



EPIDEMIOLOGY BULLETIN

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PREVENTING MEASLES IN A SCHOOL: EXCLUSION OF SUSCEPTIBLES

Virginia's immunization exclusion law for susceptible school children was invoked for the first time on September 25, 1981, in a Northern Virginia high school. The order was based on Section 32.1-47 of the Code of Virginia which states, "Upon the identification of an outbreak, potential epidemic or epidemic of a vaccine-preventable disease in a public or private school, the Commissioner shall have the authority to require the exclusion from such school of all children who are not immunized against that disease."

Suspected measles in a 15-year-old white male was reported to the Immunization Program Monday, September 21, by a school nurse through the measles surveillance system established in the region. The patient, who had clinical symptoms of measles including a fever of 104°F, cough, coryza, conjunctivitis and a maculo-papular rash beginning September 19, had a serology obtained by his private physician for a measles IgM titer, and he was confirmed as having measles disease by the State Division of Consolidated Laboratory Services on Wednesday, September 23.

Representatives from the local health department, Immunization Program personnel and school officials met Thursday, September 24, to discuss implementation of the exclusion order in the high school. A review of over 2500 student records by school and health department staff revealed that 83% of the health folders did not contain adequate documentation of measles immunization. Measles Immunization Clinics were held at the school Friday afternoon, September 25; and the mornings of Saturday, September 26; Monday, September 28; and Tuesday, September 29. Exclusion letters were sent home Friday, September 25, to 2,098 students based on the definition of an unimmunized child as stated in the exclusion order (excerpt):

- a) Any child with no school record of immunization against measles.
- b) Any child whose school immunization record indicates past measles immunization with only inactivated measles vaccine.
- c) Any child whose school immunization record indicates he was immunized against measles prior to 12 months of age.

"In order to be valid, a child's school records or the records of a physician or health department provided as proof that the child was immunized must include the month, day, and year the child was immunized.

Only month and year are required if it is clear from the record that the vaccine was administered at age 13 months or older. A physician's letter attesting to a prior history of measles disease must contain the date the diagnosis was made and the fact that the diagnosis was not based upon historical information."

Parents were required to send personal immunization records to the clinics for review by the staff. Students with proof of adequate immunization were allowed back into school; students without adequate proof of immunization were immunized in the clinic if parents requested immunization or were excluded from school on Monday, September, 28.

Within five days after the initial record review, 983 students had provided appropriate records, and another 975 had been vaccinated in school clinics, reducing the proportion of students in the school without adequate documentation of measles immunization from 83.4% to 5.6%.

Follow-up revealed that the index case was the 13-year-old sister of the case. She had been ill over the Labor Day holiday and would have been non-infectious when she returned to school in early September. Her possible exposures were traced to several gatherings, including a party attended by 21 children of parents working for an international organization based in Washington, D.C. Thirteen of the children had returned to school in England, one in Canada, and one in France; the remaining six attend schools in the United States. All of the families were contacted, but no children were said to have been ill with measles before, during, or after the party.

No additional cases of measles were identified in that school or elsewhere in the area. While many of those excluded were doubtlessly immune, many certainly were not. Unless school records contain up-to-date information on the immunization status of each student, more students than those who are susceptible will have to be excluded when a case of measles is identified in a school. Rapid confirmation of a measles case can now be accomplished within forty eight hours in most areas in the State. This capability, in combination with prompt reporting and serologic testing of all suspected measles cases, could result in a total of confirmed cases in Virginia in 1982 being even fewer than the total of nine confirmed so far this year.

THREE RABIES VACCINE UPDATES

Discontinuation of Duck Embryo Rabies Vaccine¹

On August 10, 1981, Eli Lilly and Company announced that it will cease domestic sales of its duck embryo rabies vaccine on November 30, 1981. Marketing outside the United States will terminate in the second quarter of 1982.

Duck embryo vaccine, exclusively produced and marketed by Eli Lilly and Company, has been widely used in the United States for over 2 decades for pre-exposure and post-exposure rabies prophylaxis. The only other rabies vaccine currently licensed for human use in the United States is the human diploid cell vaccine (HDCV) produced by Merieux Institute.

Recommendations of the Immunization Practices Advisory Committee (ACIP)
Supplementary Statement on Rabies Vaccine and Serologic Testing²

Human diploid cell strain rabies vaccine (HDCV) was licensed in the United States in June, 1980. At its meeting on October 15, 1981, the Immunization Practices Advisory Committee (ACIP) reviewed data on seroconversion in persons properly vaccinated with HDCV; the data showed that 100% of vaccinees (510/510) had protective antibody levels following pre-exposure treatment, and following post-exposure treatment, 99.9% (1,299/1,300) had protective antibody levels. In view of these findings, which corroborate relicensure data, the ACIP now sees no reason to continue routine serologic testing of persons who receive the recommended pre-exposure or post-exposure treatment regimens of HDCV, i.e., pre-exposure: 3 intramuscular, 1.0-ml doses on days 0, 7, and 21 or 28; post-exposure: rabies immune globulin plus 5 intramuscular, 1.0-ml doses on days 0, 3, 7, 14, and 28.

Furthermore, the ACIP believes that routine serologic testing is no longer necessary following booster doses of HDCV for persons given the recommended primary HDCV vaccination or those shown to have had an adequate antibody response to primary vaccination with duck embryo vaccine (DEV) or other rabies vaccines.

Serologic testing is still recommended for persons vaccinated with DEV or those whose immune responses might be diminished by drug therapy or for other reasons.

Editorial Note: In accord with the ACIP's conclusion on routine rabies antibody testing, effective November 30, 1981, CDC will no longer test serum for rabies antibody except in persons vaccinated with DEV or suspected of being immunocompromised. Those who have not completed vaccination with HDCV will be advised to do so rather than to submit serum for testing.

HDCV Supply Adequate

The HDCV is not currently in short supply. The reason that it must be obtained through Local or State Health Departments concerns patent rights which make it impossible for the manufacturer (Merieux) to sell to any entity other than a "government agency", etc.

- References: ¹MMWR August 21, 1981/Vol. 30/No. 32
²MMWR October 30, 1981/Vol. 30/No. 42

BIBLIOGRAPHIC RETRIEVAL SERVICE IN HEALTH DEPARTMENT

The State Department of Health in Richmond has a computer terminal connected to the National Library of Medicine and is one of 310 active Online Centers in our region (D.C., Va., Md., N.C., and W. Va.). As part of the privilege of being an Online Center, it is understood that the service is to be made available to both affiliated and unaffiliated users for a cost-recovery service fee. Therefore, if you have an information need or would like to talk to someone concerning the possibility of utilizing this service, please call Laurel Meyer in the Bureau of Toxic Substance Information at (804) 786-1763.

MONTH: September, 1981

DISEASE	STATE					REGIONS				
	THIS MONTH	LAST MONTH	TOTAL TO DATE		MEAN 5 YEAR TO DATE	THIS MONTH				
			19 81	19 80		N.W.	N.	S.W.	C.	E.
CHICKENPOX	9	61	1610	374	791.4		4		1	4
MEASLES	2	1			1378.0		2			
MUMPS	4	6	122	64	121.6			3		1
PERTUSSIS	1	3	7	7	11.6		1			
RUBELLA	3	1	10	40	261.8	1	1			1
MENINGITIS - ASEPTIC	49	81	183	137	123.8	9	16	22	1	1
BACTERIAL	9	31	167	137	106.6	1	2	2		4
ENCEPHALITIS - INFECTIOUS	3	10	32	27	21.8	2		1		
POST-INFECTIOUS		1	3	5	6.8					
HEPATITIS A (INFECTIOUS)	23	38	166	235	222.4	2	10	6	2	3
B (SERUM)	53	68	388	405	273.4	4	16	3	7	23
SALMONELLOSIS	153	264	1239	939	699.2	24	21	15	53	40
SHIGELLOSIS	44	60	1085	99	105.4		4	6	34	
TUBERCULOSIS - PULMONARY	35	44	393	392						
EXTRA-PULMONARY	7	7	77	79						
SYPHILIS (PRIMARY & SECONDARY)	52	49			415.8	3	3	19	16	11
GONORRHEA	1882	2568	16649	16955	18159.8					
ROCKY MOUNTAIN SPOTTED FEVER	7	39	100	86	100.8	1	1		4	1
RABIES IN ANIMALS	23	28	93	13	20.0	10	13			
MENINGOCOCCAL INFECTIONS	4	8	77	49	47.6		1		1	2
INFLUENZA	23	26	4924	770	4559.4	1	15	7		
MALARIA	4	8	24	55	23.6		2			
OTHER: <i>Hepatitis Unspec.</i>	15	29	141	122	132.2	2	7		1	5

COUNTIES REPORTING ANIMAL RABIES: Fauquier-4 rac.; Loudoun-12 rac.; 1-skunk; Page-3 skunks, Shenandoah 1 skunk; Warren-2 rac.
 OCCUPATIONAL ILLNESSES: Occupational pneumoconioses 14; Occupational dermatoses 2; Occupational hearing loss 6; Asbestosis 7; Byssinosis 1; Chemical inhalation 3.

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