

Additional Reports

Sentinel 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 28 flocks are maintained in the north of Western Australia, seven 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 see Commun Dis Intell 2000;24:8-9.

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Sentinel chicken serology was carried out for 23 of the 28 flocks in Western Australia in May and June 2000. A new flock was established at the Bidyadanga Aboriginal community, approximately 150km south of Broome and was bled for the first time in June 2000. Widespread MVE was still detected in the Kimberley, Pilbara, Gascoyne and Midwest regions in May, however, the number of seroconversions declined in June, except for some areas of the Pilbara, particularly those sites near permanent water (Harding and Ophthalmia dams). The number of chickens positive for flavivirus antibodies by ELISA at each site and the identity of the infecting virus(es) are shown in Table 6. A number of the later seroconversions have not yet been confirmed.

High levels of MVE virus activity occurred in 2000 as a result of high wet season rainfall in the Kimberley region and high cyclonic rains and extensive flooding in the Pilbara, Gascoyne, Murchison and Midwest regions. MVE virus antibodies have been detected in chickens in the Murchison and Midwest regions for the first time this year. This is the furthest south the virus has ever been detected. A survey to determine MVE antibody levels in domestic chickens located in this region and areas further south and east is being carried out to determine the limit of MVE virus activity in Western Australia this year. A number of news media

Table 6. Flavivirus seroconversions in Western Australian sentinel chicken flocks in May and June 2000

Location	May 2000			June 2000		
	MVE	MVE/KUN	KUN	MVE	MVE/KUN	KUN
Kimberley						
Wyndham	1	1	1			
Kununurra	1					
Halls Creek	2					
Fitzroy Crossing	1					1
Derby*	3		1			
Curtain Air Base	4					
Lombadina				2		
Broome*	8 [#]					
Pilbara						
South Hedland	1	1				1
Karratha				4 [#]		
Harding Dam*				4	1	
Nullagine	1		1			
Tom Price				1		
Paraburdoo	2		1	4		
Ophthalmia Dam	6	1		2		
Newman	1					
Exmouth	4	2		1		1
Gascoyne						
Carnarvon	3					
Mid-West						
Dongara	4					

* 2 flocks of 12 chickens at these sites

These results have not yet been confirmed.

MVE Antibodies to Murray Valley encephalitis virus detected by ELISA.

KUN Antibodies to Kunjin virus detected by ELISA.

Table 7. Flavivirus seroconversions in Northern Territory sentinel chicken flocks in May and June 2000

Location	May 2000			June 2000		
	MVE	MVE/KUN	KUN	MVE	MVE/KUN	KUN
Alice Springs	1				1 [#]	
Howard Springs				1 [#]		
Leanyer	2					
Gove	1			3 [#]		
Tennant Creek	6 [#]					
Katherine	1					

[#] These results have not yet been confirmed.

MVE Antibodies to Murray Valley encephalitis virus detected by ELISA.

KUN Antibodies to Kunjin virus detected by ELISA.

warnings have been issued by the Health Department of Western Australia to alert residents living in the northern areas of Western Australia to the increased risk of disease. Additional warnings were also sent out by the Regional Public Health Units to Aboriginal communities in the regions. To date eleven cases of Australian encephalitis caused by MVE virus have been confirmed from Western Australia. In addition there have been several cases of non-encephalitic disease caused by Kunjin virus reported from Western Australia.

Serum samples from all seven of the Northern Territory sentinel chicken flocks were tested in our laboratory in May

2000 and from six flocks in June 2000. There were a number of seroconversions to flaviviruses in the flocks located at Alice Springs, Leanyer, Katherine, Tennant Creek and Gove in May and at Alice Springs, Howard Springs, and Gove in June. The number of chickens positive for flavivirus antibodies by ELISA at each site and the identity of the infecting virus(es) are shown in Table 7. A number of news media warnings have been issued by the Northern Territory Health Department and to date there have been four cases of Australian encephalitis confirmed from central Australia.

The MVE surveillance programs using sentinel chickens in New South Wales and Victoria finished in April 2000.

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. Telephone: (02) 9332 4648; Facsimile: (02) 9332 1837; <http://www.med.unsw.edu.au/nchechr>.

HIV and AIDS diagnoses and deaths following AIDS reported for 1 to 29 February 2000, as reported to 31 May 2000, are included in this issue of Communicable Diseases Intelligence (Tables 8 and 9).

Table 8. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 to 29 February 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	1	0	2	0	0	0	1	4	7	13	10
	Male	0	20	0	12	1	0	5	4	42	39	111	85
	Sex not reported	0	0	0	0	0	0	0	0	0	0	1	0
	Total ¹	0	21	0	14	1	0	5	5	46	46	126	95
AIDS diagnoses	Female	0	2	0	1	0	0	0	0	3	1	7	1
	Male	0	3	0	2	1	0	4	1	11	12	30	22
	Total ¹	0	5	0	3	1	0	4	1	14	13	37	23
AIDS deaths	Female	0	0	0	0	0	0	0	0	0	0	3	0
	Male	1	3	0	3	1	0	2	0	10	6	13	27
	Total ¹	1	3	0	3	1	0	2	0	10	6	16	28

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

Table 9. Cumulative diagnoses of HIV infection, AIDS and deaths following AIDS since the introduction of HIV antibody testing to 29 February 2000, by sex and State or Territory

		State or Territory								Australia
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
HIV diagnoses	Female	26	604	11	153	61	5	212	116	1,188
	Male	223	10,901	109	1,990	674	79	3,892	918	18,786
	Sex not reported	0	252	0	0	0	0	24	0	276
	Total ¹	249	11,775	120	2,150	735	84	4,142	1,038	20,293
AIDS diagnoses	Female	9	188	0	48	25	3	69	26	368
	Male	86	4,644	36	823	346	44	1,616	350	7,945
	Total ¹	95	4,844	36	873	371	47	1,692	378	8,336
AIDS deaths	Female	4	113	0	32	15	2	49	16	231
	Male	66	3,171	24	567	231	29	1,270	248	5,606
	Total ¹	70	3,292	24	601	246	31	1,325	265	5,854

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

Childhood Immunisation Coverage

Tables 10 and 11 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 January and 31 March 1999 and at 24 months of age for the cohort born between 1 January and 31 March 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.

Acceptance of a report does not imply a causal relationship between administration of the vaccine and the medical outcome, or that the report has been verified as to the accuracy of its contents.

It is estimated that 250,000 doses of vaccines are administered every month to Australian children under the age of six years.

Table 10. Percentage of children immunised at 1 year of age, preliminary results by disease and State for the birth cohort 1 January to 31 March 1999; assessment date 30 June 2000

Vaccine	State or Territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Total number of children	1,068	21,412	941	12,332	4,509	1,541	15,102	6,225	63,130
Diphtheria, Tetanus, Pertussis (%)	91.5	88.2	84.2	90.4	91.9	92.8	91.2	88.8	89.8
Poliomyelitis (%)	91.2	88.4	84.6	90.3	91.8	92.6	91.3	88.8	89.8
<i>Haemophilus influenzae</i> type b (%)	91.3	87.6	88.7	90.4	90.7	91.7	90.8	88.0	89.3
Fully immunised (%)	91.1	86.5	82.7	89.7	90.2	91.1	90.0	86.9	88.4
Change in fully immunised since last quarter (%)	-0.7	-0.1	-0.3	0.0	+1.1	+2.8	+0.6	+1.1	+0.3

Table 11. Proportion of children immunised at 2 years of age, preliminary results by disease and State for the birth cohort 1 January to 31 March 1998; assessment date 30 June 2000¹

Vaccine	State or Territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Total number of children	1,102	21,148	956	12,392	4,579	1,517	14,842	6,196	62,732
Diphtheria, Tetanus, Pertussis (%)	90.0	85.6	79.4	90.1	89.4	87.2	88.3	86.4	87.5
Poliomyelitis (%)	93.6	90.1	90.0	92.7	94.0	93.4	93.2	91.0	91.9
<i>Haemophilus influenzae</i> type b (%)	89.0	84.8	86.3	90.1	88.8	86.4	88.3	85.6	87.2
Measles, Mumps, Rubella (%)	92.5	89.3	89.7	92.1	92.4	92.9	92.1	90.2	91.0
Fully immunised (%)²	87.0	78.0	74.6	86.2	84.2	82.7	83.4	79.5	81.7
Change in fully immunised since last quarter (%)	+4.4	+4.2	+1.6	+4.7	+6.3	+4.0	+5.7	+6.2	+5.0

1. The 12 months age data for this cohort was published in *Commun Dis Intell* 1999;23:232.

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.