiotics to keep animal bacterial loads low and/or to prevent outbreaks of disease? Or can improved animal husbandry methods and better infection control replace these practices?

The Government response to JETACAR has tried to approach this problem in a balanced way, recognising that caution and careful consideration of the time frames for implementing change are crucial to our economy as well as to our human health system. Further concerns stem from the knowledge that research on, and development of, new antimicrobials is expensive and can take up to 20 years. As there are no novel antibiotics due for release in the near future, it is vital to implement strategies now to conserve the integrity of those already available. The active development of new vaccines, the continuing implementation of hazard control programs and more significant infection control in the health care setting, together with targeted education, must all play a part in reducing our dependence on antibiotics.

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Letters to the Editor

Adrian K Thomas, FRANZCOG, FRCOG

Chairman, Rubella Committee, Deafness Foundation (Victoria)

To the Editor: The recent report by Hanna et al[1] of the importation of measles highlights the problem of common infectious diseases being inadvertently introduced into this country. Smallpox vaccination used to be a condition of entry into Australia. Since its abolition we have become somewhat complacent about the possibility of (relatively common) infectious diseases being imported into this country and have overlooked the fact that many migrants who come here have different 'immunity profiles' from the local population. This appears to be the case for measles and is certainly the case for rubella.

Of patients attending the Mercy Hospital for Women in Melbourne, 20 per cent of Chinese and 10 per cent of other Asian women had no detectable immunity to rubella, compared with 3 per cent of native born Australians.[2]

For a number of years the Deafness Foundation (Victoria) has been concerned about the level of susceptibility to rubella of migrant groups, especially those from Asia. Because these communities are often close-knit it is conceivable that a situation similar to that with measles described by Hanna et al could occur with rubella. Major consequences could occur if a pregnant woman were infected in this way because rubella can be subclinical, the infection may go undetected and spread rapidly.

The Deafness Foundation (Victoria) has been urging the Commonwealth Departments of Immigration and Multi-cultural Affairs, and Health and Aged Care to address this problem more aggressively; this both publicly[3] and in private presentations of its data to them. While there has been some response, it believes more could be done and it would almost certainly have to be done within Australia where the organisational structures are probably more established. In its experience the migrant population is willing to accept vaccination once its benefits are explained and compulsory vaccination is not necessary.

The Foundation endorses wholeheartedly the recent initiative of the Federal Minister for Health and Aged Care in introducing a 'catch up' programme for measles vaccination for young adults[4] – a policy it has been advocating for some time. The MMR vaccine will also address the problem of rubella susceptibility in adolescent males (who could act as a reservoir for an epidemic). As welcome as it is, however, is still does not specifically target those from overseas and the potential for epidemics will continue until immunity levels in this population group are brought much closer to that of the local population.

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Guidelines for the control of measles outbreaks in Australia

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To the Editor: The recently released national technical report, *Guidelines for the control of measles outbreaks in Australia*,[1] contains a definition of a susceptible person that is inconsistent.[2] This definition then guides all further recommendations in the document. According to the definition, all infants under 6 months of age are considered to have acceptable presumptive evidence of immunity to measles, unless the infected contact is the infant's mother. In an outbreak, babies under 6 months of age are not offered immunoglobulin or vaccination or excluded from childcare. But, if the mother was born after 1970, and does not have either documented evidence of having had two doses of a measles-containing vaccine or documented evidence of immunity or documented evidence of laboratory confirmation of measles, then she is considered to be susceptible. In an outbreak she will be offered vaccination if within 3 days of exposure, or immunoglobulin if 3 to 7 days within exposure and excluded from work until vaccinated.

So, if during an outbreak, a 28-year-old mother, without evidence of measles vaccination, measles immunity or measles infection, and her 4-month-old child are exposed to measles, the guidelines say that the mother is susceptible and requires protection, but the infant is not susceptible due to maternal antibodies! I would find this quite difficult to explain to the mother.

Perhaps the definition of an infant with acceptable presumptive evidence of immunity to measles should be something along the lines of: *Infants under 6 months of age whose mothers were considered to have acceptable presumptive evidence of immunity (born before 1970 or having had two doses of a measles-containing vaccine, laboratory evidence of infection or documented immunity) at the time of the pregnancy.* (The mother may have been vaccinated after delivery.)

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2. Ibid. p10.

Report of the Australian National Polio Reference Laboratory: 1 January to 30 June 2000

Vicki Stambos, Kerri Anne Brussen, Ann Turnbull, Aishah Ibrahim, Margery Kennett
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Abstract

The Australian National Polio Reference Laboratory (NPRL) is responsible for virological confirmation of poliomyelitis in Australia. Since 1995, 1,204 untyped enterovirus or poliovirus isolates from six States have been identified and characterised. Of these, 666 were Sabin vaccine-like poliovirus, 498 were non-polio enteroviruses and 39 were other viruses or negative; one non-Sabin vaccine-like poliovirus was identified as a laboratory contaminant. Early in 2000, the Victorian Infectious Diseases Reference Laboratory (VIDRL) was funded to coordinate surveillance of acute flaccid paralysis (AFP). From 1 January to 30 June 2000, 23 specimens from 13 patients with AFP were processed and cultured for the presence of enterovirus; none was detected. A National Coordinator has been appointed to work with the VIDRL and the Commonwealth Department of Health and Aged Care (CDHAC) to implement the Australian component of the World Health Organization's global plan for containment of wild polioviruses. During April 2000 staff of the NPRL and CDHAC met with the Regional Commission and staff of the World Health Organization (WHO) office of the Western Pacific Region (WPR) to discuss documentation required to certify Australia as poliovirus free. *Commun Dis Intell* 2000;24:300-303.

Keywords: poliovirus, enterovirus, surveillance, acute flaccid paralysis, vaccine, laboratory containment, eradication, WHO, Western Pacific Region

Introduction

In order for the Western Pacific Region (WPR)* of the World Health Organization (WHO) to be declared wild poliovirus free, each country in the WPR must demonstrate high quality surveillance of acute flaccid paralysis (AFP), good polio vaccine coverage, an outbreak response plan and the containment of laboratory-sourced wild poliovirus.

The National Certification Committee (NCC) provides to the Regional Certification Commission (RCC) documentation on national surveillance and immunisation data, and an annual summary of the progress towards certification. The laboratory component is an essential part of the documentation process. The National Coordinator of Poliovirus Containment in Australia located at the Victorian Infectious Diseases Reference Laboratory (VIDRL) is working with the Australian National Poliovirus Reference Laboratory (NPRL) and the Commonwealth Department of Health and Aged Care (CDHAC) to develop and implement a national plan for containment of wild poliovirus infectious materials.

Surveillance of AFP began in Australia in March 1995 and is used for detection of wild poliovirus in the community. Based on experience of other countries, there should be one AFP case per annum for every 100,000 children below 15 years of age. In collaboration with the Australian Paediatric Surveillance Unit (APSU) and the VIDRL, AFP surveillance was coordinated by staff of the National Centre for Disease Control at the CDHAC from 1995 to early 2000, when the coordination was transferred to the VIDRL.

As well as AFP surveillance, another approach to detecting wild polioviruses is to characterise all polioviruses isolated from all patients regardless of their illness or age. In a country where oral poliovirus vaccine (OPV) is administered there will always be incidental isolations of OPV strains. To ensure that all polioviruses are identified and subsequently characterised as wild or Sabin vaccine-like, the NPRL tests polioviruses and untyped enteroviruses referred from virology laboratories in all Australian States. Earlier reports on activities of the NPRL for 1998[1] and the two halves of 1999[2,3] have been published. This report is for the period 1 January to 30 June 2000.

Methods and results

Certification

The Australian National Poliovirus Certification Committee (ANPCC) has addressed the important issue of containment of wild poliovirus infectious and potentially infectious materials. For Australia's submission to the Regional Certification Commission (RCC) the NPRL has documented the history of poliomyelitis in Australia, and reported on

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* Abbreviations: AFP, Acute Flaccid Paralysis; ANPCC, Australian National Poliovirus Certification Committee; APSU, Australian Paediatric Surveillance Unit; CDC, Centers for Disease Control and Prevention, Atlanta; CDHAC, Commonwealth Department of Health and Aged Care; NAPH, nucleic acid probe hybridisation; NCC, National Certification Committee; NPRL, National Polio Reference Laboratory; RCC, Regional Certification Committee; RT-PCR, Reverse Transcriptase Polymerase Chain Reaction; OPV, oral poliovirus vaccine; VIDRL, Victorian Infectious Diseases Reference Laboratory; WHO, World Health Organization; WPR, Western Pacific Region.

laboratory findings and laboratory containment of wild poliovirus.

AFP surveillance

Paediatricians are requested to report all cases of AFP to the APSU by mail, and to contact the national coordinator of AFP surveillance without delay. Arrangements are made for two faecal samples to be collected at least 24 hours apart and within 14 days of onset of paralysis. The samples are transported to the NPRL at the VIDRL for testing. In order to investigate the case at its early phase a questionnaire is sent to the paediatrician; after 60 days another is sent to obtain follow-up information on the patient's condition. The Polio Expert Committee reviews the completed questionnaires and laboratory findings on all reported cases, and classifies them using the WHO virological classification.[4]

Within 24 hours of receipt, faecal samples are processed and inoculated into six different cell lines including the two cell lines (RD and L20B) recommended by the WHO. The L20B cells possess receptors for human poliovirus and are used to select poliovirus. RD cells support the growth of various enteroviruses including poliovirus.

In all 23 faecal samples from 13 patients presenting with AFP were sent to the NPRL during the first 6 months of 2000 (Table 1). Seven samples were dispatched to the NPRL within the recommended 3 days after collection, eleven were sent after 3 to 7 days and five after 8 to 14 days. Six patients were in Queensland, three in New South Wales and two each in Victoria and South Australia. Of these, six patients had two samples collected at least 24 hours apart within 14 days of onset of illness. One patient had two samples collected only 12 hours apart but still within the recommended 14 days of paralysis and another patient had a single sample collected more than 14 days after onset. Onset dates were not available for five patients, two of whom had single samples collected. No virus was detected in any of these 23 samples.

Table 1. Testing of specimens for enteroviruses from patients with acute flaccid paralysis, Australia, 1 January to 30 June 2000

State/ Territory	District/city	Specimen date (& time)	Result
Qld	Kippa Ring	17.1.00 (0700)	Negative
		17.1.00 (1900)	Negative
Vic	Bundoora	24.1.00	Negative
		27.1.00	Negative
Qld	Yeppoon	1.2.00	Negative
SA	Klemzig	18.2.00	Negative
Qld	Caboolture	4.3.00	Negative
		5.3.00	Negative
Qld	Oakey	28.3.00	Negative
SA	Hackham West	28.4.00	Negative
		1.5.00	Negative
NSW	Kurri Kurri	3.5.00	Negative
		4.5.00	Negative
ACT	Canberra	17.5.00	Negative
		18.5.00	Negative
Qld	Cairns	21.5.00	Negative
		23.5.00	Negative
Qld	Biggenden	22.5.00	Negative
		25.5.00	Negative
NSW	Bonnells Bay	5.6.00	Negative
		7.6.00	Negative
Vic	Brunswick	24.6.00	Negative
		25.6.00	Negative

Testing of referred specimens

One faecal sample from a 74-year old female who had diarrhoea and paralysis was processed and cultured for enterovirus. No virus was isolated.

Poliovirus antibody test by neutralisation was performed on a single serum sample from a 3-year old female with an unknown immunity status. Antibodies to all three strains of poliovirus were detected suggestive of past immunisation or infection.

In January 2000, four faecal samples from two boys with AFP aged 1 and 4 years were referred to VIDRL from the WHO Infectious Disease Surveillance Unit, East Timor. An enterovirus isolated from both specimens collected from the 4-year old boy was identified as Coxsackie A24 using molecular (reverse transcriptase polymerase chain reaction; RT-PCR) and sequencing methods with primers supplied by the Enterovirus Laboratory, Centers for Disease Control (CDC) and Prevention, Atlanta, USA. Neutralisation assay and immune electron microscopy confirmed the identity of both isolates. No virus was isolated from the one-year old patient.

Identification of referred enteroviruses and polioviruses

All poliovirus isolates were characterised using nucleic acid probe hybridization (NAPH). Those from AFP patients were also tested using enzyme immunoassay. Three were also characterised by the RT-PCR method using Pan Polio, Polio type specific and Sabin type specific primers supplied by the Enterovirus Laboratory, CDC.

Between 1 January and 30 June 2000, 128 polioviruses or untyped enteroviruses were referred to the laboratory. Eighty-nine (69%) isolated between 1994 to 2000 were referred from New South Wales and 36 (28%) isolated between 1991 and 2000 were sent from Western Australia. Three isolates (2%) were referred from Victoria. Of these 128 isolates, 106 (83%) were characterised as Sabin vaccine-like polioviruses. Fifteen (12%) could not be recovered in RD or L20B cells so were either another virus or were no longer viable. Seven (5%) were recovered in RD but not in L20B cells so were presumed non-polio enteroviruses and not identified further. Concordant results were obtained by both NAPH and RT-PCR.

Cumulative testing and results

Cumulative results of testing of polio and enterovirus isolates referred to the laboratory from within Australia are summarised in Table 2. This Table includes several isolates for previous years not previously reported by the NPRL; three States submitted these earlier this year as outlined above. Since 1995, 1,204 isolates have been tested at the VIDRL. Of these, 666 (55%) were identified as Sabin vaccine-like polioviruses, 498 (41%) as non-polio enteroviruses, and 39 (3%) as other viruses or, on the basis

Table 2. Cumulative summary of identification of enteroviruses and intratypic differentiation of polioviruses from Australian laboratories performed at the National Polio Reference Laboratory, 1 January 1995 to 30 June 2000

State	Year	Polio: Sabin-like	Non-polio enterovirus	Non-enterovirus negative	Total
Vic	1995	9			9
	1996	17			17
	1997	5			5
	1998	7			7
	1999	19			19
	2000	3			3
Qld	1995	41	5	8	54
	1996	99	4	9	112
	1997	41			41
	1998	8	15	2	25
	1999	2			2
W A	1995/6	133	384	5	522
	1997	32	76		108
	1998			2	2
	1999	3	9	9	21
	2000	4		4	8
Tas	1995	1			1
	1996	3			3
	1997	4			4
	1998	4			4
	1999	4			4
NSW	1994	5			5
	1995	76	5		81
	1996	35			35
	1997	39			39
	1998	30			31[#]
	1999	31			31
	2000	4			4
S A	1997	3			3
	1998	3			3
	1999	1			1
Total	1995-2000	666	498	39	1,204

[#] Includes one non-Sabin poliovirus type 2.

of failure to produce a cytopathic effect after 14 days' incubation, virus-negative.

One poliovirus isolate described in an earlier report[2] was characterised as non Sabin-like. It was identical to the non-Sabin attenuated poliovirus control used in the referring laboratory and was subsequently confirmed as a laboratory contaminant.

Containment of wild poliovirus

A national workshop to discuss Australia's approach to containment of wild poliovirus infectious and potentially infectious materials was held at the VIDRL in March 2000. A National Advisory Committee and representatives in each State and Territory assist the VIDRL and CDHAC staff in the containment process.

Currently a survey is being conducted nationally to identify those laboratories that may have wild poliovirus and potentially infectious material.[5] A national inventory will be presented to the WHO WPR office as part of the containment plan.

Other activities

As part of its reference role the VIDRL provides biological material to assist other laboratories. Between 1 January and 30 June 2000, the NPRL supplied enterovirus antisera and prototype enteroviruses and respiratory viruses to laboratories in Victoria and New South Wales. Reference Sabin poliovirus strains were supplied to laboratories in Western Australia and Victoria and cultures of RD, L20B and A549 cells to laboratories in Western Australia and New South Wales.

Discussion

Western Pacific Regional Certification

The WHO is firmly committed to poliomyelitis eradication globally by the end of the year 2000. Certification of each region requires the absence of wild poliovirus for at least 3 years in the presence of high quality surveillance. The last reported case of indigenous wild poliovirus in the WPR was in Cambodia in March 1977. All WPR countries are working to provide documentation so the WPR Certification Commission can assess whether the region should be certified as wild poliovirus free.

Australian certification

Staff of the CDHAC and NPRL have collated evidence of the absence of wild poliovirus for 3 years in the presence of high quality routine AFP surveillance among children under 15 years of age. In August 2000 the ANPCC met with the WPR RCC in Manila, produced documentation on the certification criteria and recommended that Australia be declared wild poliovirus-free.

Surveillance and investigation of acute flaccid paralysis

The APSU, CDHAC and NPRL have publicised the need for AFP surveillance and testing. Paediatricians enrolled with the APSU were sent flyers in January 2000 with instructions on reporting AFP patients and the collection and shipment of stool samples. Since February 2000 both surveillance and laboratory investigations of AFP have been administered by the NPRL leading to effective coordination of questionnaires, sample collection and transport.

Between 1 January and 30 June 2000, 23 samples from 13 patients were referred to NPRL for testing. Although this is below the optimal number for certification (20 patients Australia-wide; one per 100,000 children below 15 years of age per 6 months)[4] it is higher than for the same period last year.[2] Over the years the number of AFP samples referred to the NPRL has increased; samples from 4, 11 and 27 patients were referred to the NPRL in 1997, 1998 and 1999 respectively.

Continuous communication to highlight both the importance of AFP surveillance and the availability of information is critical to the eradication of wild poliovirus. An annual newsletter, a Poliovirus Homepage (which is continuously

updated) and six-monthly reports published in *Communicable Diseases Intelligence*[1,2,3] provide information.

Characterisation of polioviruses

Staff of the CDI Virology and Serology Laboratory Reporting Scheme (LabVISE) have urged all laboratories reporting polio and untyped enteroviruses to refer isolates to the NPRL. The majority of these samples have now been referred and all polioviruses isolated confirmed as Sabin vaccine-like.

Training in diagnostic polymerase chain reaction (PCR) techniques was provided in November 1999 to assist in identification and characterisation of polio and enteroviruses.[3] To date, the NPRL is accredited to characterise poliovirus isolates by NAPH and EIA. However, diagnostic PCR has been adapted in the NPRL as an additional test for characterisation of some poliovirus isolates.

The NPRL is currently seeking accreditation by the WHO for the use of PCR techniques for identification and intratypic differentiation of isolates. The NPRL is also attempting to sequence non-polio enteroviruses that cannot be typed by conventional neutralisation assays. These viruses may be variants of known enteroviruses or unassigned enteroviruses. As wild poliovirus is eradicated globally, these enteroviruses may become more prominent as causative agents of AFP.

Containment

In order for Australia to be certified as poliovirus free, it needs to demonstrate high quality AFP surveillance and be wild poliovirus free for at least 3 years. There are sufficient data to conclude that the last cases of indigenously acquired wild poliovirus infections occurred in Australia in 1972.[6]

Once circulation of wild poliovirus is successfully interrupted world wide, poliomyelitis will become the second infectious disease (after smallpox) to be eradicated. The only other reservoir of wild poliovirus will then be within laboratories. To prevent reintroduction of wild poliovirus into the community, containment of poliovirus in laboratories is essential.[7] A comprehensive report on Australia's approach to laboratory containment of wild poliovirus has been described in an earlier paper.[5] A plan has been developed and is currently being implemented.

Acknowledgments

We would like to thank the staff in Australian hospitals and reference laboratories for their continued cooperation and commitment in this effort to certify Australia as wild poliovirus free. We would particularly like to thank Linda Halliday of LabVISE for reminding the reference laboratories in Australia to refer their untyped enteroviruses and polioviruses to the NPRL. The Australian National Polio Reference Laboratory is funded by the Communicable Disease and Environmental Health Branch, Commonwealth Department of Health and Aged Care and by the Victorian Department of Human Services.

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Outbreak report - Foodborne illness outbreak in a Perth restaurant

Contributed by Dr Gary Dowse, Medical Epidemiologist, Communicable Diseases Control Branch, Health Department of Western Australia

Health officials in Western Australia followed up an outbreak of food-borne disease in a Perth restaurant. The overall attack rate among patrons at the restaurant on the implicated day was 36 per cent. Epidemiological analysis revealed a strong association between illness and consumption of sushi (RR 11.3; 95% CI 4.4-29.0). In addition, there were significant associations found with other seafood dishes from the cold selection and some desserts. No bacterial or viral pathogens were detected in the few faecal samples that were available, and no food samples remained. However, the characteristics of the illness, including secondary cases in family members of patrons, were most consistent with a viral origin. It was found that sushi delivered to the restaurant had not been refrigerated. Also at the time of preparation of the dishes incriminated in the outbreak, a food handler involved was symptomatic with an enteric illness similar to that described by patrons.

Major milestone reached in global polio eradication: Western Pacific Region is certified polio-free

WHO Press Release WHO/71 (29 October 2000)

Today, an independent panel of international public health experts certified the World Health Organization (WHO) Western Pacific Region as polio-free. The Region includes 37 countries and areas* ranging from tiny islands to the country with the single largest population in the world, the People's Republic of China.

The certification was announced at the 'Meeting on Poliomyelitis Eradication in the Western Pacific' in Kyoto, Japan. The WHO Western Pacific Region is now the second in the world to be certified polio-free, after the WHO Region of the Americas in 1994.

The Regional Certification Commission on Poliomyelitis Eradication confirmed that no new cases of indigenous polio have been detected in the Western Pacific Region in the last 3 years despite excellent surveillance for the virus the major benchmark for certification. The last indigenous case of polio in the Region occurred in a 15-month old girl, Mum Chanty, who was paralysed in Cambodia in March 1997.

Dr Gro Harlem Brundtland, Director-General of the World Health Organization, said from Geneva, '*This is a major milestone in the global effort led by WHO, Rotary International, UNICEF and the Centers for Disease Control to certify the world polio-free by 2005. By certifying that this diverse Region is polio-free, we demonstrate that it is possible to eradicate polio throughout the world. I would like to congratulate the countries involved, donor governments, partner agencies, and in particular the hundreds of thousands of volunteers whose time and effort contributed to this remarkable success.*'

Since the Global Polio Eradication Initiative was launched in 1988, the number of polio cases globally has dropped by over 95 per cent, from an estimated 350,000 in 1988 to 7,094 reported in 1999. There have only been 1,481 confirmed cases of polio so far this year. The WHO European Region (made up of 51 countries, including the Commonwealth of Independent States) has not had any new cases of indigenous polio for almost 2 years.

'*Today, we celebrate the hard work of everyone involved in the effort to stop the suffering caused by polio in the Western Pacific,* 'said Dr Shigeru Omi, Director of the WHO Regional Office for the Western Pacific. '*Tomorrow, our work doesn't stop. We must maintain our polio-free status through vigilant monitoring and surveillance. We must apply our victory and our lessons learned towards the goal of a world certified as polio-free by 2005.'*

In polio-free Regions, challenges ahead include maintaining certification-standard surveillance and achieving safe containment of laboratory stocks of the wild poliovirus to prevent inadvertent release. The Western Pacific Region is breaking new ground for the eradication initiative in piloting the Global Action Plan for Laboratory Containment of Wild Poliovirus. The Region will also focus on strengthening routine immunisation programs by systematically building on the lessons learned in polio eradication.

Polio transmission is likely to occur in up to 20 countries after 2000, primarily in West and Central Africa and in the Horn of Africa, as well as in parts of Asia. In these areas, national immunisation days and intensive house-to-house mop-up campaigns are being conducted to interrupt the remaining chains of poliovirus transmission within the next 12 to24 months.

Three key challenges must be overcome to achieve global eradication of polio: securing access to all children, including those in conflict-affected countries and areas, closing a US$ 450 million funding gap, and maintaining political commitment in both endemic and polio-free countries.

The Global Polio Eradication Initiative is spearheaded by WHO, Rotary International, the U S Centers for Disease Control and Prevention (CDC) and the United Nations Children's Fund (UNICEF).

The polio eradication coalition also includes national governments, private foundations (e.g. United Nations Foundation, Bill & Melinda Gates Foundation), development banks (e.g. World Bank), donor governments (e.g. Australia, Belgium, Canada, Denmark, Finland, Germany, Italy, Japan, the Netherlands, Portugal, United Kingdom and United States of America), non-governmental humanitarian organisations (e.g. the International Red Cross and Red Crescent movement), and corporate partners (e.g. Aventis Pasteur, De Beers). Volunteers in developing countries play a central role; 10 million have participated in mass immunisation campaigns.

*The 37 countries and areas comprising the WHO Western Pacific Region are American Samoa, Australia, Brunei, Darussalam, Cambodia, China, Cook Islands, the Federated States of Micronesia, Fiji, French Polynesia, Guam, Hong Kong (China), Japan, Kiribati, the Lao People's Democratic Republic, Macao (China), Malaysia, Marshall Islands, Mongolia, Nauru, New Caledonia, New Zealand, Niue, Northern Mariana Islands, Palau, Papua New Guinea, the Philippines, Pitcairn Islands, the Republic of Korea, Samoa, Singapore, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Viet Nam, and Wallis and Futuna.

A *Salmonella* Mgulani cluster in New South Wales

Margaret Lesjak,[1] Valerie Delpech,[2] Mark Ferson,[1] Keira Morgan,[1] Paul Paraskevopoulos,[1] Jeremy McAnulty[2]

Abstract

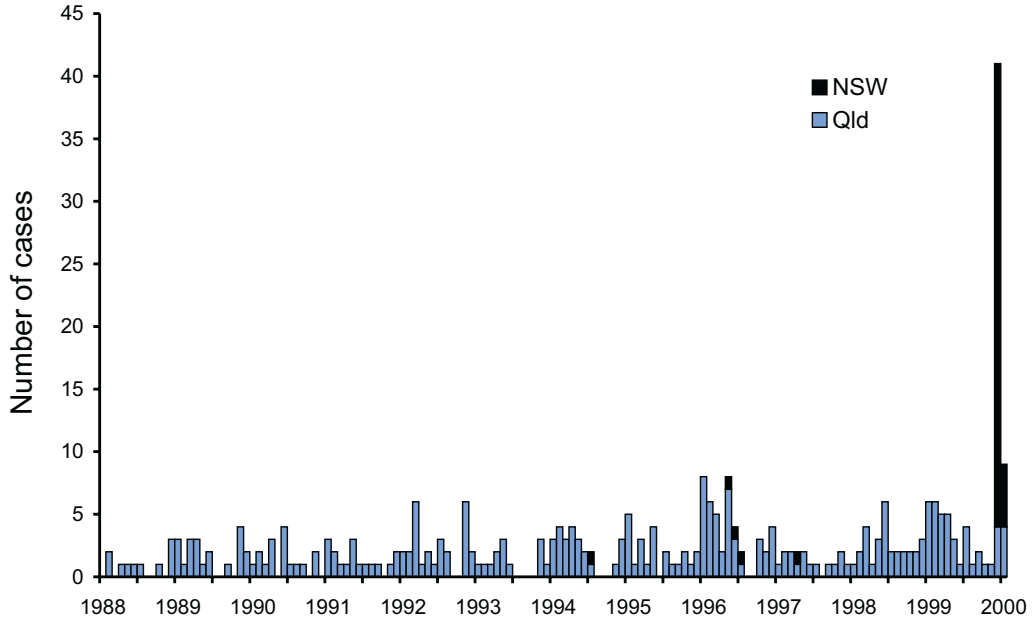
***Salmonella* Mgulani has been isolated sporadically over the years in Australia, mainly in Queensland. In December 1999 and January 2000 an outbreak involving 42 laboratory-confirmed cases occurred in New South Wales and the Australian Capital Territory. DNA fingerprints of seven isolates tested were all similar to each other and to historical isolates from other Australian sources but not to an imported isolate. No source of the outbreak was identified. *Commun Dis Intell* 2000;24:304-305.**

Keywords: salmonellosis, surveillance, Salmonella *Mgulani, DNA fingerprint, Queensland, New South Wales*

Salmonella Mgulani is rarely isolated in Australia. Between 1988 and 1998 the National Enteric Pathogens Surveillance Scheme (NEPSS) received 242 human notifications from Queensland, 5 from New South Wales, 3 from Victoria, and 1 each from the Northern Territory and South Australia. Most cases were in children under the age of 2 years.[1,2]

In contrast to the sporadic nature of *S*. Mgulani infections in Queensland (Figure) a distinct cluster of cases was first reported by the Institute for Clinical Pathology and Medical Research in New South Wales in December 1999. The South Eastern Sydney Public Health Unit coordinated the investigation of this rise in New South Wales cases. Between December 1999 and January 2000, 42 laboratory-confirmed cases were identified through active and passive surveillance. Their ages ranged between 4 months and 88 years (mean age 17 years); one third were aged 2 years or less. The male to female ratio was 1:1. Over half (56%) were residents of greater western Sydney. Ten cases (24%) had positive blood cultures. Of the 42 cases, 33 (or their carers) were interviewed; 2 could not be interviewed because of language barriers and 7 because of long delays in notification. Thirteen (40%) cases interviewed were from non-English speaking backgrounds. Food histories reflected seasonal availability with no common food source detected. The most commonly eaten foods were mangoes, bananas and apples (58%, 48% and 33% respectively eaten by all ages). No environmental source was detected.

Figure. ***Salmonella* Mgulani cases, New South Wales and Queensland, January 1988 to January 2000, by isolation date***



* National Enteric Pathogens Surveillance Scheme data

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DNA fingerprints of seven isolates (two from the Australian Capital Territory and five from New South Wales) were compared with recent historical Australian (human, bovine, food and environmental samples) and overseas (imported chilli powder from India) isolates by staff of the Australian Salmonella Reference Centre (ASRC) in Adelaide. DNA analysis using pulsed-field gel electrophoresis of Xba 1 enzyme digests was by Gel-Compar.[3] This revealed that the outbreak strains were very similar, and were 95 per cent similar to historical Australian isolates but different from the imported chilli powder isolate.

There is little published on the ecology of *S* Mgulani, other than its first reported isolation in Tanzania[4] and later isolation in India.[5] Routine laboratory surveillance of salmonellosis in New South Wales with supplementary typing performed by reference laboratories was able to detect a change in *S*. Mgulani epidemiology in this outbreak. DNA fingerprinting suggests that both the outbreak isolates and historical isolates in Australia had a common source and, given the origins of the majority of previous cases, this was most likely in Queensland.

This cluster was unusual in the wide age range of people affected, the number with positive blood cultures and the diverse backgrounds of the cases involved. Cases were concentrated in greater western Sydney with a few as far as Newcastle, the Australian Capital Territory and the New South Wales south coast. No obvious food or environmental source was found. Reporting delays impeded detailed investigation of 17 per cent of cases. Even where follow-up of all salmonellosis cases is not feasible, the timely communication of standardised typing results helps enhance outbreak identification and investigation.

Acknowledgments

We gratefully acknowledge the assistance of Dianne Davos and Rina Willmore at ASRC for the DNA fingerprinting, Ed Kraa of New South Wales Health for helpful advice and Joan Powling of the Melbourne Diagnostic Unit for the use of NEPSS data.

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Australian recommendations for the Influenza Vaccine composition for the 2001 season

In order to select virus strains for the manufacture of Influenza Vaccine for 2001 Season, a meeting of the Australian Influenza Vaccine Committee (AIVC) on Influenza Vaccines was convened on 25 October 2000.

Having considered the information on international surveillance by WHO and up-to-date epidemiology and strain characterisation presented at the meeting, the Committee considered that the WHO recommendations on the composition of vaccines for 2001 Southern Hemisphere Season should be followed:

• **H1N1 strain:**	an A/New Caledonia/20/99 (H1N1)-like strain A/New Caledonia/20/99 (IVR-116) is recommended as a suitable vaccine strain.	15 µg HA per dose.
• **H3N2 strain:**	an A/Moscow/10/99 (H3N2)-like strain A/Panama/2007/99 (RESVIR-17) is recommended as a suitable vaccine strain.	15 µg HA per dose.
• **B Strain:**	A B/Sichuan/379/99-like strain B/Johannesburg/5/99 is recommended as the suitable vaccine strain. The B/Victoria/504/00 may also be endorsed as an alternative vaccine strain if the yield of this strain is greater and further testings confirm that it is a B/Sichuan/379/99-like strain.	15 µg HA per dose.

Further advice concerning the suitability of the B/Victoria/504/00 will be provided as soon as the data are available.

The SRID reagents for testing the potency of influenza vaccines for A/New Caledonia/20/99 (IVR-116) and A/Panama/2007/99 (RESVIR-17) are available from NIBSC and CBER/FDA. However, the preparation of B strain reagents is still in progress and they need to be calibrated jointly by CBER, NIBSC and TGAL. There will be updates for the B reagents as soon as they become available.

The Public Health Laboratory Network

The Public Health Laboratory Network (PHLN) was established as part of the implementation of the National Communicable Diseases Surveillance Strategy. The PHLN is a collaborative group of laboratories with expertise in public health microbiology. State and Territory health departments nominate the laboratories, while relevant national organisations and a laboratory from New Zealand are also represented on the PHLN.

The PHLN facilitates nationwide and regional collaboration between microbiologists and epidemiologists and disseminates information about, and advises on: public health policies, the best available testing, data management and analysis, and research on communicable disease control.

The inaugural meeting of the PHLN was held in June 1997. The network now communicates monthly by teleconference and annually in person. Current work of the PHLN includes writing laboratory case definitions for all of the national notifiable diseases, providing typing and subtyping nomenclature for each organism for the revised National Notifiable Diseases Surveillance System (NNDSS), and reviewing recommendations for changes to the Laboratory Virology and Serology (LabVISE) reporting scheme.

The PHLN is a network for all microbiologists involved in public health. If you wish to bring a matter to the attention of the PHLN, please contact your representative or the secretariat; their contact details are listed below.

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Top of the hit parade

The *Communicable Diseases Australia* Website is managed and updated by the Surveillance and Management Section, Population Health Division (PHD), Department of Health and Aged Care. Besides being the Home page for the *Communicable Diseases Intelligence* (*CDI*) bulletin it is also the Home page for Australia's National Notifiable Diseases Surveillance System (NNDSS) statistics. Visitors to this site can access summary data by Year and Month, and Year and State for all diseases which are nationally notifiable in Australia. These data are updated every fortnight and date back to 1991 when the NNDSS was established.

Other documents which can be accessed from this site include all published issues of *CDI* since 1996, *CDI* Technical Report Series papers, notifiable diseases and influenza annual reports, subscription details for *CDI*, Australian climate and population data and the *CDI* supplementary paper on *Vaccine Preventable Diseases And Vaccination Coverage in Australia - 1993 to 1998*. The site also provides numerous links to communicable diseases organisations both within Australia and worldwide, including each Australian State and Territory health authority; the World Health Organization; and the Centers for Disease Control and Prevention, Atlanta.

The *CDI* Technical report series papers include: *Guidelines for the control of pertussis in Australia; Foodborne disease - Toward reducing foodborne disease illness in Australia*; *Epidemiology of the hepatitis C virus*; *A framework for an Australian Influenza Pandemic Plan*; and *Guidelines for the control of measles in Australia*. Several of these reports, along with the *CDI* supplement on vaccine preventable diseases, have been in the top 10 PHD downloaded files for the last three months.

Recent statistics have shown that the *Communicable Diseases Australia* Website is proving to be one of the most popular sites within the Department of Health and Aged Care. It has been the seventh most requested page of the entire Department's Website for each of the past three months.

This site and related pages also featured heavily in the Top 40 statistics for the Population Health Division, under which the site is managed. Since March 2000 the site has consistently topped the PHD's list of the most requested pages, with an average of 1,687 user sessions while the '*CDI* current issue' has averaged at the No 17 spot with a mean of 479 user sessions. Although not proving as popular as *CDI* the National Notifiable Diseases Surveillance System data pages have also been consistently in the top 40 most requested pages with an average position of 27 and a mean of 372 user sessions.

The Communicable Diseases Australia site address is: http://www.health.gov.au/pubhlth/cdi/cdihtml.htm

We already have several projects in hand to improve the accessibility of data and are keen to continue, and indeed improve, the interest shown in our site. Therefore we would welcome your comments and suggestions. Just click on the 'Contact Us' icon on any page and send us your comments or contact us at the address below.

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Changes to the Editorial Team

Students of the back cover of *CDI* will have noticed some recent changes to the Editorial Team. In May this year, after overseeing the production of 36 issues of *CDI* since mid-1997, Corrine Rann left as Deputy Editor to take over as Editor of *Microbiology Australia*. We wish her well in her new position and thank her for her expert contribution to the team effort over the years.

In June, Ian Griffith joined the team as Deputy Editor (part-time) bringing with him a depth of knowledge in the biomedical sciences. Ian graduated in Biochemistry from Oxford University and obtained a PhD in Microbiology from the ANU. Following a spell at the Commonwealth Serum Laboratories, in 1975 he joined the Victorian College of Pharmacy for a 25-year spell as lecturer/senior lecturer in Pharmaceutical Microbiology. Ian earned his spurs as an administrator while Honorary Secretary of The Australian Society for Microbiology (from 1977 to 1979). We welcome Ian to the team and look forward to his contribution to the future development of *CDI.*

Asiz Gomes, joins us from the NHMRC; he and Mark Bullock will be assisting with the production of *CDI* as a replacement for Gail Bird. Gail, who joined the copy-editing team early this year, has transferred to the Therapeutic Goods Administration (TGA) as Webmaster of the TGA Website.

In case you missed it

Wild poliovirus eradication?

Yoshida H, Horie H, Matsuura K, Miyamura T. Characterisation of vaccine-derived polioviruses isolated from sewage and river water in Japan. *Lancet* 2000;356:1461-1463. (28 October).

Hiromo Yoshida et al studied the molecular characteristics of type 3 polioviruses isolated from environmental samples in Japan. They suggest that complete eradication of polio will be difficult while live vaccines are in use.

Kuroiwa C, Vongphrachanh P, Chosa T et al. Risk of poliomyelitis importation and re-emergence in Laos. *Lancet* 2000;356:1487-1488. (28 October).

Chushi Kuroiwa and colleagues surveyed surveillance and vaccination activities in 16 districts of Laos. They found eight cases of unreported acute flaccid paralysis, and a poor understanding of the need for surveillance.

DNA vaccine controls AIDS in monkeys

Barouch DH, Santra S, Schmitz JE et al. Control of viremia and prevention of clinical AIDS in rhesus monkeys by cytokine-augmented DNA vaccination. *Science* 2000;290 :486-492. (20 October)

A DNA vaccine fused with a fusion protein consisting of interleukin-2 and a portion of IgG was shown to protect rhesus monkeys from challenge with high levels of an aggressive SIV/HIV chimera. Although not protected from infection, these monkeys showed nearly undetectable viral loads, high T-cell counts and no evidence of clinical AIDS. The DNA on its own provided much less protection, while the sham-inoculated controls had a profound depletion of their CD4 T-lymphocytes.

***Helicobacter pylori* and SIDS**

Kerr JR, Al-Khattaf A, Barson AJ, Burnie JP. An association between sudden infant death syndrome (SIDS) and *Helicobacter pylori* infection. *Arch Dis Child* 2000;83: 429-434 (November).

The authors used nested PCR to detect *H. pylori* ureC and cagA genes in stomach, trachea and lung tissue. They report both genes present in one or more tissues in 23 of 32 SIDS cases aged 2 to 28 weeks, but in only one of eight controls aged 3 to 44 weeks.

The Phillips report on BSE and vCJD

Editorial. *Lancet* 356;2000:1535 (4 November)

This editorial summarises the history of the way the UK Government wrongly put scientific committees into the policy making arena, especially its manipulation of the Spongiform Encephalopathy Advisory Committee. One conclusion of the Phillips enquiry was that such committees should be restricted to giving advice and should not be setting policy. The Editorial states '*It is time for the Chief Medical Officer to become a non-government appointment and to work and act entirely independently of the Department of Health'.* It also claims the compensation scheme has not been thought through, and suggests the UK Government would do well to put money into research into BSE (and scrapie) and vCJD.

BSE inquiry uncovers 'a peculiarly British disaster'

Ashraf H. *Lancet* 356;2000:1579-1580. (4 November)

This article summarises the main findings of the Phillips report which stated '*any who have come to our report hoping to find villains and scapegoats, should go away disappointed'* but nevertheless levelled specific criticisms at two Ministries, and Chief Medical and Veterinary Officers. It also provides a useful summary of the history of the BSE outbreak in the UK, the use of the Southwood report to allay concerns, and the slow response of government departments to doubts subsequently expressed by senior scientists. Indeed some of the latter were not allowed to publish any suggestion of a link between BSE and vCJD.

Latest on BSE in Europe

Abstracted from ProMED, 8 November 2000

1. Contributed by Chris Griot. Source: BBC News, 21 Oct 2000 (edited)

Authorities in France say a leading supermarket chains has sold up to a ton of beef which may be infected with the agent causing BSE. The beef came from a cattle herd slaughtered earlier in October. Tests later showed one of the 13 animals had the disease, but by then meat from the other animals was already on sale in 39 Carrefour supermarkets.

France banned the use of meat and bone meal (MBM) in foodstuffs for cattle herds in 1990. But the state consumer fraud agency, which checks compliance with the 1990 law, is reported to have tolerated MBM in cattle feed for at least 2 years, however at levels of less than 0.3 per cent. Unlike Britain, France - which refuses to lift its ban on UK beef imports in defiance of an European Commission ruling - does not bar all cattle over the age of 30 months from human consumption. Under the 30-month rule, all cows in the UK over this age have to be slaughtered and their carcasses incinerated.

2. *Contributed by M Cosgriff and Marjorie Pollack. Source: Reuters, 27 Oct 2000 (edited)*

France has reported seven more cases of BSE amid growing consumer fears after supermarkets unknowingly sold beef potentially contaminated beef; six were detected under the traditional surveillance system while the seventh was spotted under the country's new BSE testing program launched in June. The new discoveries bring to 78 the total number of cases of BSE reported this year in France.

Communicable Diseases Surveillance

Presentation of NNDSS data

In the March 2000 issue an additional summary table was introduced. Table 1 presents 'date of notification' data, which is a composite of three components: (i) the true onset date from a clinician, if available, (ii) the date the laboratory test was ordered, or (iii) the date reported to the public health unit. Table 2 presents the crude incidence of diseases by State or Territory for the current reporting month. Table 3 presents data by report date for information only. In Table 3 the report date is the date the public health unit received the report.

Table 1 now includes the following summary columns: total current month 2000 data; the totals for previous month 2000 and corresponding month 1999; a 5-year mean which is calculated using previous, corresponding and following month data for the previous 5 years (*Morb Mortal Wkly Rep*, 2000:49;139-146); year to date (YTD) figures; the mean for the year to date figures for the previous 5 years; and the ratio of the current month to the mean of the last 5 years.

Highlights for September, 2000

Communicable Disease Surveillance Highlights report on data from various sources, including the National Notifiable Diseases Surveillance System (NNDSS) and several disease specific surveillance systems that provide regular reports to Communicable Diseases Intelligence*. These national data collections are complemented by intelligence provided by State and Territory communicable disease epidemiologists and/or data managers who have recently formed a Data Management Network. This additional information has enabled the reporting of more informative highlights each month.*

The NNDSS is conducted under the auspices of the Communicable Diseases Network Australia New Zealand and the CDI *Virology and Serology Laboratory Reporting Scheme (LabVISE) is a 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'.*

Three types of data are included in National Influenza Surveillance, 2000. These are sentinel general practitioner surveillance conducted by the Australian Sentinel Practice Research Network (ASPREN), the Department of Human Services (Victoria), the Department of Health (New South Wales) and the Tropical Influenza Surveillance Scheme, Territory Health Services (Northern Territory); laboratory surveillance data from the Communicable Diseases Intelligence *Virology and Serology Laboratory Reporting Scheme (LabVISE); and the World Health Organization Collaborating Centre for Influenza Reference and Research; and absenteeism surveillance conducted by Australia Post. Data from ASPREN are referred to as 'consultations' or 'encounters'. For further information about these schemes, see* Commun Dis Intell *2000;24:9-10.*

In September 2000 the number of reports of incident hepatitis B (ratio 1.5), chlamydial infection (ratio1.5), mumps (ratio 1.3) legionellosis (ratio 1.2) and meningococcal infection (ratio 1.5) has increased compared with their 5 year-mean (Figure 9, Table 1).

Gastrointestinal infections

There were 1,334 notifications of gastrointestinal infections. All diseases had fewer reporting numbers this month than for the 5-year mean with the exception of Shiga-like toxin producing *Escherichia coli* (SLTEC/VTEC) which has only recently become notifiable and is still not notifiable in Queensland or Western Australia.

There were six cases of SLTEC/VTEC infection all in South Australia. One was in a one-year old child where the family had purchased beef in bulk from a local abattoir, and one was in a 90-year old resident of an aged care facility where no apparent source for the infection was identified.

Vaccine preventable diseases

All vaccine preventable diseases except mumps had fewer reports this month than for the 5-year mean. The increase in the notification rate (1.2/100,000 population) for mumps was again due to an increase in Western Australia (3.9/100,000 population).

Although less than for the previous month, the pertussis notification rate of 26.1/100,000 population increased due to an increase in the Australian Capital Territory (61.7/100,000 population), New South Wales (53.7/100,000 population) and South Australia (26.9/100,000 population) (Figure 1). With this current increase in notifications, compared with previous increases in 1994/1995 (up to 130/100,000 population) and 1997/1998 (up to 250/100,000 population), less disease is presenting in children under the age of 10 years (18 per cent of cases this month; 33.6/100,000 population) (Figure 2).

Measles cases continue to be at their lowest level since the national notification system began (Figure 3). Of the 8 cases for September 2000, 5 were reported in New South Wales (all female: 2 were under one year of age, 2 were one-year old, and one was 23 years of age). Two were reported in the Australian Capital Territory (both males aged 29 and 38 years) and one was reported in South Australia (a 25-year old male).

Figure 1. Notification rate of pertussis, Australian Capital Territory, New South Wales, South Australia and Australia, 1 October 1999 to 30 September 2000

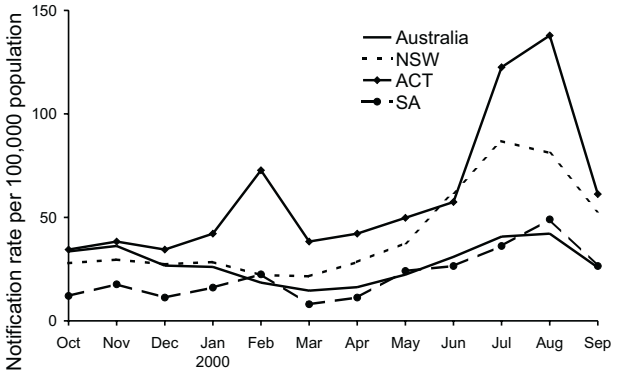


Figure 2. Notification rate of pertussis, Australia, 1 January 1991 to 30 September 2000, by all age groups and under 10 years of age

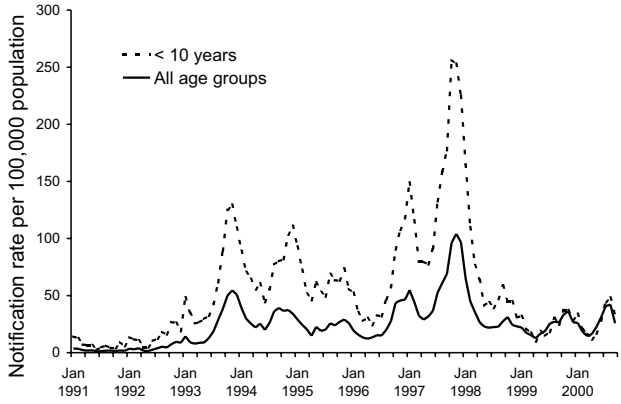
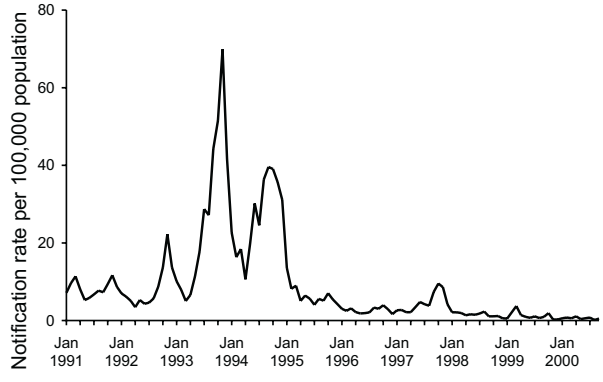


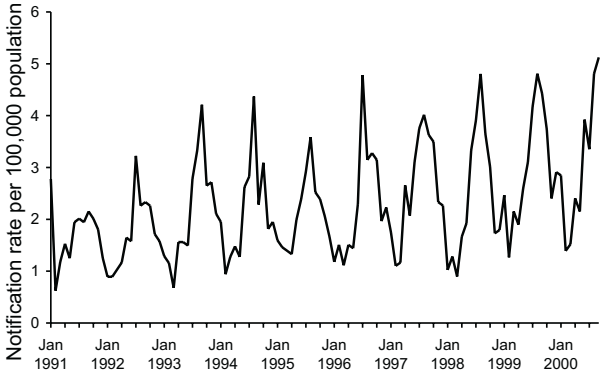
Figure 3. Notification rate of measles, Australia, 1 January 1991 to 30 September 2000



Meningococcal infections

There were 81 notifications of meningococcal infection in September 2000 (a notification rate of 5.2/100,000 population (Figure 4). Of these cases, 31 per cent were under 5 years of age and 32 per cent were in the 15-24 year age range. The serogroups were available for 51 cases; these were serogroups B, C, Y and W (41%, 55%, 2% and 2% respectively). There were also several deaths caused by meningococcal infections.

Figure 4. Notification rate of meningococcal infection, Australia, 1 January 1991



Legionellosis

There were 17 notifications of legionellosis in September 2000. The increase in the notification rate (1.1/100,000 population) was due to an increase in South Australia (6.5/100,000 population). Of these South Australian cases, 5 were caused by *Legionella longbeachae*. Two cases have been confirmed serologically. There was one male aged 64 and one female aged 43 years. In one case exposure to gardening and manure occurred prior to the onset of illness and in the second case no environmental exposures were identified. Three presumptive cases are awaiting further serology.

Influenza

Ten participating laboratories submitted 455 laboratory reports of influenza in September 2000, a substantial increase from 107 in August 2000, and an increase from 352 in September 1999 (Figure 5). Of the laboratory reports received in September 2000 (weeks 36-39), 285 were influenza A and 131 influenza B (Figure 6). The weekly proportion of influenza B among the total laboratory reports varied from 28 to 36 per cent in September 2000 which was higher than the same period last year (14% to 19%).

After peaking at the end of August, all of the influenza surveillance schemes reported a decline in the number of influenza-like illness consultation. The New South Wales Influenza Surveillance Scheme has reported the highest rate during the year 2000 influenza surveillance season (37 per 1,000 consultations in week 37 ending 17 September) (Figure 7).

Figure 5. Laboratory reports of influenza, Australia, 1999 to 2000, by month of specimen collection

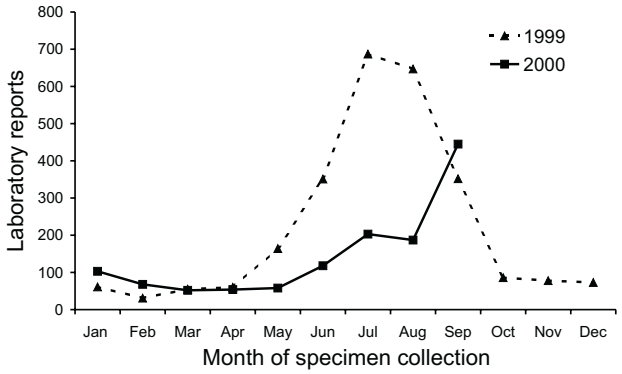


Figure 6. Laboratory reports of influenza, Australia, week 40 1999 to week 39 2000, by week of specimen collection

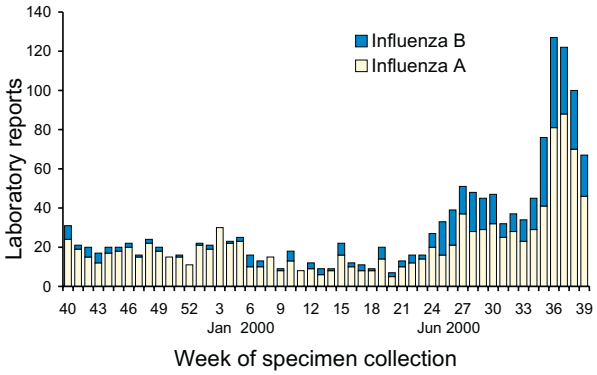
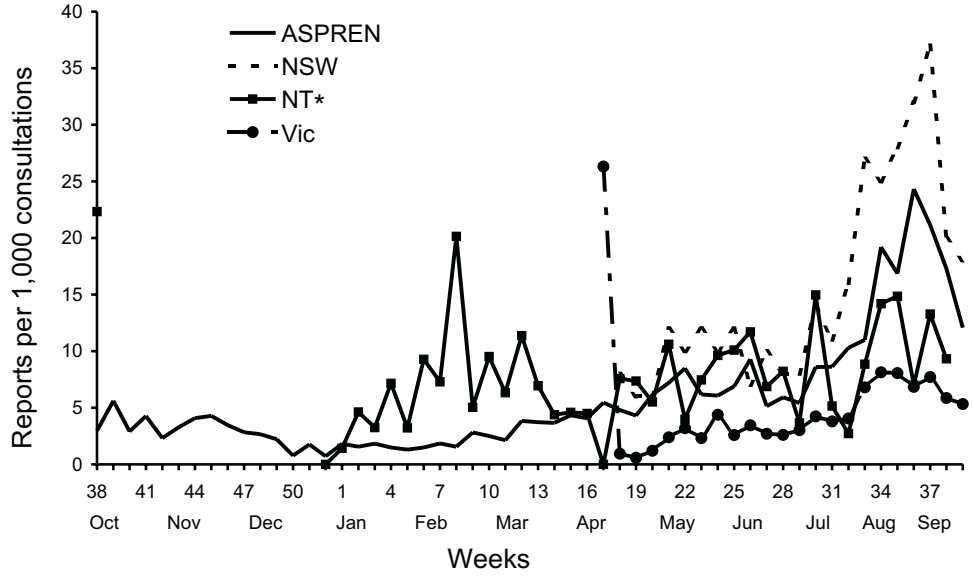


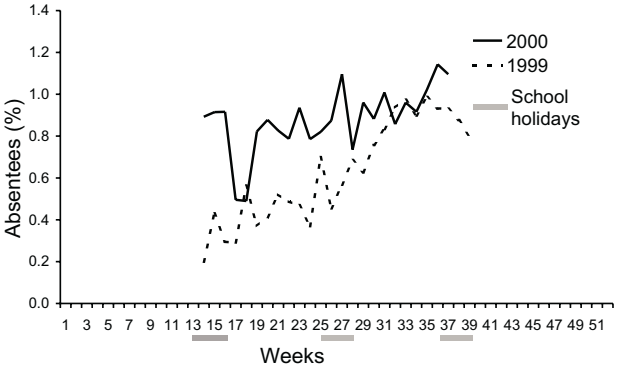
Figure 7. Sentinel general practitioner influenza consultations rates, week 38 1999 to week 39 2000, by surveillance scheme



* Data for week 39 not supplied

The percentage of Australia Post employees absent for three or more consecutive days in the first half of September 2000 (weeks 36 and 37 only) was the highest rate for the entire surveillance period in 2000, and was higher than the same period in 1999 (Figure 8). The first two distinctive peaks for absenteeism (weeks 15/16 and weeks 26/27) coincided with school holiday periods in most States. The rate in week 35 (ending 6 September) was the highest for the entire surveillance period in 2000 (1.1%) but this peak preceded the school holiday and Olympic Games period (weeks 37-39).

Figure 8. Absenteeism rates in Australia Post, week 14 to week 39 1999 and week 14 to week 37 2000



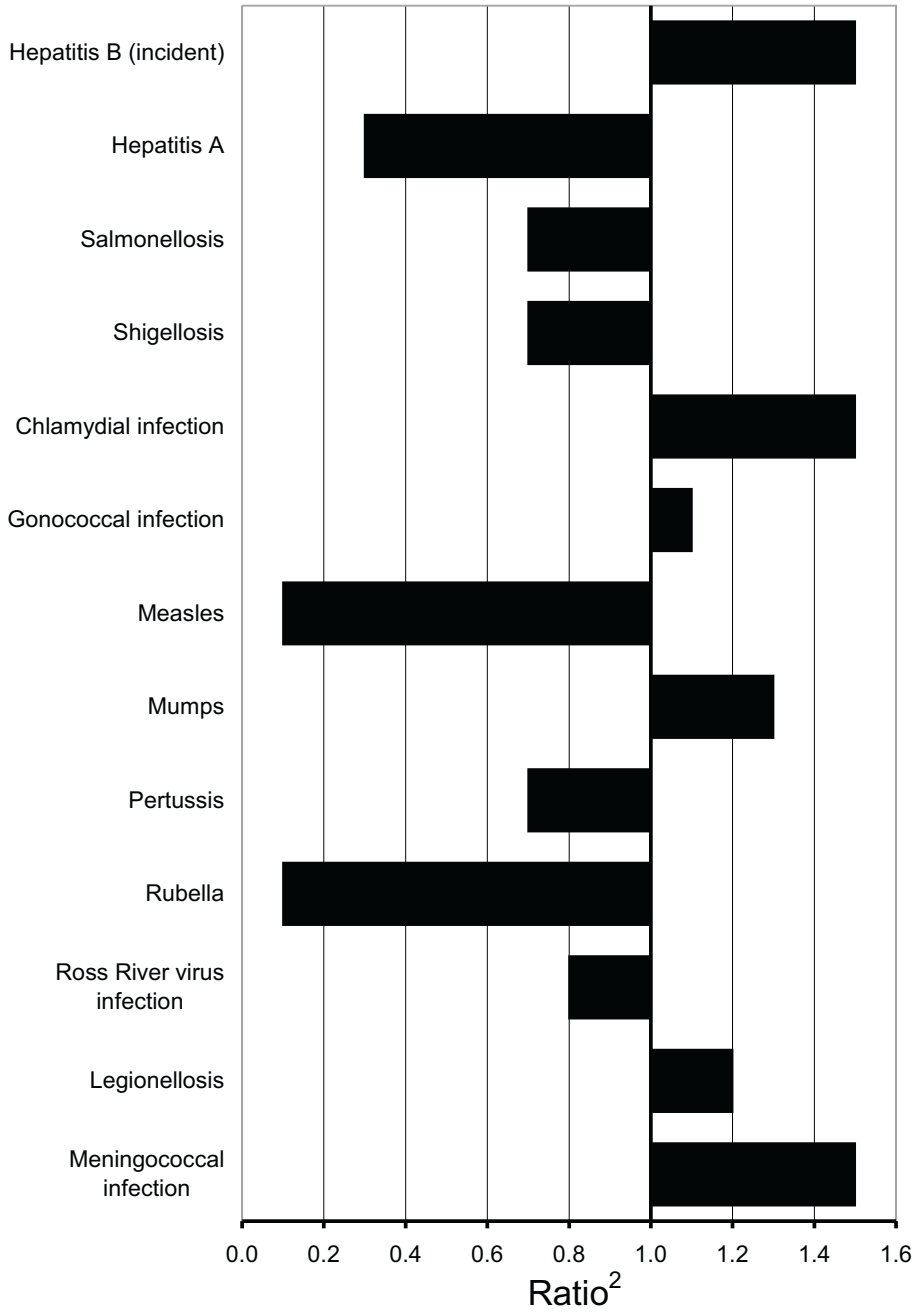
Tables

There were 7,149 notifications to the National Notifiable Diseases Surveillance System (NNDSS) with a notification date in September 2000 (Table 1). The crude incidence of diseases per 100,000 population for each State or Territory (Table 2) was included for the first time in the August issue of *Commun Dis Intell*. Data by date of report for September 2000, are included in this issue of *Commun Dis Intell* (Table 3). Figure 9 illustrates, for selected diseases, the September 2000 totals as ratios to the mean of their August to October levels for the previous 5 years (1995 to 1999).

There were 1,941 reports received by the *CDI* Virology and Serology Laboratory Reporting Scheme (LabVISE) in the reporting period, 1 to 30 September 2000 (Tables 4 and 5).

The Australian Sentinel Practice Research Network (ASPREN) data for weeks 35 to 38, ending 24 September 2000, are included in this issue of *Commun Dis Intell* (Table 6).

Figure 9. Selected[1] diseases from the National Notifiable Diseases Surveillance System, comparison of provisional totals for the period 1 to 30 September 2000 with historical data[2]



1. Selected diseases are chosen each calendar month according to current activity
2. Ratio of current month total to mean of August to October data for the previous five years

Table 1. Notifications of diseases received by State and Territory health authorities in the period 1 to 30 September 2000, by date of notification[#]

Disease	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Total September 2000[1]	Total August 2000[1]	Total September 1999[1]	Last 5 years mean	Year to date 2000	Last 5 years YTD mean	Ratio*
Bloodborne															
Hepatitis B (incident)	0	7	0	4	4	0	8	11	34	46	25	23	311	209	1.5
Hepatitis B (unspecified)[2]	5	209	0	65	11	6	178	55	529	693	724	574	6,028	5,229	0.9
Hepatitis C (incident)	1	6	0	-	2	0	4	6	19	34	23	19	364	145	1.0
Hepatitis C (unspecified)[2]	24	459	14	298	43	29	416	139	1,422	1,743	1,718	1,346	15,823	11,929	1.1
Hepatitis D	0	0	0	0	0	0	0	0	0	5	1	2	15	13	
Gastrointestinal															
Botulism	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Campylobacterosis[3]	23	-	13	200	157	52	354	183	982	1,186	1,007	1,054	9,844	8,565	0.9
Haemolytic uraemic syndrome	0	0	0	0	0	0	0	0	0	0	0	1	6	5	
Hepatitis A	2	15	3	6	1	0	4	12	43	39	129	152	668	1,711	0.3
Hepatitis E	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
Listeriosis	0	1	0	0	0	0	2	0	3	3	16	6	52	50	0.5
Salmonellosis	5	47	11	69	16	3	54	58	263	320	374	401	4,633	5,098	0.7
Shigellosis[3]	0	-	12	9	2	0	7	3	33	29	43	45	366	515	0.7
SLTEC,VTEC[4]	0	0	0	NN	6	0	0	NN	6	2	0	1	29	9	6.0
Typhoid	0	0	0	0	0	0	0	0	0	7	8	4	55	58	
Yersiniosis[3]	0	-	1	3	0	0	0	0	4	8	10	16	59	178	0.3
Quarantinable															
Cholera	0	0	0	0	0	0	0	0	0	0	0	0	1	3	
Plague	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rabies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Viral haemorrhagic fever	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Yellow fever	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sexually transmissible															
Chancroid	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Chlamydial infection[5]	19	217	70	414	127	22	223	163	1,255	1,661	1,153	831	12,950	7,385	1.5
Donovanosis	0	0	0	0	NN	0	0	0	0	0	1	4	11	35	
Gonococcal infection[6]	0	47	86	90	10	0	89	87	409	507	440	370	4,774	3,507	1.1
Lymphogranuloma venereum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Syphilis[7]	2	42	12	66	0	0	0	3	125	166	176	139	1,395	1,295	0.9

Table 1 (continued). Notifications of diseases received by State and Territory health authorities in the period 1 to 30 September 2000, by date of notification[#]

Disease	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Total September 2000[1]	Total August 2000[1]	Total September 1999[1]	Last 5 years mean	Year to date 2000	Last 5 years YTD mean	Ratio*
Vaccine preventable															
Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Haemophilus influenzae type b	0	1	0	2	1	0	0	0	4	5	1	4	21	39	1.0
Measles	2	5	0	0	1	0	0	0	8	2	15	58	84	449	0.1
Mumps	0	7	0	0	0	0	5	6	18	19	16	14	173	130	1.3
Pertussis	16	283	0	22	33	2	47	5	408	666	418	580	3,751	3,814	0.7
Poliomyelitis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rubella[8]	0	10	0	2	0	0	5	0	17	35	31	228	173	1,188	0.1
Tetanus	0	0	0	1	0	0	0	0	1	0	0	0	6	4	
Vectorborne															
Arbovirus infection NEC	0	0	0	1	0	0	0	0	1	2	1	2	64	46	0.5
Barmah Forest virus infection	0	10	0	21	0	0	0	3	34	40	33	33	452	586	1.0
Dengue	0	0	0	6	0	0	0	0	6	1	4	11	203	125	0.5
Malaria	1	15	8	18	3	0	5	0	50	88	62	48	790	589	1.0
Ross River virus infection	0	7	1	48	0	0	3	4	63	60	79	78	3,683	4,456	0.8
Zoonoses															
Brucellosis	0	0	0	4	0	0	0	0	4	5	8	5	16	27	0.8
Hydatid infection	0	NN	0	3	0	0	1	0	4	2	0	5	20	30	0.8
Leptospirosis	1	2	0	3	0	0	4	0	10	11	13	13	176	147	0.8
Ornithosis	0	NN	0	NN	0	2	3	1	6	8	5	7	59	53	0.9
Q fever	0	10	0	33	1	0	0	0	44	45	55	46	385	401	1.0
Other															
Legionellosis	0	0	0	6	8	0	1	2	17	25	16	14	386	150	1.2
Leprosy	0	0	0	0	0	0	0	0	0	0	1	1	3	6	
Meningococcal infection	4	35	0	5	5	1	22	9	81	76	70	55	435	347	1.5
Tuberculosis	0	9	0	4	3	0	21	7	44	65	120	91	669	780	0.5
Total	105	1,444	231	1,403	434	117	1,456	757	5,947	7,604	6,796	6,281	68,933	59,312	

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. Unspecified numbers should be interpreted with some caution as the magnitude may be a reflection of the numbers of tests being carried out.
3. Not reported for NSW because it is only notifiable as 'foodborne disease' or 'gastroenteritis in an institution'.
4. Infections with Shiga-like toxin (verotoxin) producing *E. coli* (SLTEC/VTEC).
5. WA: genital only.
6. NT, Qld, SA , Vic and WA: includes gonococcal neonatal ophthalmia.
7. Includes congenital syphilis.
8. Includes congenital rubella.

\# Date of notification = a composite of three components: (i) the true onset date from a clinician, if available, (ii) the date the laboratory test was ordered, or (iii) the date reported to the public health unit.

NN Not Notifiable.

NEC Not Elsewhere Classified.

\- Elsewhere Classified.

* Ratio = ratio of current month total to the mean of the last 5 years (where data are available) calculated as described above.

Table 2. Crude incidence of diseases by State or Territory, 1 to 30 September 2000. (Rate per 100,000 population)

Disease[1]	State or Territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Bloodborne									
Hepatitis B (incident)	0.0	1.3	0.0	1.4	3.2	0.0	2.0	7.1	2.2
Hepatitis B (unspecified)[2]	19.1	39.1	0.0	22.2	8.8	15.3	45.3	35.5	33.5
Hepatitis C (incident)	3.8	1.1	0.0	-	1.6	0.0	1.0	3.9	1.5
Hepatitis C (unspecified)[2]	91.9	85.9	87.1	101.8	34.6	74.0	105.9	89.6	90.0
Hepatitis D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gastrointestinal									
Botulism	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Campylobacterosis[3]	88.1	-	80.9	68.3	126.2	132.7	90.1	118.0	93.9
Haemolytic uraemic syndrome	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hepatitis A	7.7	2.8	18.7	2.0	0.8	0.0	1.0	7.7	2.7
Hepatitis E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Listeriosis	0.0	0.2	0.0	0.0	0.0	0.0	0.5	0.0	0.2
Salmonellosis	19.1	8.8	68.4	23.6	12.9	7.7	13.8	37.4	16.6
Shigellosis[3]	0.0	-	94.7	3.1	1.6	0.0	1.8	1.9	3.2
SLTEC,VTEC[4]	0.0	0.0	0.0	NN	4.8	0.0	0.0	NN	0.5
Typhoid	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yersiniosis[3]	0.0	-	6.2	1.0	0.0	0.0	0.0	0.0	0.4
Quarantinable									
Cholera	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plague	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rabies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Viral haemorrhagic fever	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow fever	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sexually transmissible									
Chancroid	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chlamydial infection[5]	72.8	40.6	435.5	141.4	102.1	56.1	56.8	105.1	79.4
Donovanosis	0.0	0.0	0.0	0.0	NN	0.0	0.0	0.0	0.0
Gonococcal infection[6]	0.0	8.8	535.0	30.7	8.0	0.0	22.7	56.1	25.9
Lymphogranuloma venereum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Syphilis[7]	7.7	7.9	74.7	22.5	0.0	0.0	0.0	1.9	7.9
Vaccine preventable									
Diphtheria	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Haemophilus influenzae type b	0.0	0.2	0.0	0.7	0.8	0.0	0.0	0.0	0.3
Measles	7.7	0.9	0.0	0.0	0.8	0.0	0.0	0.0	0.5
Mumps	0.0	1.3	0.0	0.0	0.0	0.0	1.3	3.9	1.1
Pertussis	61.3	53.0	0.0	7.5	26.5	5.1	12.0	3.2	25.8
Poliomyelitis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rubella[8]	0.0	1.9	0.0	0.7	0.0	0.0	1.3	0.0	1.1
Tetanus	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.1
Vectorborne									
Arbovirus infection NEC	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.1
Barmah Forest virus infection	0.0	1.9	0.0	7.2	0.0	0.0	0.0	1.9	2.2
Dengue	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.4
Malaria	3.8	2.8	49.8	6.1	2.4	0.0	1.3	0.0	3.2
Ross River virus infection	0.0	1.3	6.2	16.4	0.0	0.0	0.8	2.6	4.0

Table 2 (continued). Crude incidence of diseases by State or Territory, 1 to 30 September 2000. (Rate per 100,000 population)

Disease[1]	State or Territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Zoonoses									
Brucellosis	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.3
Hydatid infection	0.0	NN	0.0	1.0	0.0	0.0	0.3	0.0	0.4
Leptospirosis	3.8	0.4	0.0	1.0	0.0	0.0	1.0	0.0	0.6
Ornithosis	0.0	NN	0.0	NN	0.0	5.1	0.8	0.6	0.8
Q fever	0.0	1.9	0.0	11.3	0.8	0.0	0.0	0.0	2.8
Other									
Legionellosis	0.0	0.0	0.0	2.0	6.4	0.0	0.3	1.3	1.1
Leprosy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meningococcal infection	15.3	6.6	0.0	1.7	4.0	2.6	5.6	5.8	5.1
Tuberculosis	0.0	1.7	0.0	1.4	2.4	0.0	5.3	4.5	2.8
Total	402.1	270.4	1437.1	479.3	348.8	298.6	370.8	488.1	376.3

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. Unspecified numbers should be interpreted with some caution as the magnitude may be a reflection of the numbers of tests being carried out.
3. Not reported for NSW because it is only notifiable as 'foodborne disease' or 'gastroenteritis in an institution'.
4. Infections with Shiga-like toxin (verotoxin) producing *E. coli* (SLTEC/VTEC).
5. WA: genital only.
6. NT, Qld, SA , Vic and WA: includes gonococcal neonatal ophthalmia.
7. Includes congenital syphilis.
8. Includes congenital rubella.

NN Not Notifiable.

NEC Not Elsewhere Classified.

\- Elsewhere Classified.

Table 3. Notifications of diseases received by State and Territory health authorities in the period 1 to 30 September 2000, by date of report*

Disease[1]	State or Territory								Total this period	Year to date total
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA		
Bloodborne										
Hepatitis B (incident)	0	11	1	3	7	0	10	11	43	318
Hepatitis B (unspecified)[2]	3	359	0	70	30	4	179	63	708	6,252
Hepatitis C (incident)	1	8	0	-	3	0	3	6	21	377
Hepatitis C (unspecified)[2]	22	724	12	283	64	34	418	159	1,716	16,087
Hepatitis D	0	2	0	0	0	0	0	0	2	15
Gastrointestinal										
Botulism	0	0	0	0	0	0	0	0	0	0
Campylobacterosis[3]	22	-	15	185	169	46	362	205	1,004	9,919
Haemolytic uraemic syndrome	0	0	0	0	0	0	0	0	0	6
Hepatitis A	2	15	6	8	1	0	4	13	49	696
Hepatitis E	0	0	0	0	0	0	0	0	0	0
Listeriosis	0	0	0	1	0	0	2	0	3	51
Salmonellosis	5	57	12	91	21	1	62	53	302	4,799
Shigellosis[3]	0	-	10	6	3	0	9	3	31	367
SLTEC,VTEC[4]	0	0	0	NN	5	0	0	NN	5	30
Typhoid	0	3	0	0	0	0	0	0	3	60
Yersiniosis[3]	0	-	1	3	0	0	0	0	4	61
Quarantinable										
Cholera	0	0	0	0	0	0	0	0	0	1
Plague	0	0	0	0	0	0	0	0	0	0
Rabies	0	0	0	0	0	0	0	0	0	0
Viral haemorrhagic fever	0	0	0	0	0	0	0	0	0	0
Yellow fever	0	0	0	0	0	0	0	0	0	0
Sexually transmissible										
Chancroid	0	0	0	0	0	0	0	0	0	0
Chlamydial infection[5]	15	290	104	443	149	28	294	189	1,512	12,977
Donovanosis	0	0	0	0	NN	0	0	0	0	12
Gonococcal infection[6]	0	70	133	91	24	0	92	89	499	4,831
Lymphogranuloma venereum	0	0	0	0	0	0	0	0	0	0
Syphilis[7]	1	54	14	81	0	0	0	9	159	1,461
Vaccine preventable										
Diphtheria	0	0	0	0	0	0	0	0	0	0
Haemophilus influenzae type b	0	2	0	3	1	0	0	0	6	23
Measles	1	4	0	0	1	0	0	0	6	84
Mumps	0	5	0	0	0	0	7	7	19	175
Pertussis	24	409	1	32	43	0	67	6	582	3,895
Poliomyelitis	0	0	0	0	0	0	0	0	0	0
Rubella[8]	0	19	0	2	1	0	11	0	33	176
Tetanus	0	0	0	0	0	0	0	0	0	6
Vectorborne										
Arbovirus infection NEC	0	0	0	1	0	0	1	0	2	65
Barmah Forest virus infection	0	11	0	21	0	0	0	5	37	466
Dengue	0	0	0	4	0	0	0	0	4	222
Malaria	1	17	6	25	3	0	6	3	61	799
Ross River virus infection	0	8	1	54	1	0	3	8	75	3,887

Table 3 (continued). Notifications of diseases received by State and Territory health authorities in the period 1 to 30 September 2000, by date of report*

Disease[1]	State or Territory								Total this period	Year to date total
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA		
Zoonoses										
Brucellosis	0	0	0	3	0	0	0	0	3	15
Hydatid infection	0	NN	0	2	0	0	2	1	5	20
Leptospirosis	0	2	1	7	1	0	5	0	16	182
Ornithosis	0	NN	0	NN	0	0	7	1	8	65
Q fever	0	16	0	25	3	0	0	0	44	400
Other										
Legionellosis	0	1	0	8	12	0	2	3	26	391
Leprosy	0	0	0	0	0	0	0	0	0	4
Meningococcal infection	5	32	0	10	5	0	22	8	82	434
Tuberculosis	0	22	3	10	0	1	29	14	79	744
Total	102	2,141	320	1,472	547	114	1,597	856	7,149	70,373

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. Unspecified numbers should be interpreted with some caution as the magnitude may be a reflection of the numbers of tests being carried out.
3. Not reported for NSW because it is only notifiable as 'foodborne disease' or 'gastroenteritis in an institution'.
4. Infections with Shiga-like toxin (verotoxin) producing *E. coli* (SLTEC/VTEC).
5. WA: genital only.
6. NT, Qld, SA , Vic and WA: includes gonococcal neonatal ophthalmia.
7. Includes congenital syphilis.
8. Includes congenital rubella.

* Date of report is the date the public health unit received the report.

NN Not Notifiable.

NEC Not Elsewhere Classified.

\- Elsewhere Classified.

Table 4. Virology and serology laboratory reports by contributing laboratories for the reporting period 1 to 30 September 2000[1]

State or Territory	Laboratory	This period	Total this period[2]
Australian Capital Territory	The Canberra Hospital	68	199
New South Wales	Institute of Clinical Pathology & Medical Research, Westmead	196	210
	New Children's Hospital, Westmead	133	151
New South Wales	Repatriation General Hospital, Concord	-	-
	Royal Prince Alfred Hospital, Camperdown	65	88
	South West Area Pathology Service, Liverpool	-	-
Queensland	Queensland Medical Laboratory, West End	12	206
	Townsville General Hospital	9	9
South Australia	Institute of Medical and Veterinary Science, Adelaide	587	678
Tasmania	Northern Tasmanian Pathology Service, Launceston	25	-
	Royal Hobart Hospital, Hobart	-	-
Victoria	Monash Medical Centre, Melbourne	-	-
	Royal Children's Hospital, Melbourne	171	208
	Victorian Infectious Diseases Reference Laboratory, Fairfield	141	159
Western Australia	PathCentre Virology, Perth	334	419
	Princess Margaret Hospital, Perth	188	157
	Western Diagnostic Pathology	12	8
Total		1,941	2,492

1. The complete list of laboratories reporting for the 12 months, January to December 2000, will appear in every report from January 2000 regardless of whether reports were received in this reporting period. Reports are not always received from all laboratories.
2. Total reports include both reports for the current period and outstanding reports to date.

\- Nil reports

Table 5. Virology and serology laboratory reports by State or Territory[1] for the reporting period 1 to 30 September 2000, and total reports for the year[2]

	State or Territory[1]								This period 2000	This period 1999	Year to date 2000[3]	Year to date 1999
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA				
Measles, mumps, rubella												
Measles virus	-	-	-	-	1	-	-	-	1	16	36	151
Mumps virus	-	-	1	-	1	-	1	3	6	5	40	46
Rubella virus	-	1	-	-	1	-	-	-	2	33	28	251
Hepatitis viruses												
Hepatitis A virus	2	-	1	-	-	-	1	6	10	44	121	401
Hepatitis D virus	-	-	-	-	-	-	2*	-	2	-	6	8
Arboviruses												
Ross River virus	-	-	-	-	-	-	-	2	2	62	1,098	1,430
Barmah Forest virus	-	-	-	2	-	-	-	1	3	16	121	180
Dengue not typed	-	-	-	-	-	-	-	1	1	6	167	44
Flavivirus (unspecified)	-	-	-	-	-	-	1	-	1	2	39	25
Adenoviruses												
Adenovirus type 1	-	-	-	-	-	-	1	-	1	1	4	8
Adenovirus type 3	-	-	-	-	1	-	-	-	1	3	14	22
Adenovirus type 40	-	-	-	-	-	-	-	6	6	7	82	60
Adenovirus not typed/pending	1	12	-	-	26	1	7	25	72	81	741	814
Herpes viruses												
Cytomegalovirus	3	19	-	-	36	1	24	12	95	120	850	1,005
Varicella-zoster virus	-	11	-	2	11	1	22	39	86	196	961	1,604
Epstein-Barr virus	-	-	-	1	60	-	10	20	91	284	1,459	2,350
Other DNA viruses												
Papovavirus group	-	-	-	-	-	-	-	1	1	-	6	11
Parvovirus	-	-	-	-	3	-	8	16	27	44	243	451
Picornavirus family												
Coxsackievirus B4	-	-	-	-	1	-	-	-	1	-	4	-
Echovirus type 7	-	1	-	-	-	-	-	-	1	-	33	1
Echovirus type 9	-	1	-	-	-	-	-	-	1	3	4	26
Rhinovirus (all types)	-	6	-	-	-	-	-	11	17	48	283	324
Enterovirus not typed/pending	-	1	1	-	-	-	-	27	29	65	617	622
Picornavirus not typed	-	-	-	-	-	-	-	2	2	-	2	-
Ortho/paramyxoviruses												
Influenza A virus	2	73	1	3	71	-	46	105	301	282	908	2,104
Influenza B virus	-	16	-	-	79	-	32	17	144	70	373	271
Parainfluenza virus type 1	-	-	-	-	4	-	1	1	6	6	219	40
Parainfluenza virus type 2	-	-	-	-	1	-	-	2	3	6	31	104
Parainfluenza virus type 3	-	5	-	3	20	-	3	33	64	109	223	560
Respiratory syncytial virus	1	26	-	3	57	12	28	68	195	464	2,545	3,175
Other RNA viruses												
HTLV-1	-	-	-	-	-	-	-	1	1	2	5	9
Rotavirus	62	178	-	1	85	6	41	43	416	296	1,181	1,634
Reovirus (unspecified)	-	1	-	-	-	-	-	-	1	-	2	2

Table 5 (continued). Virology and serology laboratory reports by State or Territory[1] for the reporting period 1 to 30 September 2000, and total reports for the year[2]

	State or Territory[1]								This period 2000	This period 1999	Year to date 2000[3]	Year to date 1999
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA				
Other												
Chlamydia trachomatis not typed	-	23	-	3	47	1	7	70	151	474	2,210	3,597
Chlamydia psittaci	-	-	-	-	-	4	6	-	10	4	69	62
Mycoplasma pneumoniae	-	3	-	-	18	-	25	7	53	152	447	1,144
Coxiella burnetii (Q fever)	-	-	-	-	2	-	1	1	4	53	53	287
Rickettsia spp - other	-	-	-	-	-	-	-	1	1	1	9	11
Streptococcus group A	-	-	-	-	-	-	11	-	11	143	246	556
Bordetella pertussis	-	14	-	-	6	2	30	3	55	87	440	1,001
Legionella pneumophila	-	-	-	-	2	-	1	-	3	2	32	17
Legionella longbeachae	-	-	-	-	3	-	-	2	5	-	43	23
Cryptococcus species	-	1	-	-	-	-	-	-	1	-	10	6
Leptospira species	-	-	-	1	3	-	-	-	4	7	40	77
Treponema pallidum	-	-	-	3	48	-	-	-	51	246	547	1,060
Toxoplasma gondii	1	-	-	-	-	-	1	-	2	-	11	5
Total	72	392	4	22	587	28	310	526	1,941	3,440	16,603	25,579

1. State or Territory of postcode, if reported, otherwise State or Territory of reporting laboratory.
2. From January 2000 data presented are for reports with report dates in the current period. Previously reports included all data received in that period.
3. Totals comprise data from all laboratories. 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.

\- No data received this period.

* Yet to be notified to NNDSS

Table 6. Australian Sentinel Practice Research Network reports, weeks 35 to 38, 2000

Week number	35		36		37		38	
Week ending on	3 September 2000		10 September 2000		17 September 2000		24 September 2000	
Doctors reporting	64		65		64		58	
Total encounters	8,186		8,097		7,849		6,768	
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	138	16.9	197	24.3	166	21.1	117	17.3
Chickenpox	10	1.2	10	1.2	13	1.7	6	0.9
Gastroenteritis	84	10.3	69	8.5	64	8.2	73	10.8
Gastroenteritis with stool culture	8	1.0	13	1.6	10	1.3	9	1.3
ADT immunisations	19	2.3	30	3.7	38	4.8	39	5.8

The NNDSS is conducted under the auspices of the Communicable Diseases Network Australia New Zealand. The system coordinates the national surveillance of close to 50 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 Commun Dis Intell *2000;24:6-7.*

LabVISE is a sentinel reporting scheme. Currently 17 laboratories contribute data on the laboratory identification of viruses and other organisms. This number may change throughout the year. Data are collated and published in Communicable Diseases Intelligence *monthly. 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* Commun Dis Intell *2000;24:10.*

ASPREN currently comprises about 120 general practitioners from throughout the country, not all of whom report each week. Between 7,000 and 8,000 consultations are reported each week, with special attention to 14 conditions chosen for sentinel surveillance in 2000. Communicable Diseases Intelligence *reports the consultation rates for five of these. For further information, including case definitions, see* Commun Dis Intell *2000;24:7-8.*

Additional Reports

Rotavirus Surveillance

Paul Masendycz, Royal Children's Hospital, Parkville, Vic 3052 for the National Rotavirus Reference Centre.

The National Rotavirus Reference Centre (NRRC) undertakes surveillance and characterisation of rotavirus strains causing epidemics of severe diarrhoea in young children throughout Australia. There are currently fourteen laboratories contributing data and rotavirus specimens for the characterisation of representative rotavirus serotypes. The NRRC is happy to receive notifications of rotavirus outbreaks Australia-wide.

The NRRC can be contacted at the Murdoch Children's Research Institute, Department of Gastroenterology and Clinical Nutrition, Royal Children's Hospital, Flemington Road, Parkville, Victoria 3052. Telephone: (03) 9345 5069. Fax: (03) 9345 6240.
E-mail: masendyp@cryptic.rch.unimelb.edu.au. For more information see Commun Dis Intell *2000;24:10.*

June to August, 2000

Rotavirus reports have been received from most Australian centres for the period 1 June to 31 August 2000. All Australian capital cities with the exception of Adelaide, Brisbane and Hobart experienced a drop in rotavirus reports compared with the same time last year.[1] Perth in particular had a quiet season reporting 36 rotavirus cases in August 2000, compared with 65 in 1999. This lower incidence was also noted in Melbourne, with 32 cases in August 2000, 22 less than August 1999. Sydney and Townsville had slow starts to their rotavirus seasons. The total number for Australia for the period 1 June to 31 August 2000 (793) was lower than for the same period last year (909).

The rotavirus season of most centres appeared to follow the winter/spring peak, with Western Australia and the Northern Territory experiencing earlier rotavirus season peaks (Figure 10). The Northern Territory experienced a rotavirus season that peaked in May 2000; all 48 reports were from Alice Springs. The timing of the Alice Springs 2000 season appears to be representative of a 'normal' rotavirus season (Fran Morey, Alice Springs Hospital; personal communication). Alice Springs experienced two rotavirus seasons in 1999 (April and October). Serotype analysis of isolates from the Alice Springs specimens, showed that most of the children shared the same infecting rotavirus, serotype G1.

In 2000, in both the north and south of Western Australia, the season appeared to follow that of the Northern Territory, peaking a month after Alice Springs. Centres in Queensland, New South Wales, Victoria, South Australia and Tasmania had not experienced their respective peaks by August 2000.

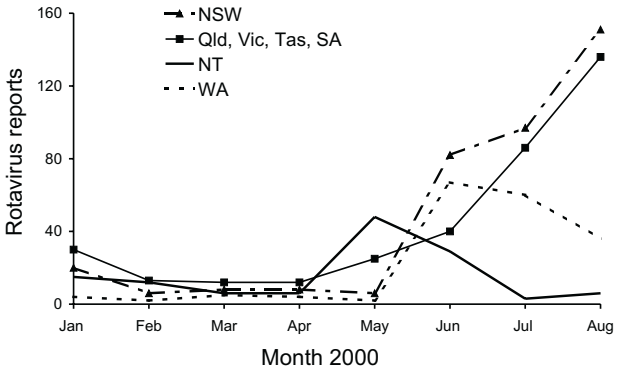
Further surveillance

In order to gain a greater insight into the importance of enteric pathogens, the NRRC has undertaken a pilot study on the prevalence of astrovirus in children admitted to hospital with acute gastroenteritis. We have begun to screen specimens that have had no bacterial or viral pathogen identified by normal diagnostic testing. The specimens are screened by northern hybridisation dot blot analysis. Our results to date show the pathogen may be responsible for up to 4 per cent of hospital admissions in Melbourne. We plan to continue the astrovirus surveillance in other Australian centres and we welcome contributions and comments from interested parties.

The NRRC welcomes contributions from all centres experiencing gastroenteritis outbreaks. The NRRC can be contacted by E-mail, fax or telephone.

1. Masendycz P, Bogdanovic-Sakran N, Palombo E, Bishop R, Barnes G. Annual report of the Rotavirus Surveillance Program, 1999/2000. *Commun Dis Intell* 2000;24:195-198.

Figure 10. Rotavirus reports, Australia, 1 January to 31 August 2000, by region



Editorial note. Virology and serology reports for rotavirus for 1 June to 31 August communicated to the CDHAC (as reported in the July, August, and September editions of *Commun Dis Intell* 2000;24: Table 4) totalled 484 for this period in 2000 and 1,000 in 1999. *CDI* data depend on voluntary reporting to the CDHAC. Not all laboratories report to both the Commonwealth Department of Health and Aged Care and to the NRRC.

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 (Australian Capital Territory, 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, and annually in HIV/AIDS and related diseases in Australia Annual Surveillance Report. The reports are available from the National Centre in HIV Epidemiology and Clinical Research, 376 Victoria Street, Darlinghurst NSW 2010. Internet: http://www.med.unsw.edu.au/nchecr. Telephone: (02) 9332 4648. Facsimile: (02) 9332 1837.

HIV and AIDS diagnoses and deaths following AIDS reported for 1 to 31 May 2000, as reported to 31 August 2000, are included in this issue of Commun Dis Intell *(Tables 7 and 8).*

Table 7. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 to 31 May 2000, by sex and State or Territory of diagnosis

		State or Territory								Totals for Australia			
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 2000	This period 1999	Year to date 2000	Year to date 1999
HIV diagnoses	Female	1	2	0	2	0	0	2	1	8	6	35	29
	Male	2	21	1	3	0	0	19	3	49	54	266	272
	Sex not reported	0	0	0	0	0	0	0	0	0	0	0	0
	Total[1]	3	23	1	5	0	0	21	4	57	60	302	301
AIDS diagnoses	Female	0	0	0	1	0	0	0	0	1	1	8	6
	Male	0	1	0	1	0	0	2	1	5	10	57	61
	Total[1]	0	1	0	2	0	0	2	1	6	11	65	67
AIDS deaths	Female	0	0	0	0	0	0	0	1	1	1	4	2
	Male	0	4	0	1	0	0	2	0	7	4	32	44
	Total[1]	0	4	0	1	0	0	2	1	8	5	36	47

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

Table 8. Cumulative diagnoses of HIV infection, AIDS and deaths following AIDS since the introduction of HIV antibody testing to 31 May 2000, by sex and State or Territory

		State or Territory								
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
HIV diagnoses	Female	28	611	11	158	61	5	219	119	1,212
	Male	225	11,042	111	2,012	680	78	3,938	925	19,011
	Sex not reported	0	247	0	0	0	0	24	0	271
	Total[1]	253	11,920	122	2,177	741	83	4,195	1,048	20,539
AIDS diagnoses	Female	9	188	1	49	25	3	70	26	371
	Male	86	4,652	35	829	347	44	1,632	355	7,980
	Total[1]	95	4,852	36	880	372	47	1,710	383	8,375
AIDS deaths	Female	4	113	0	32	15	2	49	17	232
	Male	66	3,179	24	570	231	29	1,277	248	5,624
	Total[1]	70	3,300	24	604	246	31	1,332	266	5,873

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

Childhood Immunisation Coverage

Tables 9 and 10 provide the latest quarterly report on childhood immunisation coverage from the Australian Childhood Immunisation Register (ACIR).

The data show the percentage of children fully immunised at age 12 months for the cohort born between 1 April and 30 June 1999 and at 24 months of age for the cohort born between 1 April and 30 June 1998, according to the Australian Standard Vaccination Schedule.

A full description of the methodology used can be found in Commun Dis Intell *1998;22:36-37.*

Table 9. Percentage of children immunised at 1 year of age, preliminary results by disease and State for the birth cohort 1 April to 30 June 1999; assessment date 30 September 2000

	State or Territory								
Vaccine	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total number of children	1,114	21,775	933	12,499	4,657	1,548	15,051	6,514	64,091
Diphtheria, Tetanus, Pertussis (%)	92.0	88.8	82.7	91.0	90.5	90.5	90.8	88.6	89.8
Poliomyelitis (%)	92.2	89.1	85.6	91.0	90.6	91.3	91.4	89.4	90.2
Haemophilus influenzae type b (%)	91.8	89.0	89.7	91.3	90.5	91.0	91.4	89.5	90.3
Fully immunised (%)	91.7	87.8	80.5	90.3	90.0	89.8	90.2	87.7	89.0
Change in fully immunised since last quarter (%)	+0.6	+1.3	-2.2	+0.6	-0.2	-1.3	+0.2	+0.8	+0.6

Table 10. Proportion of children immunised at 2 years of age, preliminary results by disease and State for the birth cohort 1 April to 30 June 1998; assessment date 30 September 2000[1]

	State or Territory								
Vaccine	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total number of children	1,065	21,599	927	12,712	4,591	1,471	15,190	6,489	64,044
Diphtheria, Tetanus, Pertussis (%)	90.1	87.7	80.8	91.0	90.1	88.6	89.6	87.6	88.9
Poliomyelitis (%)	93.4	90.6	93.0	92.7	94.2	94.0	93.3	91.4	92.2
Haemophilus influenzae type b (%)	89.8	87.7	88.5	91.0	90.2	89.1	89.9	87.8	89.2
Measles, Mumps, Rubella (%)	93.5	89.7	90.2	92.8	92.3	93.5	92.0	90.3	91.3
Fully immunised (%)[2]	88.0	80.7	77.1	87.4	85.4	84.6	84.1	81.6	83.4
Change in fully immunised since last quarter (%)	+1.0	+2.7	+2.5	+1.2	+1.2	+1.9	+0.7	+2.1	+1.7

1. The 12 months age data for this cohort was published in *Commun Dis Intell* 1999;23:314.
2. These data relating to 2 year old children should be considered as preliminary. The proportions shown as 'fully immunised' appear low when compared with the proportions for individual vaccines. This is at least partly due to poor identification of children on immunisation encounter forms.

Bulletin Board

Public Health Association of Australia
32nd Annual Conference
26-29 November 2000
National Convention Centre, Canberra
Phone: 02 6285 2373
Fax: 02 6282 5438
Email: conference@phaa.net.au
Website:
http://www.phaa.net.au/conf/annual/regbroch.htm

Australian Epidemiology Association
2000 Annual Scientific Meeting
The Future of Epidemiology
29 November to 1 December 2000
TBA
Canberra
Contact: Bob Douglas
Email: Bob.Douglas@anu.edu.au

Emerging Disease Conference
Challenges of Emerging Illness in Urban Environments
11-12 December 2000
The New York Academy of Medicine, NY, USA
Contact: Patricia Doyle
Fax: 212 987 4735
Email: dr_p_doyle@hotmail.com
Website: http://www.nyam.org

Master of Applied Epidemiology
3rd MAE Conference
Charting new directions: cutting-edge issues in applied epidemiology
1-2 April 2001
Hyatt Hotel, Canberra, Australian Capital Territory
Phone: 02 6249 2790
Fax: 02 6249 0740
Email MAE(DC): ros.hales@anu.edu.au
Email MAE(IH): elizabeth.lovell@anu.edu.au

The Communicable Diseases Network Australia New Zealand (CDNANZ)
Communicable Diseases Control Conference 2001
2-3 April 2001
Hyatt Hotel, Canberra, Australian Capital Territory
Phone: +61 2 6251 0675
Fax: +61 2 6251 0672
Email: diseases@consec.com.au
Website:
http://www.health.gov.au/pubhlth/cdi/cdconf.htm

International Conference on Exposure Assessment in Epidemiology and Practice
10-13 June 2001
Göteborg, Sweden
Phone: +46 31 335 4890
Fax: +46 31 40 9728
E-mail: x2001@ymk.gu.se
Website: http://www.ymk.gu.se/eng/x2001.htm

Association for Professionals in Infection Control and Epidemiology
Annual Meeting
10-14 June 2001
Seattle, Washington
Phone: +1 202 789 1890
Fax: +1 202 789 1899
E-mail: apicinfo@apic.org
Website: http://www.apic.org/

International Society of Travel Medicine
7th Conference
27-31 May 2001
Innsbruck, Austria
Phone: +49 89 2180 3830
Fax: +49 89 33 6038
E-mail: istm_eura@csi.com
Website: http://www.istm.org/istm_c7.html

Institute for Microbiology of Medical Faculty of Masaryk University & St Anna's Faculty Hospital
10th Tomasek Days
Annual conference of young microbiologists
6-8 June 2001
Brno, Czechia
Contact: Ondrej Zahradnicek
Phone: ++420 5 4318309
Fax: ++420 5 4318308
Email: ozahrad@med.muni.cz
Website: www.med.muni.cz/zahrad/strtomda.htm

Winter Symposium for Emergency Medicine/ Outpatient Parenteral Therapy
23-27 June 2001(tentative)
Peppers Fairmont Resort, Leura, New South Wales
Phone: 02 9956 8333
Fax: 02 9956 5154
Email: confact@conferenceaction.com.au

The Communicable Diseases Intelligence *Bulletin Board is provided as a service to readers. Every effort has been made to provide accurate information, but readers are advised to contact the relevant organisation for confirmation of details. Information about the availability of resources is included when space allows. Inclusion of a resource on the Bulletin Board does not imply endorsement of the resource by either the Communicable Diseases Network Australia New Zealand or the Commonwealth Department of Health and Aged Care.*

Contributions to the Bulletin Board are invited from those organisations with forthcoming events relevant to communicable disease control.

Overseas briefs

World Health Organization

This material has been summarised from information on the World Health Organization Internet site. A link to this site can be found under 'Other Australian and international communicable diseases sites' on the Communicable Diseases Australia homepage.

Cholera - South Africa

As of 2 November 2000 the Kwazulu-Natal Department of Health has reported 4,270 cases and 32 deaths since the start of the outbreak in mid-August 2000. The trend towards lower numbers of cases being reported on a daily basis appears to be continuing.

The outbreak in Kwazulu-Natal is affecting the following areas: Lower Umfolozi districts which include Ngwelezane and Empangeni, Eshowe/Nkandla areas, Durban, Kwa-Dukuza/Stanger area, Jozini and Ugu Region/South Coast.

Joint Operational Crisis Committees have been established in the affected areas and the Department of Health is working with the WHO Office in South Africa and the WHO Regional Office in Harare, Zimbabwe to control the outbreak and implement preventive measures.

ProMED-mail

This material has been summarised from information provided by ProMED-mail (http://ww.promedmail.org). A link to this site can be found under 'Other Australian and international communicable diseases sites' on the Communicable Diseases Australia homepage.

Experimental bird-to-bird transmission of West Nile virus

Source: USGS Press Release, 25 October 2000 (edited)

Scientists from the US Geological Survey (USGS) reported today that West Nile virus can be transmitted from bird-to-bird in a confined laboratory setting. Previously it had been thought that the virus was only transmitted through mosquito bites. Scientists from the USGS National Wildlife Health Center in Madison, Wisconsin, placed infected birds in the same biocontainment (BL3) aviary as healthy birds. The infected birds died 5 to 8 days later. Most of the initially uninfected birds, the researchers found, also became infected and died 5 to 8 days after the first infected bird died.

Moderator's comment (edited): While these experiments do not imply that the human population is at risk of West Nile virus infection from free-living birds, they may have great significance in the context of the spread of the virus in the natural environment. For example, they may provide clues as to why this virus might be so slow in disseminating and why chickens and mosquitoes might not be infected when crows are infected in the same areas. Mosquitoes are the primary means of transmission of the virus between birds and to humans. But this certainly opens up a host of new questions

West Nile virus - cryptic spread?

Contributed by LJ Pinto (edited)

If bird-to-bird transmission proved to be the case in the field (as well as under experimental conditions), West Nile virus might continue to spread from bird-to-bird in colder weather when mosquitoes are not active. Since many (most?) US States quit surveillance activities by the end of November, any bird-to-bird spread of West Nile virus into new areas or into new bird populations during this time would likely pass unnoticed, at least until surveillance restarted in the spring.

Moderator's comment. These are interesting thoughts about the future course of West Nile virus infection in North America.

Ebola haemorrhagic fever in Uganda

WHO Updates (edited)

As of 7 November 2000, the Ugandan Ministry of Health has reported cumulative figures of 284 cases including 91 deaths. The outbreak was confirmed on 14 October 2000 and was first detected in the Gulu district 223 miles north of Kampala. Other cases of patients dying of high fever have been reported in Mbarara and Kitagata hospitals in Western Uganda, but a link with the Ebola outbreak had not been established. However, three samples from patients in Mbarara 265 miles south of Gulu in south-western Uganda tested by the laboratory established in Gulu by the WHO Collaborating Centre at the US Centers for Disease Control and Prevention (CDC) have been reported as positive. The first patient (who had recently moved from barracks in Gulu to barracks in Mbarara) died on October 27, 5 days after showing symptoms. He infected the other two.

The WHO recommends (Update 19) no special restrictions on travel or trade to or from Uganda, and no specific measures with respect to Ebola haemorrhagic fever are warranted or advised.

A third case of vCJD linked to the same village in the UK

Contributed by M Cosgriff: abstracted from Electronic Telegraph, 2 November (Byline: Paul Stokes) (edited)

Another case of variant CJD has been linked to a former mining village (in Doncaster, South Yorkshire) that is at the centre of an inquiry into a possible cluster of deaths from the human form of bovine spongiform encephalopathy (BSE).

Three cases are associated with the village; a 24-year old woman who died in February 1997, a 19-year old male who died in March 1997 and a 28-year old female who died in September 2000.

Experts from the CJD surveillance unit in Edinburgh are being called on to examine any links between the three deaths. It is possible that contaminated meat from a single source was sold to the families of all three victims.

Editorial note: The diagnosis of one victim (the 28-year old female) awaits laboratory confirmation.

Suspected hand, foot and mouth disease outbreaks

Epidemics of hand, foot and mouth disease are currently affecting children in Malaysia, Singapore and more recently Sri Lanka. The Malaysian and Singaporean outbreaks have been attributed variously to infection by Enterovirus 71, Echovirus 7, and possibly other enteroviruses. The most recent outbreak, involving 4 children in the Philippines, is not at the moment as serious as the Malaysian and Singaporean outbreaks, and may have an independent origin. Blood samples have been sent to Australia in order to establish whether the virus responsible for the disease in the Philippines resembles any of the agents isolated in Malaysia and Singapore.

Yellow fever - Guinea (Mamou): confirmed: alert

Contributed by Jan ter Meulen, Institute of Virology, Philipps Univ. Marburg
(26 October 2000)

Yesterday three serum samples were reported positive for yellow fever IgM antibodies by Christian Mathiot, IP Dakar. The Ministry of Health and WHO Guinea are arranging for yellow fever vaccination in the affected region. Barrier nursing measures were implemented in the regional hospital of Mamou, and contacts of patients were investigated.

Guinea lies within the yellow fever 'Endemic Zone'. One case was reported in 1952 and none between 1953 to 1986. The last cases (5) were reported in 1987. Potential for infection exists in the Siguiri region. Proof of vaccination is required for travellers over one year of age arriving from infected areas.

Avian influenza virus (H4N6) reported in Canadian pigs

Source: Reuters Health, 15 October 2000 (edited)

Canadian and American researchers have isolated avian influenza virus H4N6 from domestic pigs. Because of prior demonstrations of transmission of avian influenza viruses from pigs to humans and the pandemic potential of avian influenza strains, '*The appearance of avian influenza viruses among pigs poses concerns for both veterinary and human health,*' Dr. Christopher W Olsen, of the University of Wisconsin-Madison, and colleagues say in the October issue of the Journal of Virology (*J Virol* 2000;74:9322-9327).

The team reports on their investigation of a Canadian farm where an outbreak of pneumonia in pigs began in October 1999. The researchers isolated 8 viral RNA segments from affected animals. Analysis of these segments '*demonstrated that these are wholly avian influenza viruses of the North American lineage*,' according to the report. Further investigation revealed the identity of the virus as avian influenza virus H4N6, a relative of strains commonly found in Canadian ducks. '*This report is the first to document the isolation of a wholly avian influenza virus from pigs in North America and the isolation of an H4 influenza virus from naturally infected pigs*.' These findings support the need to '*enhance surveillance for atypical influenza viruses in pigs as part of overall pandemic preparedness efforts*.'

Footprint of H5N1 virus detected at Hong Kong poultry farm

Sourced by HL Penning from the South China Morning Post, 21 October 2000 (edited). (Byline Ella Lee, Martin Wong & Antoine So)

Signs of a virus similar to the avian influenza virus that killed six people in 1997 have been found on a Yuen Long farm. It is the first time that evidence of the H5 virus has been found in Hong Kong since the crisis 3 years ago, which turned the international spotlight on the territory and led to the slaughter of one million chickens. Agriculture, Fisheries and Conservation Department officials said last night that inspectors had found chickens at a farm in Ngau Tam Mei which appeared to have been exposed to the avian virus. The 10,000 chickens - now isolated - will be destroyed if more sophisticated test results available next week confirm they contain the H5 virus.

Aquatic birds such as geese and ducks are the sources of H5 virus. The Government began segregating the farming and slaughter of chickens and water birds after the 1997 crisis. The 1997 crisis began when the H5N1 virus, previously found only in poultry, mutated and infected people. A total of 18 people were infected and 6 died.

Mosquito containment program – New Zealand

Selina Gentry, Media Liaison Communications, Ministry of Health, New Zealand (edited)

On 13 October 2000, an expert Technical Advisory Group (TAG) to the Ministry of Health has recommended that a program to contain the exotic southern saltmarsh mosquito, *Aedes camptorhynchus*, should begin as soon as possible, while a decision is being considered about future management of the mosquito in the Gisborne area. The TAG, which was initially set up to advise on steps to be taken after the mosquito was first identified in Hawke's Bay in December 1998, includes various New Zealand experts as well as Australian mosquito expert, Associate Professor Brian Kay. (The southern saltmarsh mosquito has been declared an unwanted organism in New Zealand. In Australia it is thought to be the main carrier of Ross River virus. To date there have been no confirmed cases of Ross River virus in Napier or Gisborne.)

Pacific Public Health Surveillance Network

The Pacific Public Health Surveillance Network serves to disseminate information about communicable diseases in the Pacific region through Pacnet. Pacnet may be accessed, on registration, through the South Pacific Commission Website (http://www.spc.org.nc).

Dengue type 3 – Palau

Contributed by Michele D Pineda (MPH), Epidemiologist, Ministry of Health, Republic of Palau (9 October 2000)

Four individuals in Palau have been confirmed for dengue infection during the months of June through August 2000. Confirmation for four additional suspected cases is pending.

Two of the confirmed cases showed serological evidence of dengue type 3. This finding is of interest because dengue type 3 virus has not been previously identified in Palau.

An epidemic of dengue type 4 occurred in Palau between January and July 1995 (817 cases), and an epidemic of dengue type 2 occurred between January and May 1988 (about 1,000 cases). Prior to 1988, dengue transmissions had not been reported in Palau since 1944. *Aedes aegypti* and *Aedes albopictus* mosquitoes were found in Palau during the 1988 and 1995 outbreaks.

Diagnostic testing for dengue and other arboviruses is provided to the Palau Ministry of Health by the WHO Collaborating Center for Arbovirus Reference and Research in Queensland, Australia.

Website

http://www.health.gov.au/pubhlth/cdi/cdihtml.htm

Contributions

Contributions covering any aspects of communicable diseases are invited. All contributions are subject to the normal refereeing process. **Instructions to authors can be found in *Commun Dis Intell* 2000;24:5**.

Subscriptions and contacts

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