

# Morbidity and Mortality



U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE  
DATE OF RELEASE: MARCH 15, 1974 - ATLANTA, GEORGIA 30333  
ATLANTA, GA. 30333

EPIDEMIOLOGIC NOTES AND REPORTS

FOLLOW-UP ON *SALMONELLA EASTBOURNE*  
OUTBREAK - United States

Since the last report of the *Salmonella eastbourne* outbreak (MMWR, Vol. 23, No. 9), CDC has been notified of 3 additional human *S. eastbourne* infections from Kansas (1), New York (1), and Massachusetts (1) for a total of 79 cases from 23 states. Additional data obtained in the course of investigating the epidemic is briefly presented below.

1. Three of 6 members of a family in North Carolina experienced diarrheal illness between January 12 and 22, 1974, after eating all the Christmas-wrapped chocolate balls from 5 1-lb bags purchased on sale January 12. Balls remaining in a sixth bag were submitted to the state laboratory where *Salmonella java* was isolated. The balls were produced in Canada by Regent Chocolate, Ltd., and sold under the Woodbine

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label, distributed by Frankford Candy Company, Philadelphia, Pennsylvania. Single stool specimens obtained from family members in mid-February contained no salmonellae.

2. A 16-month-old boy in Delaware was hospitalized in late January for diarrhea; he and his 7-year-old brother, who

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	10th WEEK ENDING		MEDIAN 1969-1973	CUMULATIVE, FIRST 10 WEEKS		
	March 9, 1974	March 10, 1973		1974	1973	MEDIAN 1969-1973
Aseptic meningitis . . . . .	24	40	31	338	360	351
Brucellosis . . . . .	4	1	1	14	17	16
Chickenpox . . . . .	4,446	6,215	---	35,119	50,917	---
Diphtheria . . . . .	7	27	5	25	50	41
Encephalitis:						
Primary: Arthropod-borne and unspecified . . . . .	21	19	19	157	164	190
Post-Infectious . . . . .	2	1	5	37	35	45
Hepatitis, Viral:						
Type B . . . . .	193	123	133	1,643	1,337	1,337
Type A . . . . .	752	964	1,050	8,398	9,580	10,879
Type unspecified . . . . .	189	---	---	1,530	---	---
Malaria . . . . .	3	7	25	33	38	442
Measles (rubeola) . . . . .	522	943	949	4,880	6,490	6,977
Meningococcal infections, total . . . . .	38	41	58	281	322	647
Civilian . . . . .	37	41	58	277	311	555
Military . . . . .	1	---	3	4	11	45
Mumps . . . . .	2,060	2,262	2,288	16,403	18,473	22,282
Pertussis . . . . .	16	---	---	290	---	---
Rubella (German measles) . . . . .	309	1,138	1,542	2,270	5,650	7,638
Tetanus . . . . .	---	---	2	7	10	14
Tuberculosis, new active . . . . .	450	585	---	5,155	5,422	---
Tularemia . . . . .	4	1	1	21	14	22
Typhoid fever . . . . .	11	11	2	67	49	48
Typhus, tick-borne (Rky. Mt. spotted fever) . . . . .	---	1	---	14	6	3
Veneral Diseases:						
Gonorrhea . . . . .	14,994	13,485	---	159,831	142,817	---
Syphilis, primary and secondary . . . . .	429	480	---	4,496	4,824	---
Rabies in animals . . . . .	32	60	73	436	567	684

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax: S.C. 1 . . . . .	2	Poliomyelitis, total: Ala. 1 . . . . .	1
Botulism: . . . . .	3	Paralytic: Ala. 1 . . . . .	1
Congenital rubella syndrome: Ala. 4, Calif. 1, Ida. 1 . . . . .	18	Psittacosis: . . . . .	4
Leprosy: Hawaii 1, La. 4, V.I. 1 . . . . .	13	Rabies in man: . . . . .	---
Leptospirosis: Calif. 1, Hawaii 1, La. 1, Ore. 1 . . . . .	14	Trichinosis: N.Y. Ups. 2 . . . . .	25
Plague: . . . . .	---	Typhus, murine: Calif. 1 . . . . .	5

**SALMONELLA EASTBOURNE** – Continued

was asymptomatic, had stool cultures positive for *S. java*. From Christmas until approximately the time of onset of illness, the children had been eating chocolate balls supplied by the Frankford Candy Company; the country of origin could not be traced. No balls remained for laboratory analysis.

3. The Food and Drug Administration has obtained isolates of *Salmonella elomrane* from a retail sample of chocolate Easter rabbits in 12-oz cellophane bags produced in West Germany and marketed under the Frankford Candy Company label. There has been no reported human illness associated with this product; further investigation is being conducted. (Reported by J. Newton MacCormack, M.D., Head, Communicable Disease Control Branch, North Carolina Division of Health Services; Ernest Tierkel, D.V.M., Chief, Bureau of Disease Control, and Barbara Rose, M.D., Deputy State Health Officer, Delaware Division of Public Health; the Food and Drug Administration; the Enteric Unit, Enterobacteriology Section, Division of Bacteriology, Bureau of Laboratories, and the Enteric Diseases Section, and Epidemiologic Services Laboratory Section, Bacterial Diseases Division, Bureau of Epidemiology, CDC; and an EIS Officer.)

**Editorial Note**

The relation of diarrheal illness to chocolate consump-

tion in the first and second incidents must be interpreted with caution, as Christmas chocolate consumption is a relatively common event, and *S. java* isolates are reported frequently in the United States. Between 1965 and 1973, a mean of 342 human *S. java* infections were reported annually to CDC compared with a mean of 4 *S. eastbourne* infections reported annually between 1965 and 1972. The role of the Frankford label chocolate balls produced by Regent Chocolate, Ltd., as the vehicle of *S. java* transmission in these cases is suggested by 1) the distribution of the product in both incidents by the same company and 2) the isolation of *S. java* from the product consumed by diarrhea patients in 1 state and from the stools of ill persons who consumed the product in the other state.

No recent increase is apparent in *S. java* infections reported to CDC, and there has been only 1 human infection of *S. elomrane* reported to CDC (in 1969) since the original report of the serotype in 1965 (1). These findings emphasize the need for continued surveillance beginning with individual case investigation to define further the scope of chocolate-related salmonellosis.

**Reference**

1. Kelterborn E: *Salmonella* Species. Dr. W. Junk N.V., Den Haag, 1967, p 138

**INFLUENZA A** – Illinois

During the third week of February, visits to the University of Illinois – Urbana health service doubled. The students had an illness characterized by fever, headache, myalgia, sore throat, and cough. Viral cultures were positive for influenza type A in some students.

(Reported by Dale Kinzie, M.D., Professor of Health Sciences, and Associate Director, Health Service, University of Illinois – Urbana; Gale Fella, M.P.H., Public Health Administrator, Champaign – Urbana Public Health Department; Richard

Morrissey, M.P.H., Chief, Division of Public Health Laboratories, and Byron J. Francis, M.D., State Epidemiologist, Illinois Department of Public Health.)

**Editorial Note**

This outbreak in Illinois is the first outbreak of influenza A reported in the United States this year. Influenza is usually most prevalent from December through February, and the late appearance of influenza A suggests that it will not be a significant public health problem this season.

**BOTULISM** – Alabama

On February 6, 1974, a 54-year-old man from Courtland, Alabama, developed nausea and vomiting approximately 7 hours after eating 1 mouthful of home-canned tomatoes which had an unusual taste. Over the subsequent 3 days he developed lethargy, diplopia, dysphagia, and dysarthria, and on February 9 was admitted to a local hospital. Over the next 2 days, he experienced increasing respiratory difficulty, and on February 11, he was transferred to a nearby university hospital with a working diagnosis of brain stem infarction. Two hours after admission, while in the hospital emergency room, he suffered a cardio-pulmonary arrest but was successfully resuscitated. Over the next 24 hours, he became alert and oriented. On February 13, the patient's family informed the attending physician about the patient's ingestion of the home-canned tomatoes, and the diagnosis of botulism was considered. Physical examination at that time revealed paralysis of muscles supplied by cranial nerves III, IV, VI, IX-XII, mild proximal muscle weakness, absent bowel sounds, and normal sensory findings.

Pre-treatment serum samples obtained from the patient on February 11 and 14 and a pre-treatment stool sample obtained on February 14 were positive for type B botulinal

toxin. Results of electromyographic studies performed on February 15 were compatible with botulism.

The patient was treated with 3 vials of trivalent (ABE) botulinal antitoxin and guanidine and was maintained on a respirator. By March 11, cranial nerve function was normal, and ventilatory assistance was no longer required.

Further investigation revealed that the suspect jar of tomatoes had been discarded and that no one else had eaten from it. Other jars of tomatoes canned in the same way during the summer of 1973 were negative for botulinal toxin and *Clostridium botulinum*. The patient's wife stated that the tomatoes were prepared by boiling them in an open kettle for 45-60 minutes, then putting them in jars that had been immersed in boiled water. This was the first time she had not used a pressure cooker in home-canning.

(Reported by James Holsey, M.D., Department of Neurology, University Hospital, Birmingham, Alabama; Betty W. Vaughn, M.D., Health Officer, Lawrence County; Frederick S. Wolf, M.D., State Epidemiologist, Alabama State Department of Health; John L. Yount, Resident Inspector, Birmingham Office, Food and Drug Administration; Dean Cromartie, Jr.,

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**TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING MARCH 9, 1974 AND MARCH 10, 1973 (10th WEEK)**

AREA	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		
						1974	1973	1974	1974	1974	1974		
<b>UNITED STATES</b>	24	4	4,446	7	25	21	19	2	193	752	189	3	33
<b>NEW ENGLAND</b>	—	—	569	—	—	—	1	—	4	37	25	—	3
Maine *	—	—	14	—	—	—	—	—	—	2	—	—	—
New Hampshire *	—	—	36	—	—	—	—	—	—	4	—	—	—
Vermont	—	—	16	—	—	—	—	—	—	2	1	—	—
Massachusetts	—	—	283	—	—	—	1	—	—	6	24	—	1
Rhode Island	—	—	98	—	—	—	—	—	—	7	—	—	2
Connecticut	—	—	122	—	—	—	—	—	4	16	—	—	—
<b>MIDDLE ATLANTIC</b>	—	—	163	—	—	—	3	—	37	112	53	1	2
Upstate New York	—	—	61	—	—	—	2	—	6	35	4	—	—
New York City	—	—	89	—	—	—	1	—	3	18	—	—	1
New Jersey *	—	—	NN	—	—	—	—	—	24	45	48	—	—
Pennsylvania *	—	—	13	—	—	—	—	—	4	14	1	1	1
<b>EAST NORTH CENTRAL</b>	5	—	1,677	—	—	8	4	—	22	180	10	—	3
Ohio	—	—	362	—	—	4	—	—	1	34	—	—	2
Indiana *	1	—	137	—	—	—	—	—	—	14	—	—	—
Illinois	1	—	—	—	—	1	—	—	7	50	8	—	1
Michigan	3	—	660	—	—	3	4	—	13	72	2	—	—
Wisconsin	—	—	518	—	—	—	—	—	1	10	—	—	—
<b>WEST NORTH CENTRAL</b>	1	1	769	—	—	5	1	—	5	31	11	—	1
Minnesota	—	—	46	—	—	—	1	—	3	3	—	—	—
Iowa	—	—	264	—	—	5	—	—	1	2	1	—	—
Missouri	—	—	4	—	—	—	—	—	1	—	9	—	—
North Dakota	—	—	60	—	—	—	—	—	—	—	—	—	—
South Dakota	—	—	1	—	—	—	—	—	—	5	—	—	1
Nebraska	—	—	7	—	—	—	—	—	—	—	1	—	—
Kansas	1	1	387	—	—	—	—	—	—	21	—	—	—
<b>SOUTH ATLANTIC</b>	5	1	322	—	1	2	—	—	20	140	22	1	7
Delaware	—	—	5	—	—	—	—	—	—	—	—	—	—
Maryland	—	—	6	—	—	1	—	—	1	12	4	1	1
District of Columbia	—	—	12	—	—	—	—	—	2	—	—	—	2
Virginia *	—	1	52	—	—	—	—	—	1	9	3	—	1
West Virginia *	—	—	226	—	—	—	—	—	—	5	—	—	—
North Carolina	2	—	NN	—	—	—	—	—	2	19	—	—	1
South Carolina	—	—	14	—	—	—	—	—	2	8	9	—	—
Georgia	—	—	7	—	—	—	—	—	—	23	—	—	—
Florida	3	—	—	—	1	1	—	—	12	64	6	—	2
<b>EAST SOUTH CENTRAL</b>	4	—	133	—	—	—	1	—	31	59	17	—	—
Kentucky *	1	—	101	—	—	—	—	—	1	7	10	—	—
Tennessee	3	—	—	—	—	—	—	—	1	30	—	—	—
Alabama	—	—	30	—	—	—	—	—	29	20	7	—	—
Mississippi	—	—	2	—	—	—	1	—	—	2	—	—	—
<b>WEST SOUTH CENTRAL</b>	—	1	228	—	6	2	4	—	6	35	4	—	2
Arkansas	—	—	98	—	—	—	—	—	1	14	—	—	—
Louisiana *	—	—	NN	—	—	—	—	—	4	3	3	—	1
Oklahoma *	—	1	130	—	—	2	1	—	1	18	1	—	1
Texas	—	—	—	—	6	—	3	—	—	—	—	—	—
<b>MOUNTAIN</b>	—	—	109	—	1	1	—	—	3	26	7	—	1
Montana *	—	—	4	—	—	—	—	—	—	3	—	—	—
Idaho	—	—	—	—	—	—	—	—	—	2	1	—	—
Wyoming	—	—	6	—	—	—	—	—	—	—	—	—	—
Colorado	—	—	44	—	—	1	—	—	—	—	—	—	1
New Mexico	—	—	16	—	1	—	—	—	—	4	—	—	—
Arizona	—	—	—	—	—	—	—	—	1	9	2	—	—
Utah	—	—	3	—	—	—	—	—	1	7	4	—	—
Nevada	—	—	36	—	—	—	—	—	1	1	—	—	—
<b>PACIFIC</b>	9	1	476	7	17	3	5	2	65	132	40	1	14
Washington	1	—	443	6	14	—	—	—	2	6	20	—	—
Oregon	—	—	—	—	—	1	1	—	4	19	2	—	—
California *	7	1	—	—	1	2	4	2	52	93	18	1	14
Alaska	1	—	21	1	2	—	—	—	2	7	—	—	—
Hawaii	—	—	12	—	—	—	—	—	5	7	—	—	—
Guam *	—	—	—	—	—	—	—	—	—	—	—	—	1
Puerto Rico	—	—	18	—	—	—	—	—	—	4	4	—	—
Virgin Islands	—	—	14	—	—	—	—	—	—	—	—	—	—

\*Delayed reports: Aseptic Meningitis: N.J. +3, W. Va. +6 (1973)      Encephalitis, Primary: Ky. 1 (1974)      Hepatitis B: Pa. 1, Okla. 13 (1973), La. delete 2 (1974)  
 Brucellosis: Va. delete 1 (1974)      Encephalitis, Post: Okla. 1 (1973)      Hepatitis A: Pa. 13, Okla. 31 (1973), Me. 2, N.H. delete 1, Indiana delete 1,  
 Chickenpox: Me. 17, N.H. 47, Calif. 30, Guam 1 (1974)      W. Va. 1, La. delete 1, Montana delete 3, Guam 10 (1974)  
 Hepatitis Unspecified: N.H. 1, La. delete 1 (1974)

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING MARCH 9, 1974 AND MARCH 10, 1973 (10th WEEK) - Continued

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1974	Cumulative		1974	Cumulative		1974	Cum. 1974	1974	1974	Cum. 1974	Cum. 1974
		1974	1973		1974	1973						
UNITED STATES	522	4,880	6,490	38	281	322	2,060	16,403	16	309	2,270	7
NEW ENGLAND	24	271	2,658	1	19	16	227	2,318	1	15	162	-
Maine *	-	9	10	-	-	-	31	390	-	4	18	-
New Hampshire *	4	137	500	-	4	1	3	102	-	-	6	-
Vermont	-	1	57	-	-	2	-	7	-	-	5	-
Massachusetts	14	67	1,258	-	6	6	40	379	-	5	84	-
Rhode Island	5	40	218	-	3	1	93	741	-	-	9	-
Connecticut	1	17	615	1	6	6	60	699	1	6	40	-
MIDDLE ATLANTIC	198	1,706	509	2	33	42	147	1,244	3	67	210	1
Upstate New York	1	23	115	1	12	11	24	237	-	6	52	-
New York City	11	84	294	1	10	10	20	185	3	2	31	-
New Jersey	170	1,349	58	-	8	9	22	331	-	6	63	1
Pennsylvania	16	250	42	-	3	12	81	491	-	53	64	-
EAST NORTH CENTRAL	242	2,021	1,792	5	30	30	610	4,964	-	93	858	-
Ohio *	76	921	83	-	8	16	170	1,285	-	13	91	-
Indiana	10	67	176	2	2	1	30	442	-	17	235	-
Illinois	43	331	547	1	4	3	86	484	-	10	122	-
Michigan	103	579	646	2	10	8	266	2,074	-	36	310	-
Wisconsin	10	123	340	-	6	2	58	679	-	17	100	-
WEST NORTH CENTRAL	9	144	169	2	15	29	223	1,244	-	16	52	2
Minnesota	1	76	12	1	5	-	2	22	-	-	2	-
Iowa	-	4	120	-	4	3	169	933	-	-	5	-
Missouri	2	19	10	-	3	14	5	96	-	-	8	2
North Dakota	1	13	19	-	1	3	2	7	-	-	5	-
South Dakota	-	1	-	-	-	2	1	2	-	-	-	-
Nebraska	-	1	1	-	-	3	-	35	-	-	3	-
Kansas	5	30	7	1	2	4	44	149	-	16	29	-
SOUTH ATLANTIC	20	169	200	7	57	57	320	1,661	2	9	197	1
Delaware	-	2	1	-	3	-	3	29	-	1	5	-
Maryland	-	2	-	1	9	11	4	29	-	-	-	-
District of Columbia	-	-	-	-	-	1	2	22	-	-	1	-
Virginia *	1	10	8	1	10	6	14	115	2	2	7	-
West Virginia	3	47	52	-	2	1	218	969	-	4	45	-
North Carolina	-	1	4	1	11	12	NN	NN	-	1	4	-
South Carolina	1	10	17	1	4	4	3	14	-	1	69	-
Georgia	-	1	7	-	4	13	-	-	-	-	2	-
Florida	15	96	111	3	14	9	76	483	-	-	64	1
EAST SOUTH CENTRAL	6	34	131	12	31	21	143	1,675	3	22	163	1
Kentucky	4	26	43	7	13	6	56	630	-	5	44	-
Tennessee	-	-	65	4	16	10	76	871	1	12	91	1
Alabama	-	1	-	1	2	2	8	153	2	3	19	-
Mississippi	2	7	23	-	-	3	3	21	-	2	9	-
WEST SOUTH CENTRAL	2	61	265	2	51	50	91	1,024	1	4	67	1
Arkansas	-	4	13	-	4	5	10	84	-	1	7	-
Louisiana	1	6	23	1	11	8	-	44	-	3	6	-
Oklahoma	1	8	6	1	7	4	81	158	1	-	14	-
Texas	---	43	223	---	29	33	---	738	---	---	40	1
MOUNTAIN	9	176	194	1	7	12	37	534	-	6	100	-
Montana	-	110	2	1	1	2	4	91	-	1	56	-
Idaho	7	38	88	-	1	1	2	123	-	-	5	-
Wyoming	-	3	5	-	-	-	1	4	-	-	-	-
Colorado	1	9	20	-	-	2	21	201	-	5	25	-
New Mexico *	-	12	71	-	2	1	9	112	-	-	10	-
Arizona	-	3	7	-	2	3	-	-	-	-	-	-
Utah	-	-	1	-	1	1	-	3	-	-	2	-
Nevada	1	1	-	-	-	2	-	-	-	-	2	-
PACIFIC	12	298	572	6	38	65	262	1,739	6	77	461	1
Washington	-	20	264	1	5	3	112	684	-	5	146	-
Oregon	-	-	145	1	6	4	65	361	1	18	58	-
California	12	277	158	4	25	57	77	630	5	54	248	1
Alaska	-	-	-	-	2	1	7	50	-	-	-	-
Hawaii	-	1	5	-	-	-	1	14	-	-	9	-
Guam *	-	1	2	-	-	-	-	56	-	-	-	-
Puerto Rico	26	122	419	-	-	1	16	197	-	-	4	1
Virgin Islands	-	-	-	-	-	-	1	3	-	-	-	1

\*Delayed reports: Measles: N.H. 5, Ohio delete 7 (1974)  
Meningococcal Infections: Ohio delete 1, N.M. delete 1 (1974)  
Mumps: Me. 27, N.H. 15, Guam 4 (1974)  
Rubella: Ohio 1, Va. delete 1 (1974)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING MARCH 9, 1974 AND MARCH 10, 1973 (10th WEEK) - Continued

AREA	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES						RABIES IN ANIMALS
	1974	Cum. 1974	Cum. 1974	1974	Cum. 1974	1974	Cum. 1974	GONORRHEA			SYPHILIS (Pri. & Sec.)			Cum. 1974
								1974	Cumulative		1974	Cumulative		
									1974	1973		1974	1973	
UNITED STATES	450	5,155	21	11	67	-	14	14,994	159,831	142,817	429	4,496	4,824	436
NEW ENGLAND	19	239	-	-	2	-	-	393	4,215	3,652	3	93	126	3
Maine	1	21	-	-	-	-	-	30	310	223	1	10	6	1
New Hampshire	2	10	-	-	-	-	-	15	132	129	-	3	4	-
Vermont	-	3	-	-	-	-	-	9	133	48	-	-	8	-
Massachusetts	7	133	-	-	-	-	-	202	1,913	1,687	-	36	49	-
Rhode Island *	4	25	-	-	2	-	-	22	342	452	-	3	4	2
Connecticut	5	47	-	-	-	-	-	115	1,385	1,113	2	41	55	-
MIDDLE ATLANTIC	90	851	1	1	12	-	9	2,080	20,590	18,612	117	1,014	1,083	3
Upstate New York	-	73	1	-	-	-	-	131	3,648	4,749	8	102	75	1
New York City	39	365	-	-	11	-	-	729	8,411	7,224	62	601	688	-
New Jersey	29	197	-	1	1	-	-	573	3,585	2,325	26	155	178	-
Pennsylvania	22	216	-	-	-	-	9	647	4,946	4,314	21	156	142	2
EAST NORTH CENTRAL	53	672	-	1	5	-	-	2,059	20,988	16,783	19	236	278	23
Ohio *	22	205	-	-	-	-	-	862	7,731	5,290	3	44	55	-
Indiana	8	111	-	-	-	-	-	99	2,135	2,021	1	38	59	1
Illinois	1	162	-	1	3	-	-	286	2,580	2,102	7	52	40	2
Michigan	22	194	-	-	2	-	-	599	6,225	5,499	8	79	106	-
Wisconsin	-	-	-	-	-	-	-	213	2,317	1,871	-	23	18	20
WEST NORTH CENTRAL	15	170	7	-	2	-	-	668	8,045	8,324	2	67	54	125
Minnesota	5	27	-	-	1	-	-	185	1,981	1,634	-	8	23	63
Iowa	1	15	-	-	-	-	-	13	1,029	1,067	-	8	4	25
Missouri *	5	95	6	-	1	-	-	187	2,309	3,121	1	37	16	3
North Dakota	-	2	-	-	-	-	-	17	140	128	-	-	-	26
South Dakota	2	9	1	-	-	-	-	39	402	421	-	1	1	-
Nebraska	1	5	-	-	-	-	-	67	677	852	1	2	1	-
Kansas	1	17	-	-	-	-	-	160	1,507	1,101	-	11	9	8
SOUTH ATLANTIC	95	1,072	1	6	10	-	4	4,635	41,139	37,326	156	1,506	1,420	61
Delaware	-	18	-	-	-	-	-	52	597	504	2	23	19	-
Maryland	16	117	-	1	1	-	1	335	3,869	3,247	26	177	171	-
District of Columbia	5	75	-	-	-	-	-	332	3,200	3,121	14	138	159	-
Virginia	19	136	1	-	-	-	-	295	3,641	3,539	17	188	117	28
West Virginia	3	67	-	2	3	-	-	58	522	540	2	5	4	10
North Carolina *	20	203	-	-	-	-	-	690	5,526	5,456	6	153	103	-
South Carolina	5	108	-	-	-	-	-	565	4,800	4,154	10	214	217	1
Georgia	15	112	-	-	-	-	2	1,036	8,141	6,667	12	154	290	17
Florida	12	236	-	3	6	-	1	1,272	10,843	10,098	67	454	340	5
EAST SOUTH CENTRAL	51	500	6	1	10	-	-	1,428	13,565	12,231	17	246	350	65
Kentucky	15	113	1	1	7	-	-	126	1,708	1,459	4	55	157	42
Tennessee	11	153	3	-	3	-	-	526	5,461	4,835	6	91	79	16
Alabama	22	155	2	-	-	-	-	440	3,505	3,165	7	51	23	7
Mississippi	3	79	-	-	-	-	-	336	2,891	2,772	-	49	91	-
WEST SOUTH CENTRAL	29	629	5	-	4	-	-	983	21,907	18,846	24	442	556	89
Arkansas	10	96	1	-	1	-	-	183	2,274	2,564	-	23	37	13
Louisiana *	13	99	1	-	1	-	-	607	4,769	3,695	18	128	148	3
Oklahoma	6	50	2	-	-	-	-	193	1,817	2,045	6	29	48	19
Texas	---	384	1	---	2	---	---	---	13,047	10,542	---	262	323	54
MOUNTAIN	21	158	1	-	5	-	1	596	5,878	5,330	17	102	160	14
Montana	1	13	-	-	-	-	-	36	359	332	-	-	-	-
Idaho	-	8	-	-	-	-	-	14	423	322	-	1	4	-
Wyoming	-	2	1	-	2	-	-	10	118	95	1	1	5	2
Colorado	-	16	-	-	-	-	1	213	1,650	1,422	-	19	60	-
New Mexico *	11	48	-	-	-	-	-	87	868	839	8	18	20	5
Arizona *	2	47	-	-	3	-	-	207	1,799	1,548	6	33	44	7
Utah	1	9	-	-	-	-	-	28	276	298	-	6	3	-
Nevada	6	15	-	-	-	-	-	1	385	474	2	24	24	-
PACIFIC	77	864	-	2	17	-	-	2,152	23,504	21,713	74	790	797	53
Washington	1	55	-	-	2	-	-	234	2,092	2,037	12	27	31	-
Oregon	7	32	-	-	-	-	-	208	1,864	1,953	3	16	18	6
California	59	700	-	2	15	-	-	1,624	18,434	16,697	57	735	709	47
Alaska	-	20	-	-	-	-	-	41	552	548	-	1	19	-
Hawaii	10	57	-	-	-	-	-	45	562	478	2	11	20	-
Guam *	-	3	-	-	-	-	-	-	80	68	-	-	-	-
Puerto Rico	19	117	-	-	-	-	-	84	536	630	13	173	151	11
Virgin Islands	-	-	-	-	-	-	-	6	39	39	1	7	6	-

\*Delayed reports: Tuberculosis: Ohio delete 21 (1973), Ohio delete 1, Mo. 13, N.C. delete 1, Guam 3 (1974)  
 Typhoid: N.M. 1 (1973)  
 Gonorrhea: Ariz. 442 (1973), La. delete 1, Guam 11 (1974)  
 Syphilis: Ariz. 37 (1973), Ohio delete 1, R.I. 1, (1974)

TABLE IV. DEATHS IN 121 UNITED STATES CITIES FOR WEEK ENDING MARCH 9, 1974

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

Area	All Causes					Pneumonia and Influenza All Ages	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	
<b>NEW ENGLAND</b>	741	495	175	41	18	30	<b>SOUTH ATLANTIC</b>	1,511	830	437	129	49	58
Boston, Mass.	197	125	45	12	8	10	Atlanta, Ga.	134	61	45	14	7	7
Bridgeport, Conn.	21	11	8	2	-	1	Baltimore, Md.	227	119	70	17	9	3
Cambridge, Mass.	33	27	4	2	-	2	Charlotte, N. C.	67	26	28	4	2	-
Fall River, Mass.	29	23	4	1	-	1	Jacksonville, Fla.	121	66	22	16	5	2
Hartford, Conn.	76	47	21	5	2	1	Miami, Fla.	114	58	39	11	3	1
Lowell, Mass.	27	19	6	2	-	-	Norfolk, Va.	68	40	20	3	5	3
Lynn, Mass.	18	15	2	1	-	-	Richmond, Va.	103	57	36	8	-	4
New Bedford, Mass.	43	32	8	2	1	-	Savannah, Ga.	56	29	16	5	4	9
New Haven, Conn.	53	30	16	4	2	3	St. Petersburg, Fla.	97	77	11	3	2	1
Providence, R. I.	51	33	15	2	1	2	Tampa, Fla.	84	56	15	7	2	6
Somerville, Mass.	13	9	2	1	-	2	Washington, D. C.	387	215	115	37	9	19
Springfield, Mass.	58	36	19	1	1	1	Wilmington, Del.	53	26	20	4	1	3
Waterbury, Conn.	37	26	9	1	1	1	<b>EAST SOUTH CENTRAL</b>	682	401	195	37	23	33
Worcester, Mass.	85	62	16	5	2	6	Birmingham, Ala.	102	55	34	6	6	-
<b>MIDDLE ATLANTIC</b>	3,323	2,074	845	214	78	180	Chattanooga, Tenn.	51	31	18	2	-	9
Albany, N. Y.	61	41	15	-	1	1	Knoxville, Tenn.	54	33	13	2	1	1
Allentown, Pa.	33	22	6	4	1	4	Louisville, Ky.	115	79	25	4	5	11
Buffalo, N. Y.	157	91	47	9	6	10	Memphis, Tenn.	147	84	44	8	4	1
Camden, N. J.	46	23	18	3	1	3	Mobile, Ala.	71	43	17	4	1	2
Elizabeth, N. J.	38	21	11	5	-	4	Montgomery, Ala.	57	27	21	5	1	4
Erie, Pa.	41	32	6	2	-	6	Nashville, Tenn.	85	49	23	6	5	5
Jersey City, N. J.	71	40	23	4	4	5	<b>WEST SOUTH CENTRAL</b>	1,206	661	354	76	46	45
Newark, N. J.	102	42	34	13	6	4	Austin, Tex.	47	29	12	3	2	1
New York City, N. Y.†	1,748	1,133	393	126	34	79	Baton Rouge, La.	42	24	8	3	3	1
Paterson, N. J.	48	28	16	2	-	7	Corpus Christi, Tex.	36	23	8	2	2	1
Philadelphia, Pa.	310	182	88	24	8	10	Dallas, Tex.	188	99	61	12	3	2
Pittsburgh, Pa.	215	130	56	8	7	20	El Paso, Tex.	65	38	17	5	3	10
Reading, Pa.	45	34	9	1	-	3	Fort Worth, Tex.	89	55	21	3	2	1
Rochester, N. Y.	123	75	36	6	4	10	Houston, Tex.	236	107	86	21	8	5
Schenectady, N. Y.	20	12	8	-	-	-	Little Rock, Ark.	43	25	13	-	2	2
Scranton, Pa.	50	24	20	4	1	4	New Orleans, La.	178	97	52	10	8	5
Syracuse, N. Y.	83	61	19	-	2	1	San Antonio, Tex.	153	89	40	10	7	4
Trenton, N. J.	62	37	22	-	2	2	Shreveport, La.	41	26	11	-	3	5
Utica, N. Y.	28	19	7	1	-	4	Tulsa, Okla.	88	49	25	7	3	8
Yonkers, N. Y.	42	27	11	2	1	3	<b>MOUNTAIN</b>	610	366	147	36	27	19
<b>EAST NORTH CENTRAL</b>	2,580	1,532	680	165	112	89	Albuquerque, N. Mex.	65	36	19	2	2	5
Akron, Ohio	64	41	13	6	2	-	Colorado Springs, Colo.	27	15	7	2	2	1
Canton, Ohio	35	22	8	2	2	2	Denver, Colo.	149	106	25	12	2	7
Chicago, Ill.	644	366	188	38	23	24	Las Vegas, Nev.	26	11	12	1	2	2
Cincinnati, Ohio	143	99	32	6	2	7	Ogden, Utah	19	12	4	1	-	-
Cleveland, Ohio	208	109	62	15	16	5	Phoenix, Ariz.	150	89	41	4	8	3
Columbus, Ohio	138	66	43	12	7	1	Pueblo, Colo.	29	15	7	4	2	-
Dayton, Ohio	118	69	30	6	5	4	Salt Lake City, Utah	52	30	10	5	4	-
Detroit, Mich.	354	206	84	27	24	6	Tucson, Ariz.	93	52	22	5	5	1
Evansville, Ind.	49	31	12	5	1	-	<b>PACIFIC</b>	1,703	1,129	407	93	38	54
Fort Wayne, Ind.	48	34	9	3	1	4	Berkeley, Calif.	20	15	3	-	1	-
Gary, Ind.	27	10	10	4	2	1	Fresno, Calif.	45	24	13	5	3	1
Grand Rapids, Mich.	67	46	18	2	1	5	Glendale, Calif.	28	22	6	-	-	2
Indianapolis, Ind.	189	114	44	16	10	6	Honolulu, Hawaii	42	23	10	3	4	2
Madison, Wis.	48	28	9	5	4	8	Long Beach, Calif.	106	71	28	4	-	3
Milwaukee, Wis.	148	101	37	5	2	4	Los Angeles, Calif.	531	366	115	28	11	15
Peoria, Ill.	47	33	10	1	3	1	Oakland, Calif.	67	41	15	7	2	1
Rockford, Ill.	35	19	12	2	1	9	Pasadena, Calif.	26	23	-	1	1	1
South Bend, Ind.	38	27	8	2	1	1	Portland, Ore.	137	87	35	7	6	6
Toledo, Ohio	112	64	35	5	5	1	Sacramento, Calif.	63	35	19	4	3	-
Youngstown, Ohio	68	47	16	3	-	-	San Diego, Calif.	147	99	37	7	-	2
<b>WEST NORTHCENTRAL</b>	837	553	179	45	30	42	San Francisco, Calif.	194	127	50	10	2	6
Des Moines, Iowa	70	51	10	3	4	9	San Jose, Calif.	70	54	12	3	-	4
Duluth, Minn.	31	22	4	3	-	2	Seattle, Wash.	125	75	36	10	2	4
Kansas City, Kans.	26	14	9	1	1	2	Spokane, Wash.	54	36	12	3	3	2
Kansas City, Mo.	113	78	24	5	6	2	Tacoma, Wash.	48	31	16	1	-	3
Lincoln, Nebr.	30	22	6	-	-	2	<b>Total</b>	13,193	8,041	3,419	836	421	550
Minneapolis, Minn.	100	58	27	5	5	1	<b>Expected Number</b>	12,914	7,658	3,508	820	442	525
Omaha, Nebr.	91	64	17	6	2	7							
St. Louis, Mo.	246	154	54	16	9	5							
St. Paul, Minn.	84	58	15	5	3	5							
Wichita, Kans.	46	32	13	1	-	7							

†Delayed report for week ending March 2, 1974

**BOTULISM – Continued**

Senior Medical Student, Emory University School of Medicine, on temporary assignment with the Bureau of Epidemiology; the Anaerobe Unit, Enterobacteriology Section, Bacteriology Division, Bureau of Laboratories, the Enteric Diseases Section, Bacterial Diseases Division, Bureau of Epidemiology, CDC; and an EIS Officer.)

**Editorial Note**

While this is the first type B botulism case reported to CDC from Alabama, 25 of the 37 type B outbreaks reported in the United States between 1899 and 1969 were in states east of the Mississippi River (1). The canning technique used by the patient's wife could not insure complete destruction

of *C. botulinum* spores (2). Canned tomatoes, although often considered too acid a food for the survival of *C. botulinum*, are capable of supporting both growth and toxin production (3) and have been previously incriminated in botulism outbreaks (1).

**References**

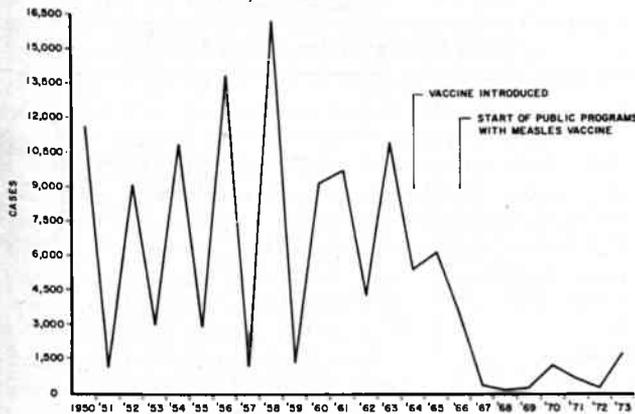
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2. Borgstrom G: Principles of Food Science. New York, MacMillan Co. Vol 1, 1968, p 169
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**SURVEILLANCE SUMMARY  
MEASLES – Michigan, 1951-1973**

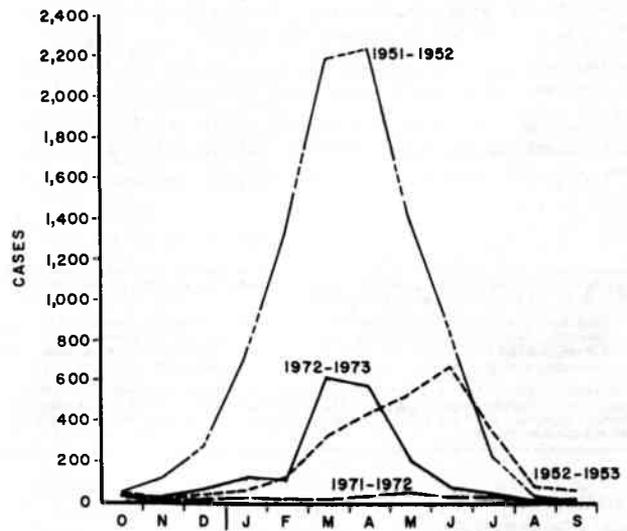
Reported measles cases in Detroit, Michigan, averaged 6,832 per calendar year for the 10-year period 1951-1960, ranging from 1,083 to 16,283 (Figure 1). Following the introduction of measles vaccine in 1963, the number fell sharply –epidemiologic year (EY) 1967-556 cases, EY 1968-159 cases, EY 1969-166 cases.

The first "post-vaccine epidemic" occurred in EY 1970 when 1,223 cases were reported. Cases occurred in areas of the city where, according to survey data, the percentage of persons vaccinated was low. In the next 2 years, 561 and 179 cases were reported. In 1973, measles cases again increased. Between October 1972 and May 1973, 1,560 cases were reported, the number peaking in March. No evidence of an excessive vaccine-failure rate was noted. Following a school-oriented measles vaccination program, cases declined.

**Figure 1  
REPORTED MEASLES CASES  
DETROIT, MICHIGAN – 1950-1973**



**Figure 2  
REPORTED MEASLES CASES, FOR  
2 PRE-VACCINE YEARS (1952-1953) AND 2 POST-VACCINE  
YEARS (1972-1973) – DETROIT, MICHIGAN**



Review of cases in Detroit by month suggests that the number of cases occurring in December, January, and February is usually as reliable an indicator of the subsequent spring experience in the post-vaccine era as it was previously (Figure 2).

(Reported by Barbara Buber, R.N., Victoria Funk, Barbara Hendricks, R.N., and David C. Nolan, M.D., Director, Division of Epidemiology, Detroit Department of Health.)

**EPIDEMIOLOGIC NOTES AND REPORTS  
VARICELLA MIMICKING VACCINIA – Florida**

On December 27, 1973, a 36-year-old man was vaccinated against smallpox in the Pinellas County, Florida, Health Department in preparation for a planned hunting trip to South America in February. Two days later, he had a headache which he controlled with aspirin. On the following day, he noticed a skin eruption on his forehead at the hairline and had fever, itching, general malaise, and anterior cervical adenopathy.

The man consulted his family physician who diagnosed the rash as generalized vaccinia and treated him symptomatically; the patient was sent back to the Health Department where the vaccination had been given. There was no evidence of primary reaction at the vaccination site, and the patient had never had a "take" on 4 previous smallpox vaccinations. Examination revealed a papulo-vesicular rash in varying stages which was generalized but spared the palms and soles. Be-

**VACCINIA – Continued**

cause of this clinical appearance, chickenpox was suspected.

Blood specimens drawn 1 and 3 weeks after onset of the rash had varicella-zoster complement-fixation (CF) titers of >1:512 and 1:256, respectively. Vaccinia CF titers on these specimens were <1:8. In mid-January, 1 of the patient's 3 susceptible children developed a generalized eruption diagnosed by the family physician as chickenpox.

After being told that he had chickenpox and of the need for Zoster Immune Globulin (ZIG), the patient agreed to donate 2 double units of hyperimmune plasma.

(Reported by George M. Brother, M.D., Director, Preventable Diseases, Pinellas County Health Department; and E. Charlton Prather, M.D., Bureau of Preventable Diseases, Florida Division of Health.)

**Editorial Note**

The appearance of varicella in an urban adult recently vaccinated against smallpox can be confusing. The fact that the generalized rash appeared only 3 days after vaccination clinically points away from generalized vaccinia in which the rash usually appears 7-14 days after vaccination. The appearance of clinical varicella in the family and the elevated varicella antibody titer with a negative vaccinia titer confirmed the diagnosis. Adults convalescing from varicella and herpes zoster, such as this patient, who are otherwise healthy are potential donors of Zoster Immune Plasma. Physicians who see these patients are urged to refer them for plasma donations. ZIG consultants (MMWR, Vol. 23, No. 6) may be contacted regarding appropriate arrangements.

**CURRENT TRENDS****REVISION IN NOMENCLATURE OF ANTIGENS ASSOCIATED WITH VIRAL HEPATITIS TYPE B**

In January 1974, the Committee on Viral Hepatitis of the National Research Council – National Academy of Sciences published a new system for identifying antigens associated with hepatitis B (MMWR, Vol. 23, No. 4). The Committee has subsequently considered typographical problems which might arise from the way the group and sub-type specific determinants were depicted. They concluded that the group-specific determinant, a, and the subtype-specific deter-

minants, d or y, and w or r should be printed in boldface type. (Reported by the Committee on Viral Hepatitis of the National Research Council – National Academy of Sciences.)

**Erratum, Vol. 23, No. 5, p. 46**

In the credits of the influenza report from Arkansas, delete G. Doty Murphy III, State Epidemiologist, and insert Stephen K. Felts, M.D., Acting State Epidemiologist.

The Morbidity and Mortality Weekly Report, circulation 36,000, is published by the Center for Disease Control, Atlanta, Ga.

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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.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to: Center for Disease Control  
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Morbidity and Mortality Weekly Report  
Atlanta, Georgia 30333

DHEW Publication No. (CDC) 74-8017

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