

Morbidity and Mortality



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EPIDEMIOLOGIC NOTES AND REPORTS
STAPHYLOCOCCAL FOOD POISONING
Ponce, Puerto Rico

An outbreak of food poisoning occurred on September 3, 1968, in Ponce, Puerto Rico, among doctors, nurses, student nurses, and employees of the Ponce District Hospital following a luncheon in the hospital cafeteria. Of a total of 446 employees eligible to eat the noon meal, as many as 143 individuals may have become ill with symptoms characterized by abdominal pain, headache, dizziness, vomiting, and less frequently diarrhea giving an attack rate of 32 percent. The epidemic curve suggests a common source of exposure and a short incubation period with a mean of 4 hours (Figure 1).

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Food histories implicated ham as the vehicle of infection (Table 1). The ham was prepared by a catering service on the day of the outbreak and delivered to the cafeteria. While in transit the food was kept at room temperature.
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TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	41st WEEK ENDED		MEDIAN 1963 - 1967	CUMULATIVE, FIRST 41 WEEKS		
	October 12, 1968	October 14, 1967		1968	1967	MEDIAN 1963 - 1967
Aseptic meningitis	158	89	68	3,434	2,302	1,659
Brucellosis	5	8	8	182	202	205
Diphtheria	4	2	6	157	113	153
Encephalitis, primary:						
Arthropod-borne & unspecified	54	38	---	1,080	1,289	---
Encephalitis, post-infectious	4	2	---	401	667	---
Hepatitis, serum	107	40	681	3,494	1,709	30,442
Hepatitis, infectious	994	669		35,282	30,195	
Malaria	101	23	7	1,834	1,556	84
Measles (rubeola)	113	267	800	20,113	58,712	243,198
Meningococcal infections, total	30	27	35	2,135	1,783	2,191
Civilian	28	26	---	1,951	1,666	---
Military	2	1	---	184	117	---
Mumps	1,106	---	---	128,384	---	---
Poliomyelitis, total	---	---	2	48	27	75
Paralytic	---	---	2	48	23	70
Rubella (German measles)	252	248	---	44,869	40,659	---
Streptococcal sore throat & scarlet fever.	6,663	6,546	5,906	330,209	352,764	315,204
Tetanus	8	7	6	138	180	210
Tularemia	2	4	4	156	144	205
Typhoid fever	11	9	11	304	333	338
Typhus, tick-borne (Rky. Mt. spotted fever)	1	4	4	262	286	226
Rabies in animals	55	76	65	2,783	3,496	3,496

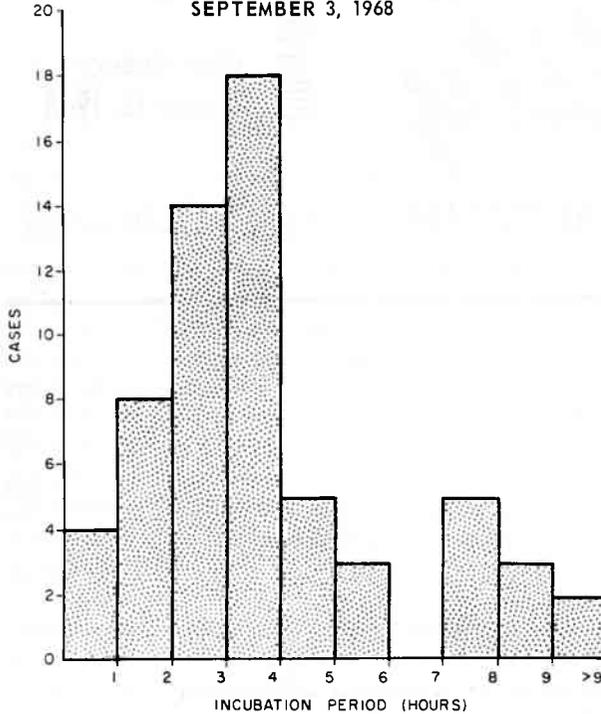
TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	3	Rabies in man:	---
Botulism:	5	Rubella, Congenital Syndrome:	5
Leptospirosis: La.-1, N.C.-1, N.Y. Ups.-1	36	Trichinosis: N.H.-1, N.Y.C.-1	52
Plague:	2	Typhus, murine: *	25
Psittacosis: Conn.-1, N.Y.C.-2	38		

*Delayed reports: Typhus, murine: Tex.-1

STAPHYLOCOCCAL FOOD POISONING — (Continued from front page)

Figure 1
CASES OF FOOD POISONING, BY INCUBATION PERIOD
PONCE DISTRICT HOSPITAL, PUERTO RICO
SEPTEMBER 3, 1968



Cultures of leftover ham, vomitus from patients, and nose and throat specimens from food handlers at the catering

Table 1
Attack Rates for Specific Food Items

Food	Persons who ATE specified food			Attack Rate Percent	Persons who did NOT eat specified food			Attack Rate Percent
	Ill	Not Ill	Total		Ill	Not Ill	Total	
Rice with sausages	64	120	184	35	6	29	35	17
Ham	71	124	195	36	0	25	25	0
Pie	47	101	148	32	24	48	72	33
Bread	53	124	177	30	18	25	43	42
Milk	67	141	208	32	4	8	12	33
Beans	32	45	77	42	39	104	143	27

service, all grew abundant *Staphylococcus aureus*, coagulase positive. Inspection of the caterer's kitchen facilities revealed crowded conditions and several violations of recommended sanitary practices.

(Reported by Bernardo Piñero, M.D., Medical Director, and Modesto Reyes Reyes, M.S.S., Regional Supervisor, Environmental Health, Southern Health Region; Luis Mainardi, M.D., M.P.H., Chief, Communicable Disease Control, Carlos N. Vicens, M.D., Director, Program for Preventive Medicine, and Angel A. Colon, M.D., Ph.D., Director, Institute of Laboratories, Puerto Rico Department of Public Health; and EIS Officers.)

TRANSFUSION MALARIA — Dallas, Texas

In April 1968, a 36-year-old man with chronic renal failure underwent bilateral nephrectomies and incidental splenectomy in preparation for a renal transplant. Postoperatively, he was maintained on biweekly hemodialysis. On July 20, he developed chills and fever, and on July 30, *Plasmodium malariae* parasites were detected on a routine blood smear. Previous blood smears were then reviewed and parasites were detected from as early as July 18. The patient was treated with chloroquine and primaquine, and he made an uneventful recovery. He had no history of malaria or use of shared syringes and had not traveled outside the United States except for two brief trips across the border from Texas into northern Mexico, 15 years previously. However, in the preoperative treatment of his renal insufficiency and during his postoperative hemodialysis, he had received 56 units of whole blood.

Of the 56 blood donors, 33 were located and interviewed; none gave a history of malaria, but 13 had traveled to malarious areas. Serum was obtained from eight of the 13 and analyzed for the presence of malaria antibodies by the indirect fluorescent technique. Only one of the eight, a 21-year-old Nigerian exchange student, had a positive serologic test. The dilution end points in his serum were 1:2,560 against *P. malariae*, 1:640 against *P. falciparum*, and 1:160 against *P. ovale* and *P. vivax*; these results

indicated a recent *P. malariae* infection. Blood smears were obtained from this donor on several occasions, but no malaria parasites were detected. On August 23, 1968, 10 ml of his fresh blood were given intravenously to a volunteer recipient, and on September 10, *P. malariae* parasites were detected in the volunteer's peripheral blood. On repeated questioning, the Nigerian donor denied having had malaria at any time in his life. He had been well since arriving in the United States in June 1966; he had not used antimalarial drugs. The blood which he donated on June 15 was given to the patient on June 17.

(Reported by James P. Luby, M.D., and Paul M. Southern, Jr., M.D., Department of Internal Medicine, University of Texas Southwestern Medical School at Dallas; Hal J. Dewlett, M.D., M.P.H., Dallas City Health Department; M.S. Dickerson, M.D., M.P.H., Director, Communicable Disease Division, Texas State Department of Health; and Peter G. Contacos, M.D., Head, Section on Primate Malaria, Laboratory of Parasite Chemotherapy, National Institute of Health, Chamblee, Georgia.)

Editorial Note:

Plasmodium malariae is endemic in Nigeria. Infections caused by this species are noted for their chronic and benign nature (relapses have been noted after more than 20 years in some cases) and tendency to persist at very

low parasite densities in the immune host. The absence of a history of illness in the responsible donor suggests that he had contracted malaria as a child and acquired sufficient immunity to permit his subsequent asymptomatic

sub-patent parasitemia. The case also illustrates that for induced malaria the infective dose of *P. malariae* trophozoites can be below the level detectable by examination of peripheral blood smears.

SUSPECT SCRUB TYPHUS – Kansas

On March 24, 1968, a 21-year-old serviceman who had just arrived in Topeka, Kansas, after 13 months of duty in Vietnam complained of fever, malaise, painful swelling in the left groin, and a papular lesion on the left thigh. On March 26 he consulted a physician who prescribed sulfadiazine, and on March 27 he was hospitalized for diagnostic evaluation.

On admission, the patient's liver was slightly enlarged and his spleen was palpable; he had a 3-4 cm tender left inguinal node and a raised papule on the anterolateral aspect of his left leg. Laboratory studies revealed hematuria and a cerebral spinal fluid pleocytosis consisting of 12 lymphocytes. He also had a direct reacting bilirubin of 4.8 mgm per 100 ml, 80 percent of which was unconjugated. Other liver function tests were normal, and febrile agglutinins were unrevealing. Cultures, including one of fluid taken from the inguinal lymph node, and direct staining of the lymph aspirate were all negative. On March 31, the possibility of plague was considered, and after several blood specimens were taken, the patient was started on chloromycetin and streptomycin. His temperature was normal 48 hours later. Examination on April 5 revealed a round ulcer-like lesion on the anterior left hip and a 1-2 cm left inguinal node. The patient has now recovered.

During the last month of the patient's service in Vietnam, he had worked and slept in a warehouse. He reported having seen and heard rats, but he denied having handled them or seen any dead animals.

The patient's military record showed that he had received an injection of plague vaccine on March 15, 1968. A serum titer to *Pasteurella pestis* of 1:128 was demonstrated in the patient's acute phase serum, but this was believed compatible with the immunization history. Sera, drawn on April 5 (12 days after onset of illness) and on April 25, had a titer of 1:640 for *Rickettsia tsutsugamushi*,

using an indirect immunofluorescent test. A complement fixation test for the spotted fever group was negative in both sera. This high titer is compatible with a recent infection with *R. tsutsugamushi* and strongly suggests that the disease was scrub typhus.

(Reported by William Hamilton, M.D., MC, USA, Fort Riley, Kansas; Ralph Singer, Colonel, MC, USA.; Bennett Elisberg, M.D., Chief, Department of Rickettsial Diseases, Walter Reed Army Institute of Research; Virus Disease Section, Ecological Investigations Program, NCDC, Kansas City, Kansas; and an EIS Officer.)

Editorial Note:

Scrub typhus is not a notifiable disease in the United States but is reported optionally by states. Since 1951 only one case has been reported to NCDC, that in an ill Vietnam returnee reported from Florida in 1966. However, 129 cases of scrub typhus were reported by the armed services for the 2-year period, 1966-1967 (Table 2).

Table 2
Scrub Typhus in U.S. Troops in Vietnam*
January 1966 – December 1967

Year	Service Branch	Number of Cases	Rate per 1,000 Troops per Year
1966	Army	37	0.2
	Navy and Marines	1	0.01
	Air Force	1	0.03
1967	Army	54	0.2
	Navy and Marines	34	0.3
	Air Force	2	0.04

*Based on Report of Military Assistance Command, Vietnam Morbidity Report, Prepared by Surgeon's Office MACV on Admission Diagnosis.

SURVEILLANCE SUMMARY MEASLES – United States

For the week ending October 5, 1968 (week 40), there were 108 cases of measles reported to the NCDC. This is a decrease of 116 cases from the 224 cases reported in the corresponding week last year. The number of cases reported in the 4-week period ending October 5, 1968, shows a slight decrease in reported cases from the preceding 4 weeks (Figure 2, inset).

For epidemiologic year* (EY) 1967-68, a total of 23,883 cases of measles were reported to the NCDC. This number is the lowest recorded total for any epidemiologic year and represents 34 percent, 11 percent, and 9 percent of the cases reported for EY 1966-67, 1965-66, and 1964-65, respectively. This reduction, in addition to reflecting a

steady improvement in immunization status, also reflects improved reporting techniques at the state level; several states initiated individual case investigation programs which resulted in a significant number of cases being deleted from official records (New Jersey, MMWR, Vol. 17, No. 24 and Los Angeles, MMWR, Vol. 17, No. 25). Some investigations resulted in reporting additional cases (Louisiana, MMWR, Vol. 17, No. 38). Continued efforts in the coming year should result in further improvements in the accuracy of reporting.

Beginning in EY 1966-67 a change in the seasonal pattern of reported measles was noted (Figure 2). This
(Continued on page 380)

MEASLES - (Continued from page 379)

Figure 2
REPORTED MEASLES BY 4-WEEK PERIOD, USA
EPIDEMIOLOGIC YEARS 1964-65 THROUGH 1967-68

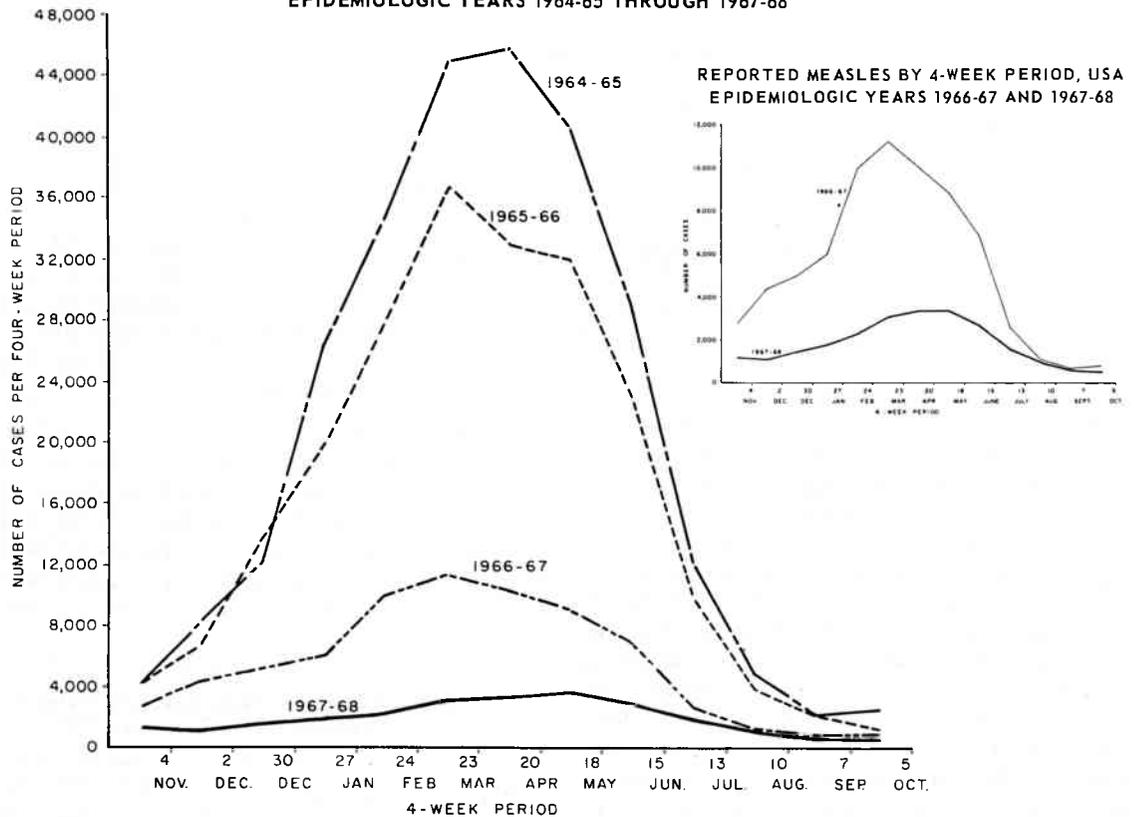


Table 3
Reported Measles by Geographic Divisions, USA, Epidemiologic Years,
1964-65 through 1967-68 and Percent Change from Preceding Epidemiologic Year

Geographic Division	1967-68*		1966-67		1965-66*		1964-65*	
	Number of cases	Percent decrease from 1966-67	Number of cases	Percent decrease from 1965-66	Number of cases	Percent decrease from 1964-65	Number of cases	Percent decrease from 1963-64
United States	23,883	66.2	70,638	67.0	213,992	19.6	266,310	45.7
New England	1,268	7.5	1,179	59.4	2,902	93.2	42,448	125.5
Middle Atlantic	4,470	52.9	2,923	87.0	22,542	38.3	16,295	71.8
East North Central	4,657	35.8	7,256	90.7	77,616	29.5	59,955	44.6
West North Central	524	85.3	3,557	63.2	9,656	46.4	18,013	42.5
South Atlantic	1,992	75.0	7,964	54.3	17,430	36.4	27,391	34.8
East South Central	806	87.2	6,283	71.6	22,162	42.1	15,596	77.8
West South Central	5,647	72.4	20,445	21.1	25,923	21.1	32,857	55.2
Mountain	1,362	75.2	5,491	58.6	13,272	42.2	22,947	11.9
Pacific	3,157	79.7	15,540	30.9	22,489	27.0	30,808	55.0

*Bold type indicates increase over preceding epidemiologic year.

change is even more evident in the current epidemiologic year (Figure 2, inset).

In Table 3, the reported cases of measles by geographic division for EY 1967-68 are compared with the cases reported for FY 1966-67, 1965-66, and 1964-65. During the 2 epidemiologic years prior to the initiation of the

national measles eradication program in October 1966, five of the nine geographic divisions showed an increase in the cases reported from the preceding epidemiologic year (the Middle Atlantic, East North Central, and East South Central in EY 1965-66 and the New England and Mountain in EY 1964-65); however, in EY 1966-67, all

geographic divisions showed a substantial decrease; seven of the nine showed more than a 50 percent reduction.

For EY 1967-68, the nation as a whole showed approximately the same rate of decrease from 1966-67 as was noted in EY 1966-67 from the preceding epidemiologic year. However, there were two geographic divisions that did not follow this pattern. The New England and Middle Atlantic divisions showed an increase. These increases may reflect inadequate immunization maintenance programs following mass immunization programs. With the exception of the East North Central division, which had noted the high-

est rate of decrease in EY 1966-67, all other geographic divisions showed a higher rate of decrease in EY 1967-68 than was noted for the preceding epidemiologic year. All of these six divisions reported between 13 and 28 percent as many cases as each had reported during the previous epidemiologic year.

(Reported by State Services Section, and Statistics Section, Epidemiology Program, NCDC.)

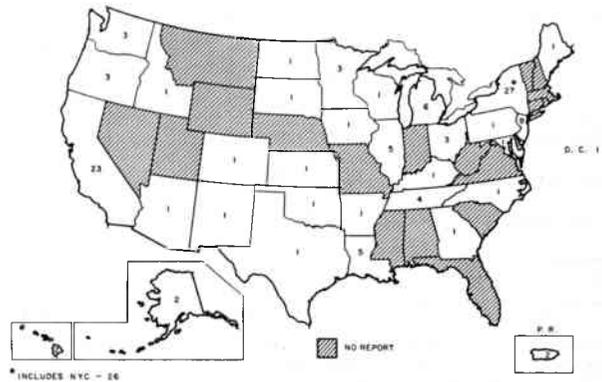
*The epidemiologic year for measles begins with week number 41 of the calendar year and ends with week number 40 of the succeeding year.

FOODBORNE DISEASE OUTBREAKS - January-June 1968

During the first 6 months of 1968, 31 states, Washington, D.C., and Puerto Rico reported 115 outbreaks of foodborne diseases to NCDC (Figure 3). These surveillance data have been compiled in an effort to characterize and to quantitate diseases caused by foodborne outbreaks, to study the types of vehicles and sources of contamination particularly when interstate products are involved, and to suggest possible control measures.

Although the data collected represent only a small percentage of the total number of outbreaks that occur in the United States, various trends and the predominance of certain etiologic agents became apparent. The total number of people affected in the 115 outbreaks during the first 6 months of 1968 was 7,663 (Table 4). The etiology was confirmed in 69 of the 115 outbreaks (60 percent). *Clostridium perfringens* was most frequently the cause of illness and accounted for 2,761 cases in 21 outbreaks. Staphylococcal food poisoning was second accounting for 2,391 cases in 29 outbreaks. Turkey, beef, and chicken were the

Figure 3
REPORTED OUTBREAKS OF FOODBORNE ILLNESS
USA AND PUERTO RICO - JANUARY-JUNE 1968



vehicles most frequently responsible for *C. perfringens* outbreaks (Table 5). Pork, beef, vegetables, and chicken
(Continued on page 382)

Table 4
Etiology of Confirmed and Unconfirmed Outbreaks of Foodborne Illness
January - June 1968

Etiology	Outbreaks						Cases					
	Confirmed		Unconfirmed		Total		Confirmed		Unconfirmed		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Bacterial	58	50.5	21	18.2	79	68.7	6,476	84.4	580	7.3	7,056	92.1
Brucella			1	.9	1	.9			2		2	
<i>C. botulinum</i>	1	.9	3	2.6	4	3.5	1	*	3		4	.1
<i>C. perfringens</i>	17	14.8	4	3.4	21	18.2	2,291	29.9	470	6.1	2,761	36.0
<i>E. coli</i>	1	.9	3	2.6	4	3.5	360	4.7	22	.2	382	5.0
Salmonella	13	11.3	1	.9	14	12.2	677	8.8	3		680	8.9
Shigella	1	.9	-	-	1	.9	195	2.5			195	2.5
Staphylococcus	21	18.3	8	6.9	29	25.2	2,317	30.2	74	.9	2,391	31.2
Streptococcus	4	3.4	1	.9	5	4.3	635	8.3	6	.1	641	8.4
Parasitic	2	1.7	1	.9	3	2.6	7	.1	2		9	.1
<i>Trichinella spiralis</i>	2	1.7	1	.9	3	2.6	7	.1	2		9	.1
Viral	3	2.6			3	2.6	136	1.7			136	1.7
Hepatitis	2	2.6			3	2.6	136	1.7			136	1.7
Chemical	6	5.2	3	2.6	9	7.8	33	.4	10	.1	43	.6
Miscellaneous			1	.9	1	.9			5	.6	5	.1
Unknown			20	17.4	20	17.4			414	5.4	414	5.4
Total	69	60.0	46	40.0	115	100.0	6,652	86.6	1,011	13.4	7,663	100.0

*Any value less than .1 was omitted

FOODBORNE DISEASE OUTBREAKS - (Continued from page 381)

Table 5
Vehicles Associated with Foodborne Illness of Specific Etiology¹
January - June 1968

Etiology	Turkey	Chicken	Egg	Milk	Beef	Pork	Other meat	Vegetables	Shellfish	Other fish	Water	Other	Unknown
Bacterial													
Brucella				1									
<i>C. botulinum</i>							1	1		1			1
<i>C. perfringens</i> ²	9*	3*			9*			1		1			1
<i>E. coli</i>			1				1				1	1	
Salmonella ³	1*	1	2		3	3	1	3					1
Shigella													1
Staphylococcus ⁴	3	4			5	6	1	5	1	2		4	2
Streptococcus	1		1		1		1	1					
Parasitic													
<i>Trichinella spiralis</i>						3							
Viral													
Hepatitis											2	1	
Chemical ³		1	1		2			2				4	
Miscellaneous						1							
Unknown	1	1	1		3	1	1	3	3	1		1	4
Total	15	10	6	1	23	14	6	16	4	5	3	11	10

¹Includes suspected as well as proven vehicles²Three outbreaks with two vehicles³One outbreak with two vehicles⁴Two outbreaks with two vehicles and one outbreak with three vehicles

*Includes some outbreaks due to meat and/or gravy and/or dressing

Table 6
Sources of Contamination of Vehicles in Foodborne Illness by Etiology
January - June 1968

Etiology	Packaged or bulk food	Commercially prepared food	Home prepared	Unknown - unspecified
Bacterial				
Brucella			1	
<i>C. botulinum</i>	1*		2	1
<i>C. perfringens</i>	2	7	2	10
<i>E. coli</i>		2	1	1
Salmonella	1	8	2	3
Shigella		1		
Staphylococcus	1	17	2	9
Streptococcus		4		1
Parasitic				
<i>Trichinella spiralis</i>	2		1	
Viral				
Hepatitis	1	1	1	
Chemical		7	1	1
Miscellaneous		1		
Total	8	48	13	26

*Suspected not proven

Table 7
Places of Acquisition of Foodborne Illness by Etiology
January - June 1968

Etiology	Home	Restaurant	Banquet	School	Store	Medical institution	Other	Unknown	Total
Bacterial									
Brucella	1								1
<i>C. botulinum</i>	3		1						4
<i>C. perfringens</i>	2	7	5	5	1	1			21
<i>E. coli</i>		2	1				1		4
Salmonella	5	4	2		1		2		14
Shigella		1							1
Staphylococcus	5	11	6	2	4		1		29
Streptococcus	3				1		1		5
Parasitic									
<i>Trichinella spiralis</i>	3								3
Viral									
Hepatitis				2	1				3
Chemical	3	4			1		1		9
Miscellaneous	1								1
Unknown	6	8	2	2	1		1		20
Total outbreaks	32	37	17	11	10	1	7	-	115
Number of persons	316	1,913	1,458	2,750	143	243	840	-	7,663

were the most often incriminated vehicles in staphylococcal outbreaks.

When the data were studied to determine the source of contamination of the vehicles involved in the foodborne outbreaks (Table 6), it was found that 48 (42 percent) were contaminated during processing in a commercial establishment for public consumption, 13 (11 percent) contaminated during processing in the home, and 8 (7 percent) contaminated in preparation for marketing. The largest number of outbreaks (37) occurred in restaurants and involved 1,913 individuals (Table 7). The largest number of cases occurred in schools (2,750) accounting for 11 outbreaks. While 32 outbreaks took place in homes, only 316 persons

were affected. Illness due to brucella, *C. botulinum*, and *Trichinella spiralis* tended to occur at home and that due to *C. perfringens* and *S. aureus* in public facilities.

(Reported by Enteric Diseases Unit, Bacterial Diseases Section, Epidemiology Program, and Laboratory Program, NCDC.)

A copy of the original report from which these data were derived is available on request from:
National Communicable Disease Center
Atlanta, Georgia 30333
Attn: Chief, Enteric Diseases Unit
Bacterial Diseases Section
Epidemiology Program

HUMAN LISTERIOSIS - United States 1967

In 1967 a total of 60 human cases of listeriosis were reported to NCDC from 24 states. At least 10 of the 60 cases (16.7 percent) were fatal. Of the 50 cases where sex was reported, 34 were males and 16 were females (Table 8). More cases occurred in infants less than 1 year old than in any other age group. Infecting serotypes were identified in 38 of the 60 cases and the most frequently identified was *Listeria monocytogenes* type 1 b (Table 9).

Listeriosis is not a reportable disease. However, cases are being voluntarily reported to NCDC with increasing frequency. At present there is only limited information on the pathogenesis, epidemiology, epizootiology, clinical

manifestations, laboratory diagnosis, and reservoirs of this disease. Interested laboratories and public health departments are encouraged to contribute complete case histories, cultures for serotyping, and sera for serologic diagnosis to NCDC. Cultures and sera may be addressed to:

National Communicable Disease Center
Atlanta, Georgia 30333
Attn: Chief, Bacterial Serology Unit
Laboratory Program

(Continued on page 388)

Morbidity and Mortality Weekly Report

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

OCTOBER 12, 1968 AND OCTOBER 14, 1967 (41st WEEK)

AREA	ASEPTIC MENINGITIS		BRUCELLOSIS	DIPHTHERIA	ENCEPHALITIS			HEPATITIS		MALARIA	
	1968	1967			Primary including unsp. cases	Post-Infectious	Serum	Infectious			
								1968	1967		1968
UNITED STATES...	158	89	5	4	54	38	4	107	994	669	101
NEW ENGLAND.....	10	-	-	-	1	2	-	6	68	37	3
Maine*	2	-	-	-	-	-	-	-	5	1	-
New Hampshire.....	-	-	-	-	-	-	-	-	-	2	-
Vermont.....	-	-	-	-	-	-	-	-	3	-	-
Massachusetts.....	6	-	-	-	1	-	-	-	35	15	3
Rhode Island.....	2	-	-	-	-	2	-	2	11	4	-
Connecticut.....	-	-	-	-	-	-	-	4	14	15	-
MIDDLE ATLANTIC.....	22	3	-	-	8	1	-	36	153	83	11
New York City.....	10	-	-	-	2	-	-	22	50	19	2
New York, up-State*	1	1	-	-	2	-	-	3	34	30	2
New Jersey*	8	1	-	-	2	-	-	5	31	20	-
Pennsylvania.....	3	1	-	-	2	1	-	6	38	14	7
EAST NORTH CENTRAL...	48	10	-	-	34	18	-	10	137	97	5
Ohio.....	13	2	-	-	20	15	-	-	48	45	-
Indiana.....	6	-	-	-	2	-	-	-	8	10	4
Illinois.....	5	3	-	-	6	-	-	-	8	4	1
Michigan.....	23	5	-	-	5	3	-	10	61	34	-
Wisconsin.....	1	-	-	-	1	-	-	-	12	4	-
WEST NORTH CENTRAL...	1	1	-	-	-	6	-	1	47	39	3
Minnesota.....	-	1	-	-	-	1	-	1	18	9	1
Iowa.*.....	-	-	-	-	-	3	-	-	5	5	-
Missouri.....	-	-	-	-	-	2	-	-	19	16	-
North Dakota.....	1	-	-	-	-	-	-	-	1	1	-
South Dakota.....	-	-	-	-	-	-	-	-	-	1	-
Nebraska.....	-	-	-	-	-	-	-	-	-	3	-
Kansas.....	-	-	-	-	-	-	-	-	4	4	2
SOUTH ATLANTIC.....	8	13	2	2	2	-	-	3	134	61	6
Delaware.....	-	-	-	-	-	-	-	-	2	-	-
Maryland.....	3	9	-	-	1	-	-	-	11	8	-
Dist. of Columbia..	-	-	-	-	-	-	-	-	-	1	-
Virginia.....	2	1	2	-	-	-	-	2	63	13	-
West Virginia.....	1	-	-	-	-	-	-	-	2	9	-
North Carolina.....	1	-	-	-	1	-	-	-	7	5	5
South Carolina.....	1	-	-	-	-	-	-	-	8	4	-
Georgia.....	-	-	-	-	-	-	-	-	18	15	-
Florida.....	-	3	-	2	-	-	-	1	23	6	1
EAST SOUTH CENTRAL...	3	31	-	-	-	2	1	3	42	45	-
Kentucky.....	-	14	-	-	-	-	-	-	8	16	-
Tennessee.....	1	6	-	-	-	1	1	2	19	14	-
Alabama.....	-	7	-	-	-	-	-	1	8	-	-
Mississippi.....	2	4	-	-	-	1	-	-	7	15	-
WEST SOUTH CENTRAL...	9	4	1	1	-	-	-	2	83	81	1
Arkansas.....	-	-	-	-	-	-	-	1	2	10	-
Louisiana.....	1	1	-	1	-	-	-	1	17	27	1
Oklahoma.....	2	-	-	-	-	-	-	-	12	4	-
Texas.....	6	3	1	-	-	-	-	-	52	40	-
MOUNTAIN.....	3	1	-	1	5	-	-	3	38	29	8
Montana.*.....	-	-	-	-	2	-	-	-	10	2	-
Idaho.....	-	-	-	-	-	-	-	-	1	1	-
Wyoming.....	-	-	-	-	-	-	-	-	6	-	-
Colorado.....	1	-	-	1	1	-	-	-	-	-	8
New Mexico.....	-	-	-	-	-	-	-	-	5	13	-
Arizona.....	2	-	-	-	1	-	-	1	13	10	-
Utah.....	-	1	-	-	1	-	-	2	2	-	-
Nevada.....	-	-	-	-	-	-	-	-	1	3	-
PACIFIC.....	54	26	2	-	4	9	3	43	292	197	64
Washington.....	1	-	-	-	1	-	-	1	25	11	-
Oregon.....	4	2	-	-	-	-	-	1	16	20	2
California.....	49	22	1	-	3	9	3	41	249	166	61**
Alaska.....	-	-	1	-	-	-	-	-	-	-	-
Hawaii.....	-	2	-	-	-	-	-	-	2	-	1
Puerto Rico.....	-	-	-	-	-	-	-	-	35	24	-

*Delayed reports: Aseptic meningitis: Mont. 1

**Delayed military case reports

Encephalitis, primary: Mont. 4
Hepatitis serum: N. Y. Upstate 6
Hepatitis infectious: Me. 1, N. J. delete 5
Malaria: Iowa 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED
OCTOBER 12, 1968 AND OCTOBER 14, 1967 (41st WEEK) - CONTINUED

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS	POLIOMYELITIS			RUBELLA	
	1968	Cumulative		1968	Cumulative			1968	Total	Paralytic		
		1968	1967		1968	1967				1968		Cum. 1968
UNITED STATES...	113	20,113	58,712	30	2,135	1,783	1,106	-	-	48	252	
NEW ENGLAND.....	1	1,169	870	1	125	73	116	-	-	1	34	
Maine*.....	-	38	246	-	6	3	13	-	-	-	2	
New Hampshire.....	-	141	76	-	7	2	2	-	-	-	-	
Vermont.....	-	2	34	-	1	1	23	-	-	-	-	
Massachusetts.....	1	368	361	-	64	34	56	-	-	1	15	
Rhode Island.....	-	6	62	-	9	4	9	-	-	-	1	
Connecticut.....	-	614	91	1	38	29	13	-	-	-	16	
MIDDLE ATLANTIC.....	16	4,135	2,305	6	386	292	39	-	-	-	12	
New York City.....	11	2,174	474	2	78	51	30	-	-	-	2	
New York, Up-State.....	5	1,232	594	1	69	71	NN	-	-	-	9	
New Jersey*.....	-	614	490	3	134	96	9	-	-	-	1	
Pennsylvania*.....	-	115	747	-	105	74	NN	-	-	-	-	
EAST NORTH CENTRAL...	27	3,886	5,614	1	258	238	264	-	-	3	90	
Ohio.....	-	297	1,155	-	70	82	17	-	-	1	6	
Indiana.....	-	685	604	1	36	25	33	-	-	1	21	
Illinois.....	1	1,379	1,006	-	58	56	50	-	-	1	10	
Michigan.....	7	284	950	-	74	58	44	-	-	-	23	
Wisconsin.....	19	1,241	1,899	-	20	17	120	-	-	-	30	
WEST NORTH CENTRAL...	3	393	2,888	-	114	80	119	-	-	4	8	
Minnesota.....	-	16	134	-	27	19	1	-	-	-	3	
Iowa.....	1	103	750	-	7	16	98	-	-	2	2	
Missouri.....	-	81	337	-	37	16	1	-	-	2	1	
North Dakota.....	2	137	874	-	3	2	17	-	-	-	2	
South Dakota.....	-	4	55	-	5	6	NN	-	-	-	-	
Nebraska.....	-	42	644	-	8	13	2	-	-	-	-	
Kansas.....	-	10	94	-	27	8	-	-	-	-	-	
SOUTH ATLANTIC.....	5	1,533	6,969	8	429	349	98	-	-	3	12	
Delaware.....	-	16	49	-	8	7	3	-	-	-	-	
Maryland.....	-	102	165	1	35	46	11	-	-	-	2	
Dist. of Columbia..	-	6	23	1	15	11	-	-	-	1	-	
Virginia.....	1	306	2,197	1	40	41	2	-	-	-	-	
West Virginia.....	1	293	1,401	1	13	33	55	-	-	1	7	
North Carolina.....	1	283	880	2	82	71	NN	-	-	1	-	
South Carolina.....	-	12	511	1	58	29	-	-	-	-	-	
Georgia.....	-	4	36	1	86	53	-	-	-	-	-	
Florida.....	2	511	1,707	-	92	58	27	-	-	-	3	
EAST SOUTH CENTRAL...	1	497	5,254	4	194	140	27	-	-	2	9	
Kentucky.....	-	100	1,345	3	89	41	10	-	-	1	1	
Tennessee.....	-	62	1,909	1	56	59	16	-	-	-	8	
Alabama.....	1	95	1,332	-	26	26	1	-	-	1	-	
Mississippi.....	-	240	668	-	23	14	-	-	-	-	-	
WEST SOUTH CENTRAL...	25	4,889	17,613	3	313	230	75	-	-	23	15	
Arkansas.....	-	2	1,404	-	20	33	-	-	-	-	-	
Louisiana.....	-	24	156	-	88	91	1	-	-	-	-	
Oklahoma.....	2	125	3,351	-	50	17	1	-	-	2	-	
Texas.....	23	4,738	12,702	3	155	89	73	-	-	21	15	
MOUNTAIN.....	1	1,008	4,723	2	36	33	77	-	-	-	21	
Montana.....	-	58	303	-	6	2	6	-	-	-	-	
Idaho.....	-	21	391	-	11	3	3	-	-	-	2	
Wyoming.....	-	52	181	-	1	1	-	-	-	-	-	
Colorado.....	-	515	1,584	1	11	13	28	-	-	-	9	
New Mexico.....	-	113	591	-	-	3	11	-	-	-	1	
Arizona*.....	1	223	1,022	1	3	4	15	-	-	-	7	
Utah.....	-	21	382	-	1	4	14	-	-	-	2	
Nevada.....	-	5	269	-	3	3	-	-	-	-	-	
PACIFIC.....	34	2,603	12,476	5	280	348	291	-	-	12	51	
Washington.....	6	546	5,501	4	44	31	66	-	-	1	8	
Oregon.....	4	534	1,643	1	22	27	1	-	-	-	5	
California.....	24	1,479	5,017	-	199	276	219	-	-	11	37	
Alaska*.....	-	9	140	-	3	10	5	-	-	-	-	
Hawaii.....	-	35	175	-	12	4	-	-	-	-	1	
Puerto Rico.....	10	434	2,142	-	20	13	29	-	-	-	1	

*Delayed reports: Measles: N.J. delete 32, Pa. delete 5, Ariz. delete 6, Alaska 7

Mumps: Me. 21

Rubella: Me. 1

Morbidity and Mortality Weekly Report

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED
OCTOBER 12, 1968 AND OCTOBER 14, 1967 (41st WEEK) - CONTINUED

AREA	STREPTOCOCCAL SORE THROAT & SCARLET FEVER	TETANUS		TULAREMIA		TYPHOID		TYPHUS FEVER TICK-BORNE (Rky. Mt. Spotted)		RABIES IN ANIMALS	
		1968	1968	Cum. 1968	1968	Cum. 1968	1968	Cum. 1968	1968	Cum. 1968	1968
UNITED STATES...	6,663	8	138	2	156	11	304	1	262	55	2,783
NEW ENGLAND.....	641	-	3	-	47	1	9	-	1	1	72
Maine.*.....	20	-	-	-	-	-	-	-	-	-	53
New Hampshire.....	29	-	-	-	-	-	1	-	-	-	2
Vermont.....	17	-	-	-	47	-	-	-	-	-	11
Massachusetts.....	131	-	1	-	-	1	5	-	1	1	5
Rhode Island.....	50	-	-	-	-	-	-	-	-	-	-
Connecticut.....	394	-	2	-	-	-	3	-	-	-	1
MIDDLE ATLANTIC.....	123	-	17	-	7	2	26	-	19	1	44
New York City.....	3	-	10	-	-	2	14	-	-	-	-
New York, Up-State.....	105	-	4	-	7	-	5	-	4	1	37
New Jersey.....	NN	-	-	-	-	-	4	-	6	-	-
Pennsylvania.....	15	-	3	-	-	-	3	-	9	-	7
EAST NORTH CENTRAL...	396	2	13	1	11	1	40	1	9	2	255
Ohio.....	39	-	1	-	1	1	17	1	7	-	86
Indiana.....	112	1	3	-	1	-	3	-	-	1	83
Illinois.....	58	-	5	1	8	-	19	-	2	1	36
Michigan.....	127	1	3	-	1	-	-	-	-	-	14
Wisconsin.....	60	-	1	-	-	-	1	-	-	-	36
WEST NORTH CENTRAL...	204	-	13	-	15	-	34	-	9	18	694
Minnesota.....	27	-	2	-	-	-	1	-	-	6	214
Iowa.....	75	-	4	-	-	-	2	-	1	1	110
Missouri.....	-	-	4	-	7	-	25	-	3	6	101
North Dakota.....	59	-	-	-	-	-	-	-	-	3	108
South Dakota*.....	19	-	-	-	3	-	1	-	4	-	97
Nebraska.....	4	-	3	-	-	-	3	-	1	-	25
Kansas.....	20	-	-	-	5	-	2	-	-	2	39
SOUTH ATLANTIC.....	786	4	32	-	11	1	56	-	139	10	328
Delaware.....	1	-	-	-	-	-	-	-	-	-	1
Maryland.....	71	-	3	-	-	-	9	-	18	-	5
Dist. of Columbia..	3	-	2	-	-	-	1	-	-	-	1
Virginia.....	270	-	4	-	3	-	9	-	42	4	116
West Virginia.....	200	-	2	-	-	-	-	-	2	1	42
North Carolina.....	22	-	2	-	2	-	2	-	39	1	13
South Carolina.....	60	1	4	-	-	-	4	-	9	-	-
Georgia.....	19	3	3	-	4	-	14	-	26	2	61
Florida.....	140	-	12	-	2	1	17	-	3	2	89
EAST SOUTH CENTRAL...	1,351	-	15	-	8	4	35	-	51	8	590
Kentucky.....	113	-	1	-	1	2	8	-	10	5	301
Tennessee.....	1,026	-	6	-	5	-	16	-	35	3	261
Alabama.....	105	-	5	-	-	-	2	-	4	-	22
Mississippi.....	107	-	3	-	2	2	9	-	2	-	6
WEST SOUTH CENTRAL...	671	-	25	1	45	-	40	-	28	5	439
Arkansas.....	8	-	4	-	15	-	11	-	6	-	54
Louisiana*.....	53	-	9	1	7	-	6	-	1	7	41
Oklahoma.....	18	-	-	-	8	-	12	-	13	-	117
Texas.....	592	-	12	-	15	-	11	-	8	5	227
MOUNTAIN.....	1,228	1	1	-	8	-	15	-	5	1	79
Montana.....	23	-	-	-	-	-	-	-	-	-	-
Idaho.....	69	-	-	-	-	-	-	-	1	-	-
Wyoming.....	25	-	-	-	1	-	1	-	-	-	3
Colorado.....	848	-	-	-	3	-	2	-	4	-	4
New Mexico.....	130	-	-	-	-	-	8	-	-	-	33
Arizona.....	87	1	1	-	-	-	3	-	-	-	36
Utah.....	43	-	-	-	4	-	-	-	-	-	-
Nevada.....	3	-	-	-	-	-	1	-	-	1	3
PACIFIC.....	1,263	1	19	-	4	2	49	-	1	9	282
Washington.....	631	-	1	-	-	-	2	-	-	-	2
Oregon.....	67	-	1	-	1	-	5	-	-	-	6
California.....	482	1	17	-	3	2	42	-	1	9	274
Alaska.....	24	-	-	-	-	-	-	-	-	-	-
Hawaii.....	59	-	-	-	-	-	-	-	-	-	-
Puerto Rico.....	7	-	10	-	-	-	3	-	-	1	18

*Delayed reports: SST: Me. 29

Tetanus: La. delete 1

Rabies in animals: S.D. 18

LISTERIOSIS - (Continued from page 383)

Table 8
Reported Cases of Human Listeriosis by Sex and Age
United States, 1967

Age Group	Sex		Total
	Male	Female	
<1	10	3	13
1-9		1	1
10-19			
20-29		2	2
30-39	3	4	7
40-49	2		2
50-59	7	1	8
60-69	3	1	4
70 or >70	2	1	3
Unknown	7	3	10
Total	34	16	50

Table 9
Human Listeriosis by Infecting Serotype
United States, 1967

Cases	Infecting Serotype
5	1a
17	1b
1	2
2	4a
8	4b
4	4d
1	5
22	Unknown*
Total	60

*Cases in which no isolate was submitted to NCDC.

(Reported by Zoonoses Surveillance Unit, Veterinary Public Health Section, Epidemiologic Program, and Bacteriology Section, Laboratory Program, NCDC.)

A copy of the original report from which these data were derived is available on request from:

National Communicable Disease Center
Atlanta, Georgia 30333

Attn: Chief, Zoonoses Surveillance Unit, Veterinary Public Health Section, Epidemiology Program

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IN ADDITION TO THE ESTABLISHED PROCEDURES FOR REPORTING MORBIDITY AND MORTALITY, THE NATIONAL COMMUNICABLE DISEASE CENTER WELCOMES ACCOUNTS OF INTERESTING OUTBREAKS OR CASE INVESTIGATIONS WHICH ARE OF CURRENT INTEREST TO HEALTH OFFICIALS AND WHICH ARE DIRECTLY RELATED TO THE CONTROL OF COMMUNICABLE DISEASES. SUCH COMMUNICATIONS SHOULD BE ADDRESSED TO:

NATIONAL COMMUNICABLE DISEASE CENTER
ATLANTA, GEORGIA 30333
ATTN: THE EDITOR
MORBIDITY AND MORTALITY WEEKLY REPORT

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 ON SATURDAY; COMPILED DATA ON A NATIONAL BASIS ARE RELEASED ON THE SUCCEEDING FRIDAY.

U. S. DEPARTMENT OF
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