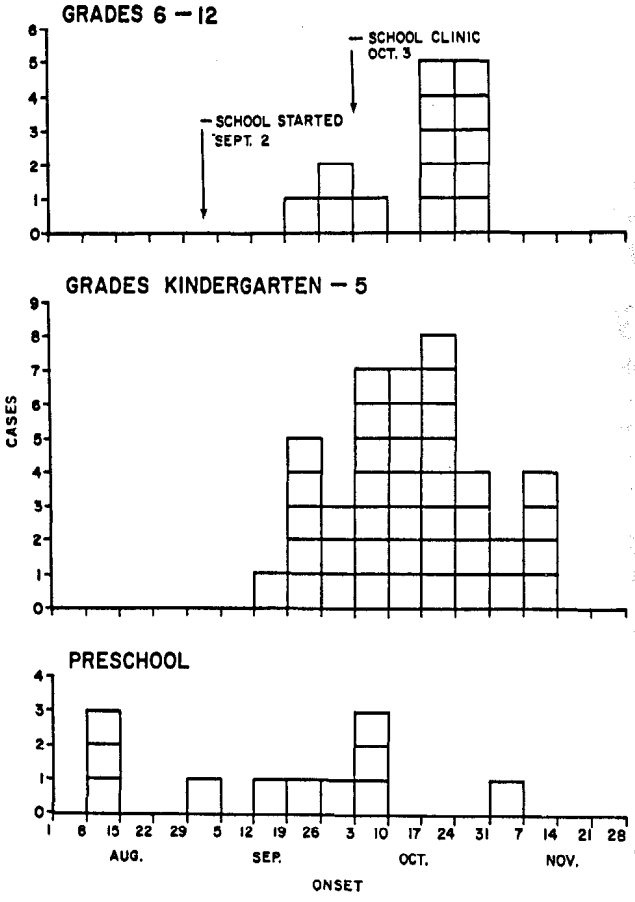
MEASLES – Continued

Figure 1
MEASLES IN A RURAL SCHOOL DISTRICT BY PRESCHOOL GROUP, GRADES K-5, AND GRADES 6-12
AUGUST-NOVEMBER 1975



To assess the success of the program in reaching the susceptible population, the school health records were reviewed. In this fashion, 74 children in grades 1-5 (11%) were identified as susceptibles (i.e., students with no record of measles vaccination or disease). Of these, only 15 (20%) were immunized at the school clinic. According to health records, 184 (92%) of the 199 children vaccinated at the clinic were already immune.

(Reported by L Barron, RN, Fennville Public Schools; C Cheever, RN, DW Kuiper, DO, K Zimmerman, RS, Allegan County Health Dept; JL Isbister, MD, D Wallgren, Michigan Dept of Public Health; Vaccine Evaluation Branch, Field Surveillance Branch, Field Services Div, Bur of Epidemiology and Immunization Div, Bur of State Services, CDC.)

Editorial Note

This incident illustrates that a sustained outbreak may occur despite high immunization levels (e.g., 89% in grades 1-5 on the basis of record review).

Preschool transmission within an extended family was important in maintaining measles within the community during the summer months. Had effective control measures been implemented during the low transmission season, the school outbreak might have been prevented.

The vaccination clinic appears to have had little effect on the course of the outbreak. The traditional school-based program often will not reach the "hard-to-reach." Where measles continues to occur in the region, efforts are being made to identify and vaccinate only the susceptible individuals in affected schools.

There is a general assumption that the more vaccine distributed, the better the control program. This outbreak demonstrates that dose distribution is a very crude measure and may often be misleading. Only by determining the percentage of susceptibles reached during immunization activities, as well as careful monitoring of morbidity, can a true assessment of measles control be obtained.

TRANSMISSION OF COLORADO TICK FEVER VIRUS BY BLOOD TRANSFUSION – Montana

On July 8, 1975, a resident of Hamilton, Montana, had an acute onset of a biphasic febrile illness 4 days after removing an attached tick and 18 hours after donating a unit of blood to the American Red Cross. On July 14, because of persistent dizziness, he consulted his physician, who suspected Colorado tick fever (CTF). At that time, CTF virus was isolated from his blood by suckling mouse inoculation; an antibody response to CTF was subsequently demonstrated by the indirect fluorescent technique.

On July 18, when it was learned that the patient had donated blood during the incubation period of his illness, the Montana Regional Blood Center of the American Red Cross was alerted. The tubing used to carry the blood from the donor to the collection bag had been stored for 2 weeks at 4°C, a routine procedure. On July 21, CTF virus was detected in the serum, but not the cells of the blood remaining in the tubing.

On July 15, the blood had been administered to an 82-year-old male during an exploratory laparotomy for obstruction of the bowel due to carcinoma of the colon. Following surgery he experienced a prolonged febrile illness. On August 7, 23 days following the transfusion, CTF virus was detected in the cellular fraction of the recipient's blood. He returned to his home in Jordan, Montana on August 12.

(Reported by WH Randall, MD, Miles City, Montana; J Simmons, MT, Montana Regional Blood Center; EA Casper, PHN, and RN Philip, MD, Rocky Mountain Laboratory, NIAID, National Institutes of Health.)

Editorial Note

Transmission of CTF by transfused blood has not been previously documented. Because of the brief viremia occurring prior to the onset of illness and the prolonged viremia following illness, such an event was a recognized possibility (*1*).

A case of CTF in an accidentally inoculated laboratory worker has recently been reported (*1*). CTF virus was isolated from the patient's blood 2 days after inoculation and 38 hours before the onset of clinical illness. Subsequently, virus was isolated for 3 months following exposure. For the first 13 days after exposure, the virus was isolated in the serum fraction; thereafter, the virus was present only in the cellular fraction, suggesting that the virus is incorporated into red blood cells during hematopoiesis.

(Continued on page 427)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING DECEMBER 13, 1975 AND DECEMBER 14, 1974 (50th WEEK)

AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod-borne and Unspecified		Post Infectious	Type B	Type A	Type Unspecified		
	1975	1975	1975	1975	Cum. 1975	1975	1974	1975	1975	1975	1975	1975	Cum. 1975
UNITED STATES	59	3	3,500	6	286	27	15	9	275	801	221	4	402
NEW ENGLAND	1	-	462	-	-	-	-	1	5	24	12	-	24
Maine *	-	-	2	-	-	-	-	-	-	-	-	-	2
New Hampshire *	-	-	1	-	-	-	-	-	1	2	-	-	1
Vermont *	-	-	18	-	-	-	-	-	-	3	1	-	3
Massachusetts	-	-	295	-	-	-	-	-	2	9	11	-	9
Rhode Island	1	-	105	-	-	-	-	-	2	3	-	-	2
Connecticut	-	-	41	-	-	-	-	1	-	7	-	-	7
MIDDLE ATLANTIC	10	1	262	-	-	3	4	-	69	111	41	2	96
Upstate New York	2	-	150	-	-	1	-	-	11	19	1	2	11
New York City	2	-	17	-	-	-	-	-	4	8	-	-	29
New Jersey	2	1	NN	-	-	-	3	-	37	44	34	-	13
Pennsylvania	4	-	95	-	-	2	1	-	17	40	6	-	43
EAST NORTH CENTRAL	10	1	1,538	-	5	4	2	3	26	132	14	-	15
Ohio	2	-	293	-	-	-	-	1	6	25	-	-	4
Indiana	-	-	141	-	-	-	-	-	-	19	-	-	-
Illinois	-	-	133	-	4	-	-	-	10	56	8	-	5
Michigan	5	-	493	-	1	4	1	1	7	27	6	-	6
Wisconsin	3	1	478	-	-	-	1	1	3	5	-	-	-
WEST NORTH CENTRAL	-	1	513	-	8	6	2	4	30	43	33	-	16
Minnesota	-	-	10	-	-	-	-	-	11	5	-	-	6
Iowa	-	-	426	-	-	5	1	4	4	7	-	-	-
Missouri *	-	1	7	-	1	1	1	-	11	21	27	-	7
North Dakota	-	-	5	-	6	-	-	-	-	2	-	-	1
South Dakota	-	-	-	-	-	-	-	-	-	-	-	-	-
Nebraska	-	-	65	-	1	-	-	-	2	2	-	-	2
Kansas	-	-	-	-	-	-	-	-	2	6	6	-	-
SOUTH ATLANTIC	7	-	258	-	-	4	2	1	39	128	41	-	56
Delaware	-	-	3	-	-	-	-	-	2	5	-	-	-
Maryland	1	-	5	-	-	2	1	-	2	16	2	-	10
District of Columbia	-	-	-	-	-	-	-	-	2	2	-	-	10
Virginia	-	-	58	-	-	-	-	-	5	10	10	-	8
West Virginia	-	-	136	-	-	-	-	-	-	4	-	-	2
North Carolina *	3	-	NN	-	-	2	-	-	2	12	4	-	6
South Carolina	-	-	-	-	-	-	-	1	2	6	2	-	2
Georgia	-	-	-	-	-	-	-	-	-	40	-	-	10
Florida	3	-	56	-	-	-	1	-	24	33	23	-	8
EAST SOUTH CENTRAL	3	-	22	-	-	4	1	-	17	53	1	-	11
Kentucky *	-	-	14	-	-	4	-	-	5	21	-	-	3
Tennessee	3	-	NN	-	-	-	-	-	9	24	-	-	-
Alabama *	-	-	6	-	-	-	-	-	3	-	1	-	6
Mississippi	-	-	2	-	-	-	1	-	-	8	-	-	2
WEST SOUTH CENTRAL	13	-	159	-	6	4	2	-	13	96	25	-	22
Arkansas	-	-	2	-	-	-	2	-	-	7	-	-	1
Louisiana *	4	-	NN	-	-	2	-	-	3	11	4	-	-
Oklahoma	-	-	30	-	-	-	-	-	1	6	-	-	2
Texas	9	-	127	-	6	2	-	-	9	72	21	-	19
MOUNTAIN	4	-	99	-	30	-	-	-	6	50	17	-	15
Montana	-	-	30	-	6	-	-	-	-	1	-	-	1
Idaho	-	-	4	-	-	-	-	-	-	7	3	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-	-
Colorado	2	-	10	-	1	-	-	-	4	19	2	-	8
New Mexico	2	-	3	-	8	-	-	-	-	5	1	-	-
Arizona	-	-	-	-	15	-	-	-	1	8	-	-	4
Utah	-	-	52	-	-	-	-	-	1	4	11	-	2
Nevada *	-	-	-	-	-	-	-	-	-	6	-	-	-
PACIFIC	11	-	187	6	237	2	2	-	70	164	37	2	147
Washington	-	-	148	6	213	-	-	-	6	28	5	-	6
Oregon	1	-	2	-	-	-	-	-	5	10	6	-	10
California *	10	-	-	-	6	2	2	-	56	106	26	2	126
Alaska	-	-	31	-	18	-	-	-	1	8	-	-	2
Hawaii	-	-	6	-	-	-	-	-	2	12	-	-	3
Guam *	-	-	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico *	1	-	11	-	-	-	-	-	-	6	-	-	1
Virgin Islands	-	-	-	-	-	-	-	-	-	-	-	-	-

NN: Not Notifiable.

*Delayed Reports: Chickenpox: Me. 23, Vt. 40, Calif. 42, Guam 2. Diphtheria: Mo. delete 1. Enceph.: Ala. 58. Hep. B: N. Carolina 1, Kentucky 1. Hep. A: Me. 1, N.H. 1, Nev. 1, P.R. 18, Guam 1. Hep. Unsp.: N. Carolina 1, Kentucky delete 1, La. delete 1, P.R. delete 18.

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING DECEMBER 13, 1975 AND DECEMBER 14, 1974 (50th WEEK) -- Continued

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1975	Cumulative		1975	Cumulative		1975	Cum. 1975	1975	1975	Cum. 1975	Cum. 1975
		1975	1974		1975	1974						
UNITED STATES ...	285	23,475	21,742	30	1,374	1,300	1,264	56,223	27	111	15,993	93
NEW ENGLAND	1	354	959	1	80	75	77	2,078	1	4	2,089	3
Maine	-	15	45	-	7	4	-	83	-	-	43	-
New Hampshire*	1	22	212	-	4	11	7	128	-	1	307	-
Vermont	-	75	56	-	2	13	1	19	-	-	71	-
Massachusetts	-	114	403	-	28	17	8	288	1	1	1,221	1
Rhode Island	-	3	61	1	7	10	54	831	-	-	28	-
Connecticut	-	125	182	-	32	20	7	729	-	2	419	2
MIDDLE ATLANTIC	50	2,288	8,295	1	142	194	154	3,189	11	12	1,824	13
Upstate New York	48	1,028	979	-	44	70	89	1,142	10	4	324	2
New York City	1	166	640	1	36	42	23	922	1	6	190	2
New Jersey	-	476	5,706	-	22	53	9	421	-	1	1,027	3
Pennsylvania	1	618	970	-	40	29	33	704	-	1	283	6
EAST NORTH CENTRAL ..	89	7,042	8,492	3	201	172	460	22,806	3	58	4,680	6
Ohio	-	110	3,072	2	68	67	129	2,678	-	6	649	2
Indiana	11	500	280	-	10	18	32	2,271	-	5	1,036	-
Illinois	4	1,862	2,155	-	25	12	31	2,706	2	8	363	3
Michigan	-	3,180	2,304	-	75	53	137	9,304	1	26	1,651	-
Wisconsin	74	1,390	681	1	23	22	131	5,847	-	13	981	1
WEST NORTH CENTRAL ..	11	5,137	761	5	93	102	71	4,241	2	-	1,481	11
Minnesota	4	231	85	1	20	33	8	205	-	-	37	2
Iowa	7	674	134	1	8	15	52	1,491	1	-	30	3
Missouri*	-	273	265	3	48	31	6	940	1	-	744	2
North Dakota	-	1,061	37	-	2	3	3	511	-	-	71	-
South Dakota	-	356	27	-	1	3	-	6	-	-	18	-
Nebraska	-	395	45	-	3	3	2	86	-	-	21	-
Kansas	-	2,147	168	-	11	14	-	1,002	-	-	560	4
SOUTH ATLANTIC	20	467	597	9	272	253	95	3,965	1	4	1,628	17
Delaware	-	35	16	-	8	5	-	13	-	-	21	-
Maryland	-	62	24	-	32	25	32	418	-	-	38	1
District of Columbia	-	2	3	-	5	1	-	155	-	-	-	-
Virginia	-	40	37	-	21	42	5	815	-	3	325	2
West Virginia	12	214	223	-	5	9	41	1,423	-	1	236	1
North Carolina	-	2	5	2	51	52	8	125	1	-	44	6
South Carolina	-	-	57	2	39	22	5	74	-	-	780	2
Georgia	-	40	4	3	18	8	-	17	-	-	4	-
Florida	8	72	228	2	93	89	4	925	-	-	180	5
EAST SOUTH CENTRAL ..	5	366	288	3	184	127	52	5,000	3	4	1,001	9
Kentucky	5	155	198	1	77	49	14	1,843	-	-	245	3
Tennessee	-	178	57	1	61	55	31	2,346	-	3	723	2
Alabama	-	5	18	1	32	14	7	439	-	-	23	1
Mississippi	-	28	15	-	14	9	-	372	3	1	10	3
WEST SOUTH CENTRAL ..	68	489	256	4	209	206	63	4,848	2	6	766	21
Arkansas	-	-	7	-	13	14	-	186	2	-	20	1
Louisiana*	-	1	14	1	39	50	-	343	-	-	283	5
Oklahoma	64	212	29	-	15	21	10	308	-	3	98	-
Texas	4	276	206	3	142	121	53	4,011	-	3	365	15
MOUNTAIN	25	1,575	848	1	40	42	55	1,092	2	3	529	-
Montana	-	50	373	-	8	1	-	43	-	-	253	-
Idaho	4	16	54	-	5	3	17	63	-	-	74	-
Wyoming	-	3	1	-	1	3	-	2	1	-	-	-
Colorado	-	1,163	123	1	11	9	19	667	-	1	136	-
New Mexico	1	16	62	-	4	3	2	40	1	1	19	-
Arizona	1	83	20	-	3	10	-	-	-	-	2	-
Utah	19	216	15	-	7	9	17	176	-	1	37	-
Nevada	-	28	200	-	1	4	-	101	-	-	8	-
PACIFIC	16	5,757	1,246	3	153	129	237	9,004	2	20	1,995	13
Washington	7	300	77	-	22	18	111	4,560	-	16	356	1
Oregon	-	199	7	1	9	17	17	741	-	1	190	-
California	9	5,193	1,096	2	113	87	108	3,600	2	3	1,429	11
Alaska	-	-	-	-	7	4	-	49	-	-	-	-
Hawaii	-	65	66	-	2	3	1	54	-	-	20	1
Guam*	-	24	20	-	2	2	-	32	-	-	8	-
Puerto Rico	21	733	674	-	1	6	102	1,123	1	-	30	17
Virgin Islands	-	8	35	-	-	-	-	250	-	-	3	3

*Delayed Reports: Measles: La. 1, Guam 2. Men. Inf.: Mo. delete 1. Mumps: N.H. 2. Rubella: Mo. 1.

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING DECEMBER 13, 1975 AND DECEMBER 14, 1974 (50th WEEK) – Continued

AREA	TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (RMSF)		VENEREAL DISEASES (Civilian Cases Only)						RABIES IN ANIMALS
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1975	Cum. 1975	Cum. 1975	1975	Cum. 975	1975	Cum. 1975	1975	Cumulative 1975	Cumulative 1974	1975	Cumulative 1975	Cumulative 1974	Cum. 1975
UNITED STATES	630	31,850	107	12	356	1	813	20,684	958,220	862,404	559	24,461	24,400	2,277
NEW ENGLAND	13	1,200	-	-	16	-	6	782	26,762	23,471	9	818	867	70
Maine	1	75	-	-	-	-	-	54	2,077	1,985	-	35	44	43
New Hampshire	-	30	-	-	-	-	-	18	688	772	1	16	13	2
Vermont	1	28	-	-	-	-	-	-	618	612	-	7	3	-
Massachusetts	8	687	-	-	10	-	2	489	12,629	10,782	7	536	612	12
Rhode Island	2	133	-	-	-	-	3	26	2,044	2,011	-	23	16	4
Connecticut	1	247	-	-	6	-	1	195	8,706	7,309	1	201	179	9
MIDDLE ATLANTIC	76	5,718	4	3	65	1	87	2,670	109,472	106,632	83	4,445	5,229	90
Upstate New York	23	877	3	1	10	1	34	738	20,000	19,802	2	391	511	70
New York City	27	2,222	-	-	28	-	2	963	45,566	46,259	57	2,625	3,026	-
New Jersey	26	1,165	1	-	13	-	10	443	16,504	14,825	14	700	809	-
Pennsylvania*	-	1,454	-	2	14	-	41	526	27,402	25,746	10	729	883	20
EAST NORTH CENTRAL	88	4,428	5	3	40	-	19	3,584	159,337	139,195	28	1,997	2,091	116
Ohio	16	1,201	-	3	14	-	16	971	44,647	36,270	13	497	314	5
Indiana	7	558	-	-	-	-	1	213	13,392	13,414	2	146	188	10
Illinois	33	1,304	-	-	16	-	1	1,541	55,735	46,305	10	948	1,073	24
Michigan*	21	1,202	1	-	9	-	1	587	30,369	30,782	2	328	418	9
Wisconsin	11	163	4	-	1	-	-	272	15,194	12,424	1	78	98	68
WEST NORTH CENTRAL	28	1,140	20	-	16	-	32	971	48,582	45,258	25	611	627	487
Minnesota	6	176	-	-	3	-	-	107	9,606	9,164	2	110	84	133
Iowa	2	124	1	-	1	-	-	214	7,076	5,943	12	80	38	97
Missouri	5	520	15	-	7	-	19	321	17,723	15,462	10	270	403	49
North Dakota	1	17	-	-	-	-	-	18	776	721	-	5	7	97
South Dakota	6	70	-	-	-	-	-	16	1,814	2,048	-	5	3	48
Nebraska	-	40	1	-	3	-	2	125	4,291	3,886	-	18	10	4
Kansas	8	193	3	-	2	-	11	170	7,296	8,034	1	123	82	59
SOUTH ATLANTIC	163	7,051	17	-	49	-	405	4,393	233,773	220,594	172	7,427	7,592	338
Delaware	-	130	-	-	-	-	4	68	3,336	3,085	-	83	79	5
Maryland	30	1,141	1	-	11	-	30	493	28,517	23,516	13	552	739	7
District of Columbia	3	349	1	-	4	-	-	312	13,595	18,333	15	662	635	-
Virginia	8	829	6	-	7	-	111	300	22,863	20,497	6	585	687	100
West Virginia	2	257	-	-	4	-	4	107	3,050	2,576	1	56	20	3
North Carolina*	27	1,132	-	-	2	-	129	556	33,540	30,293	39	1,013	867	12
South Carolina	23	445	3	-	7	-	84	524	22,071	20,449	16	535	666	11
Georgia	40	1,012	5	-	3	-	37	826	43,847	42,742	16	1,017	1,108	164
Florida	30	1,756	1	-	11	-	6	1,207	62,954	59,103	66	2,924	2,791	36
EAST SOUTH CENTRAL	52	2,784	13	3	32	-	110	1,432	80,705	72,395	26	1,130	1,204	146
Kentucky	9	544	1	-	7	-	12	228	10,511	9,072	3	166	260	93
Tennessee	23	1,062	12	2	17	-	72	505	31,916	28,772	7	418	443	21
Alabama	15	771	-	1	3	-	8	368	22,464	20,112	8	260	245	32
Mississippi*	5	407	-	-	5	-	18	331	15,814	14,439	8	286	256	-
WEST SOUTH CENTRAL	82	3,658	43	-	29	-	145	3,212	118,506	111,821	69	2,231	2,129	474
Arkansas	10	473	15	-	1	-	20	465	12,718	11,493	3	71	93	80
Louisiana*	13	473	2	-	10	-	1	353	20,469	22,688	10	513	548	8
Oklahoma	11	298	9	-	1	-	93	267	11,302	9,842	2	87	136	103
Texas	48	2,414	17	-	17	-	31	2,127	73,997	67,798	54	1,560	1,352	283
MOUNTAIN	35	985	3	-	9	-	8	780	38,736	33,591	14	559	572	266
Montana	14	72	1	-	-	-	5	31	2,010	1,877	-	6	4	162
Idaho	1	32	-	-	-	-	2	33	2,003	1,695	-	16	12	1
Wyoming	-	30	1	-	1	-	-	34	940	787	-	10	2	5
Colorado	8	216	-	-	1	-	1	221	10,484	9,170	2	97	143	32
New Mexico	-	132	-	-	2	-	-	148	6,836	4,878	7	155	91	37
Arizona	11	406	-	-	5	-	-	197	10,174	9,464	3	204	248	26
Utah	-	49	1	-	-	-	-	51	2,414	2,082	-	16	12	3
Nevada*	1	48	-	-	-	-	-	65	3,875	3,638	2	55	60	-
PACIFIC	93	4,886	2	3	100	-	1	2,860	142,347	109,447	133	5,243	4,089	290
Washington*	-	425	1	-	6	-	1	269	12,895	11,893	17	181	132	4
Oregon	6	189	-	-	-	-	-	224	10,865	11,187	4	141	110	7
California	78	3,654	1	2	91	-	-	2,294	112,832	81,288	109	4,860	3,806	273
Alaska	-	62	-	-	1	-	-	23	3,451	2,837	-	6	10	6
Hawaii	9	556	-	1	2	-	-	50	2,304	2,242	3	55	31	-
Guam*	-	58	-	-	-	-	-	-	343	-	-	13	-	-
Puerto Rico*	4	472	18	-	8	-	-	50	2,797	2,957	-	679	882	42
Virgin Islands	-	3	-	-	2	-	-	-	219	739	-	41	52	-

*Delayed Reports: TB: Mich. delete 7, N.C. delete 3, P.R. 18, Guam 3. Tularemia: P.R. delete 18. RMSF: Pa. delete 1, Miss. delete 1. GC: La. delete 12, Nev. 36, Guam 17. Syphilis: La. delete 1, Nev. 1, Wash. 13.

Week No. 50

TABLE IV. DEATHS IN 121 UNITED STATES CITIES FOR WEEK ENDING DECEMBER 13, 1975

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

Area	All Causes					Pneumonia and Influenza All Ages
	All Ages	65 years and over	45-64 years	25-44 years	Under 1 year	
NEW ENGLAND	726	427	211	29	39	35
Boston, Mass.	186	103	54	12	6	6
Bridgeport, Conn.	65	44	19	1	1	7
Cambridge, Mass.	24	19	3	2	-	4
Fall River, Mass.	29	17	9	2	-	-
Hartford, Conn.	71	37	24	2	5	1
Lowell, Mass.	31	17	13	1	-	-
Lynn, Mass.	27	18	9	-	-	1
New Bedford, Mass.	30	24	6	-	-	-
New Haven, Conn.	75	31	16	2	24	2
Providence, R. I.	48	20	22	4	2	8
Somerville, Mass.	17	10	4	2	-	1
Springfield, Mass.	39	31	7	-	-	3
Waterbury, Conn.	25	18	6	1	-	1
Worcester, Mass.	59	38	19	-	1	1
MIDDLE ATLANTIC	2,991	1,834	822	160	97	94
Albany, N. Y.	41	25	13	2	-	1
Allentown, Pa.	20	15	2	2	-	3
Buffalo, N. Y.	134	64	52	11	5	8
Camden, N. J.	34	17	13	-	3	-
Elizabeth, N. J.	31	23	8	-	-	-
Erie, Pa.	41	23	12	1	4	3
Jersey City, N. J.	53	21	26	2	2	1
Newark, N. J.	71	29	30	5	3	2
New York City, N. Y. †	1,506	926	400	96	53	40
Paterson, N. J.	39	29	6	2	1	-
Philadelphia, Pa.	403	230	122	20	14	6
Pittsburgh, Pa.	190	114	58	5	6	7
Reading, Pa.	43	34	7	1	-	4
Rochester, N. Y.	124	87	29	6	1	8
Schenectady, N. Y.	36	29	4	2	-	-
Scranton, Pa.	42	31	10	1	-	-
Syracuse, N. Y.	100	70	16	4	3	3
Trenton, N. J.	31	23	7	-	1	4
Utica, N. Y.	24	19	5	-	-	1
Yonkers, N. Y.	28	25	2	-	1	3
EAST NORTH CENTRAL	2,396	1,414	629	149	102	52
Akron, Ohio	81	43	19	7	5	-
Canton, Ohio	31	19	9	2	-	2
Chicago, Ill.	605	330	159	50	38	10
Cincinnati, Ohio	198	118	56	11	6	2
Cleveland, Ohio	177	102	61	5	3	4
Columbus, Ohio	141	80	34	8	12	2
Dayton, Ohio	92	56	25	2	2	-
Detroit, Mich.	263	132	89	20	9	4
Evansville, Ind.	60	41	13	3	1	5
Fort Wayne, Ind.	41	29	8	2	2	4
Gary, Ind.	18	9	6	1	2	-
Grand Rapids, Mich.	59	45	10	2	-	5
Indianapolis, Ind.	162	93	43	12	6	-
Madison, Wis.	33	19	7	4	2	5
Milwaukee, Wis.	117	86	22	3	2	3
Peoria, Ill.	66	39	17	4	4	1
Rockford, Ill.	35	27	4	2	-	5
South Bend, Ind.	51	32	10	2	3	-
Toledo, Ohio	100	68	23	5	4	-
Youngstown, Ohio	66	46	14	4	1	-
WEST NORTH CENTRAL	817	515	190	42	42	37
Des Moines, Iowa	58	35	18	1	2	2
Duluth, Minn.	36	28	4	1	2	6
Kansas City, Kans.	37	24	8	2	1	4
Kansas City, Mo.	123	69	38	7	7	3
Lincoln, Nebr.	33	24	5	2	-	3
Minneapolis, Minn.	104	67	14	6	10	8
Omaha, Nebr.	75	44	20	3	5	2
St. Louis, Mo.	177	108	46	11	6	5
St. Paul, Minn.	83	56	17	4	5	1
Wichita, Kans.	91	60	20	5	4	3
SOUTH ATLANTIC	1,187	651	355	82	61	46
Atlanta, Ga.	122	59	42	7	12	3
Baltimore, Md.	232	128	74	14	8	3
Charlotte, N. C.	58	37	15	3	1	2
Jacksonville, Fla.	110	55	36	9	5	1
Miami, Fla.	82	35	33	6	5	-
Norfolk, Va.	57	34	15	6	1	5
Richmond, Va.	107	62	30	7	6	7
Savannah, Ga.	30	15	10	3	1	5
St. Petersburg, Fla.	68	57	9	-	2	1
Tampa, Fla.	86	45	23	8	6	12
Washington, D. C.	177	87	58	15	12	5
Wilmington, Del.	58	37	10	4	2	2
EAST SOUTH CENTRAL	741	407	220	60	29	45
Birmingham, Ala.	106	56	32	11	3	1
Chattanooga, Tenn.	57	34	14	5	2	7
Knoxville, Tenn.	53	33	13	3	4	1
Louisville, Ky.	144	81	43	8	5	19
Memphis, Tenn.	167	92	50	12	7	1
Mobile, Ala.	62	34	21	3	4	2
Montgomery, Ala.	45	23	13	8	-	5
Nashville, Tenn.	107	54	34	10	4	9
WEST SOUTH CENTRAL	1,207	678	313	75	85	39
Austin, Tex.	37	23	8	3	-	3
Baton Rouge, La.	53	39	12	1	-	2
Corpus Christi, Tex.	36	19	11	2	3	-
Dallas, Tex.	164	83	47	15	14	2
El Paso, Tex.	54	30	12	4	3	5
Fort Worth, Tex.	81	48	21	5	5	-
Houston, Tex.	218	96	62	22	24	7
Little Rock, Ark.	81	41	20	4	11	6
New Orleans, La.	156	90	41	5	16	-
San Antonio, Tex.	140	91	35	2	3	6
Shreveport, La.	91	52	26	6	5	3
Tulsa, Okla.	96	66	18	6	1	5
MOUNTAIN	498	298	134	26	14	33
Albuquerque, N. Mex.	67	38	19	5	1	11
Colorado Springs, Colo.	23	13	8	2	-	3
Denver, Colo.	95	50	31	6	3	1
Las Vegas, Nev.	30	14	9	4	2	4
Ogden, Utah	18	11	2	2	1	5
Phoenix, Ariz.	123	80	29	4	2	3
Pueblo, Colo.	18	11	4	-	1	2
Salt Lake City, Utah	55	34	14	1	4	3
Tucson, Ariz.	69	47	18	2	-	1
PACIFIC	1,644	1,036	410	102	43	45
Berkeley, Calif.	24	15	4	3	-	2
Fresno, Calif.	66	37	19	5	4	-
Glendale, Calif.	22	19	2	1	-	1
Honolulu, Hawaii	63	36	14	6	7	1
Long Beach, Calif.	110	64	34	6	2	3
Los Angeles, Calif.	436	283	99	29	8	11
Oakland, Calif.	88	58	19	3	2	4
Pasadena, Calif.	47	31	13	1	1	2
Portland, Oreg.	143	95	37	5	1	3
Sacramento, Calif.	61	37	17	3	3	-
San Diego, Calif.	109	61	36	5	2	4
San Francisco, Calif.	164	105	39	15	3	5
San Jose, Calif.	50	34	13	1	-	-
Seattle, Wash.	182	117	46	10	5	7
Spokane, Wash.	40	26	8	3	3	2
Tacoma, Wash.	39	18	10	6	2	-
Total	12,207	7,260	3,284	725	512	426
Expected Number	12,510	7,618	3,267	782	404	442

†Delayed Report for Week Ending 12/13/75

TICK FEVER – Continued

It is unlikely that the recipient was exposed to CTF before coming to the hospital because the area of Montana near his home is thought to be free of the small rodent hosts which are necessary to maintain the cycle of infection.

Reference

1. Philip RN, Casper EA, Cory J, et al: The potential for transmission of arboviruses by blood transfusion with particular reference to Colorado tick fever. In Transmissible Disease and Blood Transfusion. New York, Grune and Stratton, Inc., 1975, pp 175-195

CYANIDE POISONING FROM INGESTION OF APRICOT KERNELS – California

On October 22, 1975, a 34-year-old man from San Diego County developed symptoms of cyanide poisoning after ingestion of apricot kernels. He had purchased a 1-pound package of raw, dried apricot kernels at a health food store, and used them in the preparation of milk shakes, following a recipe in a health-nutritional magazine. The kernels were roasted at 300°F for 10 minutes, and 48 kernels were used, together with milk and honey, to prepare 2 milk shakes. The man's wife consumed only a small amount of her milk shake since she didn't like the taste; the man drank all of his milk shake as well as the remainder of his wife's. He had also eaten a few kernels separately, for a total consumption of approximately 48 seeds.

Approximately 1 hour later the husband developed forceful vomiting, headache, flushing, heavy perspiration, dizziness, and faintness. The couple immediately went to a local emergency room where vomiting was induced in both by ipecac. The husband's symptoms rapidly subsided. (The wife was asymptomatic.) Fragments of kernels were observed in the vomitus of both.

Apricot kernels, along with cherry and peach pits and apple seeds and other pits and seeds, contain a cyanogenic glycoside called amygdalin, which releases hydrogen cyanide upon reaction with digestive chemicals. Symptoms of cyanide poisoning may develop soon after ingestion, including dyspnea, cyanosis, vomiting, prostration, excitement, convulsions, stupor, paralysis, and sometimes death, depending on dosage. (The minimum number of seeds needed to cause disease or death is not known.) Roasting of apricot kernels (especially when crushed) can remove the cyanide, but this requires up to 10 hours.

Editorial Note

Chronic cyanide intoxication has been postulated as a cause of neuropathies in some developing countries where cyanogenic nuts and seeds are consumed (*1*). Laboratory studies revealed high levels of breakdown products of cyanide. Symptoms diminished when the suspect foods were eliminated from the diet. Two previous cases of probable cyanide poisoning after ingestion of apricot kernels were reported in *California Morbidity* on September 1, 1972.

Apricot kernels and similar pits and seeds are sold at health food stores and are widely promoted as having disease preventive or curative properties. Physicians should be aware of the possibility of cyanide poisoning when large quantities of such products are consumed.

Reference

1. Sayre JW, Kaymakcalan S: Cyanide poisoning from apricot seeds among children in central Turkey. N Engl J Med 270:1113-1115, 1964

(Reported by WA Townsend, MD, Div of Medical Services, San Diego County; and B Boni, MD, California State Dept of Health; in California Morbidity, *No. 45, November 14, 1975.)*

REACTION TO MUSHROOMS – Minnesota

In May 1975 a University of Minnesota graduate student collected several dozen specimens of *Morchella angusticeps* Peck., an often sought wild mushroom commonly known as the black morel, in a wooded area 30 miles north of St. Paul. That night he and his wife and son had the mushrooms, fried in butter, for dinner. Approximately 2 hours later the student began vomiting and experienced diarrhea; he was ill for about 2 hours and then recovered. His wife and son were not affected. A year earlier he had had the same reaction after eating a similar mushroom, *Morchella esculenta* Pers., but since he had drunk some beer with that meal he assumed that he had had a case of mushroom-alcohol poisoning. Two years earlier he had had a like upset after eating a mixture of mushrooms, including black morels, but that time he thought that the mixture had been responsible.

(Reported by Elmer Schmidt, University of Minnesota.)

Editorial Note

Morchella are considered to be among the choicest edible mushrooms. They are not associated with mushroom poisoning and are not ordinarily associated with mushroom-alcohol intolerance. However, there has been 1 report in the literature of a couple becoming ill after consuming morels and alcohol, while their 2 teenage children who ate just the morels stayed well (*1*). The incident reported from Minnesota suggests that certain individuals may be unusually susceptible to normally nontoxic mushrooms.

Reference

1. Benedict RG: Mushroom toxins other than Amanita. In Microbial Toxins, Vol. 8, Fungal Toxins, edited by Kadis S, Ciegler A, Ajl SJ. New York and London, Academic Press, 1972, pp 310-311

INTERNATIONAL NOTES

ST. LOUIS ENCEPHALITIS – Canada

As of September 23, 1975, 72 possible cases of encephalitis had been identified over a period of 6 weeks in Windsor-Essex County in the Province of Ontario. Of these cases, 18 were serologically confirmed as St. Louis Encephalitis (SLE). SLE has not been previously observed in Canada.

There were also 7 suspected cases and 1 confirmed case in the Niagara area, as well as 13 suspected cases in the Sarnia area. The majority of cases occurred in adults. Two persons from the Windsor area died from encephalitis during this period; 1 has been confirmed as SLE. Aerial spraying with insecticide was carried out in the Windsor area.

(Reported by the World Health Organization in the Weekly Epidemiological Record *50(45):379, 7 Nov 1975.)*