

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

Epidemiologic Notes and Reports

Measles and School Immunizations — Alaska

The state of Alaska was measles-free from May 1973 until June 1976, when an outbreak occurred in Shungnak (MMWR 25[35], 1976). Since then, 2 other major outbreaks, summarized below, have occurred. During the epidemiologic investigation of both recent outbreaks, large numbers of unimmunized school children were found, indicating that the state's 7-year-old school immunization law was not being strictly enforced. Measures are being taken to ensure strict compliance by all Alaska public schools.

The first of last fall's outbreaks involved 12 cases of measles in military dependents in the Anchorage area. The outbreak, which lasted for 2 months, was discovered in October in children attending school on a military base in Anchorage; it spread to 3 other schools. As part of the epidemiologic investigation, school immunization records for those grades in which cases had occurred were reviewed. Twenty-three of 178 (13%) children in the fifth grade of 1 school were found to have no record of vaccination against measles. Five of 92 (5%) children in the third grade of another school were not vaccinated; 2 of those 5 contracted measles. With the cooperation of military physicians, all children without written verification of measles vaccination were immunized.

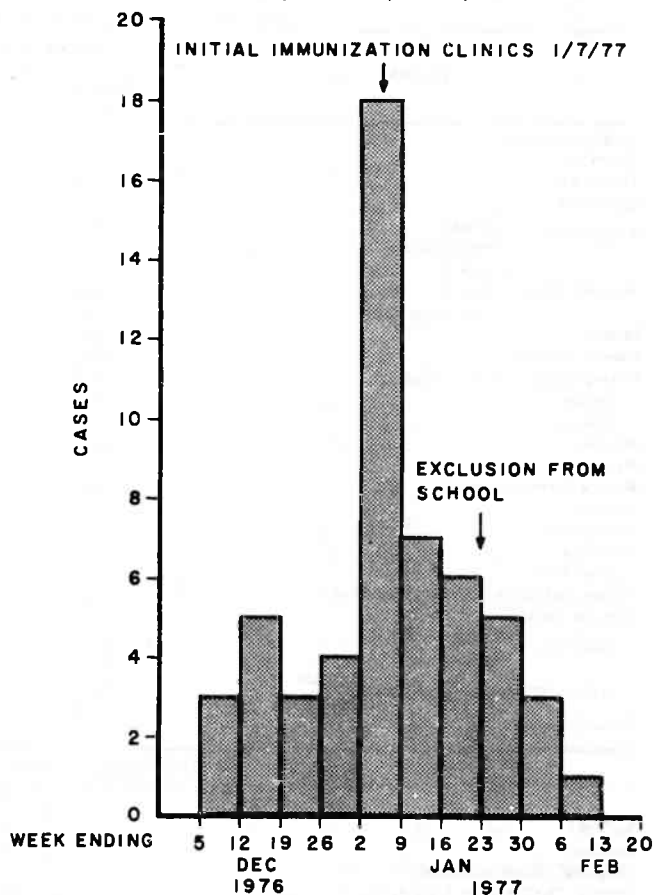
The second outbreak occurred in Fairbanks, where a total of 55 persons had measles in the period from December 5, 1976 to February 13, 1977 (Figure 1). Authorities first learned of the outbreak when several unvaccinated school children, again all military dependents, were discovered to have the disease shortly before the Christmas holidays. During the first week of school following the Christmas vacation, 17 cases of measles were documented, most in 2 schools located on a large military base. With the cooperation of military physicians and school district authorities, all children in those 2 schools who could not provide written verification of vaccination against measles were excluded from school; this resulted in the vaccination of approximately 250 of the 550 children in the 2 schools. No cases subsequently occurred in those schools.

Control programs for measles were initiated in both Anchorage and Fairbanks. Several Anchorage civilian schools were arbitrarily selected for immunization record review. In 1 school of 650 children, 276 (42%) did not have records of immunization status. After parents of these children had been contacted to provide vaccination records,

over 150 children still could not produce a record of measles vaccination. State and local health authorities, in conjunction with the Anchorage school district officials, initiated a district-wide school immunization record review; it revealed that 25% of school children had no record of immunization against measles.

Similarly, many schools in Fairbanks had no records of immunization status. Because initial school-based control efforts were ineffective, parents were asked either to have their children immunized against measles or to provide written proof that they had been vaccinated. Children who could not meet these requirements were excluded from attendance at all Fairbanks' schools beginning January

FIGURE 1. Measles outbreak, Fairbanks, Alaska, 1976-1977



24, 1977. The number of cases declined sharply after mass immunization clinics were held, and the last case occurred on February 11 (Figure 1).

An Alaska law established in 1970 requires that all children attending school "be immunized" against diphtheria, tetanus, polio, measles, rubella, and pertussis. Immunization against the latter, however, is not required in children over 6, and immunization against rubella is not required in children 12 years of age and older. Exceptions to the law are made only if: 1) a valid immunization certificate shows that immunizations have been obtained; 2) a physician signs a statement that immunization is injurious to the health of the child; or 3) the parent or guardian signs an affidavit that immunization is against the tenets or practices of the religion of which the child is a member. A valid immunization

certificate is defined as: 1) an international immunization certificate, 2) a signed statement by a physician listing the dates of the immunizations, or 3) a copy of clinic or health center records. A history of having had the clinical illness is not considered a substitute for immunization.

State and local authorities initiated a statewide school immunization record review on January 10. A deadline of March 1, 1977, was set for all school children throughout the state to be immunized in compliance with Alaska law against diphtheria, pertussis, tetanus, polio, measles, and rubella or to be excluded from school.

Reported by B Wild, RN, Anchorage Municipal School District; A Beltz, RN, Anchorage Municipal Health Dept; L Clune, Fairbanks School District; P Rogers, RN, Fairbanks Health Center; R Fraser, MD, P Frith, DVM, JP Middaugh, MD, Acting State Epidemiologist, LD Zyla, Alaska Dept of Health and Social Services.

Q Fever — California

A 48-year-old disabled truck driver with transient cerebral ischemic attacks and moderate left hemiparesis underwent temporal artery bypass surgery at a San Francisco hospital on April 20, 1976. His immediate postsurgical course was uncomplicated, but on May 3, 3 days after discharge, he had abrupt onset of chills, fever, sweats, headache, and malaise. He was readmitted on May 8 to the hospital, where his symptoms persisted, with fever spikes to 105 F. He coughed, but his chest X-ray was unremarkable.

On the sixth hospital day slight hepatomegaly was de-

tected. The SGOT was 183 IU/l, and a liver scan showed evidence of diffuse hepatitis. Liver biopsy revealed hepatitis with granuloma formation. A Monospot Test and HB_sAg test were negative. He was treated with antipyretics and supportive care; his temperature gradually defervesced, and he was discharged after 17 days with a diagnosis of "hepatitis, etiology undetermined." A retrospective diagnosis of Q fever was made when a late convalescent blood sample had a Q fever complement fixation titer of 1:1024 compared to an acute phase titer of <1:8.

(Continued on page 91)

Table I. Summary—Cases of Specified Notifiable Diseases: United States

(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	10th WEEK ENDING		MEDIAN 1972-1976	CUMULATIVE, FIRST 10 WEEKS		
	March 12, 1977	March 13, 1976		March 12, 1977	March 13, 1976	MEDIAN 1972-1976
Aseptic meningitis	36	40	31	354	371	351
Brucellosis	3	4	2	33	52	17
Chickenpox	7,174	7,620	---	56,197	52,956	---
Diphtheria	—	8	9	8	76	50
Encephalitis						
Primary	13	7	13	118	148	151
Post-Infectious	2	7	2	18	43	37
Hepatitis, Viral						
Type B	332	463	195	2,935	2,646	1,872
Type A	748	818	825	6,469	6,929	8,484
Type unspecified	208	230	---	1,837	1,730	---
Malaria	12	6	6	57	56	51
Measles (rubeola)	1,996	1,137	943	12,655	6,945	6,490
Meningococcal infections, total	59	45	41	417	356	350
Civilian	59	45	41	414	353	340
Military	—	—	1	3	3	10
Mumps	614	1,738	2,210	5,717	12,590	16,600
Pertussis	15	15	---	122	228	---
Rubella (German measles)	864	469	469	4,143	2,790	2,790
Tetanus	1	—	—	6	6	9
Tuberculosis	667	617	---	5,414	5,779	---
Tularemia	3	1	1	15	23	21
Typhoid fever	4	5	7	58	66	49
Typhus, tick-borne (Rky. Mt. spotted fever)	4	—	—	18	5	10
Venereal Diseases:						
Gonorrhea						
Civilian	18,242	17,699	---	179,812	187,715	---
Military	412	675	---	5,169	5,834	---
Syphilis, primary and secondary	500	487	---	4,356	5,074	---
Civilian	3	2	---	62	73	---
Military	49	54	54	429	356	490

Table II. Notifiable Diseases of Low Frequency: United States

	CUM.		CUM.
Anthrax:	—	Poliomyelitis, total:	2
Botulism:	8	Paralytic:	2
Congenital rubella syndrome:	2	Psittacosis: Calif. 1:	8
Leprosy: *NYC 1, Wisc. 1, La. 1, Tex. 1:	25	Rabies in man:	—
Leptospirosis: Ohio 1, La. 1:	9	Trichinosis: Va. 2:	24
Plague:	1	Typhus, murine:	6

*Delayed reports: Leprosy: Texas 2 (1976)

Table III
Cases of Specified Notifiable Diseases: United States
Weeks Ending March 12, 1977 and March 13, 1976 — 10th Week

AREA REPORTING	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod- borne and Unspecified		Post In- fectious	Type B	Type A	Type Unspecified		
						1977	1976	1977	1977	1977	1977		
	1977	1977	1977	1977	CUM. 1977							1977	CUM. 1977
UNITED STATES	36	3	7, 174	-	8	13	7	2	332	748	208	12	57
NEW ENGLAND	3	-	1, 128	-	-	-	-	-	11	12	14	1	3
Maine	-	-	10	-	-	-	-	-	-	-	-	-	-
New Hampshire*	-	-	-	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	2	-	-	-	-	-	2	2	-	-	-
Massachusetts	-	-	400	-	-	-	-	-	3	3	13	-	2
Rhode Island*	1	-	183	-	-	-	-	-	1	1	-	1	1
Connecticut	2	-	533	-	-	-	-	-	5	6	1	-	-
MIDDLE ATLANTIC	3	-	366	-	1	3	-	-	60	64	30	1	11
Upstate New York	-	-	108	-	-	-	-	-	7	8	2	-	4
New York City	3	-	159	-	1	1	-	-	18	10	11	-	5
New Jersey	-	-	NN	-	-	1	-	-	22	23	13	1	1
Pennsylvania	-	-	99	-	-	1	-	-	13	23	4	-	1
EAST NORTH CENTRAL ..	5	-	2, 582	-	-	-	2	1	69	101	3	2	5
Ohio	1	-	157	-	-	-	-	1	17	30	-	2	3
Indiana	-	-	172	-	-	-	-	-	2	3	2	-	-
Illinois	-	-	543	-	-	-	-	-	28	32	-	-	1
Michigan	2	-	1, 047	-	-	-	2	-	20	33	1	-	1
Wisconsin	2	-	663	-	-	-	-	-	2	3	-	-	-
WEST NORTH CENTRAL ..	-	-	1, 284	-	-	1	-	1	28	47	13	1	4
Minnesota	-	-	1	-	-	-	-	-	7	6	-	-	1
Iowa	-	-	501	-	-	-	-	-	2	-	-	-	-
Missouri	-	-	5	-	-	-	-	-	14	14	9	-	2
North Dakota*	-	-	70	-	-	-	-	-	1	-	-	-	-
South Dakota	-	-	128	-	-	-	-	-	-	-	-	-	-
Nebraska	-	-	67	-	-	1	-	-	1	-	-	-	-
Kansas	-	-	512	-	-	-	-	1	3	27	4	1	1
SOUTH ATLANTIC	8	1	355	-	-	1	-	-	40	91	23	4	10
Delaware	-	-	3	-	-	-	-	-	1	-	1	-	-
Maryland	-	-	13	-	-	1	-	-	3	7	2	3	5
District of Columbia ..	-	-	5	-	-	-	-	-	4	-	-	1	1
Virginia	1	1	12	-	-	-	-	-	3	5	5	-	3
West Virginia	1	-	60	-	-	-	-	-	1	7	-	-	-
North Carolina	2	-	NN	-	-	-	-	-	3	8	5	-	-
South Carolina	-	-	18	-	-	-	-	-	-	2	1	-	-
Georgia	-	-	-	-	-	-	-	-	7	24	-	-	1
Florida	4	-	244	-	-	-	-	-	18	38	9	-	-
EAST SOUTH CENTRAL ..	-	-	103	-	-	-	3	-	23	65	6	1	3
Kentucky	-	-	3	-	-	-	-	-	3	27	6	1	3
Tennessee	-	-	NN	-	-	-	1	-	10	14	-	-	-
Alabama	-	-	74	-	-	-	1	-	9	10	-	-	-
Mississippi	-	-	26	-	-	-	1	-	1	14	-	-	-
WEST SOUTH CENTRAL ..	4	1	471	-	-	2	1	-	24	70	45	-	4
Arkansas	-	-	3	-	-	-	-	-	1	8	2	-	-
Louisiana	-	-	NN	-	-	-	1	-	6	17	9	-	-
Oklahoma	3	-	48	-	-	2	-	-	6	9	4	-	-
Texas*	1	1	420	-	-	-	-	-	11	36	30	-	4
MOUNTAIN	-	-	368	-	-	-	-	-	18	85	17	-	4
Montana*	-	-	38	-	-	-	-	-	-	4	-	-	-
Idaho	-	-	57	-	-	-	-	-	-	5	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-	-
Colorado	-	-	200	-	-	-	-	-	9	16	11	-	3
New Mexico	-	-	3	-	-	-	-	-	2	20	3	-	-
Arizona*	-	-	NN	-	-	-	-	-	6	36	2	-	1
Utah	-	-	67	-	-	-	-	-	-	4	-	-	-
Nevada*	-	-	3	-	-	-	-	-	1	-	1	-	-
PACIFIC	13	1	517	-	7	6	1	-	59	213	57	2	13
Washington	1	-	404	-	6	-	1	-	-	-	3	-	-
Oregon	2	-	1	-	-	1	-	-	3	10	3	-	-
California*	10	1	-	-	-	3	-	-	53	150	51	2	9
Alaska	-	-	93	-	1	2	-	-	-	45	-	-	-
Hawaii	-	-	19	-	-	-	-	-	3	8	-	-	4
Guam	NA	NA	NA	NA	-	NA	-	-	-	NA	NA	NA	-
Puerto Rico	-	-	21	-	-	-	-	-	-	11	-	-	-
Virgin Islands	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-

NN: Not notifiable

NA: Not available

*Delayed reports: Asep. Meng.: Texas delete 11 (1976); Brucellosis: Tex. delete 1 (1976); Chickenpox: N. Hamp. add 25, Calif. add 19 (1977); Enceph.: Tex. delete 2 (1976); Hep. B: R.I. delete 1, Ariz. delete 1, Nev. add 5 (1977); Hep. A: Tex. delete 42 (1976) N. Hamp add 1, R.I. delete 2, N. Dak. delete 1, Texas add 1, Mont. add 1, Ariz. add 1, Nev. add 2 (1977); Hep. Unsp.: Tex. delete 16 (1976), Tex. delete 3, Mont. delete 1, Nev. add 5 (1977); Malaria: Tex. delete 2 (1976).

Table III-Continued
Cases of Specified Notifiable Diseases: United States
Weeks Ending March 12, 1977 and March 13, 1976 — 10th Week

REPORTING AREA	MEASLES (Rubella)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1977	CUMULATIVE		1977	CUMULATIVE		1977	CUM. 1977	1977	1977	CUM. 1977	CUM. 1977
		1977	1976		1977	1976						
UNITED STATES	1,996	12,655	6,945	59	417	356	614	5,717	15	864	4,143	6
NEW ENGLAND	111	517	102	6	25	21	38	278	-	32	175	-
Maine	1	3	3	-	2	-	1	15	-	1	11	-
New Hampshire*	2	148	-	1	3	2	-	30	-	3	20	-
Vermont	13	154	-	-	1	1	3	5	-	5	6	-
Massachusetts*	56	114	2	-	5	5	7	48	-	17	80	-
Rhode Island	1	1	12	-	-	3	4	20	-	1	13	-
Connecticut	38	97	85	5	14	10	23	160	-	5	45	-
MIDDLE ATLANTIC	276	1,386	1,102	5	58	33	56	361	4	302	912	-
Upstate New York	71	328	487	-	15	9	4	51	4	76	296	-
New York City*	13	73	50	1	12	10	27	154	-	20	62	-
New Jersey	1	28	78	-	16	6	9	91	-	197	500	-
Pennsylvania	191	957	487	4	15	8	16	65	-	9	54	-
EAST NORTH CENTRAL	365	3,332	2,756	3	37	38	237	1,999	1	168	1,180	-
Ohio	6	155	4	1	21	12	47	346	-	37	289	-
Indiana*	186	1,724	564	-	-	3	10	107	-	50	402	-
Illinois	16	331	167	-	5	4	31	192	-	22	97	-
Michigan	33	269	921	2	9	15	88	648	1	39	278	-
Wisconsin*	124	853	1,100	-	2	4	61	706	-	20	114	-
WEST NORTH CENTRAL	439	2,623	147	1	14	34	112	1,396	2	25	149	1
Minnesota	40	363	29	-	1	5	-	3	-	3	5	-
Iowa	259	1,571	8	-	1	6	57	776	-	1	77	-
Missouri	57	163	4	1	10	8	7	266	2	1	10	1
North Dakota	-	2	1	-	-	-	-	4	-	-	-	-
South Dakota	2	9	-	-	1	2	-	12	-	-	-	-
Nebraska	-	67	35	-	-	2	6	11	-	-	1	-
Kansas	81	448	70	-	1	11	42	324	-	20	56	-
SOUTH ATLANTIC	107	540	558	16	90	80	31	225	1	109	323	1
Delaware	2	17	59	-	1	-	6	41	-	4	4	-
Maryland	9	30	259	-	7	6	4	15	-	-	-	-
District of Columbia	-	-	1	-	-	-	-	2	-	-	-	-
Virginia*	61	292	6	-	4	7	2	38	-	6	76	1
West Virginia	5	36	71	-	6	3	5	61	-	1	27	-
North Carolina	-	15	-	2	19	16	3	10	1	3	101	-
South Carolina	29	67	-	-	7	10	2	5	-	76	89	-
Georgia	-	77	-	6	19	5	1	5	-	14	14	-
Florida	1	6	162	8	27	33	8	48	-	5	12	-
EAST SOUTH CENTRAL	20	184	170	8	45	23	24	319	2	95	519	1
Kentucky	4	82	160	-	17	2	1	21	-	1	18	1
Tennessee	16	93	5	2	11	12	13	192	1	93	497	-
Alabama	-	-	-	3	12	7	9	101	-	-	3	-
Mississippi	-	9	5	3	5	2	1	5	1	1	1	-
WEST SOUTH CENTRAL	88	612	287	14	81	60	47	541	2	35	246	2
Arkansas	-	1	-	2	4	2	1	4	-	-	-	-
Louisiana	20	43	5	5	31	5	2	22	-	-	6	1
Oklahoma	11	34	189	-	1	11	14	204	-	5	13	-
Texas*	57	534	93	7	45	42	30	311	2	30	227	1
MOUNTAIN	126	823	1,446	-	10	19	19	207	-	11	140	-
Montana*	84	486	46	-	-	2	1	2	-	1	5	-
Idaho	1	25	537	-	1	1	2	55	-	-	-	-
Wyoming	-	1	-	-	-	-	-	-	-	-	1	-
Colorado	31	224	31	-	1	8	10	56	-	7	96	-
New Mexico	-	5	3	-	2	1	-	58	-	-	1	-
Arizona	9	67	132	-	5	3	-	-	-	-	-	-
Utah	-	2	692	-	-	4	6	35	-	3	36	-
Nevada	1	13	5	-	1	-	-	1	-	-	1	-
PACIFIC	464	2,638	377	6	57	48	50	391	3	87	499	1
Washington	26	182	34	-	8	13	10	87	-	30	150	-
Oregon	18	68	5	-	3	5	7	84	1	2	25	-
California	420	2,340	336	6	37	28	28	199	2	55	320	1
Alaska	-	48	-	-	8	1	4	15	-	-	-	-
Hawaii	-	-	2	-	1	1	1	6	-	-	4	-
Guam	NA	2	4	-	-	1	NA	-	NA	NA	-	-
Puerto Rico	8	125	33	-	-	1	23	132	-	-	3	2
Virgin Islands	NA	5	-	-	-	-	NA	36	NA	NA	-	-

NA: Not available

*Delayed reports: Measles: Tex. delete 4 (1976); N. Hamp. add 6, Mass. delete 4, Ind. add 1, Wisc. delete 2, Va. delete 2, Mont. delete 1 (1977); Men. Inf.: N. Hamp. add 1 (1977); Mumps: N. Hamp. add 1 (1977); Rubella: Tex. delete 1 (1976) N. Hamp add 2, NYC add 15 (1977).

Table III-Continued
Cases of Specified Notifiable Diseases: United States
Weeks Ending March 12, 1977 and March 13, 1976 — 10th Week

REPORTING AREA	TUBERCULOSIS		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (RMSF)		VENEREAL DISEASES (Civilian Cases Only)						RABIES IN ANIMALS
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1977	CUM. 1977	CUM. 1977	1977	CUM. 1977	1977	CUM. 1977	1977	CUMULATIVE		1977	CUMULATIVE		CUM. 1977
									1977	1976		1977	1976	
UNITED STATES	667	5,414	15	4	58	4	18	18,242	179,812	187,715	500	4,356	5,073	429
NEW ENGLAND	16	187	1	-	2	-	-	565	4,688	5,223	14	155	136	5
Maine	3	15	-	-	-	-	-	49	393	457	1	7	6	5
New Hampshire	-	6	-	-	-	-	-	27	179	113	-	-	-	-
Vermont	1	8	-	-	-	-	-	9	107	108	-	2	2	-
Massachusetts	4	97	1	-	1	-	-	271	2,043	2,518	9	110	91	-
Rhode Island	1	11	-	-	-	-	-	27	328	333	-	2	8	-
Connecticut	7	50	-	-	1	-	-	182	1,638	1,694	4	34	29	-
MIDDLE ATLANTIC	135	820	-	-	10	-	1	1,797	20,510	19,126	49	617	874	5
Upstate New York	25	124	-	-	1	-	1	218	2,581	2,658	7	52	50	5
New York City	37	247	-	-	6	-	-	744	9,944	8,127	28	394	588	-
New Jersey	21	215	-	-	3	-	-	406	2,911	3,233	8	79	122	-
Pennsylvania	52	234	-	-	-	-	-	429	5,074	5,108	6	92	114	-
EAST NORTH CENTRAL ..	131	902	2	-	7	-	-	3,096	27,191	31,362	60	493	444	13
Ohio*	18	152	1	-	2	-	-	951	6,962	8,207	16	135	106	-
Indiana	12	91	-	-	-	-	-	290	2,305	2,875	9	31	25	1
Illinois	44	315	-	-	1	-	-	996	9,383	11,246	28	259	234	-
Michigan*	51	297	-	-	4	-	-	601	5,983	6,186	4	49	62	1
Wisconsin	6	47	1	-	-	-	-	258	2,558	2,848	3	19	17	11
WEST NORTH CENTRAL ..	18	166	3	-	4	-	3	808	9,290	9,441	10	96	98	103
Minnesota	9	37	-	-	1	-	-	175	1,567	1,791	6	31	24	42
Iowa	1	18	-	-	-	-	-	102	1,144	1,253	1	7	14	15
Missouri	6	68	2	-	1	-	3	309	3,961	3,759	2	29	43	6
North Dakota	-	2	-	-	-	-	-	8	146	132	-	-	-	13
South Dakota	-	4	1	-	-	-	-	10	242	280	-	1	2	20
Nebraska	-	6	-	-	-	-	-	53	747	751	1	13	5	-
Kansas	2	31	-	-	2	-	-	151	1,483	1,475	-	15	10	7
SOUTH ATLANTIC	123	1,300	5	2	13	4	8	3,794	41,750	44,417	137	1,258	1,527	48
Delaware	-	12	-	-	-	-	-	17	555	671	2	11	14	-
Maryland	29	191	-	-	-	-	-	470	5,208	6,114	7	83	127	-
District of Columbia ..	3	57	-	-	-	-	-	223	2,282	2,735	13	130	141	-
Virginia	4	143	-	-	5	-	1	489	4,430	5,071	20	117	136	2
West Virginia	12	52	-	-	2	-	-	65	562	587	-	1	9	1
North Carolina	24	229	-	1	1	2	5	593	6,597	6,783	15	177	275	-
South Carolina	7	125	2	-	-	-	-	313	3,916	4,150	10	56	81	-
Georgia	9	145	3	-	-	2	2	859	8,116	8,248	23	223	196	39
Florida	35	346	-	1	5	-	-	765	10,084	10,058	47	460	548	6
EAST SOUTH CENTRAL ..	55	437	-	-	1	-	4	1,731	15,383	16,694	22	145	226	7
Kentucky	9	93	-	-	-	-	1	163	2,121	2,184	-	14	37	5
Tennessee*	20	154	-	-	-	-	2	705	6,304	6,502	4	41	90	2
Alabama*	11	118	-	-	1	-	1	511	4,070	4,583	3	26	41	-
Mississippi	15	72	-	-	-	-	-	352	2,888	3,425	15	64	58	-
WEST SOUTH CENTRAL ..	78	591	1	-	-	-	2	2,380	23,774	26,789	51	560	570	167
Arkansas	9	54	-	-	-	-	-	120	1,799	2,285	1	14	21	11
Louisiana	10	129	-	-	-	-	-	448	3,444	3,812	8	120	122	1
Oklahoma	8	54	-	-	-	-	1	227	2,069	2,461	5	17	31	60
Texas*	51	354	1	-	-	-	1	1,585	16,462	18,231	37	409	396	95
MOUNTAIN	16	141	3	-	6	-	-	875	7,266	7,486	19	96	141	7
Montana	-	5	1	-	-	-	-	34	388	391	-	-	2	7
Idaho	-	9	-	-	-	-	-	43	353	369	-	2	5	-
Wyoming	-	3	-	-	-	-	-	5	199	168	-	5	4	-
Colorado*	-	27	2	-	4	-	-	224	1,878	1,927	3	27	40	-
New Mexico	10	22	-	-	-	-	-	161	1,043	1,533	-	15	42	-
Arizona	6	63	-	-	1	-	-	204	2,043	2,068	15	41	36	-
Utah	-	4	-	-	1	-	-	68	421	439	1	4	1	-
Nevada	-	8	-	-	-	-	-	136	941	591	-	2	11	-
PACIFIC	95	870	-	2	15	-	-	3,196	29,960	27,177	138	936	1,057	74
Washington	NA	32	-	-	-	-	-	194	2,189	2,279	NA	21	27	-
Oregon	1	35	-	-	2	-	-	272	2,126	2,028	3	36	33	-
California	77	667	-	2	13	-	-	2,582	24,146	21,486	132	864	977	65
Alaska	-	8	-	-	-	-	-	63	874	807	-	4	1	9
Hawaii*	17	128	-	-	-	-	-	85	625	577	3	11	19	-
Guam	NA	10	-	NA	-	NA	-	NA	53	94	NA	-	-	-
Puerto Rico	3	66	-	-	1	-	-	62	568	510	9	114	106	8
Virgin Islands	NA	-	-	NA	-	NA	-	NA	23	54	NA	-	24	-

NA: Not available

*Delayed reports: TB: Ohio delete 1, Mich. delete 2 (1977); Tularemia: Colo. add 2 (1976); Typhoid fever: Tex. add 3 (1976); RMSF: Tex. delete 1 (1976); GC: Tenn. delete 3 civ. delete 1 mil., Hawaii add 12 mil. (1977), An. rabies: Ala. add 1 (1977).

Table IV
Deaths in 121 United States Cities*
Week Ending March 12, 1977 - 10th Week

REPORTING AREA	ALL CAUSES					Pneumonia and Influenza ALL AGES	REPORTING AREA	ALL CAUSES					Pneumonia and Influenza ALL AGES
	ALL AGES	65 Years and Over	45-64 Years	25-44 Years	Under 1 Year			ALL AGES	65 Years and Over	45-64 Years	25-44 Years	Under 1 Year	
NEW ENGLAND	641	394	173	29	25	34	SOUTH ATLANTIC	1,335	806	375	79	28	82
Boston, Mass.	197	111	55	7	13	8	Atlanta, Ga.	130	79	42	7	-	3
Bridgeport, Conn.	37	27	8	2	-	2	Baltimore, Md.	287	167	82	22	5	10
Cambridge, Mass.	21	19	2	-	-	4	Charlotte, N. C.	70	44	14	5	2	4
Fall River, Mass.	21	15	4	2	-	1	Jacksonville, Fla.	98	53	31	3	5	11
Hartford, Conn.	67	30	26	2	4	1	Miami, Fla.	125	88	22	9	4	15
Lowell, Mass.	22	17	5	-	-	-	Norfolk, Va.	41	21	15	2	-	2
Lynn, Mass.	20	15	4	1	-	3	Richmond, Va.	120	61	45	9	2	13
New Bedford, Mass.	13	10	2	1	-	-	Savannah, Ga.	30	18	8	1	1	5
New Haven, Conn.	48	25	14	6	2	3	St. Petersburg, Fla.	89	68	18	1	1	6
Providence, R.I.	66	41	20	2	2	1	Tampa, Fla.	79	51	21	5	1	8
Somerville, Mass.	6	5	1	-	-	1	Washington, D. C.	215	122	62	14	6	4
Springfield, Mass.	44	28	13	1	2	2	Wilmington, Del.	51	34	15	1	1	1
Waterbury, Conn.	29	19	8	2	-	2							
Worcester, Mass.	50	32	11	3	2	6							
MIDDLE ATLANTIC	3,111	1,984	764	182	91	175	EAST SOUTH CENTRAL	710	427	188	44	28	50
Albany, N. Y.	61	40	13	2	3	3	Birmingham, Ala.	114	65	33	8	4	5
Allentown, Pa.	20	16	3	1	-	2	Chattanooga, Tenn.	77	43	26	6	-	13
Buffalo, N. Y.	117	76	28	3	7	11	Knoxville, Tenn.	49	35	10	3	-	3
Camden, N. J.	34	20	8	6	-	2	Louisville, Ky.	89	58	22	4	3	10
Elizabeth, N. J.	30	18	11	1	-	-	Memphis, Tenn.	164	105	39	4	11	4
Erie, Pa.	29	20	9	-	-	3	Mobile, Ala.	77	44	16	7	6	7
Jersey City, N. J.	47	26	16	4	1	2	Montgomery, Ala.	35	23	6	5	1	1
Newark, N. J.	73	32	28	2	7	5	Nashville, Tenn.	105	54	36	7	3	7
New York City, N. Y.	1,459	942	344	98	30	76	WEST SOUTH CENTRAL	1,377	787	372	94	63	47
Paterson, N. J.	35	20	10	4	-	3	Austin, Tex.	52	32	10	1	5	3
Philadelphia, Pa.	519	309	141	33	20	19	Baton Rouge, La.	43	20	17	2	4	2
Pittsburgh, Pa.	207	131	52	10	9	11	Corpus Christi, Tex.	41	18	16	3	1	-
Reading, Pa.	43	32	11	-	-	7	Dallas, Tex.	191	106	46	22	9	3
Rochester, N. Y.	140	105	25	3	5	14	El Paso, Tex.	54	31	15	3	2	2
Schenectady, N. Y.	30	19	7	-	3	1	Fort Worth, Tex.	80	47	16	10	3	-
Scranton, Pa.	54	40	13	-	-	6	Houston, Tex.	348	184	112	26	12	12
Syracuse, N. Y.	95	61	14	8	6	4	Little Rock, Ark.	91	51	25	5	4	6
Trenton, N. J.	56	34	16	6	-	1	New Orleans, La.	169	95	43	11	9	-
Utica, N. Y.	23	20	2	-	-	3	San Antonio, Tex.	140	93	34	2	8	6
Yonkers, N. Y.	39	23	13	1	-	2	Shreveport, La.	79	53	17	5	3	7
							Tulsa, Okla.	89	57	21	4	3	6
EAST NORTH CENTRAL	2,396	1,457	645	125	84	78	MOUNTAIN	618	365	152	42	26	22
Akron, Ohio	66	47	11	1	6	-	Albuquerque, N. Mex.	76	36	19	4	6	5
Canton, Ohio	40	28	11	1	-	2	Colorado Springs, Colo.	30	18	8	2	2	4
Chicago, Ill.	557	313	166	30	24	16	Denver, Colo.	132	78	35	9	6	6
Cincinnati, Ohio	182	117	47	9	3	5	Las Vegas, Nev.	23	14	6	2	-	-
Cleveland, Ohio	178	97	53	12	6	4	Ogden, Utah	14	11	3	-	-	-
Columbus, Ohio	137	84	39	6	4	-	Phoenix, Ariz.	149	89	37	12	5	3
Dayton, Ohio	100	59	32	6	2	2	Pueblo, Colo.	20	19	1	-	-	1
Detroit, Mich.	321	176	97	23	11	8	Salt Lake City, Utah	71	38	18	4	7	3
Evansville, Ind.	48	35	11	-	1	3	Tucson, Ariz.	103	62	25	9	-	-
Fort Wayne, Ind.	64	42	18	2	1	2							
Gary, Ind.	18	7	5	1	3	2	PACIFIC	1,652	1,074	382	93	54	33
Grand Rapids, Mich.	47	29	14	3	1	4	Berkeley, Calif.	21	13	7	1	-	-
Indianapolis, Ind.	185	126	35	9	4	7	Fresno, Calif.	70	50	13	1	3	-
Madison, Wis.	40	27	10	2	1	4	Glendale, Calif.	23	18	5	-	-	-
Milwaukee, Wis.	137	86	38	5	5	2	Honolulu, Hawaii	56	27	15	9	2	2
Peoria, Ill.	43	26	12	1	3	3	Long Beach, Calif.	100	59	37	2	2	2
Rockford, Ill.	41	23	10	5	1	5	Los Angeles, Calif.	553	373	111	35	17	8
South Bend, Ind.	37	29	5	1	2	6	Oakland, Calif.	54	34	6	6	4	1
Toledo, Ohio	84	53	18	6	4	-	Pasadena, Calif.	40	29	9	-	1	1
Youngstown, Ohio	71	53	13	2	2	3	Portland, Oreg.	117	76	29	4	3	-
							Sacramento, Calif.	83	59	14	4	5	2
WEST NORTH CENTRAL	784	503	185	38	31	29	San Diego, Calif.	103	64	25	5	6	1
Des Moines, Iowa	77	52	15	5	2	2	San Francisco, Calif.	164	96	43	16	5	1
Duluth, Minn.	36	20	7	2	5	3	San Jose, Calif.	56	39	12	2	-	2
Kansas City, Kans.	32	16	9	2	3	-	Seattle, Wash.	125	78	37	3	4	5
Kansas City, Mo.	130	84	32	5	5	7	Spokane, Wash.	58	42	12	3	-	6
Lincoln, Nebr.	27	21	5	-	-	1	Tacoma, Wash.	29	17	7	2	2	2
Minneapolis, Minn.	91	61	18	4	3	3							
Omaha, Nebr.	83	56	20	2	3	2							
St. Louis, Mo.	177	110	44	13	5	1							
St. Paul, Minn.	79	53	21	3	2	5							
Wichita, Kans.	52	30	14	2	3	5							
TOTAL	12,624	7,797	3,236	726	430	550	Expected Number	12,503	7,717	3,215	765	394	549

*By place of occurrence and week of filing certificate. Excludes fetal deaths.

The Morbidity and Mortality Weekly Report, circulation 52,000, is published by the Center for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs 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. Send reports to: Center for Disease Control, Attn.: Editor, Morbidity and Mortality Weekly Report, Atlanta, Georgia 30333.

Send mailing list additions, deletions, and address changes to: Center for Disease Control, Attn.: Distribution Services, GSO, 1-8B-36, Atlanta, Georgia 30333. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

Q Fever — Continued

Search for usual exposures to *Coxiella burnetii* (that is, contact with sheep, goats, cattle, abattoirs, fertilizers, ticks, wool, goat's hair, ingestion of raw milk, travel in rural areas, and even contact with persons with symptoms of Q fever) in the 2 to 4-week period before the patient's onset of illness proved fruitless. A review of procedures and medications during this first hospitalization revealed only 1 plausible source of Q fever: a single unit of whole blood he received at surgery.

The unit of blood had been obtained in Shasta County on April 6 from a 20-year-old, 3-time volunteer donor who, 3 days after his donation, had abrupt onset of fever, chills, sweats, headache, chest and low back pain, fatigue, anorexia, and distaste for tobacco. He attributed his symptoms, which persisted for 6 days, to severe "flu," but he did not seek medical attention. When tested 4 months later, his Q fever CF titer was 1:64. Recipients of his 2 previous blood donations (in October 1975 and January 1976) had no febrile illness following transfusion. Serum from the second recipient was negative for Q fever when tested 9 months after her transfusion.

The donor's most likely exposure to Q fever was 23 days before his onset of illness (20 days before blood donation) when he assisted in the delivery of 3 kids from a goat in Redding. He gave no history of drinking raw goat's milk. Serum samples from the goat and 2 of the 3 kids were positive for Q fever when bled on August 24. Six of 7 persons

at that delivery also had elevated Q fever antibody titers (5 with 1:64, 1 with 1:16). All 6 individuals with positive sera had illnesses compatible with Q fever within 2 to 4 weeks after attending delivery.

Reported by JS Goldberg, MD, Ralph K Davies Medical Center, San Francisco; HA Perkins, MD, Irwin Memorial Blood Bank, San Francisco; VM Zapitz, MS, San Francisco Dept of Public Health; BB Hurst, MD Shasta County Health Dept, Redding, CA; D Suther, DVM, California State Dept of Food and Agriculture, Redding; F Jensen, MS, EH Lennette, MD, K Damus, MSPH, RR Roberto, MD, California State Dept of Health, in California Morbidity, No. 47, December 4, 1976.

Editorial Note: This report is apparently the first documentation of transmission by blood transfusion of a rickettsial disease. Q fever is usually transmitted by inhalation of aerosols from contaminated animal products. A CF titer of 1:32 is consistent with past infection and is not uncommon among persons with recent infection, although demonstration of a rise in titer such as occurred in the recipient of the blood transfusion is considered the proof of Q fever infection. Q fever is an uncommon illness; the prevalence of antibodies $\geq 1:8$ to it would be expected in about 0.3% of the population of California (1).

Reported by Viral Diseases Div, Bur of Epidemiology, CDC.

Reference

- Schachter J, Sung M, Meyer KF: Potential danger of Q fever in a university hospital environment. *J Infect Dis* 123:301-304, 1971

Current Trends**Primary and Secondary Syphilis — United States, December 1976**

Reported cases of primary and secondary syphilis numbered 1,793 in December 1976, down 13.1% from the number reported in December 1975 (provisional data). This represents the ninth consecutive month in which a decline in cases has been reported. During the calendar year 1976, some 23,634 cases were reported; this was 2,079 fewer

(—8.1%) than reported the previous year (Table 1). Also, early latent (less than 1-year duration) syphilis declined from 20,169 cases reported in 1975 to 18,909 in 1976, down 6.2%.

Reported by Venereal Disease Control Div, Bur of State Services, CDC.

TABLE 1. Summary of reported primary and secondary syphilis cases by reporting area, December 1976 and December 1975 (provisional data).

Reporting Area by HEW Regions	December		Calendar Year Cumulative January — December		Reporting Area by HEW Regions	December		Calendar Year Cumulative January — December		Reporting Area by HEW Regions	December		Calendar Year Cumulative January — December	
	1976	1975	1976	1975		1976	1975	1976	1975		1976	1975	1976	1975
Connecticut	20	13	173	204	Illinois (Excl. Chicago)	5	27	147	267	Arizona	9	18	203	250
Delaware	1	2	24	42	Chicago	60	66	930	773	California (Excl. LA & SF)	127	208	1,868	1,985
Maine	1	1	597	545	Indiana (Excl. Indianapolis)	13	8	85	109	Los Angeles*	149	168	1,840	1,933
Massachusetts	61	31	8	16	Indianapolis*	0	6	36	50	San Francisco*	59	70	816	949
New Hampshire	0	1	18	25	Michigan	20	26	256	335	Hawaii	5	7	86	56
Rhode Island	1	2	10	8	Minnesota	8	9	105	110	Nevada	1	6	40	53
Vermont	1	0	832	840	Ohio	38	46	496	516	REGION IX TOTAL	350	478	4,983	6,228
REGION I TOTAL	84	48	2,386	2,964	Wisconsin	8	7	111	79	Alaska	4	1	31	7
New Jersey	38	45	556	759	REGION V TOTAL	152	195	2,186	2,238	Idaho	2	1	25	19
New York (Excl. NYC)	23	27	250	400	Arkansas	10	5	103	68	Oregon	9	19	106	145
New York City	156	249	2,386	2,964	Louisiana	33	41	579	530	Washington	26	21	181	215
REGION II TOTAL	217	321	3,182	4,123	New Mexico	10	11	145	154	REGION X TOTAL	41	42	343	388
Delaware	5	6	68	88	Oklahoma	3	8	93	90	UNITED STATES TOTAL	1,793	2,084	23,634	25,713
District of Columbia	33	43	559	689	Texas	165	164	2,042	1,579	Puerto Rico	55	47	644	740
Maryland (Excl. Baltimore)	15	16	182	223	REGION VI TOTAL	221	228	2,862	2,421	Virgin Islands	1	4	33	35
Baltimore	14	23	354	365	Iowa	4	2	44	32	United States, including	1,848	2,115	24,311	26,488
Pennsylvania (Excl. Phila.)	16	24	234	370	Kansas	15	5	94	135	Quiliary Areas				
Philadelphia	41	24	414	386	Missouri	15	23	181	277					
Virginia	69	40	699	574	Nebraska	8	1	48	21					
West Virginia	1	2	23	39	REGION VII TOTAL	42	31	367	485					
REGION III TOTAL	194	178	2,533	2,714	Colorado	11	10	140	112					
Alabama	17	27	188	270	Montana	2	1	14	8					
Florida	200	248	2,481	3,228	North Dakota	2	0	4	5					
Georgia (Excl. Atlanta)	68	50	623	666	South Dakota	0	0	6	4					
Atlanta*	36	44	468	462	Utah	3	3	26	18					
Kentucky	5	7	120	169	Wyoming	0	0	8	6					
Mississippi	26	14	288	288	REGION VIII TOTAL	18	14	188	153					
North Carolina	78	82	1,253	1,102										
South Carolina	27	33	379	539										
Tennessee	17	22	288	421										
REGION IV TOTAL	474	527	8,081	7,148										

*County Data

Note: Cumulative totals include revised and delayed reports through previous months.

Source: CDC 9.08, HEW-CDC-SSS-VD Control Division, Atlanta, Georgia

Postexposure Rabies Treatment — Georgia

Based upon manufacturers' distribution data, an estimated 30,000 persons in the United States receive postexposure rabies treatment each year with duck embryo vaccine (DEV) (1,2). The majority of those treated receive prophylaxis following licks, scratches, or bites of stray dogs or cats and other animals not available for rabies examination (3,4). Many other persons are unnecessarily treated after exposures that could not have resulted in disease. The most severely exposed persons — about 4,000-6,000 each year — receive a combination of rabies antiserum and vaccine. The remaining 25,000 annual vaccinations may thus be unnecessary.

In an effort to minimize unnecessary postexposure rabies treatment, the Georgia Department of Human Resources many years ago established a consultative service for private physicians and health departments regarding recommended postexposure treatment for rabies. The recommendations are based upon the Public Health Service's Advisory Committee on Immunization Practices' guidelines (1) and upon knowledge of where rabies is enzootic in Georgia. Primary considerations of exposure are species of biting animal, circumstances of the bite, vaccination status of the biting animal, and the presence of rabies in the area. When treatment is recommended, the State Epidemiolo-

gist's office sends antiserum and vaccine without cost within 4 hours to the attending physician anywhere in the state. This service is available on a 24-hour, 7-day-a-week basis.

Over the past 5 years 70 to 80 persons were treated annually through this consultative mechanism, for a postexposure treatment rate of 1.6/100,000. This is approximately 15% of the estimated national rate of 14/100,000. The estimated cost of postexposure treatment in Georgia is approximately \$500 (antiserum, vaccine, and medical fees) — a savings in treatment costs of over \$200,000 per year when compared to the estimated national cost of treatment.

Reported by JE McCroan, PhD, State Epidemiologist, and RK Sikes, DVM, MPH, Georgia Dept of Human Resources.

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Influenza — United States

No outbreaks of influenza A have been reported in the past week, but isolates of A/Victoria-like virus have been reported from sporadic cases in 10 states. In California, Louisiana, and Washington, these were the first A/Victoria isolates reported so far this year. Isolates of Influenza B were reported for the first time this year from Ohio (sporadic cases) and Utah (school outbreaks).

An outbreak of influenza-like illness which occurred in January and early February in 2 rural northeastern parishes of Louisiana was studied in depth. The overall attack rate of influenza-like illness was 30.0%, with the highest attack

rate of 55.6% occurring in the 6- to 10-year-old group; the attack rate declined gradually with advancing age. The outbreak, which started the first week in January, lasted 6 weeks, with the peak incidence occurring during the week of January 28. Fever was present in 95.5% of the cases, malaise in 88.7%, cough in 86.3%, headache in 81.8%, rhinitis in 76.4% of the cases, and myalgia in 64.5%. Six isolates of influenza B virus were recovered from ill patients cultured on January 17 (MMWR 26[4], 1977).

Reported by the State Epidemiologists from California, Louisiana, Ohio, Utah, and Washington; and the National Influenza Immunization Program, CDC.

Errata, Vol. 26, No.7

- p54 In the article, "Immunologic Response of Immunosuppressed Children to Influenza Vaccine," add the following names to the credits: C Sumaya, MD, MPH, and T Williams, MD.
- p60 In the article, "Giardiasis — California, Colorado," substitute the following for the first 2 sentences of

paragraph 5: Filtrates of reservoir water were negative for cysts as were 100 non-human, mammalian fecal specimens collected upstream from the reservoir. However, *Giardia* cysts were found in a water filtrate taken from a beaver pond located upstream from the reservoir.

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PUBLIC HEALTH SERVICE / CENTER FOR DISEASE CONTROL
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