COMMUNICABLE DISEASES REPORT, NEW SOUTH WALES, FOR MARCH AND APRIL 2006

For updated information, including data and facts on specific diseases, visit www.health.nsw.gov.au and click on **Infectious Diseases.**

TRENDS

Tables 2 and 3 and Figure 2 show reports of communicable diseases received through to the end of March and April 2006 for each area health service in NSW.

MEASLES RETURNS

Between mid-March and the end of April 2006, 38 confirmed cases of measles were reported in NSW. In comparison there were no cases reported between April 2005 and March 2006. Prior to 1966, nearly all children in NSW were at some point infected with wild measles, but the introduction of immunisation has dramatically reduced the incidence of this disease. The last large-scale outbreak of measles in NSW occurred in 1993, when 2348 cases were reported.1 Since then the incidence of measles in NSW has fallen substantially. This decline has been assisted by the National Measles Control Campaign of 1998, which included mass vaccination of children in primary schools.² In September 1999 local transmission was probably interrupted for the first time.3 Since 2002, between five and 18 cases have been reported annually in NSW. Here we report the characteristics of the cases that have occurred up to the end of April 2006. These cases appear to be associated with two distinct outbreaks (Figure 1).

Characteristics of the measles cases

The ages of the 38 measles patients ranged from 10 months to 57 years, with over three quarters aged under 15 years. Thirty-four were NSW residents and four were visitors who either contracted measles or were diagnosed with measles while in NSW. At least two thirds of the patients had not been immunised (Table 1). Only four of the 15 children aged between 12 months and four years were appropriately immunised for their age (i.e. had received one dose of the measles, mumps and rubella vaccine (MMR)).

Outbreak 1

Three cases, and a further eight secondary cases, were linked to a common exposure at the Emergency Department of a hospital on March 1. Despite a search of medical records, however, a definite source case has not been identified. Because no measles case had been reported in the preceding 10 months in NSW, it is hypothesised that the source of this outbreak was an unidentified sick traveller.

Outbreak 2

Twenty of the cases with an onset of illness from mid-April were associated with a national tour of a spiritual leader. A further 18 cases had been reported in other states to the end of April. It is likely that some members of the tour group were infected with measles prior to their arrival in Australia. Low immunisation rates in the families of some of these cases, and extensive travel within NSW by some cases whilst infectious prior to their diagnosis, suggests that secondary and tertiary cases are likely to present in coming weeks.

Unlinked cases

A further seven of the 38 NSW cases have not been linked to either of these two outbreaks, suggesting that measles was spreading through parts of the community in April.

Interventions

In response to these outbreaks, NSW Health issued several media releases and communicated directly with general practitioners. This may have resulted in an increased clinical awareness about measles and testing for measles by health professionals, leading to improved identification of cases.

Measles is a highly preventable disease. Clinicians or health care managers should:

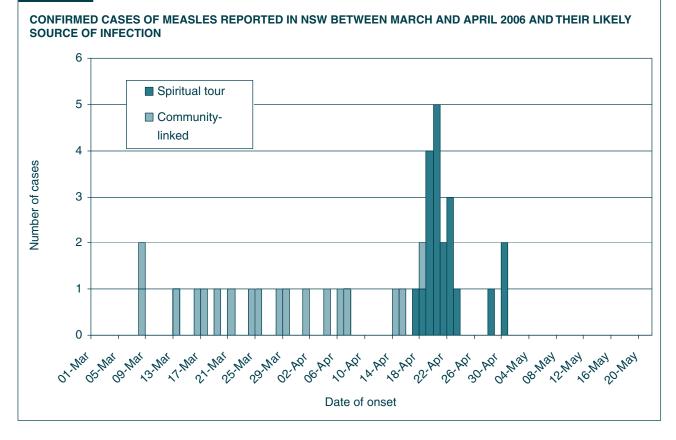
• ensure that all staff are immune to measles. Two doses of MMR vaccine are recommended for staff born during

TABLE 1

THE AGE, IMMUNISATION STATUS AND PLACE OF RESIDENCE OF MEASLES CASES REPORTED IN NSW BETWEEN MARCH AND APRIL 2006 (N=38).

| Characteristic | Cas | ses |
|---------------------------------------|-----|-----|
| | n | % |
| Age group (years) | | |
| <1 | 3 | 8 |
| 1-4 | 15 | 39 |
| 5-14 | 11 | 29 |
| 15-40 | 7 | 18 |
| >40 | 2 | 5 |
| Immunisation status against measles | | |
| (MMR dose received) | | |
| None | 25 | 66 |
| One | 4 | 11 |
| Two | 0 | 0 |
| Probably immunised | 2 | 5 |
| Unknown | 7 | 18 |
| Place of residence | | |
| NSW | | |
| Northern Sydney / Central Coast AHS* | 8 | 21 |
| South Eastern Sydney / Illawarra AHS* | 4 | 11 |
| Sydney South West AHS* | 8 | 21 |
| Sydney West AHS* | 14 | 37 |
| Other states | | |
| Tasmania | 1 | 3 |
| Queensland | 1 | 3 |
| Overseas | | |
| California | 2 | 5 |
| *AHS =Area Health Service | | |

FIGURE 1



or after 1966 unless they have documented evidence of immunity

- maintain a high index of suspicion for cases
- prevent transmission by ensuring that suspected cases (people presenting with fever, cough, coryza, conjunctivitis or rash) are shown immediately to a separate room, and do not wait in the general waiting room
- for suspected cases, notify the local public health unit, and collect diagnostic specimens, including a nose/ throat swab or aspirate on a viral transport swab and a first pass urine sample for measles immunofluorescence (and, if negative, a polymerase chain reaction test) and culture, and serum for measles IgM
- ensure that cases remain in isolation until four days after the onset of their rash.

Reference

- 1. Brotherton J. EpiReview. Measles in NSW, 1991–2000, *N S W Public Health Bull* 2001; 12(7): 200–4.
- Ashwell M. The 1998 measles control campaign in NSW. NSW Public Health Bull 1999; 10(7): 89–92.
- 3. NSW Health Department. Infectious Diseases, NSW: November 1999. *NSW Public Health Bull* 1999; 10(11):154.

KERATOCONJUNCTIVITIS IN THE GREATER SOUTHERN AREA HEALTH SERVICE

In March 2006 the Greater Southern Public Health Unit (GSPHU) received a report of a number of cases of keratoconjunctivitis in a regional centre. A subsequent investigation by GSPHU and the Communicable Diseases Branch of the NSW Department of Health identified 66 patients with this condition, 47 of whom were diagnosed with viral conjunctivitis at a local eye clinic. Adenovirus was identified in three of four eye swabs taken from patients. Secondary cases among household members have been reported by 11 cases. Some cases described a severe, painful illness that incapacitated them for up to three weeks.

Keratoconjunctivitis is an acute viral disease of the eye. Symptoms include a sore and itchy red eye, with swollen lids, photophobia, a clear or yellow discharge that can make the lids stick together (especially on waking), blurred vision, and sometimes fever, headache and tiredness. It is typically caused by an adenovirus, and is transmitted by direct contact. It is commonly spread between household members as it is highly contagious. The incubation period is usually between five days and two weeks, and patients are infectious from a day or two before until about two weeks after the onset of their symptoms.

There is no specific treatment for viral conjunctivitis, so prevention is key. Patients should:

- stay out of school until symptoms have resolved or until they are cleared by a doctor
- avoid touching their eyes
- if they touch their eyes, wash their hands thoroughly with soap and running water
- avoid touching other people unless their hands are freshly washed
- throw away or carefully wash (in hot water and detergent) items that touch their eyes
- not share eye makeup or other items used on the eyes (ie, towels, tissues, eye drops, eye medications)
- use a separate towel and face cloth for each member of the household
- cover their mouth and nose when coughing or sneezing
- use disposable tissues to blow their nose, sneeze or cough
- if visiting a doctor or clinic, explain that they have viral conjunctivitis, so the clinic can implement measures to prevent spread of infection.

To identify the extent and factors contributing to the outbreak, the GSPHU and the Communicable Diseases Branch are conducting a case-control study.

A fact sheet on viral conjunctivitis can be found at: www. health.nsw.gov.au/infect/pdf/viral_conjunctivitis_cdfs. pdf.

LEGIONNAIRES' DISEASE IN NORTHERN SYDNEY

The Northern Sydney/Central Coast Public Health Unit (NSCCPHU) has reported an outbreak of Legionnaires' disease in six patients whose common exposure was visiting the Chatswood area. All patients were diagnosed with infection due to *Legionella pneumophila* serogroup 1 based on positive urinary antigen tests. This infection has previously been associated with exposure to contaminated aerosolized water. Possible sources include aerosols emitted from air-conditioning cooling towers that are often located on top of large buildings.

NSCCPHU staff interviewed the cases about possible exposures during the incubation periods of their illness (ie, two-ten days before onset). Five cases reported the onset of their illness in early March, and all but one reported visiting the Chatswood central business district (CBD) in either late February or the first few days of March. The remaining case reported a slightly later onset date (10 March), and was living in a respite care facility about 1 km from the Chatswood CBD but had not visited the Chatswood CBD. After interviewing the first two cases, NSCCPHU staff initiated a series of actions that included:

- a review of the cooling towers in the areas visited by the cases
- active surveillance to identify other possible cases. This included alerting Emergency Departments, laboratories and general practitioners in the area, and asking them to report other possible cases. Public Health Units in other areas were advised about the outbreak.
- asking the local council to contact cooling tower operators to remind them about the need to properly maintain all cooling towers according to the requirements of the NSW Public Health Act (1991)
- issuing media releases to inform the public about the outbreak.

Over a hundred cooling towers in the Chatswood area were inspected and the maintenance practices reviewed. The main objective was to ensure that there was no ongoing risk to the community. The cooling towers were tested for the presence of *Legionella* bacteria as a quality measure; however, a likely source of infection was not identified. NSCCPHU staff also reviewed possible sources of infection in the respite care facility. Because cooling towers are cleaned and maintained on a routine basis, it is possible that the source of the outbreak had been cleaned as part of the tower's regular maintenance, and therefore was not able to be identified as a potential source at the time of the investigation.

Legionnaires' disease outbreaks can be prevented through careful maintenance procedures that minimise the risk of contamination and these measures are mandated by the *NSW Public Health Act 1991*. For more information on Legionnaires' disease, see: www.health.nsw.gov.au/public-health/ehb/general/microbial/microbial.html.

ENTERIC DISEASES

In March, NSW Health received an increased number of reports of outbreaks of enteric diseases in childcare and aged care facilities.

In April, NSW Health's Public Health Real-Time Emergency Department Surveillance System (PHREDSS) detected an increase in people presenting to Emergency Departments (EDs) with vomiting and diarrhoea compared with previous weeks. After accounting for variations in the dates of the Easter break, this increase mirrored similar increases in each of the previous five years. As PHREDSS data do not include information on specific pathogens, the cause of the increase was unclear. On further analysis, it was found that the increase occurred mainly in children aged 0–4 years, and to a lesser extent in other people aged up to 34 years. By the end of April, however, the increase in presentations due to vomiting and diarrhoea was seen across all age groups.

Public health units were asked to contact those Emergency Departments with increases in presentations for vomiting and diarrhoea and request that clinical staff collect stool specimens from patients presenting with diarrhoea for analysis for common bacterial, viral and parasitic pathogens. Reports from public health units suggest that norovirus was the predominant pathogen identified in these patients.

Norovirus is one of the commonest causes of gastroenteritis in the community, particularly in the winter months. Symptoms include nausea, vomiting, diarrhoea, fever, abdominal pain, headache and muscle aches. The illness is self-limiting. However, it is highly contagious, and is mainly transmitted via the hands of people with the illness, either via direct contact with other people or indirectly via food. People with diarrhoea or vomiting should: wash their hands thoroughly with soap and running water for at least 10 seconds after using the toilet and before touching objects; and not handle food for other people until at least two days after their complete recovery. For more information on viral gastroenteritis see www.health.nsw. gov.au/infect/pdf/viral_gastro.pdf. Guidelines have been developed for the management of outbreaks in institutional settings (see www.health.nsw.gov.au/pubs/2004/gastroctrl_fs.html).

FIGURE 2

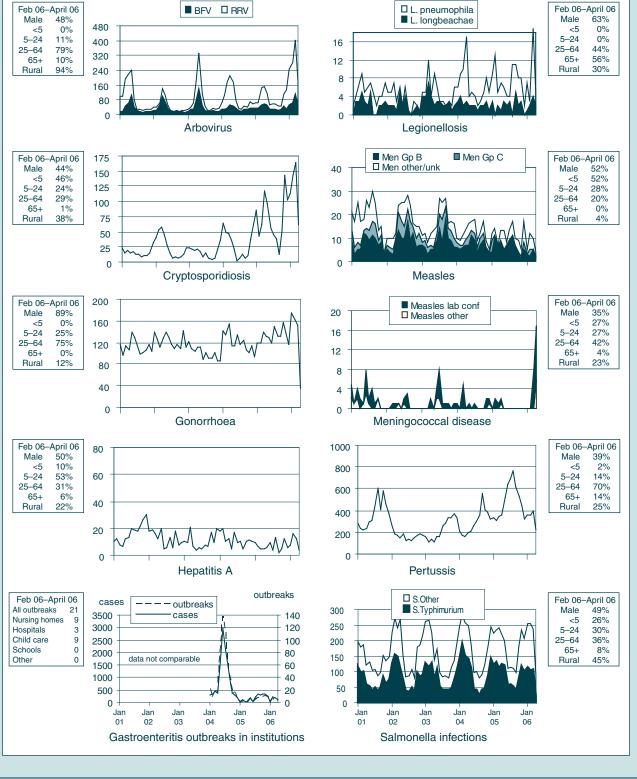
REPORTS OF SELECTED COMMUNICABLE DISEASES, NSW, JAN 2001 TO APR 2006, BY MONTH OF ONSET

Preliminary data: case counts in recent months may increase because of reporting delays. Laboratory-confirmed cases only, except for measles, meningococcal disease and pertussis BFV = Barmah Forest virus infections, RRV = Ross River virus infections Lab conf = laboratory confirmed Men Gp C and Gp B = meningococcal disease due to serogroup C and serogroup B infection, other/unk = other or unknown serogroups. NB: multiple series in graphs are stacked, except

gastroenteritis outbreaks. NB: Outbreaks are more likely to be reported

by nursing homes and hospitals than by other institutions

| NSW popu | ulation |
|-----------|---------|
| Male | 50% |
| <5 yrs | 7% |
| 5–24 yrs | 27% |
| 25–64 yrs | 53% |
| 65+ yrs | 13% |
| Rural | 46% |



NSW Public Health Bulletin

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