Additional Reports

Australian encephalitis: Chicken Surveillance Programme

Sentinel chicken flocks are used to monitor flavivirus activity in Australia. The main viruses of concern are Murray Valley encephalitis (MVE) and Kunjin which cause the potentially fatal disease Australian encephalitis in humans. Currently 29 flocks are maintained in the north of Western Australia, eight in the Northern Territory, nine in New South Wales and ten in Victoria. The flocks in Western Australia and the Northern Territory are tested year round but those in New South Wales and Victoria are tested only from November to March, during the main risk season.

Results are coordinated by the Arbovirus Laboratory in Perth and reported bimonthly. For more information and details of the location of sentinel chicken sites see Commun Dis Intell *2000;24:8-9.*

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Sentinel chicken serology was carried out for 27 of the 29 flocks in Western Australia in November and December 2000. There were no seroconversions to flaviviruses in November. However, 10 seroconversions to flaviviruses were detected in December, 5 from Derby (Curtin Airbase) in the Kimberley 5 from Ophthalmia dam near Newman in the Pilbara. At Derby, 3 of the chickens were positive for MVE antibodies, 1 for MVE and Kunjin antibodies and 1 for Kunjin alone. All 5 of the seroconversions detected at the dam near Newman were to MVE virus. This activity was unusual as it occurred at the beginning of the wet season. As a result of these findings the Health Department of Western Australia issued a health warning to residents living in these areas warning of the increased risk of infection with MVE virus.

A new sentinel chicken flock was established at Gapuwiyak (north-east of Darwin) in the Northern Territory in November 2000. Serum samples from all of the 8 Northern Territory sentinel chicken flocks were tested in our laboratory in November and December 2000. There were no seroconversions to flaviviruses during this period. The October seroconversion to MVE virus at Beatrice Hill Farm, east of Darwin, was confirmed in the November bleed.

The MVE sentinel chicken surveillance programs in New South Wales and Victoria re-commenced in November 2000. Serum samples were tested in November and December 2000 but no flavivirus antibodies were detected.

Rotavirus Surveillance

The National Rotavirus Reference Centre (NRRC) undertakes surveillance and characterisation of rotavirus strains causing annual 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 give and receive notifications of rotavirus outbreaks Australia-wide. The NRRC can be contacted at the Murdoch Childrens Research Institute, Department of Gastroenterology and Clinical Nutrition, Royal Children's Hospital, Flemington Road, Parkville, Victoria 3052. Telephone: (03) 9345 5069, Facsimile: (03) 9345 6240,
Email: masendyp@cryptic.rch.unimelb.edu.au. For more information see Commun Dis Intell *2000;24:10.*

June to November, 2000

Rotavirus specimens have been received from Northern West Western Australia, Perth, Adelaide, Hobart, Melbourne, West Sydney, Brisbane, Townsville, Alice Springs, Gove and Darwin for the time period 1 June to 30 November 2000.

Over 600 specimens have been included in a monoclonal antibody based serotyping enzyme immunoassay (EIA). The results show that G9 rotaviruses, which were the second most important serotype in 1999/2000, were not as widespread in the first part of the 2000/2001 period. They were detected only in Brisbane, Sydney and Melbourne, having been previously identified in most other centres. The epidemiological significance of G9 rotaviruses in Australia remains unclear and further monitoring is warranted.

Serotype G2 viruses appeared in most of the centres studied, including Perth, Adelaide, Melbourne, Hobart, West Sydney, Gove and Darwin. Molecular techniques including reverse transcriptase/PCR and Northern hybridisation were required for the detection of serotype G2 viruses because the currently used G2 serotyping monoclonal antibody (MAb) derived in 1986 did not recognise these strains. Sequence analysis of the circulating G2 strains identified an amino acid change at the same position where variant viruses unreactive with this MAb also showed an amino acid substitution. This change in the virus may have implications for future vaccine development.

The collection period June to December 2000 was notable for the first 'sighting' of serotype G4 rotaviruses in the Northern Territory's 'Top End'. These G4 viruses were first detected from a child in Darwin in August 2000 and subsequently from children on Elcho Island in East Arnhem Land. Children from 10 communities in East Arnhem Land were admitted to the Gove District Hospital in Nhulunbuy and were all found to be serotype G4. Further analysis by RNA polyacrylamide gel electrophoresis and reverse transcriptase/PCR showed the children were all infected with the same epidemic strain. The outbreak was confined to the top end (as at 11 January, 2001) and appeared to be limited to the period August to October 2000.

Rotavirus collection continues, and the National Rotavirus Reference Centre welcomes any notifications of rotavirus outbreaks.

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 August 2000, as reported to 30 November 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 August 2000, by sex and State or Territory of diagnosis

										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	0	4	0	1	0	0	2	0	7	8	54	52
	Male	1	22	0	3	4	0	15	0	45	74	424	443
	Sex not reported	0	0	0	0	0	0	0	0	0	0	0	0
	Total[1]	1	26	0	4	4	0	17	0	52	82	480	495
AIDS diagnoses	Female	0	0	0	0	0	0	0	0	0	3	9	12
	Male	0	3	0	0	0	0	2	0	5	23	103	103
	Total[1]	0	3	0	0	0	0	2	0	5	26	112	115
AIDS deaths	Female	0	0	0	0	0	0	0	0	0	0	5	3
	Male	0	5	0	1	0	0	3	0	9	7	75	75
	Total[1]	0	5	0	0	0	0	3	0	9	7	80	79

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 August 2000, by sex and State or Territory

		State or Territory								
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
HIV diagnoses	Female	28	620	9	161	62	5	223	119	1,227
	Male	227	11,130	108	2,034	686	78	3,969	925	19,157
	Sex not reported	0	245	0	0	0	0	24	0	269
	Total[1]	255	12,016	117	2,202	748	83	4,230	1,049	20,700
AIDS diagnoses	Female	9	188	0	49	25	3	72	26	372
	Male	87	4,691	35	832	347	45	1,648	356	8,041
	Total[1]	96	4,891	35	883	372	48	1,728	384	8,437
AIDS deaths	Female	4	114	0	32	15	2	50	17	234
	Male	67	3,226	24	572	231	29	1,283	252	5,684
	Total[1]	71	3,348	24	606	246	31	1,339	270	5,935

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 July and 30 September 1999 and at 24 months of age for the cohort born between 1 July and 30 September 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 July to 30 September 1999; assessment date 31 December 2000

	State or Territory								
Vaccine	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total number of children	1,094	22,277	786	12,801	4,600	1,547	15,869	6,241	65,215
Diphtheria, Tetanus, Pertussis (%)	93.3	91.1	91.0	92.4	92.5	92.5	92.5	90.8	91.8
Poliomyelitis (%)	93.1	91.0	91.0	92.3	92.4	92.4	92.4	90.8	91.8
Haemophilus influenzae type b (%)	93.1	90.9	93.1	92.6	92.4	91.7	92.4	90.6	91.7
Fully immunised (%)	92.7	90.5	89.2	92.0	92.2	91.6	92.1	90.2	91.3
Change in fully immunised since last quarter (%)	+1.0	+2.7	+8.7	+1.7	+2.2	+1.8	+1.9	+2.5	+2.3

Table 10. Proportion of children immunised at 2 years of age, preliminary results by disease and State for the birth cohort 1 July to 30 September 1998; assessment date 31 December 2000[1]

	State or Territory								
Vaccine	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total number of children	1,119	22,021	853	12,712	4,691	1,636	15,949	6,386	65,367
Diphtheria, Tetanus, Pertussis (%)	90.1	88.0	84.1	91.2	92.3	91.6	90.4	88.0	89.6
Poliomyelitis (%)	93.0	91.3	91.7	93.5	94.4	94.4	93.5	91.8	92.7
Haemophilus influenzae type b (%)	89.0	87.9	87.7	91.3	91.9	91.6	90.5	88.2	89.6
Measles, Mumps, Rubella (%)	93.1	90.7	89.8	93.1	94.0	94.4	93.5	91.7	92.3
Fully immunised (%)[2]	87.8	81.9	80.0	88.3	88.6	88.6	86.4	83.1	85.1
Change in fully immunised since last quarter (%)	-0.2	+1.2	+2.9	+0.9	+3.2	+4.0	+2.3	+1.5	+1.7

1. The 12 months age data for this cohort was published in *Commun Dis Intell* 2000;24:42.
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.

Acknowledgment: These figures were provided by the Health Insurance Commission (HIC), to specifications provided by the Commonwealth Department of Health and Aged Care. For further information on these figures or data on the Australian Childhood Immunisation Register please contact the Immunisation Section of the HIC: Telephone 02 6124 6607.