INFECTIOUS DISEASES

TABLE 5

INFECTIOUS DISEASE NOTIFICATIONS FOR 1994
FOR NOTIFICATIONS RECEIVED BY MARCH 30, 1994
BY MONTH OF ONSET

Condition	Month			
	Jan	Feb	Mar	Total
Adverse event after immunisation	2	4	–	6
AIDS	27	16	15	58
Arboviral infection	22	61	34	117
Foodborne illness (NOS)	13	3	1	17
Gastroenteritis (instit.)	1	11	3	15
Gonorrhoea	33	25	8	66
H influenzae epiglottitis	2	1	4	7
H influenzae meningitis	1	–	1	2
H influenzae septicaemia	1	1	–	2
H influenzae infection (NOS)	2	1	–	3
Hepatitis A – acute viral	48	44	21	113
Hepatitis B – acute viral	7	6	1	14
Hepatitis B – unspecified	302	276	111	689
Hepatitis C – acute viral	1	–	–	1
Hepatitis C – unspecified	553	645	223	1,421
Hepatitis D – unspecified	1	2	–	3
Hepatitis – acute viral (NOS)	1	1	–	2
HIV infection	25	43	27	95
Hydatid disease	–	1	1	2
Legionnaires' disease	3	4	1	8
Leptospirosis	1	2	–	3
Listeriosis	2	2	–	4
Malaria	5	8	4	17
Measles	147	63	21	231
Meningococcal meningitis	5	3	4	12
Meningococcal septicaemia	1	1	2	4
Meningococcal infection (NOS)	1	–	–	1
Mumps	1	–	–	1
Mycobacterial atypical	13	3	–	16
Mycobacterial tuberculosis	24	9	7	40
Mycobacterial infection (NOS)	12	10	3	25
Pertussis	165	116	40	321
Q fever	20	12	4	36
Rubella	8	6	–	14
Rubella – congenital	–	1	–	1
Salmonella bovis morbificans	1	3	–	4
Salmonella typhimurium	47	48	9	104
Salmonella (NOS)	58	69	40	167
Syphilis	82	71	33	186
Typhoid and paratyphoid	1	3	–	4
Total	1,639	1,575	618	3,832

TABLE 6

SUMMARY OF NSW INFECTIOUS DISEASE NOTIFICATIONS
MARCH 1994

Condition	Number of cases notified			
	Period		Cumulative	
	March 1993	March 1994	March 1993	March 1994
Adverse reaction	2	–	5	6
AIDS	40	15	113	58
Arboviral infection	163	34	469	117
Brucellosis	–	–	–	–
Cholera	–	–	–	–
Diphtheria	–	–	–	–
Foodborne illness (NOS)	20	1	32	17
Gastroenteritis (instit.)	3	3	39	15
Gonorrhoea	44	8	104	66
H influenzae epiglottitis	4	4	9	7
H influenzae B – meningitis	7	1	17	2
H influenzae B – septicaemia	4	–	8	2
H influenzae infection (NOS)	3	–	6	3
Hepatitis A	49	21	177	113
Hepatitis B	359	112	937	702
Hepatitis C	513	223	1,319	1,422
Hepatitis D	1	–	1	3
Hepatitis, acute viral (NOS)	–	–	1	2
HIV infection	66	27	156	95
Hydatid disease	–	1	–	2
Legionnaires' disease	7	1	19	8
Leprosy	–	–	–	–
Leptospirosis	3	–	7	3
Listeriosis	–	–	4	4
Malaria	20	4	58	17
Measles	37	21	184	231
Meningococcal meningitis	1	4	6	12
Meningococcal septicaemia	1	2	5	4
Meningococcal infection (NOS)	1	–	3	1
Mumps	–	–	–	1
Mycobacterial tuberculosis	29	7	105	40
Mycobacterial – atypical	57	–	110	16
Mycobacterial infection (NOS)	3	3	12	25
Pertussis	39	40	127	321
Plague	–	–	–	–
Poliomyelitis	–	–	–	–
Q fever	33	4	92	36
Rubella	28	–	120	14
Salmonella infection (NOS)	117	49	341	275
Syphilis	69	33	184	186
Tetanus	–	–	2	–
Typhoid and paratyphoid	5	–	14	4
Typhus	–	–	–	–
Viral haemorrhagic fevers	–	–	–	–
Yellow fever	–	–	–	–

TABLE 7

FOODBORNE INFECTIOUS DISEASE NOTIFICATIONS
FOR NOTIFICATIONS RECEIVED BY MARCH 30, 1994
BY PUBLIC HEALTH UNIT

Condition	CSA	SSA	ESA	SWS	WSA	WEN	NSA	CCA	ILL	HUN	NCR	NER	OFR	CWR	SWR	SER	U/K	Total
Foodborne illness (NOS)	1	1	4	7	2	–	–	–	–	–	–	–	2	–	–	–	–	17
Gastroenteritis (instit.)	11	–	–	–	2	–	–	1	–	1	–	–	–	–	–	–	–	15
Listeriosis	–	–	1	–	–	–	–	–	1	1	–	–	1	–	–	–	–	4
Salmonella bovis morbificans	–	1	1	–	1	–	–	–	–	1	–	–	–	–	–	–	–	4
Salmonella typhimurium	10	8	8	1	26	3	14	3	7	10	–	1	2	7	3	1	–	104
Salmonella (NOS)	9	16	10	6	14	3	20	9	5	10	27	6	16	5	10	1	–	167
Typhoid and paratyphoid	–	1	2	–	–	1	–	–	–	–	–	–	–	–	–	–	–	4

TABLE 8

INFECTIOUS DISEASE NOTIFICATIONS FOR 1994
FOR NOTIFICATIONS RECEIVED BY MARCH 30, 1994
BY PUBLIC HEALTH UNIT

Condition	CSA	SSA	ESA	SWS	WSA	WEN	NSA	CCA	ILL	HUN	NCR	NER	OFR	CWR	SWR	SER	U/K	Total
Adverse event after immunisation	–	–	–	–	2	2	–	1	–	–	1	–	–	–	–	–	–	6
AIDS	7	2	23	2	8	3	7	1	2	–	3	–	–	–	–	–	–	58
Arboviral infection	–	2	–	–	–	–	3	1	2	7	85	2	8	–	7	–	–	117
Gonorrhoea	4	5	24	3	4	1	4	2	–	3	1	3	9	1	2	–	–	66
H. influenzae epiglottitis	1	1	–	–	1	1	1	1	1	–	–	–	–	–	–	–	–	7
H. influenzae meningitis	–	–	–	–	–	–	1	–	–	–	–	–	–	1	–	–	–	2
H. influenzae septicaemia	–	–	–	–	1	–	–	–	–	–	1	–	–	–	–	–	–	2
H. influenzae infection (NOS)	–	–	–	–	–	–	–	2	–	–	1	–	–	–	–	–	–	3
Hepatitis A – acute viral	8	3	12	8	11	1	10	2	1	6	16	10	3	3	19	–	–	113
Hepatitis B – acute viral	3	–	4	–	1	–	–	–	–	1	1	–	2	1	–	1	–	14
Hepatitis B – unspecified	80	75	65	169	121	4	94	12	15	24	16	1	3	3	7	–	–	689
Hepatitis C – acute viral	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	1
Hepatitis C – unspecified	161	70	236	132	121	31	154	47	55	96	203	10	11	34	39	21	–	1,421
Hepatitis D – unspecified	–	–	–	–	–	–	1	–	–	–	2	–	–	–	–	–	–	3
Hepatitis, acute viral (NOS)	–	–	1	–	–	–	–	–	–	1	–	–	–	–	–	–	–	2
HIV infection	13	4	40	4	1	1	–	1	–	–	2	–	–	–	–	–	29	95
Hydatid disease	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2
Legionnaires' disease	–	1	1	–	2	–	3	–	–	–	–	–	–	1	–	–	–	8
Leptospirosis	–	–	–	–	–	–	–	–	–	1	1	–	–	–	1	–	–	3
Malaria	3	–	4	2	1	–	2	–	–	1	1	–	–	–	3	–	–	17
Measles	22	5	6	12	17	16	18	3	6	18	66	9	21	9	–	3	–	231
Meningococcal meningitis	–	2	–	2	2	1	–	2	–	2	1	–	–	–	–	–	–	12
Meningococcal septicaemia	–	–	–	1	–	–	–	1	–	1	1	–	–	–	–	–	–	4
Meningococcal infection (NOS)	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	1
Mumps	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	1
Mycobacterial atypical	3	–	5	–	–	–	5	–	–	–	1	–	–	1	1	–	–	16
Mycobacterial tuberculosis	1	8	1	8	10	2	3	1	3	2	–	–	–	–	1	–	–	40
Mycobacterial infection (NOS)	13	–	1	–	3	1	3	–	–	2	2	–	–	–	–	–	–	25
Pertussis	4	22	17	14	28	7	24	6	17	25	129	–	11	10	2	5	–	321
Q fever	–	–	–	–	–	–	–	–	–	5	7	5	17	–	2	–	–	36
Rubella	–	–	1	–	5	1	2	–	–	–	1	2	–	–	2	–	–	14
Rubella – congenital	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	1
Syphilis	31	14	49	23	13	–	15	2	–	–	14	–	21	1	3	–	–	186
Total	354	214	492	381	352	72	351	85	102	194	556	43	106	65	86	35	29	3,517

TABLE 9

SURVEILLANCE OF NON-NOTIFIABLE SEXUALLY TRANSMITTED DISEASES
JANUARY-FEBRUARY 1994
(Diagnoses from sexual health centres unless otherwise stated in footnote)

* First diagnosis; 1. No data yet received for 1994; 2. 01/01/94-31/01/94; 3. 01/01/94-28/02/94; 4. 01/01/94-31/03/94; 5. No SHC in Region; 6. Laboratory and SHC data 01/01/94-31/03/94.

AHS Infection		CSA[1]	SSA[2]	ESA[3]	SWS[2]	WSA[1] + WEN	NSA[4]	CCA[4]	ILL[1]	HUN[1]	NCR[3]	NER[4]	OFR[1]	CWR[5]	SWR[6]	SER[1]
Chlamydia trachomatis	Male	–	–	10	1	–	–	–	–	–	–	3	–	–	–	
	Female	–	–	12	1	–	1	1	–	–	–	10	–	–	3	
	Total	–	–	**22**	**2**	–	**1**	**1**	–	–	–	**13**	–	–	**3**	–
Donovanosis	Male	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	Female	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	Total	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
*Genital herpes	Male	–	1	57	–	–	6	4	–	–	1	1	–	–	–	
	Female	–	3	16	–	–	3	2	–	–	1	6	–	–	–	
	Total	–	**4**	**73**	–	–	**9**	**6**	–	–	**2**	**7**	–	–	–	–
*Genital warts	Male	–	6	161	19	–	11	15	–	–	6	3	–	–	1	
	Female	–	6	69	9	–	4	5	–	–	2	11	–	–	1	
	Total	–	**12**	**230**	**28**	–	**15**	**20**	–	–	**8**	**14**	–	–	**2**	–
Nongonococcal urethritis	Male	–	1	127	12	–	4	11	–	–	6	5	–	–	1	
	Female	–	–	–	–	–	2	–	–	–	–	–	–	–	2	
	Total	–	**1**	**127**	**12**	–	**6**	**11**	–	–	**6**	**5**	–	–	**3**	–
Lymphogranuloma venereum	Male	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	Female	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	Total	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Abbreviations used in this Bulletin:
CSA Central Sydney Health Area, SSA Southern Sydney Health Area, ESA Eastern Sydney Health Area, SWS South Western Sydney Health Area, WSA Western Sydney Health Area, WEN Wentworth Health Area, NSA Northern Sydney Health Area, CCA Central Coast Health Area, ILL Illawarra Health Area, HUN Hunter Health Area, NCR North Coast Health Region, NER New England Health Region, OFR Orana and Far West Health Region, CWR Central West Health Region, SWR South West Health Region, SER South East Health Region, OTH Interstate/Overseas, U/K Unknown, NOS Not Otherwise Stated.

Please note that the data contained in this Bulletin are provisional and subject to change because of late reports or changes in case classification. Data are tabulated where possible by area of residence and by the disease onset date and not simply the date of notification or receipt of such notification.

NOTIFICATIONS

HAEMOPHILUS INFLUENZAE TYPE B (Hib)

Only one notification for Hib in a child under one year of age has been made in NSW this year. The average age for Hib notifications was 13.7 years for the first quarter of 1994. This compares with 6.3 years for all of 1993 and 3.1 years for the first quarter of 1993. Only 14 notifications were received for the first quarter of 1994, for a rate of 0.95/100,000 population. This compares with a notification rate of 2.7/100,000 population for the same period in 1993.

MEASLES

Notifications for measles peaked in epiweek 1. The notification rate for the first quarter of 1994 is 15.7/100,000 population. This compares with a rate of 12.5 for the same period in 1993. The North Coast PHU has received 66 notifications at a rate of 69.4/100,000 population. The mean age for notifications was 8.0 years (range four months to 36 years). Fifteen per cent of notifications were for neonates and infants (≤ one year of age). Fifty-nine per cent were for children over the age of five years, while 25 per cent were for people 12 years and older. From September 1, 1994, the schoolgirl rubella program is expected to be replaced by a universal schoolchild measles-mumps-rubella program.

PERTUSSIS (WHOOPING COUGH)

Notifications for pertussis peaked in epiweek 7. Seventy-eight per cent of notifications for 1994 were for the period before epiweek 8. The notification rate for pertussis for the first quarter of 1994 is 22.3/100,000 population. This compares with a rate of 8.6 for the same period in 1993.

Twenty per cent of notifications were for children aged less than five years. A further 36 per cent were for school-aged children. The mean age for notifications was 21.7 years. Sixty-six per cent of pertussis notifications were received from laboratories and 24 per cent were received from medical practitioners. North Coast Public Health Unit (PHU) has received 119 notifications at a rate of 125.2/100,000 population. The PHU has investigated all cases and advised contacts of measures to minimise risk of further spread in infection. Media releases have been made in community newspapers, and liaison between the PHU and the local Divisions of General Practice will promote the use of triple antigen.

SALMONELLA TYPHIMURIUM PHAGE TYPE 9

The National Salmonella Surveillance Scheme notified of 33 cases of Salmonella typhimurium phage type 9 in NSW between January 17 and February 10, 1994 from 11 Health Areas. Investigation by PHUs found a relationship between seven of the cases, who had bought food from a takeaway outlet in the Central Sydney Area.

Investigation by Food Surveillance Officers from Central Sydney PHU revealed unsatisfactory handling procedures, including unclean food processing equipment and perishable foods stored at unsatisfactory temperatures for long periods. Food samples were positive for Salmonella brandenburg. Measures have been implemented to improve hygiene at this outlet and further sampling will be undertaken to ensure satisfactory standards are maintained.

SENTINEL REPORTING ON INFLUENZA IN THE ILLAWARRA

Desolie Lovegrove, Public Health Nurse,
Illawarra Public Health Unit

Sentinel surveillance networks provide "listening posts" for timely reporting of conditions not normally notifiable. Sentinel surveillance does not provide complete prevalence data but can give an indication of changing patterns of disease and does provide a valuable early warning system for health professionals.

The Illawarra Sentinel Surveillance Network for influenza consists of general practice (GP) surveillance and school surveillance.

The sentinel GP surveillance has been monitoring influenza and other specified conditions on a weekly basis since June 1990. In 1992 and 1993 influenza immunisation was included in the conditions for surveillance. The network consists of 14 doctors between Helensburgh in the north to Gerringong in the south.

The sentinel school surveillance has been monitoring weekly absentee rates in schools in four geographical (northern, central, western and southern) areas of the Illawarra. It has monitored absentee rates during the winter months of 1992 and 1993.

The National Health and Medical Research Council recommend annual influenza vaccination for individuals in the following categories:

- adults and children with chronic debilitating disease, especially those with chronic cardiac, pulmonary, renal and metabolic disorders;
- persons over 65 years of age;
- residents and staff of nursing homes and other chronic care facilities;
- persons receiving immunosuppressive therapy; and
- medical and health personnel in regular contact with the above groups.

The Illawarra PHU was interested in monitoring those receiving influenza immunisations in the community to ascertain whether it was the targeted "at risk" or the "worried well" who were being immunised. Immunisation of the fit and well may be inadvisable since naturally-acquired influenza immunity provides protection against the virus for many years, compared with the short-term effects of the immunisation.

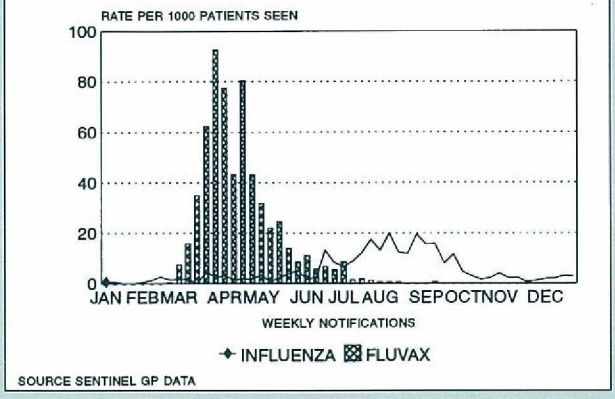
During the first week in April, as part of Influenza Awareness Week, the PHU targeted "at risk" groups in the community for influenza immunisation. An article was placed in the local GP newsletter and letters were sent to directors of all nursing homes in the Illawarra area recommending immunisation of residents in the at risk groups. Community health nurses were advised to recommend immunisation to their clients. This was followed with coverage in local newspapers and radio stations.

Influenza, school absentee rates and influenza immunisation uptake were monitored through the weekly sentinel GP and school surveillance networks.

Figure 1 shows the number, calculated as rate per 1,000 patients seen, of influenza presentations and influenza immunisation reported by the Illawarra Sentinel GP Surveillance Network in 1993. The graph shows GPs were beginning to offer influenza immunisation in March, with the demand peaking in the first week in April which was

FIGURE 1

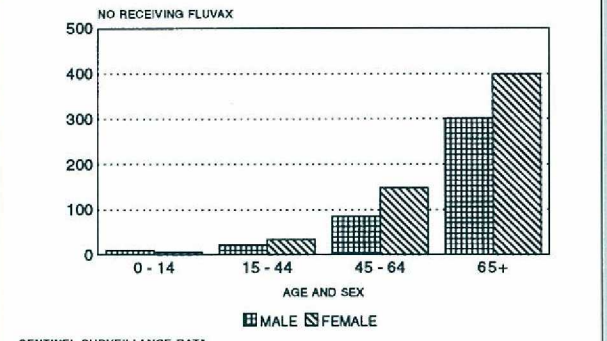
ILLAWARRA SENTINEL GP SURVEILLANCE INFLUENZA AND FLUVAX NOTIFICATIONS 1993



SOURCE SENTINEL GP DATA

FIGURE 2

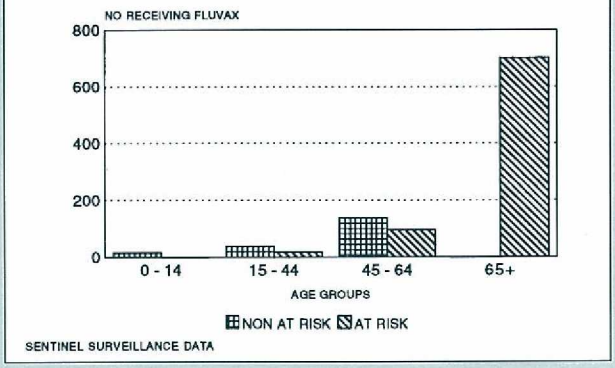
ILLAWARRA SENTINEL GP SURVEILLANCE INFLUENZA IMMUNISATION 1993 BY AGE AND SEX



SENTINEL SURVEILLANCE DATA

FIGURE 3

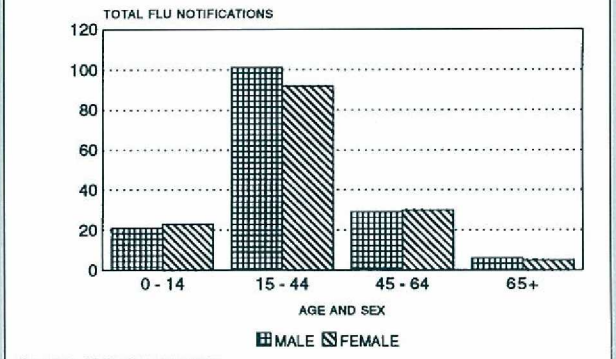
ILLAWARRA SENTINEL GP SURVEILLANCE INFLUENZA IMMUNISATION 1993 BY AGE AND RISK GROUP



SENTINEL SURVEILLANCE DATA

FIGURE 4

ILLAWARRA SENTINEL GP SURVEILLANCE INFLUENZA NOTIFICATIONS 1993 BY AGE AND SEX



SENTINEL SURVEILLANCE DATA

Influenza Awareness Week. There was a gradual decrease in immunisations over May, June, July and August.

Figure 2 shows the influenza immunisation by age groups and sex. The graph shows that most patients receiving the influenza immunisation were in the 65+ age group, which was the group targeted for immunisation. It also shows that more females than males in all age groups (except 0-14 years) were being immunised.

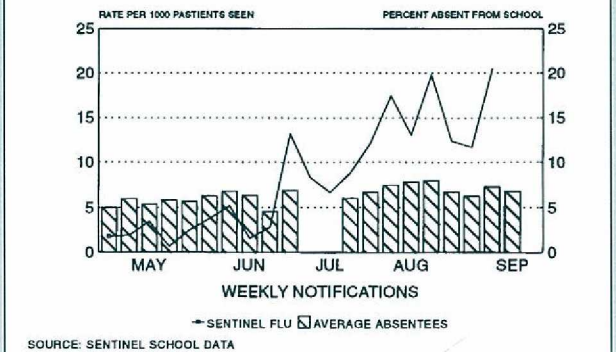
As it was possible for patients under the age of 65 years to belong to an at risk group (e.g. with chronic debilitating disease), doctors were asked to indicate if the patient receiving the influenza vaccination belonged to an at risk category. Figure 3 shows influenza immunisation by age group and risk group.

Figure 4 shows that most sentinel influenza notifications were in the 15-44 age group. Fewer than 4 per cent of influenza cases were reported in the 65+ age group, which was the "at risk" group targeted for influenza immunisation.

Continued on page 46 ▶

FIGURE 5

ILLAWARRA SENTINEL INFLUENZA SURVEILLANCE SENTINEL GP FLU & SENTINEL SCHOOL ABSENTEE RATES



SOURCE: SENTINEL SCHOOL DATA
SENTINEL GP DATA

Sentinel reporting on influenza

► *Continued from page 45*

During May, June, July, August and September absentee rates were being collected from sentinel schools in the Illawarra. Figure 5 shows the average school absentee rates and the sentinel GP influenza notifications. It is difficult to see a relationship between the two, although there was an interesting decrease in GP influenza notifications which corresponded with the school holidays.

The sentinel surveillance of influenza and influenza immunisation has provided the PHU and the community with useful data on the pattern of influenza, peak time for the administration of influenza immunisations, the age, sex and at risk category of the patients receiving the vaccinations. It would appear that in the Illawarra 80 per cent of influenza immunisations were given to those most likely to benefit – the elderly and others at risk – and that fewer than 4 per cent of influenza infections occurred in this group.

INFLUENZA SURVEILLANCE IN THREE CENTRAL WESTERN NSW BOARDING SCHOOLS

Peter Tissen, Kelly Demattia and Peter Christopher, Central Western Public Health Unit

Recurrent epidemics of influenza occur on average once every 1-10 years and can be traced back hundreds of years[1]. The pandemic of 1918-1919 demonstrated the potential devastation caused by influenza when, worldwide, an estimated 500 million people were infected and 20 million people died. Thus influenza caused the most deadly epidemic of disease in recorded history[2].

Although frequently a mild disease, influenza can cause death. It has a low case-fatality ratio – about 1 or 2 deaths per 1,000 cases – but in some groups such as the chronically ill and the elderly, the case fatality can be as high as 30 per cent.

The aims of sentinel surveillance programs are to provide a reliable, rapid and inexpensive means of disease surveillance. The purpose of this project was to monitor the incidence of influenza in the Evans and Lachlan Health Districts, as part of a Statewide program involving schools. Incidence of infection is often highest in school-age children, so the 1993 influenza surveillance program focused primarily on children aged 6-18 years.

The results obtained from the surveillance program conducted the previous year (1992 autumn/winter) showed a high incidence of influenza among children aged 13-18 years. This is commonly the case as the young are most frequently affected with new influenza virus strains, with adults often already immune to the strain from a past infection.

To achieve an exact diagnosis a blood test is required and the influenza strain is identified by means of a throat gargle. These methods of detection are not used throughout this surveillance as the technology required is too costly.

Surveillance was to be conducted for five months during the autumn/winter period, from May 1 to October 1, 1993.

Cases of influenza were determined by referring to the Royal Australian College of General Practitioners (RACGP) influenza criteria, which set out symptoms and signs indicative of influenza.

Initially, school principals were approached by the Director of the Public Health Unit and made aware of the objectives of the program and their involvement in it. Three schools, in different geographical areas, were involved in this project. These were school A at Forbes, with 760 students, and two schools 150km away at Bathurst – school B with 290 students and C with 280 students.

All the schools involved cater for boarders and day students. The study had been designed to include both boarders and day students but this notion was abandoned because of the inaccuracy in diagnosis and the poor presentation of sick notes by day students. Therefore the surveillance dealt only with boarders, who are assessed when ill by a resident registered nurse. The nurses were to make a diagnosis by referring to the RACGP criteria. The work involved the sister in charge of the sickbay reporting once a week by phone to the Department to notify the number of boarders who had contracted influenza.

Information on the number of pupils enrolled at each school was obtained from the nurses. Most students at school A had been immunised with the 1993 Commonwealth Serum Laboratory influenza vaccine about one week before the surveillance began. This was school policy.

During the five-month surveillance period, it was found that of a total of 1,330 boarder students, 42 (3 per cent) had been diagnosed with influenza. Cases occurred only at school A and school B. There were no cases reported at school C.

Schools A and B experienced two distinct outbreaks, at different times of the surveillance period. School A recorded a number of cases in late May/early June, while school B did not record any cases until the latter part of the surveillance period in August. The outbreaks occurred about eight weeks apart. No known hospitalisations or serious complications resulted from the illnesses.

From the results obtained it is evident that 1993 was not an epidemic influenza year, with only 42 cases among 1,330 students. In an epidemic year, with a new strain of influenza, an attack rate of 20 per cent or more would be expected.

Although most students at school A were vaccinated and presumed immune against influenza, this school still experienced an outbreak. This suggests the vaccine used did not contain the strain of the virus that caused the outbreak or did not have a high degree of protective value.

Compared with school A, school B experienced an outbreak during the latter part of the surveillance period because the influenza virus, via an infectious student, was introduced into the closed community later during the winter. School C experienced no cases of influenza. This suggests that when students had contact with the outside community, none contracted influenza, thus preventing the introduction of the infection to the other students.

This surveillance project was of value when combined with other similar studies undertaken by PHUs in the State, as it contributed to the provision of a profile of influenza occurrence in 1993 in NSW.

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1. Benenson AS. Control of Communicable Diseases in Man, 1990, 15th Edition, American Public Health Association, Washington, USA.
2. Last JM and Wallace RB. Public Health and Preventive Medicine, 13th Edition, 1992, Appleton and Lange, Connecticut, USA.