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# SCHOOL ENTRY IMMUNISATION CERTIFICATES: A USEFUL TOOL FOR IMMUNISATION SURVEILLANCE?

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## Abstract

In New South Wales, all children starting school must provide a certificate of immunisation to school authorities. We conducted a study to document the usefulness of immunisation certificates in surveillance of immunisation uptake in these children.

In late 1994 we reviewed immunisation records in all primary schools in the Auburn local government area. We classified a child's immunisation status as 'complete immunisation', 'incomplete immunisation' or 'invalid'.

Schools had immunisation certificates for 72% of all kindergarten children. Seventeen per cent of kindergarten children did not have any form of written immunisation documentation. Only 57% of kindergarten children who presented an immunisation certificate were fully immunised.

Until further evaluation is done, we suggest that immunisation certificates are not an adequate source of data for determining uptake rates in children starting kindergarten in New South Wales. They may also be of only limited value in the containment of vaccine preventable disease outbreaks in schools.

## Background

Immunisation against a number of childhood infectious diseases is practised throughout the world, and has had a marked effect on reducing the incidence of these diseases. Immunisation has cost benefits for measles, mumps, rubella, and pertussis<sup>1,3</sup>.

Data from the 1989-90 National Health Survey identified only 53% of children aged six years and under as fully immunised<sup>4</sup>. To prevent illness and morbidity in unimmunised children, the New South Wales Public Health (Amendment) Act 1992 requires parents of all children starting school in the kindergarten class of 1994 and thereafter, to provide a certificate of immunisation to school authorities<sup>5</sup>. The certificates contain details of the children's immunisation status and are obtained from general practitioners, local councils, community health centres and public health units (Figure). The immunisation certificates are held at schools so that unimmunised children can be easily identified and excluded from school in the event of an outbreak of a vaccine preventable disease at the school. The certificates also provide an ideal opportunity for

## Figure. NSW Health Department Immunisation Certificate

regular surveillance of the immunisation status of kindergarten children. However, for surveillance to be useful, all children must present certificates that are correctly completed. The Auburn Immunisation Task Force\* reviewed the completeness and accuracy of immunisation certificates held by primary schools in the Auburn area in 1994 to determine their usefulness as a data source.

## Methods

The review of immunisation certificates aimed to document the proportion of kindergarten children in the

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\* The Auburn Immunisation Task Force is an advocate for promoting immunisation uptake in the local Auburn community. It is an intersectoral group with representatives from community health services, Auburn Hospital, the Western Sector Public Health Unit, preschools and schools, local government, the Western Sydney Division of General Practice, migrant health services, Commonwealth Serum Laboratories, the Salvation Army and parents.

**Table 1. Immunisation status of children with immunisation certificates in the Auburn local government area**

Status	Number	%
Complete immunisation	301	56.7
Incomplete immunisation	22	4.1
Invalid certificate	208	39.2
Total	531	100.0

Auburn local government area who had presented immunisation certificates or other written immunisation records to their school, determine the immunisation status of these kindergarten children according to information contained in the immunisation certificates and assess what proportion of immunisation certificates were correctly completed.

The study was conducted in October and November 1994. We wrote to the principals of all primary schools in the Auburn local government area informing them of the study and requesting their cooperation.

A short checklist was devised to obtain the relevant information needed for the review. Two school health staff (either two school nurses, or a school nurse and a medical officer) reviewed all immunisation records in each school. Immunisation records refer to any written evidence of immunisation documentation including immunisation certificates.

We classified a child's immunisation status as 'complete immunisation' if all boxes in Section A of the immunisation certificate were ticked and the appropriate box in the Issuer's Declaration section was also ticked. A child's immunisation status was classified as

'incomplete immunisation' if both Section B and the the appropriate box in the Issuer's Declaration were ticked. We considered the immunisation certificate 'invalid' if information in the certificate was inconsistent, for example if all appropriate boxes in Section A were ticked but not the corresponding appropriate box in the Issuer's Declaration section.

**Results**

We reviewed the immunisation records of kindergarten classes of all primary schools in the Auburn local government area. There were five Catholic (236 students) and five Government (501 students) schools. There was a total of 737 kindergarten children in the 10 schools (range: 14 to 131).

The schools had immunisation certificates for 72% of all kindergarten children (n=531). Eleven per cent of kindergarten children (n=80) had written immunisation documentation other than immunisation certificates, and 17% of kindergarten children (n=126) did not have any form of written immunisation documentation.

Only 57% of kindergarten children who presented an immunisation certificate were fully immunised (Table 1). Four per cent of kindergarten children with immunisation certificates were not fully immunised, and 39% of all immunisation certificates had inconsistent information regarding immunisation status (invalid certificates).

A significantly larger proportion of kindergarten children in Government schools had presented immunisation certificates to school authorities than in Catholic schools (Table 2). There were no differences in whether immunisation certificates were correctly completed (Table 3). Government schools had a

**Table 2. Immunisation documentation by type of school, Auburn local government area, 1994**

	Government Schools		Catholic Schools	
	Number	%	Number	%
Immunisation certificates held at school	375	74.9	156	66.1*
Other immunisation documentation held at school	28	5.6	52	22.0*
No evidence of any written immunisation documentation at school enrolment	98	19.6	28	11.9*
Total kindergarten enrolment	501	100.0	236	100.0

\* p<0.05

**Table 3. Immunisation status of children with immunisation certificates, by type of school, Auburn local government area, 1994**

Status	Government Schools		Catholic Schools	
	Number	%	Number	%
Complete immunisation	211	56.3	90	57.7
Incomplete immunisation	11	2.9	11	7.1
Invalid certificate	153	40.8	55	35.2
Total	375	100.0	156	100.0

significantly larger proportion of kindergarten children without any form of written immunisation documentation than Catholic schools. Catholic schools had a significantly larger proportion of children with written immunisation documentation other than immunisation certificates than Government schools.

## Discussion

We undertook this study to determine the usefulness of immunisation certificates for routine surveillance of immunisation uptake in children starting kindergarten. If immunisation certificates were correctly completed for each and every child, then these records would be a resource efficient and useful source of information for monitoring immunisation rates in the community. With the introduction of computerised school records, this avenue for data collection is even more appealing.

Victoria has implemented similar legislation for the past four years. In 1991, the first year of the implementation of the Victorian legislation, 87.2% of children in preparatory year had presented an immunisation certificate (fully immunised, 85.2%; not fully immunised, 2.0%), and in 1992 this proportion was 89.9% (fully immunised, 85.4%; not fully immunised, 4.2%)<sup>6</sup>.

In our study, we found that only 72% of kindergarten children had presented an immunisation certificate to their school as part of their educational records. A review of only 70% of certificates to determine immunisation uptake rates may result in a biased estimate. We also found that only 60% of the certificates were completed correctly, with inconsistent information in the other 40%. The inconsistent information would not be useful when determining immunisation uptake rates in a surveillance program based on immunisation certificates. In addition, in the event of an outbreak of a vaccine preventable disease in a school in New South Wales, only a valid immunisation certificate is acceptable as evidence of immunisation.

Our rates for the number of immunisation certificates held at schools (72%) are lower than rates reported in both northern and eastern Sydney, where the rates were 84% and 81% respectively<sup>7,8</sup>. This is most likely due to different methods of data collection. Both the other studies relied on schools replying to a telephone call or a mailed questionnaire. In our study, we individually reviewed all immunisation documentation held by the schools.

There was a high percentage of children with other forms of written immunisation records, for example doctors' letterheads or pages from script pads. This suggests that health authorities need to do more to

educate immunisation providers, parents and the education sector on the school entry requirements. In addition they must ensure that immunisation providers are supplied with adequate numbers of immunisation certificates.

Many children did not present any form of written immunisation record to school authorities. In our study we did not attempt to elucidate the reasons for this. In an outbreak of a vaccine preventable disease these children would be considered non-immunised and excluded from school.

We reviewed the immunisation certificates in the first year of implementation of the school entry legislation. We hope that in subsequent years, with better informed immunisation providers, parents and school staff, a greater proportion of children starting kindergarten will have an immunisation certificate. Until further evaluation is done, we suggest that immunisation certificates are not an adequate source of data for determining immunisation uptake rates in children starting kindergarten in New South Wales. They may also be of only limited value in the containment of a vaccine preventable disease outbreak in schools.

## References

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NSW HEALTH DEPARTMENT  
**IMMUNISATION CERTIFICATE**  
*for Primary School Enrolment*

School copy

**CHILD'S PERSONAL DETAILS**

NAME: \_\_\_\_\_ DOB: \_\_\_\_\_  
SURNAME GIVEN NAMES  
 ADDRESS: \_\_\_\_\_  
 \_\_\_\_\_ POST CODE: \_\_\_\_\_  
 SCHOOL: \_\_\_\_\_

**SECTION A: COMPLETE IMMUNISATION**

*Please tick appropriate boxes indicating number of DOSES administered*

	(DOSE)				
DIPHTHERIA	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
TETANUS	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
PERTUSSIS (Whooping Cough)	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	
POLIO	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>		4 <input type="checkbox"/>
MEASLES or Measles/Mumps/Rubella	1 <input type="checkbox"/>				
	<b>COMPLETE</b> <input type="checkbox"/> <i>(Please tick OR if incomplete, go to section B)</i>				

**SECTION B: INCOMPLETE IMMUNISATION**

*Please tick the reason why the child has not been fully immunised*

Medical contraindication:	<input type="checkbox"/>	Religious objection:	<input type="checkbox"/>
Conscientious objection:	<input type="checkbox"/>	Other:	<input type="checkbox"/>

**ISSUER'S DECLARATION**

*(Please tick appropriate box)*

I certify that:

I have sighted all appropriate documentation to issue a Complete Certificate (Section A)

OR I have issued an Incomplete Certificate and I have explained that, in the event of an outbreak of a vaccine preventable disease, the unimmunised child will be excluded from attending school for the duration of the outbreak. (Section B)

DOCTOR/ISSUER'S NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_ TELEPHONE: \_\_\_\_\_

SIGNATURE & STAMP: \_\_\_\_\_

DATE: \_\_\_\_\_