Reporting of communicable disease conditions under surveillance by the APSU, 1 January to 30 June 2004

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Australian Paediatric Surveillance Unit

Background

The Australian Paediatric Surveillance Unit (APSU) was established in 1993 and is a unit of the Division of Paediatrics and Child Health, Royal Australasian College of Physicians. The activities of the APSU are funded in part by the Federal Department of Health and Ageing through the communicable diseases program. The APSU is a founding member of the International Network of Paediatric Surveillance Units (INoPSU). INoPSU now has 15 member units who employ a similar methodology.

The APSU conducts national active surveillance of rare diseases of childhood, including infectious and vaccine preventable diseases, genetic disorders, childhood injuries and mental health conditions. Surveillance through the APSU provides the only available method of national data collection for most of the childhood conditions studied.

The primary aim of the APSU is to document the epidemiology of the conditions under surveillance, their clinical features, current management and short-term outcome. The APSU's secondary aims are to provide a mechanism for national collaborative research and to disseminate data acquired by the Unit to inform best practice, appropriate prevention strategies and optimal health resource allocation.

Contributors to the APSU are clinicians known to be working in paediatrics and child health in Australia. In 2003, and average of 1,050 clinicians participated in the monthly surveillance of 14 conditions, with an overall response rate of 96 per cent.

As one-hundred per cent case ascertainment is unlikely to be achieved by any one surveillance scheme, additional data sources are used to supplement or verify case finding through the APSU. For further information please contact the APSU on telephone: +61 2 9845 2200 or email: apsu@chw.edu.au

About the APSU communicable diseases studies:

Acute flaccid paralysis

Heath Kelly, Bruce Thorley, Kerri Anne Brussen, Jayne Antony, Elizabeth Elliott, Anne Morris

Acute flaccid paralysis (AFP) surveillance in children under 15 years of age was initiated in 1995 to help meet the World Health Organisation (WHO) certification standards for poliomyelitis eradication. To the end of 2003 there were 289 confirmed cases of non-polio AFP. The reported rate of non-polio AFP (1995–2003) is therefore 0.83 (95% CI 0.74–0.94) per 100,000 children under 15 years (the World Health Organization (WHO) AFP case notification target for developed countries (1/100.000 children < 15 years) was reached in 2000 and 2001 but not 2003. In 2003 Guillain-Barre syndrome was again the most common cause of AFP (35% of confirmed cases), followed by transverse myelitis (18%). Adequate faecal specimens were received from 26 per cent of all eligible cases in 2002 and 24 per cent in 2003, well below the WHO target of 80 per cent. However, relevant diagnostic tests and/or 60 day follow up data available for these cases allowed them to be classified as AFP–non-polio.

Congenital cytomegalovirus infection

William Rawlinson, Daniel Trincado, Gillian Scott, Sian Munro, Pamela Palasanthiran, Mark Ferson, David Smith, Geoff Higgins, Michael Catton, Alistair McGregor, Dominic Dwyer, Alisson Kesson

Congenital Cytomegalovirus infection (CMV) surveillance in children up to 12 months of age commenced through the APSU in 1999. Between January 1999 and December 2003 there were 31 confirmed cases of CMV (that is infants with CMV being isolated in blood, urine, saliva or tissue in the first three weeks of life). However, follow-up information available on children reported with CMV was of poor quality in 2003 prohibiting classification of all cases notified to APSU. Thus, the reported rate of confirmed cases

Table. Confirmed cases of communicable diseases reported to the Australian Paediatric Surveillance Unit between 1 January and 30 June 2004*

Condition	Previous reporting period Jan–Dec 2003	Current reporting period Jan–June 2004*
Acute Flaccid Paralysis	30	12
Congenital cytomegalovirus	10	8
Congenital rubella	3	1
Perinatal exposure to HIV	14	9
HIV infection	1†	
Neonatal herpes simplex virus infection	6	2
Hepatitis C Virus infection	12	5

* Surveillance data are provisional and subject to revision.

† HIV virus infection through heterosexual contact.t

in 2003—1.78 (95% CI 1.21–2.52) per 100,000 live births—is likely to be an underestimate of the true rate.

Congenital rubella

Margaret Burgess, Jill Forrest, Cheryl Anne Jones, Peter McIntyre

Surveillance of newly diagnosed congenital rubella in children and adolescents under 16 commenced in 1993. A total of 49 children with congenital rubella were identified through the APSU between May 1993 and December 2003. The national Measles Control Campaign in 1998 aimed to give measles-mumps-rubella (MMR) vaccine to all unvaccinated preschoolers and a second dose to primary schoolchildren. Following the Campaign no children with congenital rubella defects were born to Australian residents during the five years 1998 to 2002. However, during this period five imported cases were reported. Two cases of congenital rubella were reported from Queensland in late 2003. These children were born to young mothers who missed vaccination with rubella in the school programme and highlight the need for continuing education regarding the risks of rubella infection in pregnancy.

HIV infection, AIDS and perinatal exposure to HIV

Ann McDonald, John Kaldor, Michelle Good, John Ziegler

This study monitors new cases of HIV/AIDS infection in children under 16 years and perinatal exposure to HIV. Perinatal exposure to HIV is now the most frequently reported source of HIV infection in Australian children. Between January 1997 and December 2003, 136 children with perinatal exposure to HIV were reported through the APSU and/or the National HIV/AIDS surveillance program. Additionally, in 2003 there was one reported case of HIV infection in a young person, which was attributed to heterosexual contact. The reported rate of perinatal HIV exposure is 7.80 (95% CI 6.54–9.22) per 100,000 live births. Of 39 cases of perinatal exposure to HIV reported through the APSU in 2002–2003, 38 were born to women whose HIV infection was diagnosed antenatally. Only one of 38 (2.6%) children born to these women acquired HIV infection. This reflects the use of interventions (antiretroviral treatment in pregnancy, elective caesarian delivery, and avoidance of breastfeeding) in women whose HIV infection is diagnosed antenatally, which substantially reduce the risk of mother to child HIV transmission.

Neonatal herpes simplex virus infection

Cheryl Anne Jones, David Isaacs, Peter McIntyre, Tony Cunningham, Suzanne Garland

Surveillance of HSV infection in children aged up to 28 days commenced in 1997. There were 59 confirmed cases of neonatal HSV infection in infants up to 28 days of age reported between January 1997 and December 2003. The reported rate is 3.38 (95% CI 2.57–4.36) per 100,000 live births (similar to the United Kingdom but considerably lower than the rate in the United States of America). In contrast to the United States of America, Herpes simplex type 1 is the predominant isolate causing neonatal HSV infection in Australia.

Hepatitis C virus infection

John Kaldor, Cheryl Anne Jones, Elizabeth Elliott, Winita Hardikar, Alison Keeson, Susan Polis, Catherine Mews

Surveillance of Hepatitis C infection in children commenced in January 2003. APSU contributors are asked to report any child less than 15 years of age

newly diagnosed with Hepatitis C infection. Twelve confirmed cases of Hepatitis C virus infection were reported to the APSU in 2003. The reported rate of HCV virus infection in Australian children less than 15 years of age, based on these preliminary data, is very low at 0.30 (95% CI 0.16–0.53) per 100,000 children under 15 years of age. In these children HCV infection was due to vertical transmission from an infected mother or childhood intravenous drug use. Most children were asymptomatic at diagnosis. Although the study findings are consistent with previous global studies, the small number of HCV cases identified nationally to date raises the possibility of under reporting. It is likely that some infected women remain undiagnosed during pregnancy and that some children born to infected mothers are not referred for investigation and paediatric follow-up.