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EPIDEMIOLOGIC NOTES AND REPORTS

AN OUTBREAK OF SALMONELLOSIS DUE TO SMOKED TURKEY – Shelby County, Tennessee

Of 17 dental students and their families who attended a New Year's Day party in Memphis, 11 (65 percent) developed gastroenteritis 23 to 43 hours after the party (mean 29 hours). Two persons were hospitalized. Symptoms included diarrhea (100 percent), fever (91 percent), abdominal cramps (73 percent), and vomiting (27 percent). The average duration of illness was greater than 3 days and two persons were still ill when interviewed 5 days after the outbreak. Stool cultures from six patients were positive for *Salmonella infantis*.

Food histories from all persons at the party suggested smoked turkey at the vehicle of infection. Of 12 who consumed the smoked turkey, 11 became ill, whereas all five who did not eat this food remained well. A sample of leftover smoked turkey was positive for *S. infantis* and a sample of fresh baked turkey also served at the party was negative.

The turkey was purchased from a smoke house in Texas and delivered by mail to Louisiana on December 20 to a relative of the host. The turkey was refrigerated until

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TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

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

DISEASE	8th WEEK ENDED		MEDIAN	CUMULATIVE, FIRST 8 WEEKS		
	February 22, 1969	February 24, 1968	1964 - 1968	1969	1968	MEDIAN 1964 - 1968
Aseptic meningitis	40	22	26	236	208	217
Brucellosis	1	1	2	9	7	28
Diphtheria	2	14	5	20	26	26
Encephalitis, primary:						
Arthropod-borne & unspecified	15	13	26	163	114	190
Encephalitis, post-infectious	3	2	12	35	60	73
Hepatitis, serum	104	69	812	764	522	6,427
Hepatitis, infectious	949	880		6,766	6,439	
Malaria	89	53	2	359	360	43
Measles (rubeola)	603	633	7,926	3,119	4,130	48,392
Meningococcal infections, total	73	72	72	620	653	584
Civilian	63	52	- - -	587	604	- - -
Military	10	20	- - -	33	49	- - -
Mumps	2,512	5,380	- - -	17,367	38,198	- - -
Poliomyelitis, total	–	3	–	1	3	2
Paralytic	–	3	–	1	3	2
Rubella (German measles)	1,096	1,106	- - -	4,898	5,689	- - -
Streptococcal sore throat & scarlet fever	11,400	11,787	11,828	86,698	90,878	86,089
Tetanus	1	–	4	13	13	25
Tularemia	4	2	2	14	14	38
Typhoid fever	4	1	4	36	26	41
Typhus, tick-borne (Rky. Mt. spotted fever)	–	–	–	1	3	6
Rabies in animals	94	76	83	504	576	576

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	–	Rabies in man:	–
Botulism:	–	Rubella congenital syndrome:	–
Leptospirosis: Kan.-1	5	Trichinosis: Mass.-1	13
Plague:	–	Typhus, murine: Tex.-1	2
Psittacosis:	5		

Data exclude reports from N.H. and R.I. – Weather conditions

SALMONELLOSIS – *(Continued front page)*

December 30 when it was transported by car from Louisiana to Memphis, a 9-hour trip. In Memphis, the turkey was refrigerated until January 1 when it was warmed briefly and served. The turkey was labeled "ready-to-eat." It had been at room temperature during its transportation through the mails and during the automobile trip.

The smoke house in Texas is a federally inspected plant. The smoked turkeys are prepared from frozen, grade A, USDA inspected turkeys. They are thawed, soaked in brine for 3 days, and smoked overnight to an internal temperature of 160°F as measured by a USDA inspector using a meat thermometer. The turkeys are then held at this temperature for an additional 2 hours and cooled at room temperature for approximately 9 hours before being packed in plastic bags, boxed, and frozen. Although the temperature reached in smoking is adequate to eliminate salmonella from the turkeys, opportunity for cross-contamination of the finished product by the raw product is present. Raw turkeys are defrosted in the same room in which the smoked turkeys are left to cool, and the same employees handle both raw and finished products. Environmental swabs in the plant and samples of turkey at each step in the process were obtained for culture. A swab from a raw turkey was positive for group B salmonella (not further identified), but no salmonella was isolated from any finished product samples.

(Reported by Cecil B. Tucker, M.D., M.P.H., Director, Division of Preventable Diseases, and W. M. Arnold, Director, Memphis Branch Laboratory, and J. H. Barrick, Ph.D., Director, Division of Laboratories, Tennessee Department of Public Health; Eugene Fowinkle, M.D., Director, R. C. Rendtorff, M.D., Director, Communicable Disease Division, and Donald R. Daffron, Sanitation Division, Memphis-Shelby County Health Department; John E. Spaulding, D.V.M., Head, Toxicology Group, Agricultural Research Center, USDA; Epidemiologic Services Laboratory Section, Epidemiology Program, NCDC; and a team of EIS Officers.)

Editorial Comment:

The smoke house implicated as the source of this outbreak distributes its products by mail mainly to Texas, Oklahoma, and Louisiana. The distribution of smoked turkeys is seasonal and most are purchased for the Christmas season. This Christmas approximately 9,000 turkeys were sold. The state health departments in Texas, Oklahoma, and Louisiana are reinvestigating persons from whom *S. infantis* was isolated during November, December, and January with regard to the possibility of contact with this product. To date, no other associated cases have been reported.

During 1968, *S. infantis* was among the 10 most frequently isolated serotypes of salmonella. No unusual increase in isolations of this serotype has been noted in recent months.

VIRAL HEPATITIS AFTER IMMUNIZATION WITH Rh-POSITIVE WHOLE BLOOD – New Jersey

Between October and November 1968, of 49 participants in a Rh-positive antibody production and harvest program in New Jersey, three developed jaundice and 12 others had one or more abnormal liver function tests compatible with anicteric viral hepatitis. These 49 Rh-negative persons were being immunized intravenously every 2 weeks with 0.5 cc of anti-coagulated Rh-positive whole blood for the production of anti Rh-positive antibody. When a participant developed sufficiently high titers, he then underwent weekly plasmapheresis for harvest of the antibody. This plasma was then used to prepare Rh-positive immune globulin.

The first case of hepatitis was in a 37-year-old school teacher, who became ill on Oct. 12, 1968, with fatigue, malaise, and dark urine. On October 19, he developed jaundice and was hospitalized. He had begun receiving Rh-positive blood cells on May 27, 1968, and had received his last injection on August 30, 43 days prior to onset of illness. He had not developed a sufficient titer to undergo plasmapheresis for anti Rh-positive antibody, but he had been donating plasma for hyperimmune tetanus globulin. He received his last tetanus toxoid injection in May 1968.

The second case was in a 44-year-old salesman, who developed abdominal pain, loss of taste for cigarettes, and dark urine on October 12. One week later, he was hospitalized with jaundice. He had been receiving Rh-positive blood cells since May 1968 and he was given his last booster on October 14. He had not developed sufficient antibody titer to undergo plasmapheresis.

The third case was in a 33-year-old housewife, who developed pruritus in early October followed by anorexia, fatigue, and dark urine on October 24. She had begun receiving blood in November 1967 and had had her last injection on October 7. She had not undergone plasmapheresis.

All three cases denied contact with a known hepatitis case and ingestion of raw shellfish during the 6 weeks prior to onset of illness, none had received a blood transfusion during the 6 months prior to onset of illness, and none used parenteral drugs. This cluster of three cases of hepatitis led to a study of the 46 remaining participants in the immunization program. It was found that 12 of these persons had one or more abnormal liver function tests compatible with anicteric hepatitis.

Inspection of the facility where blood donations, immunizations, and plasmapheresis were performed and the witnessing of these procedures revealed no obvious source for contamination of equipment or break in technique to allow inadvertent transfer of blood or serum from person to person. The three donors of the Rh-positive blood used by this company were then investigated. All donors were expected to comply with the standards for

whole blood donors which includes a negative history of hepatitis. None of the three was a known user of self-administered parenteral drugs. Records were not kept indicating which patient received which donor's blood.

The first donor was a 46-year-old man who had donated Rh-positive blood for approximately 3 years. In addition, he had undergone plasmapheresis for tetanus antitoxin for several years. He was well-known to the company and always appeared reliable when attending the bleeding station. His last contribution was on July 22, 1968. On August 3, he was hospitalized with a diagnosis of delirium tremens superimposed on chronic alcoholism. On admission, he was stuporous, dehydrated, and dirty and had body lice. He had coarse body tremors and frequent opisthotonic posturing. Three blood cultures were negative. He died the day after admission. Autopsy showed areas of liver necrosis without inflammation, fat, or fibrosis; acute tubular necrosis of the kidney; broncho-pneumonia; and cerebral edema.

The second donor was a 35-year-old man who had donated blood since July 1968. He had participated in a tetanus antitoxin plasmapheresis program since December 1966. He had a 17-year history of chronic alcoholism and was hospitalized in November 1967 for trauma sustained during an inebriated state. Blood tested by the company on Nov. 13, 1968, revealed a total bilirubin of 0.5 mg percent, SGOT of 69, and SGPT of 28.

The third donor was a 29-year-old male who began donating blood in July 1968. He had also participated in the tetanus antitoxin program and had regularly undergone plasmapheresis. On October 31, blood tested by the company revealed a bilirubin of 0.3 mg percent, SGOT of 75, and SGPT of 18.

It was not proved, but it seems that the most likely source of the hepatitis virus was the blood from one or more of the three donors of Rh-positive cells. Although none of the three admitted to parenteral drug use, parenteral drug abuse could not be excluded.

(Reported by Ronald Altman, M.D., Director, and Paul Marzinsky, Division of Preventable Diseases, New Jersey State Department of Health; and an EIS Officer.)

Editorial Comment:

This outbreak demonstrates the risk of transmitting viral hepatitis to any recipient of any quantity of whole blood. As little as 0.00004 cc of blood obtained from a person with serum hepatitis is capable of transmitting the disease to a susceptible recipient.[1] Furthermore, this incident of hepatitis in recipients of whole blood emphasizes again the need for careful screening of prospective donors.

Reference:

[1]Drake, M.E., et al.: Effect of nitrogen mustard on virus of serum hepatitis in whole blood. *Proc. Soc. Exp. Brit. Med.* *80*:310, 1952

DRUG-ASSOCIATED HEPATITIS – Nashville, Tennessee

Between January 1 and November 18, 1969, a total of eight hepatitis patients were admitted to a hospital in Nashville; seven were narcotic users who had onsets of illness between April and November 1968, were between the ages of 19 and 35, knew each other, and were part of a larger group who commonly shared injection equipment. One of these seven died with fulminating hepatitis in August, 4 weeks after admission. His girlfriend, who was hospitalized with hepatitis on October 19, reported that at least 75 other persons had practiced needle sharing with her deceased boyfriend, several of the other hepatitis patients, and herself. An attempt was made to locate the other members of the group.

Hepatitis cases reported to the county health department and records at the three hospitals where addicts would probably seek medical care were reviewed and revealed six additional cases of drug-associated hepatitis, three of whom were part of the large group of drug users. An attempt was made to define the point prevalence of anicteric and icteric illness among the group, but only four persons would submit serum for SGOT determination. Two had slightly elevated SGOT values of 60 and two were normal.

(Reported by Joseph Bistowish, M.D., Director, Metropolitan-Nashville and Davidson County Health Department; Lewis B. Lefkowitz, M.D., Assistant Professor of Medicine, Vanderbilt University and Visiting Physician, a hospital, Nashville; and Cecil B. Tucker, M.D., Deputy Commissioner and Director, Bureau of Preventive Health Services, Tennessee Department of Public Health.)

Editorial Comment:

The potential spread of viral hepatitis among a group who share parenteral injection equipment is obvious, but this public health problem has its greatest impact upon the recipients of the whole blood that addicts often sell to support their habit. It has been shown that blood obtained from addict donors has a 70-fold greater risk of transmitting hepatitis to its recipients than blood obtained from healthy donors.[1]

Reference:

[1]Cohen, S. and Dougherty, W.: Transfusion hepatitis arising from addict blood donors. JAMA *203*:139-141, 1968.

CARBON MONOXIDE POISONING – Vancouver, Washington

On November 5, 1968, in Vancouver, a middle-aged couple, their 15-year-old son, and dog, who had just moved from Canada on November 4, experienced carbon monoxide poisoning. The father died, the mother was hospitalized, and the son and dog recovered without treatment.

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED
FEBRUARY 22, 1969 AND FEBRUARY 24, 1968 (8th WEEK)

AREA	ASEPTIC MENIN-GITIS	BRUCEL-LOSIS	DIPHTHERIA	ENCEPHALITIS			HEPATITIS			MALARIA	
				Primary including unsp. cases		Post-Infectious	Serum	Infectious			
	1969	1969	1969	1969	1968	1969	1969	1969	1968	1969	Cum. 1969
UNITED STATES...	40	1	2	15	13	3	104	949	880	89	359
NEW ENGLAND.....	1	-	-	-	-	-	3	32	33	-	22
Maine.....	-	-	-	-	-	-	-	1	3	-	-
New Hampshire.*....	---	---	---	---	-	---	---	---	-	---	3
Vermont.....	-	-	-	-	-	-	-	2	1	-	-
Massachusetts.....	1	-	-	-	-	-	2	19	6	-	18
Rhode Island.....	---	---	---	---	-	---	---	---	12	---	-
Connecticut.....	-	-	-	-	-	-	1	10	11	-	1
MIDDLE ATLANTIC.....	4	-	-	3	1	-	42	148	119	15	30
New York City.....	2	-	-	1	-	-	32	48	52	-	-
New York, up-State.	-	-	-	-	1	-	4	17	27	2	5
New Jersey*.....	1	-	-	-	-	-	5	22	20	4	11
Pennsylvania.....	1	-	-	2	-	-	1	61	20	9	14
EAST NORTH CENTRAL...	9	-	-	5	1	-	7	159	148	4	19
Ohio.....	2	-	-	2	-	-	-	41	47	-	1
Indiana.*.....	-	-	-	-	-	-	-	15	20	-	-
Illinois.....	-	-	-	-	-	-	-	30	35	3	6
Michigan.....	7	-	-	3	1	-	7	68	32	1	11
Wisconsin.....	-	-	-	-	-	-	-	5	14	-	1
WEST NORTH CENTRAL...	4	-	-	1	-	-	-	38	63	3	23
Minnesota.....	2	-	-	-	-	-	-	12	5	1	1
Iowa.....	-	-	-	1	-	-	-	6	17	-	3
Missouri.....	2	-	-	-	-	-	-	10	35	2	6
North Dakota.....	-	-	-	-	-	-	-	-	-	-	1
South Dakota.....	-	-	-	-	-	-	-	1	-	-	-
Nebraska.....	-	-	-	-	-	-	-	3	1	-	1
Kansas.....	-	-	-	-	-	-	-	6	5	-	11
SOUTH ATLANTIC.....	2	1	1	1	3	-	8	130	83	43	126
Delaware.....	-	-	-	-	-	-	-	-	4	-	-
Maryland.*.....	1	-	-	-	-	-	2	22	12	-	2
Dist. of Columbia..	-	-	-	-	1	-	-	1	2	-	-
Virginia.....	1	-	-	1	-	-	1	8	7	5	8
West Virginia.....	-	-	-	-	-	-	-	9	10	-	-
North Carolina.....	-	-	-	-	1	-	-	6	11	2	52
South Carolina.....	-	1	1	-	-	-	-	10	-	2	15
Georgia.....	-	-	-	-	-	-	-	30	29	34	42
Florida.....	-	-	-	-	1	-	5	44	8	-	7
EAST SOUTH CENTRAL...	5	-	1	1	-	-	1	59	65	10	14
Kentucky.....	4	-	-	-	-	-	-	17	26	9	10
Tennessee.....	-	-	-	-	-	-	1	20	28	-	-
Alabama.....	1	-	-	1	-	-	-	9	3	1	4
Mississippi.....	-	-	1	-	-	-	-	13	8	-	-
WEST SOUTH CENTRAL...	2	-	-	2	5	1	-	86	129	2	9
Arkansas.....	-	-	-	1	4	-	-	2	5	2	4
Louisiana.....	-	-	-	1	-	-	-	16	20	-	5
Oklahoma.....	-	-	-	-	1	-	-	9	28	-	-
Texas.....	2	-	-	-	-	1	-	59	76	-	-
MOUNTAIN.....	3	-	-	1	-	-	2	29	51	4	24
Montana.....	-	-	-	-	-	-	-	4	7	-	-
Idaho.....	-	-	-	-	-	-	-	2	4	-	-
Wyoming.....	-	-	-	-	-	-	-	1	-	-	-
Colorado.....	1	-	-	1	-	-	2	7	9	4	22
New Mexico.....	1	-	-	-	-	-	-	3	13	-	1
Arizona.....	1	-	-	-	-	-	-	5	8	-	1
Utah.....	-	-	-	-	-	-	-	7	10	-	-
Nevada.....	-	-	-	-	-	-	-	-	-	-	-
PACIFIC.....	10	-	-	1	3	2	41	268	189	8	92
Washington.....	-	-	-	-	1	-	1	18	11	-	-
Oregon.....	-	-	-	-	-	-	-	24	14	1	3
California*.....	10	-	-	1	2	2	40	220	161	7	81
Alaska.....	-	-	-	-	-	-	-	5	2	-	-
Hawaii.*.....	-	-	-	-	-	-	-	1	1	-	8
Puerto Rico.....	-	-	-	-	-	-	-	27	21	-	-

*Delayed reports: Diphtheria: Haw. delete 1
Encephalitis, primary: Calif. delete 2
Hepatitis, serum: Md. 2 (1968)
Hepatitis, infectious: N.J. delete 3, Ind. delete 1
Malaria: N. H. 2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

FEBRUARY 22, 1969 AND FEBRUARY 24, 1968 (8th WEEK) CONTINUED

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS	POLIOMYELITIS			RUBELLA
		Cumulative			Cumulative			Total	Paralytic		
	1969	1969	1968	1969	1969	1968	1969	1969	1969	Cum. 1969	1969
UNITED STATES...	603	3,119	4,130	73	620	653	2,512	-	-	1	1,096
NEW ENGLAND.....	14	128	162	2	20	36	250	-	-	-	61
Maine.*.....	-	2	8	-	1	2	3	-	-	-	1
New Hampshire.....	---	6	29	---	-	3	---	---	---	-	---
Vermont.....	-	-	-	-	-	1	27	-	-	-	-
Massachusetts.*.....	5	35	74	1	10	16	91	-	-	-	21
Rhode Island.....	---	2	1	---	3	4	---	---	---	-	---
Connecticut.....	9	83	50	1	6	10	129	-	-	-	39
MIDDLE ATLANTIC.....	248	890	459	15	81	77	85	-	-	-	76
New York City.....	174	579	91	1	15	16	50	-	-	-	24
New York, Up-State.	38	93	250	1	15	6	NN	-	-	-	32
New Jersey.*.....	16	91	88	9	27	26	35	-	-	-	20
Pennsylvania.....	20	127	30	4	24	29	NN	-	-	-	-
EAST NORTH CENTRAL...	76	337	1,128	7	78	66	699	-	-	-	238
Ohio.....	8	39	98	3	23	17	40	-	-	-	7
Indiana.*.....	22	72	166	3	12	10	81	-	-	-	66
Illinois.....	14	61	515	1	9	11	67	-	-	-	11
Michigan.....	5	43	70	-	28	22	188	-	-	-	62
Wisconsin.....	27	122	279	-	6	6	323	-	-	-	92
WEST NORTH CENTRAL...	18	77	91	2	26	29	327	-	-	-	131
Minnesota.....	-	-	2	-	6	5	71	-	-	-	7
Iowa.....	10	41	22	-	3	3	221	-	-	-	113
Missouri.....	1	1	6	-	8	4	11	-	-	-	-
North Dakota.....	-	2	41	-	-	1	8	-	-	-	7
South Dakota.....	-	-	3	-	-	3	NN	-	-	-	-
Nebraska.....	7	33	10	-	2	1	9	-	-	-	4
Kansas.....	-	-	7	2	7	12	7	-	-	-	-
SOUTH ATLANTIC.....	121	600	319	19	130	150	112	-	-	-	100
Delaware.....	-	3	-	-	3	-	1	-	-	-	-
Maryland.....	3	5	28	-	14	9	9	-	-	-	41
Dist. of Columbia..	-	-	4	-	2	3	-	-	-	-	-
Virginia.*.....	45	173	58	2	20	12	21	-	-	-	5
West Virginia.....	12	43	79	1	4	3	48	-	-	-	24
North Carolina.....	1	36	37	2	14	34	NN	-	-	-	-
South Carolina.....	2	38	8	2	16	33	25	-	-	-	10
Georgia.....	-	-	2	8	26	19	-	-	-	-	-
Florida.....	58	302	103	4	31	37	8	-	-	-	20
EAST SOUTH CENTRAL...	2	28	92	5	29	52	93	-	-	-	111
Kentucky.....	1	8	34	2	8	18	63	-	-	-	86
Tennessee.....	1	6	15	-	15	14	26	-	-	-	23
Alabama.....	-	-	24	2	4	9	4	-	-	-	1
Mississippi.....	-	14	19	1	2	11	-	-	-	-	1
WEST SOUTH CENTRAL...	90	836	959	11	82	169	299	-	-	1	77
Arkansas.....	-	2	-	1	9	9	-	-	-	-	-
Louisiana.....	-	1	1	2	26	41	-	-	-	-	2
Oklahoma.....	-	101	43	2	4	35	8	-	-	-	13
Texas.....	90	732	915	6	43	84	291	-	-	1	62
MOUNTAIN.....	8	55	173	1	19	6	161	-	-	-	83
Montana.*.....	1	1	5	-	-	1	11	-	-	-	6
Idaho.....	-	-	7	1	3	2	12	-	-	-	9
Wyoming.....	-	-	26	-	-	-	-	-	-	-	1
Colorado.....	-	6	71	-	3	2	45	-	-	-	30
New Mexico.....	3	22	23	-	4	-	20	-	-	-	2
Arizona.*.....	4	25	38	-	6	1	68	-	-	-	28
Utah.....	-	-	1	-	1	-	5	-	-	-	3
Nevada.....	-	1	2	-	2	-	-	-	-	-	4
PACIFIC.....	26	168	747	11	155	68	486	-	-	-	219
Washington.....	2	10	205	1	8	12	122	-	-	-	40
Oregon.*.....	1	30	163	-	4	5	20	-	-	-	21
California.....	19	120	359	10	137	49	272	-	-	-	131
Alaska.....	3	7	-	-	-	-	59	-	-	-	16
Hawaii.*.....	1	1	20	-	6	2	13	-	-	-	11
Puerto Rico.....	17	88	55	-	2	6	-	-	-	-	-

*Delayed reports: Measles: Mass. delete 4, N.J. delete 2, Va. 11, Ore. delete 4
Meningococcal infections: Ind. delete 1, Haw. 3
Mumps: Me. 3, Mont. 1, Ariz. 4
Polio, Par.: Me. delete 1 (1969) add 1 (1968)
Rubella: Me. 4, Mont. 2, Ore. 4

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

FEBRUARY 22, 1969 AND FEBRUARY 24, 1968 (8th WEEK) CONTINUED

AREA	STREPTOCOCCAL SORE THROAT & SCARLET FEVER	TETANUS		TULAREMIA		TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. Spotted)		RABIES IN ANIMALS	
	1969	1969	Cum. 1969	1969	Cum. 1969	1969	Cum. 1969	1969	Cum. 1969	1969	Cum. 1969
UNITED STATES...	11,400	1	13	4	14	4	36	-	1	94	504
NEW ENGLAND.....	1,448	-	-	-	-	-	-	-	-	-	2
Maine.*.....	12	-	-	-	-	-	-	-	-	-	1
New Hampshire.....	---	---	-	---	-	---	-	---	-	---	-
Vermont.....	15	-	-	-	-	-	-	-	-	-	1
Massachusetts.....	238	-	-	-	-	-	-	-	-	-	-
Rhode Island.....	---	---	-	---	-	---	-	---	-	---	-
Connecticut.....	1,183	-	-	-	-	-	-	-	-	-	-
MIDDLE ATLANTIC.....	623	-	1	-	1	3	5	-	-	1	6
New York City.....	10	-	-	-	1	3	4	-	-	-	-
New York, Up-State.	377	-	1	-	-	-	1	-	-	1	6
New Jersey.....	NN	-	-	-	-	-	-	-	-	-	-
Pennsylvania.....	236	-	-	-	-	-	-	-	-	-	-
EAST NORTH CENTRAL...	1,281	-	3	-	-	-	1	-	-	3	20
Ohio.....	293	-	-	-	-	-	1	-	-	1	2
Indiana.....	339	-	-	-	-	-	-	-	-	-	3
Illinois.....	207	-	1	-	-	-	-	-	-	-	4
Michigan.....	232	-	2	-	-	-	-	-	-	-	-
Wisconsin.....	210	-	-	-	-	-	-	-	-	2	11
WEST NORTH CENTRAL...	510	-	-	-	1	-	-	-	-	20	85
Minnesota.....	48	-	-	-	-	-	-	-	-	6	21
Iowa.....	119	-	-	-	-	-	-	-	-	3	16
Missouri.....	42	-	-	-	1	-	-	-	-	7	30
North Dakota.....	130	-	-	-	-	-	-	-	-	2	14
South Dakota.....	24	-	-	-	-	-	-	-	-	-	-
Nebraska.....	90	-	-	-	-	-	-	-	-	-	-
Kansas.....	57	-	-	-	-	-	-	-	-	2	4
SOUTH ATLANTIC.....	1,149	1	4	4	6	-	2	-	-	44	180
Delaware.....	19	-	-	-	-	-	-	-	-	-	-
Maryland.*.....	78	-	-	-	-	-	-	-	-	-	-
Dist. of Columbia..	-	1	2	-	-	-	-	-	-	-	-
Virginia.....	457	-	-	-	-	-	-	-	-	30	127
West Virginia.....	249	-	-	-	2	-	-	-	-	5	20
North Carolina.....	28	-	1	4	4	-	1	-	-	-	-
South Carolina.....	160	-	1	-	-	-	1	-	-	-	-
Georgia.....	11	-	-	-	-	-	-	-	-	2	13
Florida.....	147	-	-	-	-	-	-	-	-	7	20
EAST SOUTH CENTRAL...	1,657	-	-	-	2	-	3	-	1	15	89
Kentucky.....	257	-	-	-	-	-	-	-	-	12	58
Tennessee.....	1,097	-	-	-	2	-	2	-	1	3	25
Alabama.....	141	-	-	-	-	-	-	-	-	-	6
Mississippi.....	162	-	-	-	-	-	1	-	-	-	-
WEST SOUTH CENTRAL...	871	-	2	-	2	-	6	-	-	7	57
Arkansas.....	18		-	-	-	-	5	-	-	-	2
Louisiana.....	4	-	1	-	-	-	-	-	-	1	4
Oklahoma.....	43	-	1	-	2	-	-	-	-	1	9
Texas.....	806	-	-	-	-	-	1	-	-	5	42
MOUNTAIN.....	2,310	-	-	-	2	1	12	-	-	-	12
Montana.*.....	32	-	-	-	-	-	-	-	-	-	-
Idaho.....	172	-	-	-	-	-	-	-	-	-	-
Wyoming.....	491	-	-	-	-	-	5	-	-	-	3
Colorado.....	1,082	-	-	-	-	-	1	-	-	-	1
New Mexico.....	211	-	-	-	1	1	2	-	-	-	4
Arizona.....	98	-	-	-	-	-	3	-	-	-	1
Utah.....	222	-	-	-	1	-	-	-	-	-	-
Nevada.....	2	-	-	-	-	-	1	-	-	-	3
PACIFIC.....	1,551	-	3	-	-	-	7	-	-	4	53
Washington.....	459	-	-	-	-	-	-	-	-	-	-
Oregon.....	178	-	-	-	-	-	-	-	-	-	-
California.....	765	-	3	-	-	-	7	-	-	4	53
Alaska.....	62	-	-	-	-	-	-	-	-	-	-
Hawaii.....	87	-	-	-	-	-	-	-	-	-	-
Puerto Rico.....	2	-	-	-	-	-	-	-	-	-	3

*Delayed reports: SST: Me. 8, Md. 22 (1968), Mont. 50

Week No. 8

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDED FEBRUARY 22, 1969

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

Area	All Causes		Pneumonia and Influenza	Under 1 year
	All Ages	65 years and over	All Ages	All Causes
NEW ENGLAND:	799	498	77	27
Boston, Mass.	258	143	24	13
Bridgeport, Conn.	59	48	9	1
Cambridge, Mass.	27	18	6	1
Fall River, Mass.	27	18	2	2
Hartford, Conn.	65	33	3	2
Lowell, Mass.	24	14	2	-
Lynn, Mass.	16	11	-	1
New Bedford, Mass.	27	16	1	-
New Haven, Conn.	68	42	2	3
Providence, R. I.	56	31	7	1
Somerville, Mass.	17	11	1	-
Springfield, Mass.	54	39	6	1
Waterbury, Conn.	39	27	1	-
Worcester, Mass.	62	47	13	2
MIDDLE ATLANTIC:	3,798	2,270	204	141
Albany, N. Y.	52	35	1	2
Allentown, Pa.	44	30	3	-
Buffalo, N. Y.	138	81	4	4
Camden, N. J.	36	22	8	2
Elizabeth, N. J.	43	26	-	1
Erie, Pa.	39	27	5	2
Jersey City, N. J.	88	50	7	7
Newark, N. J.	95	35	2	6
New York City, N. Y.	1,962	1,167	106	64
Paterson, N. J.	45	32	3	1
Philadelphia, Pa.	595	360	8	28
Pittsburgh, Pa.	238	136	24	11
Reading, Pa.	61	42	5	-
Rochester, N. Y.	109	65	10	11
Schenectady, N. Y.	19	13	1	-
Scranton, Pa.	42	26	3	-
Syracuse, N. Y.	62	41	2	1
Trenton, N. J.	58	33	7	-
Utica, N. Y.	27	21	3	-
Yonkers, N. Y.	45	28	2	1
EAST NORTH CENTRAL:	2,605	1,485	99	122
Akron, Ohio	60	32	-	3
Canton, Ohio	37	17	5	3
Chicago, Ill.	792	434	21	46
Cincinnati, Ohio	157	98	7	2
Cleveland, Ohio	182	98	4	10
Columbus, Ohio	129	68	3	7
Dayton, Ohio	63	41	4	2
Detroit, Mich.	397	223	10	9
Evansville, Ind.	34	20	4	1
Flint, Mich.	56	32	-	1
Fort Wayne, Ind.	45	27	5	2
Gary, Ind.	34	18	9	2
Grand Rapids, Mich.	50	34	4	1
Indianapolis, Ind.	163	89	4	6
Madison, Wis.	34	14	7	7
Milwaukee, Wis.	136	79	1	10
Peoria, Ill.	31	23	-	1
Rockford, Ill.	23	15	3	1
South Bend, Ind.	43	28	5	3
Toledo, Ohio	94	68	2	4
Youngstown, Ohio	45	27	1	1
WEST NORTH CENTRAL:	844	518	32	38
Des Moines, Iowa	50	28	4	4
Duluth, Minn.	37	19	-	2
Kansas City, Kans.	46	17	2	4
Kansas City, Mo.	149	98	5	7
Lincoln, Nebr.	20	16	-	-
Minneapolis, Minn.	117	82	5	5
Omaha, Nebr.	92	50	1	4
St. Louis, Mo.	223	131	11	10
St. Paul, Minn.	71	46	2	2
Wichita, Kans.	39	31	2	-

Area	All Causes		Pneumonia and Influenza	Under 1 year
	All Ages	65 years and over	All Ages	All Causes
SOUTH ATLANTIC:	1,256	686	89	61
Atlanta, Ga.	133	64	5	8
Baltimore, Md.	320	167	18	17
Charlotte, N. C.	67	34	6	3
Jacksonville, Fla.	78	40	5	6
Miami, Fla.	117	78	1	3
Norfolk, Va.	58	33	3	6
Richmond, Va.	81	37	5	8
Savannah, Ga.	54	22	7	-
St. Petersburg, Fla.	107	89	15	1
Tampa, Fla.	79	45	15	2
Washington, D. C.	113	47	8	4
Wilmington, Del.	49	30	1	3
EAST SOUTH CENTRAL:	624	329	45	31
Birmingham, Ala.	105	50	4	5
Chattanooga, Tenn.	40	22	4	-
Knoxville, Tenn.	52	34	6	1
Louisville, Ky.	123	62	8	9
Memphis, Tenn.	143	71	12	5
Mobile, Ala.	44	21	4	4
Montgomery, Ala.	31	17	4	3
Nashville, Tenn.	86	52	3	4
WEST SOUTH CENTRAL:	1,239	639	81	69
Austin, Tex.	35	19	5	2
Baton Rouge, La.	51	23	1	4
Corpus Christi, Tex.	30	12	-	1
Dallas, Tex.	166	82	7	5
El Paso, Tex.	45	20	4	3
Fort Worth, Tex.	73	40	2	3
Houston, Tex.	252	111	17	16
Little Rock, Ark.	62	34	7	3
New Orleans, La.	181	102	5	8
Oklahoma City, Okla.	77	47	4	5
San Antonio, Tex.	124	60	11	9
Shreveport, La.	61	40	11	6
Tulsa, Okla.	82	49	7	4
MOUNTAIN:	487	286	26	24
Albuquerque, N. Mex.	44	30	4	3
Colorado Springs, Colo.	29	20	3	2
Denver, Colo.	113	57	7	4
Ogden, Utah	19	12	2	3
Phoenix, Ariz.	114	67	2	2
Pueblo, Colo.	19	16	4	1
Salt Lake City, Utah	63	29	2	5
Tucson, Ariz.	86	55	2	4
PACIFIC:	1,864	1,127	69	80
Berkeley, Calif.	13	7	-	-
Fresno, Calif.	53	33	2	3
Glendale, Calif.	39	29	1	1
Honolulu, Hawaii	50	30	4	4
Long Beach, Calif.	112	60	3	5
Los Angeles, Calif.	569	334	20	16
Oakland, Calif.	86	52	-	9
Pasadena, Calif.	40	25	-	1
Portland, Oreg.	174	117	11	7
Sacramento, Calif.	69	42	1	4
San Diego, Calif.	85	53	5	3
San Francisco, Calif.	248	139	7	12
San Jose, Calif.	38	16	2	2
Seattle, Wash.	180	111	10	10
Spokane, Wash.	60	41	2	1
Tacoma, Wash.	48	38	1	2
Total	13,516	7,838	722	593

Cumulative Totals
including reported corrections for previous weeks

All Causes, All Ages	119,917
All Causes, Age 65 and over	69,375
Pneumonia and Influenza, All Ages	8,980
All Causes, Under 1 Year of Age	5,317

CARBON MONOXIDE POISONING

(Continued from page 63)

On admission to the hospital, the woman was somnolent, occasionally responded to verbal stimulation, but otherwise seemed normal. She received intravenous fluids and oxygen and recovered over 24 to 48 hours. Physical findings at autopsy on the man showed an unusual "cherry-red" coloring to the earlobes and acute cerebral edema with multiple petechial hemorrhages throughout the brain. Differential diagnoses included drug ingestion, heavy metal ingestion, and botulism along with carbon monoxide poisoning. Botulism was suspected because of the history of ingestion of home-preserved peaches from a jar labeled "1965" on November 4. Blood samples tested for carbon monoxide levels revealed 60 percent carboxyhemoglobin for the man and 40 percent for the woman and confirmed the diagnosis of carbon monoxide poisoning.

Probable sources for the carbon monoxide gas included fumes from a truck and from a fireplace.[1,2] Because the electricity had not been switched on, the family used a small generator to provide light while they moved in and ate dinner. The generator was powered by the engine of their truck that was backed up close to the open door of the apartment. Several logs were ignited in the living room fireplace and when the family went to bed, the fire was left burning but the damper was purportedly down. The mother and father slept in a room adjacent to the living room with the door open while the son slept in a room down the hall with the door closed and the window open. It is not known where the dog slept. All had experienced vomiting during the night.

(Reported by A. Hamilton, M.D., and Harold Dygert, M.D., Physicians, Vancouver; Clarence Hall, M.S., Head, Section of Environmental Health, Byron J. Francis, M.D., Chief, Division of Epidemiology, and T. Loomis, Ph.D., State Toxicologist, Washington State Department of Health; and an EIS Officer.)

References:

[1]Mant, A. Keith: The Problem of Carbon Monoxide Poisoning in Great Britain. Va Med Monthly *91*(2):50-56, February 1964.

[2]U.S. Public Health Service: Public Health Bulletin No. 195, Review of Carbon Monoxide Poisoning 1936, R. R. Sayers and Sara J. Davenport.

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NOTE: THE DATA IN THIS REPORT ARE PROVISIONAL AND ARE BASED ON WEEKLY TELEGRAMS TO THE NCDC BY THE INDIVIDUAL 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.