CENTERS FOR DISEASE CONTROL

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Epidemiologic Notes and Reports

Prevalence of Cytomegalovirus Excretion from Children in Five Day-Care Centers — Alabama

Recent studies have been done in Birmingham, Alabama, to determine the prevalence of cytomegalovirus (CMV) infection among attendees of day-care centers. Samples of urine and saliva from children attending five day-care centers were tested for CMV by viral isolation between March and June 1984 (Table 1). A culture was obtained from each child on a single occasion at both sites in almost all cases. Prevalence of serum antibody to CMV among parents and day-care center workers was determined using a commercial enzyme immunoassay. Centers A, B, and C served mainly middle-income families; centers D and E served primarily low-income families. Although excretion rates varied among the centers, each center had children who were shedding virus. Centers A, B, and C had at least one age cohort with greater than 50% excretion. A small number of children under 3 years of age had CMV in saliva and not in urine. Thus, the percentage of children with excretion from either site for the respective centers was 49% (A), 40% (B), 32% (C), 9% (D), and 13% (E). Frequency of viral excretion was

TABLE 1. Isolation of CMV from mouth swab (M) and urine (U) specimens from children in five day care centers*— Alabama, March-June 1984

Age (mos.)	Day-care center and source of culture									
	A		B		C		D		E	
	M	U	M	U	M	U	M	U	M	U
0-12	1/5 (20%)	3/5 (60%)	—	—	2/6 (33%)	2/5 (40%)	—	—	—	—
13-24	10/19 (53%)	10/19 (53%)	5/16 (31%)	4/17 (24%)	3/8 (38%)	4/7 (57%)	0/5 (0%)	1/6 (17%)	0/6 (0%)	0/4 (0%)
25-36	1/13 (8%)	6/12 (50%)	3/13 (23%)	7/13 (54%)	1/11 (9%)	2/10 (20%)	0/13 (0%)	1/12 (8%)	2/6 (33%)	1/5 (20%)
37-48	0/13 (0%)	4/12 (30%)	1/12 (8%)	5/13 (38%)	0/13 (0%)	3/13 (23%)	0/10 (0%)	2/9 (22%)	0/5 (0%)	1/5 (20%)
> 48	2/11 (18%)	4/11 (36%)	0/15 (0%)	4/15 (27%)	0/12 (0%)	2/11 (18%)	1/23 (4%)	0/21 (0%)	0/6 (0%)	0/6 (0%)
Total	**14/51 (27%)**	**27/59 (46%)**	**9/56 (15%)**	**20/58 (34%)**	**6/50 (12%)**	**13/46 (28%)**	**1/51 (2%)**	**4/48 (8%)**	**2/23 (9%)**	**2/20 (10%)**

*Results are number of children positive/total number of children tested (%).

Cytomegalovirus Excretion — Continued

lower in both urine and saliva specimens from children in the lower socioeconomic centers. Questionnaires completed by parents provided past medical histories and histories of recent illness. One 3-year-old in center B had congenital CMV infection proven by viral isolation at birth. No children had histories of mononucleosis-like illness, and there was no association between any specific acute illness during the preceding 6 months and CMV excretion at the time of the study. Previous CMV studies have found infection rates for preschool-aged children in the United States to range from approximately 5% to 30% (*1*). Serologic results revealed that 50%-100% of workers from each day-care center had antibody to CMV, as did 56%-88% of parents (Table 2). These data indicate that CMV infection is common among young children in day-care centers.

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Editorial Note: Public awareness that maternal primary CMV infection during pregnancy can result in damaging fetal infections has increased in recent years. Although little is known about how CMV is transmitted in the community, it does not appear to be highly contagious. Acquisition appears to require close or intimate contact with persons who are excreting CMV in their urine, saliva, or other secretions. CMV can also be transmitted via blood transfusions, breast milk, sexual intercourse, and transplanted organs (*2-6*).

Studies have shown that infants and children acquire CMV infection from other children or from their mothers either in utero, at birth, or during the perinatal period (*7,8*). Intrauterine CMV infection is the most common of all recognized intrauterine infections, occurring in an estimated 0.4%-2.3% of all live births, and it can have a variable outcome. It may result from either primary maternal infection acquired during pregnancy or from a recurrent infection (reactivation) or reinfection in a seropositive woman (*9*). Current evidence indicates that most but not all symptomatic congenital CMV infections result from primary infection of the mother. In the United States, 35%-90% of women (depending on race and socioeconomic status) entering their childbearing years are seropositive, and thus, they are not susceptible to primary CMV infection (*9*).

CMV infection is endemic in the community, and infection in childhood is common and usually asymptomatic. Previously published results from a longitudinal study of children in a day-care center indicate that the majority of children acquired CMV after joining the center and that the estimated cumulative infection rate may reach as high as 80% for children during their second year of life (*1*). Excretion of CMV has persisted for months to years in most of the children studied at that center, as it does in congenital CMV-infected children. Another study comparing point prevalence rates of CMV excretion in urine and saliva of children attending infant development centers for the developmentally delayed and those in day-care centers demonstrated that urinary excretion occurred in 22% of children in both types of centers (*10*). Since CMV infection appears to be endemic in the day-care setting, there is very

TABLE 2. Proportion of seropositivity to CMV among day-care workers and parents of children in five day-care centers — Alabama, March-June 1984

	Day-care center				
	A	B	C	D	E
Workers	17/34 (50%)	11/14 (79%)	16/17 (94%)	12/13 (92%)	4/4 (100%)
Parents	60/107 (56%)	45/80 (56%)	45/69 (65%)	38/43 (88%)	11/15 (73%)

Cytomegalovirus Excretion – Continued

little justification for excluding a child from these settings because the child is known to be excreting CMV (*11-13*).

Unfortunately, concern over the risk of acquiring CMV infection from children known to have congenital infection has led to placement of unwarranted restrictions in some communities on the participation of these children in public programs, such as day care, schools, and even intervention programs for the developmentally disabled. The risk of exposure from a child with congenital CMV infection is minimal, compared to the unavoidable exposures to the many healthy children in the general population who are unrecognized excretors of CMV. The risk of spread of CMV infection to child-care personnel, particularly women of childbearing age, is not fully known. Until more data are available on occupational infections and the potential risk of exposure to pregnant workers, female employees in their reproductive years should be informed that a significant percentage of infected children may be present in any child-care setting, and that care for any infants and children should include hygienic measures, such as washing hands after each contact with urine and respiratory-tract or other potentially infectious secretions and careful handling and disposal of diapers and other articles known to be contaminated with urine or other secretions (*2, 11-14*).

Routine serologic testing of pregnant women who take care of children in institutions is not currently indicated because: the extent of risk is not currently established; testing facilities are not readily available; and the significance of antibody titer in a single test is difficult to interpret (*2, 12-14*). Also, it is not known whether the risk of primary CMV infection would be appreciably reduced by identifying seronegative women and transferring them to areas where there is less contact with infants and children (*11,14*). Until further data are available, the most practical means by which pregnant women or women planning pregnancy can prevent acquiring CMV is rigorous, good personal hygiene throughout pregnancy, particularly in any setting where frequent, close contact with infants and children occur.

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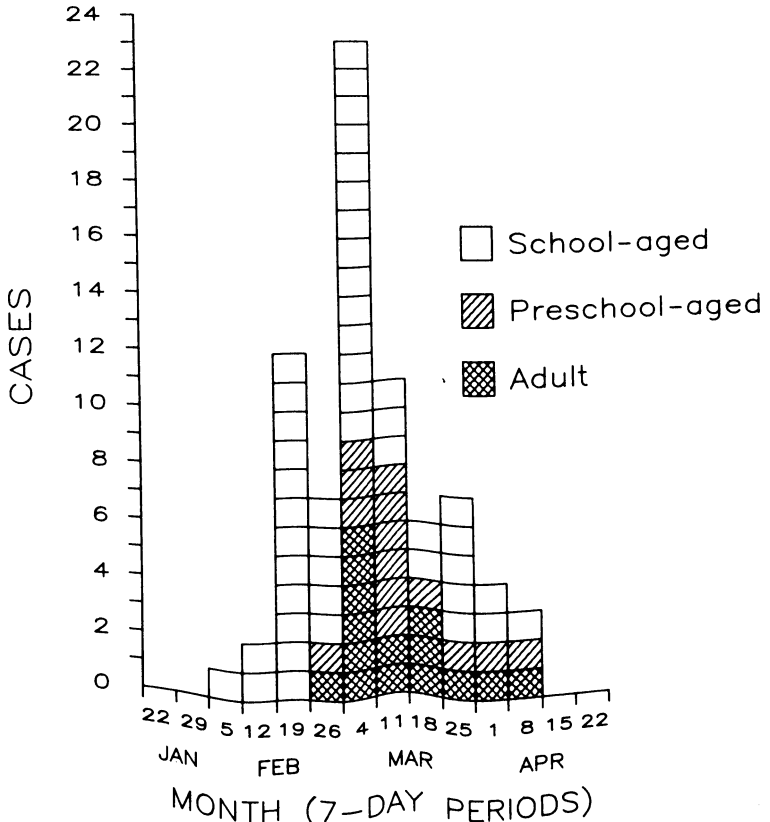
Measles in an Immunized School-Aged Population — New Mexico

From February 10, to April 15, 1984, 76 cases of measles were reported in Hobbs, New Mexico. Sixty-two cases (82%) were serologically confirmed. The outbreak began in one junior high school and spread through the community (Figure 1). Forty-seven cases (62%) occurred among students attending Hobbs Municipal Schools. Cases occurred in the first, second, and fifth to 12th grades and spread through seven schools. Twenty-nine (62%) of the patients attended the seventh through ninth grades, and nine (19%) attended the 10th through 12th grades. The attack rate was 0.6% for the entire school system and 3.8% for the index junior high school. The school system reported that 98% of students were vaccinated against measles before the outbreak began. The outbreak was eventually controlled by excluding unvaccinated students from school and by aggressive case follow-up to identify susceptible contacts. A case-control study was conducted to determine risk factors for measles in this highly vaccinated school-aged population.

One control matched for sex, grade, and school was randomly selected for each of the 47 students with measles. Parents were interviewed to determine the vaccination history of each child. Controls were confirmed not to have had a rash illness during the outbreak. Vaccine providers named by the parents were contacted to verify the immunization histories furnished by the parents.

FIGURE 1. Measles cases, by date of onset — Hobbs, New Mexico, January 22 - April 22, 1984



Measles — Continued

All but one of the 47 patients and all the controls had histories of measles vaccination. Among the 43 patients and 39 controls who had received one dose of measles vaccine, no association was found between measles vaccine failure and time since vaccination, vaccination before 15 months of age, or type of vaccine administered. Measles patients, however, were significantly less likely to have a measles vaccination record that could be documented by a provider (Table 3). Both patients and controls vaccinated in New Mexico were significantly more likely to have provider verification than were patients or controls vaccinated outside New Mexico.

Comparison of the 20 measles cases (19 serologically confirmed) and 30 controls with provider-verified immunization records demonstrated that measles vaccine failure was not associated with time elapsed since immunization. However, vaccine failure in this population was significantly associated with vaccination at 12-14 months of age (Table 4). The risk of measles for children vaccinated at 12-14 months of age was 4.7 times higher than for persons vaccinated at 15 months of age or older. However, when lack of provider verification is considered as a risk factor along with age at vaccination, more cases were associated with the former risk factor (odds ratio 6.4) than with vaccination at 12-14 months (odds ratio 4.7).

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Editorial Note: Several important issues related to measles control are raised by this outbreak. The first concerns the age distribution of patients—62% of school-aged patients were in grades 7-9. This age-specific distribution is consistent with 1984 national surveillance data and represents a change from 1983 (*1*). The reason for this shift is unknown.

TABLE 3. Verification of measles immunization records for single vaccinees — Hobbs, New Mexico, 1984

Verification status	No. cases (%)	No. controls (%)	p value
Provider record confirmed	20 (46.5%)	30 (76.9%)	0.01
Parent-held vaccination record	14 (32.6)	7 (17.9)	
Parents' written record	5 (11.6)	2 (5.1)	
School record only	1 (2.3)	0 (0)	
No record found	3 (7.0)	0 (0)	
Total	**43 (100)**	**39 (100)**	

TABLE 4. Risk factors for measles susceptibility — Hobbs, New Mexico, 1984

	No. cases (%)	No. controls (%)	Odds ratio	95% C.I.
Lack of provider verification	23 (53.5)	9 (23.1)	6.0	2.2-16.7
Age at vaccination				
< 12 mos.	1 (2.3)	0 (0)	—	—
12-14 mos.	8 (18.6)	4 (10.3)	4.7	1.2-18.2
15 mos.	11 (25.6)	26 (66.7)	1.0	—
Total	**43 (100)**	**39 (100)**		

Measles — Continued

The New Mexico data suggest that some of the problems may relate to inaccurate school records. Vaccination histories could only be verified with providers for 49% of the 47 patients studied. This outbreak demonstrates that provider-verified records had the highest correlation with protection. If provider verification had been required, 23 (49%) of the 47 cases might have been preventable, since patients would have had to be vaccinated or revaccinated to remain in school. Further studies are needed during similar outbreaks to evaluate the validity of school records. The current measles elimination strategy, which emphasizes measles immunity requirements for school entry, has been successful in keeping measles occurrence near record low levels, suggesting that records in most communities are accurate.

When all patients and controls are analyzed, no differences in risk for developing measles between groups could be found for age at vaccination. However, when only patients and controls with provider-verified records were analyzed, there appears to be an increased risk for children vaccinated at 12-14 months, compared with children vaccinated at 15 months of age or older, a finding that has been described previously (*2*). The Immunization Practices Advisory Committee (ACIP) does not routinely recommend revaccination of children initially vac-

(Continued on page 59)

TABLE I. Summary—cases of specified notifiable diseases, United States

Disease	4th Week Ending			Cumulative, 4th Week Ending		
	Jan. 26, 1985	Jan. 28, 1984	Median 1980-1984	Jan. 26, 1985	Jan. 28. 1984	Median 1980-1984
Acquired Immunodeficiency Syndrome (AIDS)	77	29	N	356	280	N
Aseptic meningitis	67	94	92	254	376	337
Encephalitis: Primary (arthropod-borne & unspec.)	12	19	15	42	54	59
Post-infectious	-	1	1	4	5	7
Gonorrhea: Civilian	15,582	17,704	18,362	55,511	65,764	73,530
Military	198	385	515	1,022	1,640	1,990
Hepatitis: Type A	347	425	425	1,235	1,382	1,689
Type B	407	471	357	1,426	1,605	1,291
Non A, Non B	76	68	N	240	231	N
Unspecified	67	69	158	261	292	569
Legionellosis	18	11	N	36	26	N
Leprosy	1	2	2	9	15	10
Malaria	19	12	12	33	43	49
Measles: Total*	3	17	17	13	42	42
Indigenous	-	16	N	2	35	N
Imported	3	1	N	11	7	N
Meningococcal infections: Total	52	57	67	155	193	222
Civilian	52	57	67	155	193	215
Military	-	-	-	-	-	1
Mumps	43	63	96	151	240	310
Pertussis	25	30	20	63	102	63
Rubella (German measles)	1	6	21	13	28	102
Syphilis (Primary & Secondary): Civilian	617	561	602	1,659	2,041	2,270
Military	2	19	11	12	31	35
Toxic Shock syndrome	5	4	N	21	30	N
Tuberculosis	341	363	445	1,057	1,171	1,472
Tularemia	2	-	1	8	3	6
Typhoid fever	1	6	6	7	22	29
Typhus fever, tick-borne (RMSF)	-	1	2	3	5	6
Rabies, animal	25	79	100	165	253	323

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1985		Cum 1985
Anthrax	-	Plague	-
Botulism: Foodborne	-	Poliomyelitis: Total	-
Infant	3	Paralytic	-
Other	-	Psittacosis	5
Brucellosis	1	Rabies, human	-
Cholera	-	Tetanus (Ga. 1)	2
Congenital rubella syndrome	-	Trichinosis	4
Diphtheria	-	Typhus fever, flea-borne (endemic, murine)	-
Leptospirosis (N.C. 1)	4		

*All of the reported cases for this week were imported from a foreign country or can be directly traceable to a known internationally imported case within two generations.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending January 26, 1985 and January 28, 1984 (4th Week)

Reporting Area	AIDS	Aseptic Menin-gitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionel-losis	Leprosy
			Primary	Post-in-fectious			A	B	NA,NB	Unspeci-fied		
	Cum 1985	1985	Cum 1985	Cum 1985	Cum 1985	Cum 1984	1985	1985	1985	1985	1985	Cum 1985
UNITED STATES	356	67	42	4	55,511	65,764	347	407	76	67	18	9
NEW ENGLAND	13	4	2	-	1,930	2,259	6	23	2	2	-	-
Maine	1	-	-	-	86	91	-	-	-	-	-	-
N H	-	-	1	-	39	46	-	2	-	-	-	-
Vt	-	-	-	-	20	23	-	-	-	-	-	-
Mass	10	1	1	-	671	773	6	11	1	2	-	-
R I	-	2	-	-	170	98	-	5	-	-	-	-
Conn	2	1	-	-	944	1,228	-	5	1	-	-	-
MID ATLANTIC	133	6	1	-	5,891	7,246	19	40	1	4	5	1
Upstate N Y	26	4	1	-	695	975	6	4	1	-	-	-
N Y City	81	-	-	-	3,318	3,186	10	30	-	3	-	1
N J	19	2	-	-	1,151	1,019	3	6	-	1	-	-
Pa	7	-	-	-	727	2,066	-	-	-	-	5	-
E N CENTRAL	14	5	12	2	6,698	10,338	15	29	3	2	6	-
Ohio	8	2	5	1	2,511	2,300	4	10	1	-	6	-
Ind	-	-	2	-	479	1,452	6	6	1	1	-	-
Ill	2	-	-	-	1,244	2,957	-	-	-	-	-	-
Mich	4	3	4	-	2,389	2,699	5	13	1	1	-	-
Wis	-	-	1	1	75	930	-	-	-	-	-	-
W N CENTRAL	6	1	3	-	3,382	2,873	12	10	2	1	1	-
Minn	1	1	-	-	419	475	6	4	2	-	-	-
Iowa	1	-	3	-	340	342	-	1	-	1	-	-
Mo	2	-	-	-	1,528	1,231	1	4	-	-	1	-
N Dak	-	-	-	-	21	30	2	1	-	-	-	-
S Dak	-	-	-	-	71	91	3	-	-	-	-	-
Nebr	-	-	-	-	392	200	-	-	-	-	-	-
Kans	2	-	-	-	611	504	-	-	-	-	-	-
S ATLANTIC	46	22	6	-	12,324	16,151	28	97	16	6	4	-
Del	1	1	1	-	298	284	1	1	3	-	2	-
Md	4	2	2	-	1,609	2,483	2	4	-	-	-	-
D C	6	-	-	-	938	1,036	-	4	-	-	-	-
Va	5	4	-	-	1,448	1,660	13	19	2	-	-	-
W Va	-	-	-	-	204	171	-	3	1	-	-	-
N C	4	8	3	-	2,491	2,560	1	10	4	2	1	-
S C	-	-	-	-	1,630	1,455	-	11	-	-	-	-
Ga	8	1	-	-	-	3,162	3	25	-	1	1	-
Fla	18	6	-	-	3,706	3,340	8	20	6	3	-	-
E S CENTRAL	3	7	2	2	5,350	4,994	5	27	4	-	-	-
Ky	1	2	-	-	580	653	3	1	-	-	-	-
Tenn	-	2	1	-	2,152	2,137	1	14	2	-	-	-
Ala	1	2	1	2	1,634	1,465	1	12	2	-	-	-
Miss	1	1	-	-	984	739	-	-	-	-	-	-
W S CENTRAL	34	5	2	-	9,749	9,133	34	11	2	23	-	-
Ark	-	-	-	-	992	852	-	-	-	-	-	-
La	1	3	-	-	1,997	2,288	-	2	1	1	-	-
Okla	-	1	2	-	954	1,036	6	1	1	3	-	-
Tex	33	1	-	-	5,806	4,957	28	8	-	19	-	-
MOUNTAIN	8	7	2	-	2,064	1,873	58	36	14	11	1	-
Mont	-	-	-	-	67	100	5	1	-	1	-	-
Idaho	-	-	-	-	69	88	2	3	3	-	-	-
Wyo	-	-	-	-	45	42	-	-	-	-	-	-
Colo	4	1	2	-	630	505	5	6	1	7	-	-
N Mex	1	-	-	-	282	263	13	2	1	-	-	-
Ariz	1	2	-	-	542	442	19	13	6	2	1	-
Utah	-	4	-	-	87	103	7	4	2	1	-	-
Nev	2	-	-	-	342	330	7	7	1	-	-	-
PACIFIC	99	10	12	-	8,123	10,897	170	134	32	18	1	8
Wash	1	1	1	-	408	594	22	8	2	4	-	-
Oreg	2	-	-	-	520	564	26	15	6	-	-	1
Calif	96	9	11	-	6,833	9,388	118	104	22	13	-	6
Alaska	-	-	-	-	245	218	2	4	-	-	-	-
Hawaii	-	-	-	-	117	133	2	3	2	1	1	1
Guam	-	U	-	-	-	22	U	U	U	U	U	-
P R	4	4	1	-	234	282	-	4	-	1	-	-
V I	-	-	-	-	29	40	-	-	-	-	-	-
Pac Trust Terr	-	U	-	-	-	-	U	U	U	U	U	-

N Not notifiable U Unavailable

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending January 26, 1985 and January 28, 1984 (4th Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported *		Total									
	Cum. 1985	1985	Cum. 1985	1985	Cum. 1985	Cum. 1984	Cum. 1985	1985	Cum. 1985	1985	Cum. 1985	Cum. 1984	1985	Cum. 1985	Cum. 1984
UNITED STATES	33	-	2	3	11	42	155	43	151	25	63	102	1	13	28
NEW ENGLAND	-	-	-	-	-	-	13	1	6	-	1	2	-	2	1
Maine	-	-	-	-	-	-	1	-	1	-	-	-	-	-	1
N.H.	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-
Vt.	-	-	-	-	-	-	2	-	-	-	1	-	-	-	-
Mass.	-	-	-	-	-	-	3	-	4	-	-	-	-	1	-
R.I.	-	-	-	-	-	-	5	-	-	-	-	1	-	-	-
Conn.	-	-	-	-	-	-	2	1	1	-	-	-	-	-	-
MID ATLANTIC	3	-	-	1	1	-	14	23	26	4	10	3	-	3	-
Upstate N.Y.	1	-	-	1 †	1	-	5	19	22	1	3	3	-	-	-
N.Y. City	2	-	-	-	-	-	1	-	-	-	4	-	-	3	-
N.J.	-	-	-	-	-	-	8	3	3	-	-	-	-	-	-
Pa.	-	-	-	-	-	-	-	1	1	3	3	-	-	-	-
E.N. CENTRAL	3	-	1	-	-	15	36	4	44	6	17	11	-	-	3
Ohio	1	-	-	-	-	-	18	-	25	5	8	4	-	-	-
Ind.	-	-	-	-	-	-	4	-	3	-	8	-	-	-	-
Ill.	-	-	-	-	-	11	1	-	8	-	-	4	-	-	2
Mich.	2	-	-	-	-	4	10	4	8	1	1	1	-	-	1
Wis.	-	-	1	-	-	-	3	-	-	-	-	2	-	-	-
W.N. CENTRAL	1	-	-	-	-	-	11	1	4	-	1	39	-	1	2
Minn.	-	-	-	-	-	-	3	-	-	-	1	2	-	-	-
Iowa	-	-	-	-	-	-	2	-	1	-	-	3	-	-	-
Mo.	1	-	-	-	-	-	5	1	1	-	-	1	-	-	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
S. Dak.	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Nebr.	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
Kans.	-	-	-	-	-	-	-	-	2	-	-	31	-	1	1
S. ATLANTIC	4	-	-	-	-	-	24	-	13	2	5	14	-	1	1
Del.	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Md.	-	-	-	-	-	-	3	-	-	-	-	1	-	-	-
D.C.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Va.	1	-	-	-	-	-	4	-	4	-	-	4	-	-	-
W. Va.	-	-	-	-	-	-	-	-	4	-	-	2	-	-	-
N.C.	1	-	-	-	-	-	5	-	-	-	2	1	-	-	-
S.C.	-	-	-	-	-	-	4	-	1	-	-	-	-	1	-
Ga.	-	-	-	-	-	-	3	-	2	-	-	3	-	-	-
Fla.	1	-	-	-	-	-	4	-	2	2	3	3	-	-	1
E.S. CENTRAL	1	-	-	-	-	2	5	-	1	1	2	2	-	1	-
Ky.	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-
Tenn.	-	-	-	-	-	2	4	-	1	-	1	1	-	-	-
Ala.	1	-	-	-	-	-	1	-	-	1	1	-	-	-	-
Miss.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W.S. CENTRAL	-	-	-	-	-	-	6	6	12	4	4	11	1	1	4
Ark.	-	-	-	-	-	-	-	-	1	2	2	7	1	1	1
La.	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Okla.	-	-	-	-	-	-	-	N	N	2	2	2	-	-	-
Tex.	-	-	-	-	-	-	5	6	11	-	-	2	-	-	3
MOUNTAIN	-	-	-	-	3	15	11	2	21	1	2	12	-	-	2
Mont.	-	-	-	-	3	-	1	1	1	-	-	1	-	-	-
Idaho	-	-	-	-	-	-	-	1	2	-	-	1	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Colo.	-	-	-	-	-	-	3	-	3	-	-	9	-	-	-
N. Mex.	-	-	-	-	-	-	3	N	N	-	1	1	-	-	-
Ariz.	-	-	-	-	-	-	3	-	14	1	1	-	-	-	-
Utah	-	-	-	-	-	15	-	-	-	-	-	-	-	-	2
Nev.	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-
PACIFIC	21	-	1	2	7	10	35	6	24	7	21	8	-	4	15
Wash.	3	-	-	-	-	-	4	-	1	1	1	5	-	-	-
Oreg.	-	-	-	-	-	-	2	N	N	4	4	-	-	-	-
Calif.	16	-	1	1 †	6	8	29	4	19	1	15	3	-	4	15
Alaska	1	-	-	-	-	-	-	1	1	1	1	-	-	-	-
Hawaii	1	-	-	1 †	1	2	-	1	3	-	-	-	-	-	-
Guam	-	U	-	U	-	5	-	U	-	U	-	-	U	-	1
P.R.	-	3	15	-	-	-	8	-	9	1	1	-	-	-	-
V.I.	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
Pac. Trust Terr.	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-

*For measles only, imported cases includes both out-of-state and international importations.

N: Not notifiable U: Unavailable †International §Out-of-state

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending January 26, 1985 and January 28, 1984 (4th Week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1985	Cum. 1984	1985	Cum. 1985	Cum. 1984	Cum. 1985	Cum. 1985	Cum. 1985	Cum. 1985
UNITED STATES	1,659	2,041	5	1,057	1,171	8	7	3	165
NEW ENGLAND	37	53	-	35	36	-	-	-	-
Maine	1	1	-	2	3	-	-	-	-
N H	-	-	-	-	1	-	-	-	-
Vt	-	-	-	-	-	-	-	-	-
Mass	20	34	-	22	14	-	-	-	-
R I	-	3	-	6	7	-	-	-	-
Conn	16	15	-	5	11	-	-	-	-
MID ATLANTIC	201	257	-	261	231	-	-	-	30
Upstate N Y	11	17	-	27	30	-	-	-	9
N Y City	143	143	-	142	91	-	-	-	-
N J	44	52	-	56	55	-	-	-	-
Pa	3	45	-	36	55	-	-	-	21
E N CENTRAL	89	129	-	124	141	-	-	1	3
Ohio	10	23	-	27	38	-	-	1	-
Ind	6	21	-	14	12	-	-	-	-
Ill	55	63	-	61	53	-	-	-	-
Mich	14	14	-	18	29	-	-	-	-
Wis	4	8	-	4	9	-	-	-	3
W N CENTRAL	13	35	-	23	25	3	1	-	24
Minn	2	6	-	2	2	-	1	-	1
Iowa	-	3	-	10	4	-	-	-	16
Mo	7	22	-	5	12	2	-	-	3
N Dak	-	-	-	-	-	-	-	-	2
S Dak	-	-	-	1	1	-	-	-	-
Nebr	1	-	-	2	3	1	-	-	2
Kans	3	4	-	3	3	-	-	-	-
S ATLANTIC	379	630	1	208	283	1	2	2	14
Del	3	-	-	2	4	-	-	-	-
Md	30	38	-	29	43	-	-	-	-
D C	10	18	-	12	8	-	-	-	-
Va	26	38	-	-	10	-	1	-	5
W Va	-	4	1	10	10	-	-	-	-
N C	54	60	-	22	50	1	-	1	-
S C	62	62	-	31	43	-	-	-	2
Ga	-	117	-	26	31	-	-	1	7
Fla	194	293	-	76	84	-	1	-	-
E S CENTRAL	188	129	-	82	85	1	-	-	11
Ky	6	7	-	15	19	-	-	-	2
Tenn	20	33	-	23	15	1	-	-	1
Ala	80	43	-	44	48	-	-	-	8
Miss	82	46	-	-	3	-	-	-	-
W S CENTRAL	384	423	-	75	65	1	-	-	35
Ark	32	15	-	1	1	-	-	-	6
La	83	113	-	26	10	-	-	-	1
Okla	9	10	-	13	12	1	-	-	4
Tex	260	285	-	35	42	-	-	-	24
MOUNTAIN	73	49	2	16	19	2	-	-	24
Mont	-	-	-	2	-	-	-	-	4
Idaho	1	2	1	-	1	-	-	-	-
Wyo	2	1	-	-	-	-	-	-	2
Colo	19	4	-	-	-	-	-	-	-
N Mex	7	8	-	-	6	1	-	-	1
Ariz	43	15	1	12	10	-	-	-	17
Utah	1	3	-	-	1	1	-	-	-
Nev	-	16	-	2	1	-	-	-	-
PACIFIC	295	336	2	233	286	-	4	-	24
Wash	-	12	-	5	14	-	-	-	-
Oreg	13	11	-	5	11	-	-	-	-
Calif	276	303	2	216	233	-	4	-	24
Alaska	-	-	-	-	8	-	-	-	-
Hawaii	6	10	-	7	20	-	-	-	-
Guam	-	-	U	-	-	-	-	-	-
P R	48	63	-	14	19	-	1	-	-
V I	-	1	-	-	-	-	-	-	-
Pac. Trust Terr	-	-	U	-	-	-	-	-	-

U Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending January 26, 1985 (4th Week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	764	549	152	30	14	19	55
Boston, Mass.	200	125	48	10	5	12	19
Bridgeport, Conn.	65	47	14	3	-	1	4
Cambridge, Mass.	31	27	2	1	1	-	1
Fall River, Mass.	34	26	8	-	-	-	1
Hartford, Conn.	58	46	7	3	1	1	7
Lowell, Mass.	54	41	12	1	-	-	2
Lynn, Mass.	23	18	3	-	-	2	1
New Bedford, Mass.	19	17	2	-	-	-	2
New Haven, Conn.	32	21	5	4	1	1	1
Providence, R.I.	70	48	17	2	2	1	5
Somerville, Mass.	12	11	1	-	-	-	2
Springfield, Mass.	57	39	12	3	2	1	-
Waterbury, Conn.	32	26	6	-	-	-	2
Worcester, Mass.	77	57	15	3	2	-	8
MID. ATLANTIC	3,132	2,142	653	224	53	60	194
Albany, N.Y.	60	46	12	1	-	1	1
Allentown, Pa.	10	8	2	-	-	-	-
Buffalo, N.Y.	71	40	26	1	-	4	8
Camden, N.J.	57	40	11	2	1	3	3
Elizabeth, N.J.	30	21	8	-	-	1	3
Erie, Pa.†	27	20	6	-	1	-	3
Jersey City, N.J.	82	51	21	4	-	6	2
N.Y. City, N.Y.	1,764	1,177	365	151	39	32	101
Newark, N.J.	61	33	16	10	-	2	10
Paterson, N.J.	37	23	7	5	2	-	1
Philadelphia, Pa.†	416	293	81	29	9	4	26
Pittsburgh, Pa.†	91	62	23	6	-	-	2
Reading, Pa.	41	34	6	-	-	1	4
Rochester, N.Y.	135	107	20	5	-	3	14
Schenectady, N.Y.	23	17	4	1	-	1	1
Scranton, Pa.†	36	22	13	1	-	-	2
Syracuse, N.Y.	85	58	21	3	1	2	3
Trenton, N.J.	41	31	6	4	-	-	2
Utica, N.Y.	25	24	1	-	-	-	-
Yonkers, N.Y.	40	35	4	1	-	-	8
E.N. CENTRAL	2,333	1,657	412	126	52	84	92
Akron, Ohio	63	43	15	3	-	2	-
Canton, Ohio	32	20	9	3	-	-	3
Chicago, Ill. §	546	453	12	25	17	37	16
Cincinnati, Ohio	94	57	27	6	3	1	8
Cleveland, Ohio	170	101	46	16	3	4	8
Columbus, Ohio	169	116	40	11	1	1	13
Dayton, Ohio	109	71	23	7	3	5	-
Detroit, Mich.	273	166	70	19	11	7	1
Evansville, Ind.	45	35	7	1	1	1	2
Fort Wayne, Ind.	44	35	8	1	-	-	-
Gary, Ind.	16	9	4	1	-	2	1
Grand Rapids, Mich.	64	43	8	3	7	3	1
Indianapolis, Ind.	187	124	42	14	2	5	8
Madison, Wis.	46	32	11	-	2	1	7
Milwaukee, Wis.	143	107	26	3	1	6	3
Peoria, Ill.	54	39	11	1	1	2	9
Rockford, Ill.	67	49	11	5	-	2	4
South Bend, Ind.	51	35	11	3	-	2	1
Toledo, Ohio	89	67	17	3	-	2	5
Youngstown, Ohio	71	55	14	1	-	1	2
W.N. CENTRAL	820	602	140	31	23	24	43
Des Moines, Iowa	76	50	14	5	3	4	5
Duluth, Minn.	26	21	3	-	1	1	-
Kansas City, Kans.	39	30	6	2	1	-	1
Kansas City, Mo.	155	122	21	7	4	1	8
Lincoln, Nebr.	21	18	1	-	-	2	1
Minneapolis, Minn.	103	73	22	4	2	2	5
Omaha, Nebr.	82	60	13	4	3	2	9
St. Louis, Mo.	192	135	35	6	8	8	8
St. Paul, Minn.	88	68	17	1	-	2	1
Wichita, Kans.	38	25	8	2	1	2	5
S. ATLANTIC	1,154	724	273	82	28	46	60
Atlanta, Ga.	184	102	57	15	6	4	5
Baltimore, Md.	182	116	46	14	3	3	1
Charlotte, N.C.	81	52	18	4	2	5	3
Jacksonville, Fla.	139	86	34	9	2	8	12
Miami, Fla.	99	60	24	10	3	2	3
Norfolk, Va.	48	29	9	4	1	5	10
Richmond, Va.	94	51	28	6	4	5	5
Savannah, Ga.	68	46	11	4	4	3	5
St. Petersburg, Fla.	120	101	14	2	1	2	7
Tampa, Fla.	70	44	13	6	2	4	6
Washington, D.C.	20	7	9	2	-	2	-
Wilmington, Del.	49	30	10	6	-	3	3
E.S. CENTRAL	911	545	229	56	33	47	51
Birmingham, Ala.	137	79	39	6	5	8	-
Chattanooga, Tenn.	72	53	13	5	1	-	8
Knoxville, Tenn.	63	43	11	4	4	1	5
Louisville, Ky.	190	115	50	14	6	5	10
Memphis, Tenn.	205	112	45	16	5	26	8
Mobile, Ala.	91	53	25	3	6	4	7
Montgomery, Ala.	40	23	12	2	2	1	5
Nashville, Tenn.	113	67	34	6	4	2	8
W.S. CENTRAL	1,708	1,012	431	135	64	66	88
Austin, Tex.	73	39	15	14	3	2	4
Baton Rouge, La.	31	22	7	1	1	-	5
Corpus Christi, Tex.	80	54	21	3	1	1	2
Dallas, Tex.	301	182	75	19	16	9	8
El Paso, Tex.	92	54	25	7	3	3	3
Fort Worth, Tex.	124	79	25	11	5	4	9
Houston, Tex.	470	227	142	50	21	30	21
Little Rock, Ark.	103	65	19	4	5	10	6
New Orleans, La.	87	53	20	7	4	3	1
San Antonio, Tex.	204	137	56	8	1	2	19
Shreveport, La.	57	45	8	3	1	-	-
Tulsa, Okla.	86	55	18	8	3	2	10
MOUNTAIN	780	498	159	64	27	32	41
Albuquerque, N.Mex.	102	58	21	15	4	4	8
Colo. Springs, Colo.	33	18	8	4	2	1	5
Denver, Colo.	148	93	28	7	5	15	10
Las Vegas, Nev.	91	53	23	11	4	-	4
Ogden, Utah	26	18	5	2	1	-	1
Phoenix, Ariz.	171	104	45	11	5	6	2
Pueblo, Colo.	29	24	4	1	-	-	2
Salt Lake City, Utah	54	33	8	7	4	2	2
Tucson, Ariz.	126	97	17	6	2	4	7
PACIFIC	2,107	1,522	372	113	42	52	166
Berkeley, Calif.	28	17	7	1	-	3	-
Fresno, Calif.	72	52	9	3	5	3	12
Glendale, Calif.	26	22	2	1	-	-	1
Honolulu, Hawaii	49	35	10	2	2	-	8
Long Beach, Calif.	187	143	34	7	1	2	4
Los Angeles, Calif.	385	265	71	31	11	4	13
Oakland, Calif.	95	69	18	5	2	1	8
Pasadena, Calif.	29	24	4	-	-	1	3
Portland, Oreg.	155	111	28	9	4	3	6
Sacramento, Calif.	184	128	42	7	2	3	13
San Diego, Calif.	189	136	30	10	4	9	37
San Francisco, Calif.	172	126	26	12	2	6	11
San Jose, Calif.	231	168	36	15	8	4	36
Seattle, Wash.	151	109	27	7	1	7	5
Spokane, Wash.	53	37	14	1	-	1	9
Tacoma, Wash.	101	80	14	2	-	5	-
TOTAL	13,709††	9,251	2,821	861	336	430	790

* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza.

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

§ Data not available. Figures are estimates based on average of past 4 weeks.

Measles – Continued

cinated between 12 months and 14 months of age, because protection of this group appears to be high (80%-95% or higher).

While children vaccinated at 12-14 months of age appear to be at greater risk of developing measles than those vaccinated at 15 months of age or older, no evidence currently exists to suggest that they are capable of sustaining transmission in the absence of other risk factors. Consequently, routine revaccination of children vaccinated between 12 and 14 months is not warranted. However, such revaccination might be considered in outbreak situations where measles is sustained and other risk factors cannot be identified. The present measles elimination strategy has been successful in eliminating measles from most of the country.

References

1. CDC. Measles—United States, first 26 weeks, 1984. MMWR 1984;33:495-6, 501-4.
2. CDC. Measles surveillance. Report no. 11, 1977-1981. September 1982.

Performance of Laboratories in Testing for Rabies Virus — United States

In response to a recommendation by the Executive Committee of the Association of State and Territorial Public Health Laboratory Directors for an external assessment of the current status of rabies testing, a special laboratory performance evaluation and training exercise was developed at CDC. The objective of the performance evaluation component was to detect problems in performing the fluorescent rabies antibody (FRA) test so that immediate on-site assistance could be directed to laboratories needing consultation or training. This approach to problem identification and resolution has been termed, "Competency Assurance Through Monitoring and Assistance (CATMA)." The exercise was designed to consist of an initial shipment of 10 slides, with duplicate brain impressions on each slide, and a second shipment of 10 slides to only those participants who reported results that were not in agreement with the expected results of the initial shipment. Rabies virus was inactivated by gamma radiation (*1-2*), so no infectious materials were distributed.

A total of 136 public health laboratories were enrolled in the program: 46 main state health department laboratories, 41 branch or regional state health department laboratories, 38 county health department laboratories, six city health department laboratories, and five state university veterinary laboratories. One hundred twenty-nine (95%) of the 136 laboratories participated in the first shipment.

Performance evaluations were based on the interpretation (positive or negative) reported for each sample by four CDC reference laboratories. Full credit was given for each interpretation agreeing with the reference laboratories' interpretations, and no credit was given for interpretations that were in disagreement. Participants who reported interpretations (in the initial or repeat shipment) for all samples that were in agreement with the reference laboratories' interpretations were awarded a certificate of achievement. In the repeat shipment, participants who reported one or more interpretations that did not agree with the reference laboratories' interpretations were contacted and offered on-site consultation and training services by either CDC or state laboratory personnel. After the consultation and training, participants were given the opportunity to examine another set of slides from CDC and receive certification, if successful.

The initial shipment of slides was made on October 18, 1983, and consisted of two control slides (one strongly positive and one negative) and unknown slides (three strongly posi-

Rabies Virus — Continued

tive, two weakly positive, and three negative). A follow-up shipment to 41 participants who reported discrepant results in the first shipment was made on January 17, 1984. The latter shipment consisted of two control slides (one strongly positive and one negative) and unknown slides (one strongly positive, four weakly positive, and three negative). The reference laboratories reported discrepant results with one of the weakly positive slides at the time of shipment; therefore, participants were not held responsible for their interpretations with this sample. In the initial shipment, 41 (32%) of 129 participants reported discrepant results (Table 5). Six (15%) of these 41 participants reported discrepant results in the repeat exercise. In the initial exercise, 34 participants reported one discrepant result; six reported two; and one reported three discrepant results. In the repeat exercise, three participants reported one discrepant result; two reported two, and one reported four discrepant results.

A review of the discrepant results from both shipments, by type of sample, showed that one negative report of 428 reports for the four strongly positive samples represented approximately 2% of the discrepant reports and 0.2% of the reports for strongly positive samples. Thirty-eight negative discrepant reports out of 381 reports for the five weakly positive samples accounted for 63% of the discrepant reports and 10% of the reports for the weakly positive samples. Of the 500 reports for the six negative samples, 21 discrepant positive reports represented 35% of the discrepant reports and 4% of the reports for negative samples. The overall results were as might have been anticipated: the major problem identified was calling weakly positive samples "negative"; the next was calling negative samples "positive." A summary of the number and percentage of laboratories reporting any interpretations in disagreement with the expected results by the type of laboratory is presented in Table 6.

The data in Table 7 demonstrate how improvement in the performance of the FRA test might be measured by using sensitivity, specificity, predictive values, and efficiency as measures. Since no data were readily available on the actual incidence of rabies among animals in the United States, for the purpose of the demonstration, incidence in a suspected group was used. The incidence (9,247 reported rabies cases per 100,000 specimens tested) was determined with data from the CDC Rabies Surveillance Annual Summary for 1980-1982 and data from the CDC Consolidated Annual Report on State and Territorial Public Health Laboratories for fiscal year 1981. Test results from the group of laboratories reporting discrepant results in the initial shipment and those from laboratories participating in the repeat shipment were used in the calculations. The sensitivity (incidence of true positive results obtained by a test for a population known to have the disease or condition) of the FRA test in the initial shipment was 84% (Table 7); this figure increased to 96% in the repeat shipment. Specificity (the ability of a test to give a negative result in the absence of disease) of the test was 94% in the initial shipment and 97% in the repeat shipment. The predictive value of a positive test (the

TABLE 5. Summary of fluorescent rabies antibody test discrepant results

		Comparison of discrepant results	
		Initial shipment	Repeat shipment
No. labs participating		129	41
No. labs with discrepant results (%)		41 (32%)	6 (15%)
No. discrepant results	1	34	3
	2	6	2
	3	1	0
	4	0	1

Rabies Virus — Continued

percentage of the positive results that are true positive) was 59% in the initial shipment and increased to 79% in the repeat shipment. The predictive value of a negative test (the percentage of negative results that are true negative) was 98% in the initial shipment and 99% in the repeat shipment. Efficiency (the ability of a test to give a positive result on positives and a negative result on negatives) of the test went from 93% in the initial shipment to 97% in the repeat shipment. The data also demonstrate that a small improvement in specificity of the test was accompanied by a large improvement in the predictive value of a positive test.

Reported by Performance Evaluation Br, Div of Technology Evaluation and Assistance; Laboratory Training Br, Div of Laboratory Training and Consultation, Laboratory Program Office, CDC.

Editorial Note: The organization, planning, and conduct of the exercise represented a cooperative effort between CDC's Laboratory Program Office (LPO) and Center for Infectious Diseases (CID). The performance evaluation component of the exercise was administered by personnel of the Microbiology Section, Performance Evaluation Branch, Division of Technology Evaluation and Assistance, LPO. The consultation and training component was administered by personnel of the Virology Training Section, Laboratory Training Branch, Division of Laboratory Training and Consultation, LPO, through the respective state health departments.

TABLE 6. Summary of results in disagreement with expected results, by type of laboratory

	Initial shipment		Repeat shipment	
Type of laboratory	No. participants	No. in disagreement (%)	No. participants	No. in disagreement (%)
Main state health dept.	44	11 (25)	10	1 (10)
Branch-regional state health dept.	39	11 (28)	11	0
County health dept.	35	12 (34)	13	1 (8)
City health dept.	6	3 (50)	3	3 (100)
State university veterinary laboratory	5	4 (80)	4	1 (25)
Total	**129**	**41 (32)**	**41**	**6 (15)**

TABLE 7. Demonstration of improvement in performance of the fluorescent rabies antibody test

	Initial shipment (%)*	Repeat shipment (%)
Sensitivity	84	96
Specificity	94	97
Predictive value of positive	59	79
Predictive value of negative	98	99
Efficiency	93	97

*Based on performance of laboratories in some disagreement with expected results in initial shipment.

Rabies Virus — Continued

The Production Branch, Biological Products Program, CID, furnished the brain impression slides that were distributed to laboratories; other CID personnel served as consultants for the exercise.

The CATMA program offers a useful approach for detecting problems and for targeting assistance to laboratories identified as having chronic problems with the FRA test. The CATMA approach combines the benefits of external quality assessment for a universe of laboratories with the economic benefits of immediate training and on-site consultation targeted only to those laboratories needing these services for maintaining competency in performance of the FRA test.

On-site consultations revealed a variety of technical deficiencies that could be traced to: (1) failure to follow recommended procedures; (2) insufficient quality control of reagents and of the actual test performance; (3) use of fragmented or incomplete protocols; (4) use of inadequate or obsolete microscopes; and (5) tests performed by insufficiently trained staff. In most instances, 2 days' consultation with a CDC staff member using unknown specimens was sufficient to identify the various problems and help the staff begin corrective action. A special remedial continuing education program was then conducted by means of mailed specimens and written consultations; this program enabled all laboratories receiving CDC assistance to achieve an acceptable level of performance on their second set of slides. The performance of the rabies test is essential for patient management, and all training provided was based on CDC-recommended procedures (*3-5*).

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Update: Influenza Activity — United States

Since January 22, 1985, 11 additional states (Alabama, Arkansas, Connecticut, Georgia, Kentucky, Maryland, Michigan, Mississippi, Ohio, South Carolina, and West Virginia) reported isolations of type A(H3N2) influenza viruses, for a total of 37 reporting states this season. Figure 2 illustrates the increases in virus isolations, patient visits to sentinel family physicians for influenza, and pneumonia and influenza (P&I) mortality in 121 cities reported from national surveillance systems since the beginning of the year.

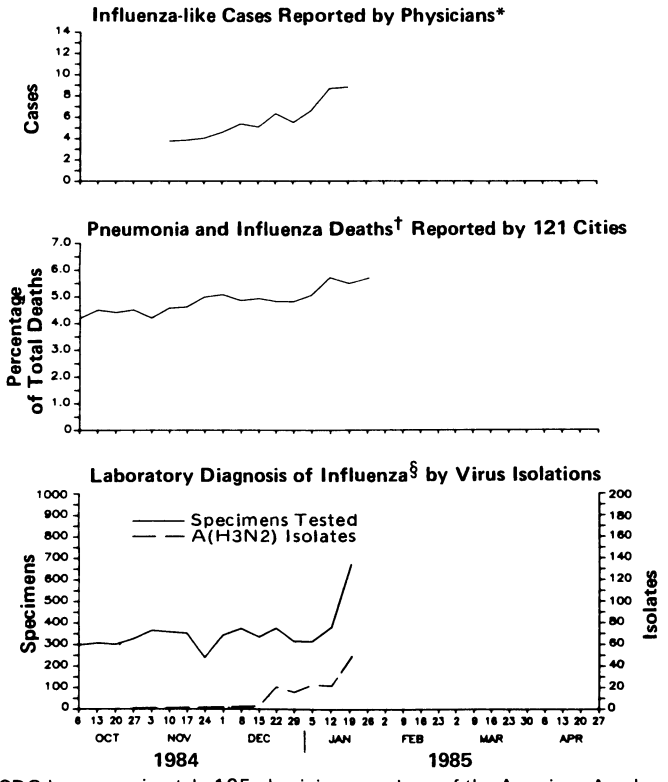
Reported by G Kobayashi, Hawaii Dept of Health; R Webster, PhD, St Jude Hospital, Memphis, P Wright, MD, M Kervina, MS, Vanderbilt University, Nashville, S Fricker, MPH, Tennessee State Dept of Health & Environment; N Swack, PhD, Iowa Dept of Health; R Belshe, PhD, Marshall University, Huntington, West Virginia; A Monto, PhD, University of Michigan, Ann Arbor; D Smith, T Munro, MS, RK Sikes, DVM, State Epidemiologist, Georgia Dept of Human Resources; Montgomery County Health Dept, Alabama; State and Territorial Epidemiologists; State Laboratory Directors; Other collaborating laboratories; Participating physicians of the American Academy of Family Physicians, Statistical Svcs Br, Div of Surveillance and Epidemiologic Studies, Epidemiology Program Office, Influenza Br, Div of Viral Diseases, Center for Infectious Diseases, CDC.

Editorial Note: Reports of virus isolations, patient visits for influenza-like illness reported by

Influenza — Continued

family physicians, and P&I statistics from 121 cities are useful in providing an overview of the period of prevalence of influenza in the nation and for broad comparisons of the relative impacts of different influenza strains. These reports do not represent the actual number of cases in the nation, nor can they be extrapolated to determine the incidence of influenza on a national or local level. This year's preliminary observations of apparent increases in the number of deaths from P&I are consistent with a general pattern that type A(H3N2) viruses are more frequently associated with severe illness among the elderly than type A(H1N1) or type B influenza, which were responsible for most activity last year and in 1981-1982. In 1982-1983, when influenza A(H3N2) viruses last predominated, their impact on mortality may have been reduced, since the strains were similar to those causing the 1980-1981 epidemic. However, even though this year's strain (A/Philippines/2/82) has not previously circulated to any great extent in the United States, it is not possible to predict what the final extent of this year's activity will be.

FIGURE 2. Indicators of influenza activity, by week — United States, 1984-1985



*Reported to CDC by approximately 125 physician-members of the American Academy of Family Physicians. A case was defined as a patient with fever 37.8 C (100 F) or higher and at least cough or sore throat.

†Reported to CDC from 121 cities in the United States. Pneumonia and influenza deaths include all deaths where pneumonia or influenza is listed as a cause of death on the death certificate.

§Reported to CDC by WHO Collaborating Laboratories (including military sources).

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The data in this report are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Such reports and any other matters pertaining to editorial or other textual considerations should be addressed to: ATTN: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333.

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