

Morbidity and Mortality

Weekly Report

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE

Prepared by the COMMUNICABLE DISEASE CENTER ME1rose 4-5131

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ATLANTA 22, GEORGIA

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PROVISIONAL INFORMATION ON SELECTED NOTIFIABLE DISEASES IN THE UNITED STATES AND ON DEATHS IN SELECTED CITIES FOR WEEK ENDED NOVEMBER 10, 1962

POLIOMYELITIS - Thirty-seven cases of poliomyelitis (28 paralytic) were reported for the week ending November 10, representing a marked increase over the 16 cases (13 paralytic) noted the preceding week and exceeding the total noted for the comparable week in 1961 when 30 cases (23 paralytic) were noted.

Many of these cases, reported this week from 16 States, represent delayed reports. An outbreak of paralytic poliomyelitis caused by Type I poliovirus has been noted among the Negro residents of Boomer, West Virginia (population 2,092). All four cases from West Virginia this week occurred in this outbreak. Eight other instances of

paralytic illness have been reported from Boomer and nearby Carbondale, West Virginia. The last case had onset on November 6. All but two cases were school aged children attending the same school from these communities. Inactivated vaccine was used extensively in October.

The four paralytic cases reported from Illinois this week represent delayed reports from Chicago, which has noted 32 cases of paralytic poliomyelitis thus far this year. No new case has been noted in the past three weeks. The Arkansas report consisted of cases noted in Fayetteville, where a Type I outbreak ultimately ac-

Table 1. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
(Cumulative totals include revised and delayed reports through previous week)

Disease	45th Week			Cumulative		
	Ended	Ended	Median 1957 - 1961	First 45 weeks		Median 1957 - 1961
	November 10, 1962	November 11, 1961		1962	1961	
Aseptic meningitis.....	35	74	---	2,250	2,892	---
Brucellosis.....	3	13	11	349	511	665
Diphtheria.....	7	13	22	383	494	683
Encephalitis, infectious.....	28	27	34	1,536	1,461	1,625
Hepatitis, infectious and serum...	807	1,039	435	47,211	63,918	19,227
Measles.....	1,890	2,284	2,284	453,177	397,137	405,051
Meningococcal infections.....	32	29	36	1,838	1,849	1,987
Poliomyelitis, total.....	37	30	76	770	1,210	5,282
Paralytic.....	28	23	56	610	787	2,606
Nonparalytic.....	5	5	14	111	293	1,872
Unspecified.....	4	2	6	49	130	804
Streptococcal sore throat and Scarlet fever.....	4,687	5,525	---	269,187	274,008	---
Tetanus.....	8	---	---	250	---	---
Tularemia.....	9	---	---	253	---	---
Typhoid fever.....	12	10	18	550	715	753
Typhus fever, tick-borne, (Rocky Mountain spotted).....	3	---	---	214	---	---
Rabies in Animals.....	44	58	60	3,218	2,990	3,365

Table 2. NOTIFIABLE DISEASES OF LOW FREQUENCY

Anthrax:
Botulism:
Malaria: N. C. - 1, N. Dak. - 1
Plague:

Psittacosis: Wis. - 1, Pa. - 1
Rabies in Man:
Smallpox:
Typhus, murine:

counted for ten paralytic cases including one fatality. Over 37,000 persons received Type I oral polio vaccine in a vaccination campaign which took place on November 4.

The totals for poliomyelitis incidence from the 1st through the 45th week for 1962 and the past four years is shown in the following table:

POLIOMYELITIS (1ST THROUGH 45TH WEEK) 1958-1962

	1962	1961	1960	1959	1958
Paralytic	610	787	2,053	5,189	2,681
Total	770	1,210	2,962	7,858	5,358

EPIDEMIOLOGICAL REPORT

Salmonella typhimurium Epidemics - Northwestern States

In September and October 1962, over 300 cases of *Salmonella typhimurium* were found to have occurred in Spokane, Washington. An intensive investigation revealed the source of infection as cream pies from one bakery and suggested that thousands of additional cases may have occurred in Washington and adjacent States.

Between September 24 and October 19, 1962, 27 salmonella isolations were obtained from Spokane County hospitals, an unusually large number for this county of 300,000. It became apparent that many of the cases were likely linked epidemiologically for the following reasons:

1. 25 of the 27 cases yielded *Salmonella typhimurium*. Although the most common serotype in this area and in the U. S., *S. typhimurium* does not normally account for 90 percent of isolates.
2. Only two cases were in young children (ages 2 and 3 respectively). The remainder ranged from adolescent to elderly in age.
3. The majority of cases were unrelated socially and lived in no geographic proximity to one another. No geographic concentration, either in the city cases or rural cases, was demonstrable.
4. The majority were from high-middle and high socioeconomic groups.
5. Multiple case occurrences in families were rare. Only two families had more than one case, and no families more than two cases.
6. Most of the cases were socially active individuals who not uncommonly ate in restaurants or other food service establishments away from home.

The 25 cases due to *S. typhimurium* were selected for study. Searching interviews were conducted and several of the cases were interviewed two and three times in an

effort to uncover clues which might lead to the recognition of a common denominator. From the maze of food items reported consumed in a variety of eating places, it was possible to focus on either banana cream pie or chocolate cream pie as definite possibilities. The dates on which 10 of the 25 had eaten banana or chocolate cream pie could be identified; the dates of eating were between September 14 and September 29. Two schools, one college, two restaurants out of the county, six restaurants within the county, and one hotel were listed as places of consumption of the cream pies. Because two of the eating places identified (the hotel and the college) were learned to have served large identifiable populations, the investigation was directed to these places.

Hotel Luncheon Epidemic

A church group of 180 women was served a luncheon on September 24 at the hotel. Starting with the 2 original cases who ate banana cream pie at the hotel on September 24 and asking whom they and subsequently contacted persons sat next to, it was possible to locate and interview 65 women by telephone. Of the 65 interviewed, 30 gave a history of experiencing illness within 96 hours after eating at the hotel. A distribution of these by date of onset is as follows:

Date	No. Ill
September 24	1
September 25	5
September 26	13
September 27	8
September 28	2
Date Unknown	1
Total . . .	30

The most frequent symptoms were diarrhea (83%), chills (50%), fever (50%), abdominal pain (50%), nausea (27%), and bloody stools (10%). Only two of the 30 had been hospitalized and, as far as is known, stool specimens were obtained only from these two cases. As indicated above, these yielded *Salmonella typhimurium*. A tabulation of food histories is shown below:

Food Item	Persons Who Ate Specified Foods			Persons Who did not eat Specified Foods		
	Total	Ill	% Ill	Total	Ill	% Ill
Salad	61	29	47.5	4	1	25.0
Creamed Chicken	63	30	47.7	2	0	00.0
Peas	58	29	50.0	7	1	14.3
Banana Pie	53	29	54.7	12	1	8.3
Apple Pie	4	0	00.0	61	30	49.2

It was felt, at this point, that the data obtained from the 65 contacted persons who attended the luncheon, though inconclusive, were generally in support of the hypothesis that banana or chocolate cream pies were likely sources.

The College Outbreak

Attention was next turned to a college in the Spokane vicinity. An 18-year-old student at that college had eaten chocolate cream pie there on September 29 and had developed illness on October 1. A review of infirmary records revealed that 42 persons in early October had been put to bed in the infirmary for illness compatible with salmonellosis. Chocolate cream pie had been served for dinner at the college on September 29 and September 30. It was learned that the source of the 80 pies was identical with that of the hotel church luncheon. A survey form was drafted, mimeographed, and distributed to the college students called together by the president of the college in an emergency meeting on October 25. Of 719 resident

students, 626 completed questionnaires. Two hundred and thirty-eight (238) students indicated that they had experienced gastrointestinal illness in late September or early October, (an overall attack rate of 38 percent). Distribution of cases by date of onset indicates an explosive outbreak.

Symptoms reported by the 238 students were as follows: diarrhea (65%), nausea or vomiting (56%), chills (48%), fever (44%), and abdominal cramps (36%). The duration of illness was under 5 days in approximately 80% of the cases.

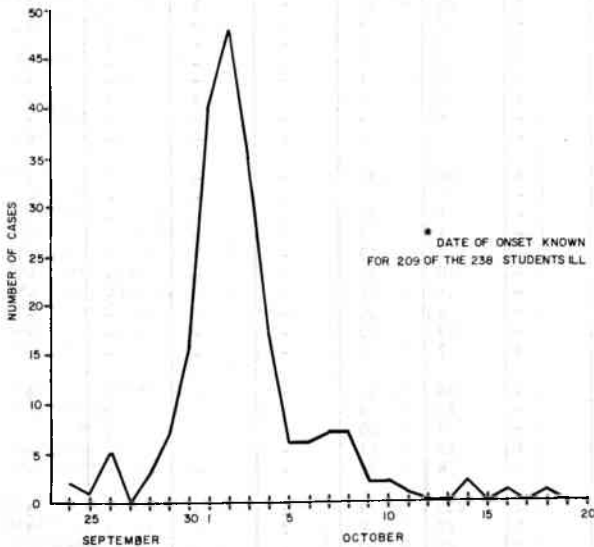
Attack rates were computed for only one item of food, chocolate cream pie. Among 414 who stated that they ate pie at approximately 5:30 P.M. either on September 29 or 30, 190 reported illness (46%) and among 212 who stated that they did not eat this food, 48 (23%) reported illness. Several problems were considered in the interpretation of these findings. Firstly, the interval between eating the suspected food and completing the questionnaires was 26 to 27 days and recall without benefit of interview could be expected to be far less than perfect. Secondly, it will be noted that many cases occurred well beyond the expected incubation period and undoubtedly represented secondary infections occurring in relatively crowded dormitory quarters. Thirdly, illness was reported by some prior to consumption of the suspected food. These cases and at least a few which occurred after consumption of the pie may have been due to other agents. The two-fold disparity in reported attack rates between those who did and those who did not report pie consumption was felt to be highly significant.

Source of Infection

The source of the cream pies served at the hotel and the college was a local bakery, a large producer of pies of several types. Ingredients used in cream pies were

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DATE OF ONSET* OF ILLNESSES AT THE COLLEGE



TOTAL DEATHS RECORDED IN 108 UNITED STATES CITIES

The weekly average number of total deaths in 108 cities for the four-week period ending November 10 was 11,432 as compared with an expected 11,129 weekly average.

	WEEK ENDING				4 WEEK TOTAL	WEEKLY AVERAGE
	10/20	10/27	11/3	11/10		
OBSERVED	11,767	11,056	11,410	11,495	45,728	11,432
EXPECTED	10,918	11,054	11,199	11,346	44,517	11,129
EXCESS	849	2	211	149	1,211	303

Table 3. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED
NOVEMBER 11, 1961 AND NOVEMBER 10, 1962

Area	Poliomyelitis, Total Cases				Poliomyelitis, Paralytic				Poliomyelitis, Nonparalytic		Aseptic Meningitis	
	45th week		Cumulative First 45 weeks		45th week		Cumulative First 45 weeks		45th week		45th week	
	1962	1961	1962	1961	1962	1961	1962	1961	1962	1961	1962	1961
UNITED STATES.....	37	30	770	1,210	28	23	610	787	5	5	35	74
NEW ENGLAND.....	1	4	8	38	-	3	7	26	1	1	-	2
Maine.....	-	-	-	5	-	-	-	5	-	-	-	-
New Hampshire.....	-	-	-	2	-	-	-	-	-	-	-	-
Vermont.....	1	4	1	11	-	3	-	9	1	1	-	-
Massachusetts.....	-	-	6	14	-	-	6	8	-	-	-	1
Rhode Island.....	-	-	-	1	-	-	-	1	-	-	-	1
Connecticut.....	-	-	1	5	-	-	1	3	-	-	-	-
MIDDLE ATLANTIC.....	-	7	72	313	-	4	52	207	-	2	3	2
New York.....	-	7	54	233	-	4	37	150	-	2	1	2
New Jersey.....	-	-	7	35	-	-	7	28	-	-	-	-
Pennsylvania.....	-	-	11	45	-	-	8	29	-	-	2	-
EAST NORTH CENTRAL.....	11	9	120	157	9	8	87	98	1	-	5	28
Ohio.....	-	2	19	45	-	2	17	21	-	-	-	2
Indiana.....	3	-	21	16	3	-	15	9	-	-	-	-
Illinois.....	5	1	53	33	4	1	37	16	-	-	4	20
Michigan.....	2	3	19	31	2	3	15	27	-	-	-	3
Wisconsin.....	1	3	8	32	-	2	3	25	1	-	1	3
WEST NORTH CENTRAL.....	-	3	37	72	-	2	26	32	-	1	4	10
Minnesota.....	-	-	7	6	-	-	7	6	-	-	3	6
Iowa.....	-	-	7	18	-	-	3	9	-	-	1	-
Missouri.....	-	1	10	24	-	1	5	7	-	-	-	-
North Dakota.....	-	-	4	4	-	-	2	1	-	-	-	-
South Dakota.....	-	2	1	3	-	1	1	1	-	1	-	-
Nebraska.....	-	-	8	8	-	-	8	4	-	-	-	-
Kansas.....	-	-	-	9	-	-	-	4	-	-	-	4
SOUTH ATLANTIC.....	9	2	66	209	6	2	58	152	-	-	2	4
Delaware.....	-	-	-	2	-	-	-	1	-	-	-	-
Maryland.....	1	-	2	39	-	-	1	29	-	-	-	-
District of Columbia..	-	-	2	3	-	-	1	3	-	-	-	-
Virginia.....	-	-	9	13	-	-	9	13	-	-	2	2
West Virginia.....	4	-	10	31	4	-	10	21	-	-	-	-
North Carolina.....	2	-	13	21	2	-	11	11	-	-	-	-
South Carolina.....	-	-	6	34	-	-	6	26	-	-	-	-
Georgia.....	2	-	16	30	-	-	13	23	-	-	-	-
Florida.....	-	2	8	36	-	2	7	25	-	-	-	2
EAST SOUTH CENTRAL.....	3	1	69	90	3	1	58	51	-	-	4	6
Kentucky.....	3	-	28	27	3	-	23	5	-	-	3	-
Tennessee.....	-	-	10	26	-	-	5	10	-	-	1	-
Alabama.....	-	1	22	11	-	1	22	11	-	-	-	6
Mississippi.....	-	-	9	26	-	-	8	25	-	-	-	-
WEST SOUTH CENTRAL.....	7	2	302	145	5	2	235	79	2	-	7	5
Arkansas.....	5	1	19	20	3	1	17	9	2	-	1	2
Louisiana.....	1	1	25	51	1	1	22	40	-	-	-	-
Oklahoma.....	-	-	21	4	-	-	16	-	-	-	-	-
Texas.....	1	-	237	70	1	-	180	30	-	-	6	3
MOUNTAIN.....	2	1	16	45	2	1	12	26	-	-	1	2
Montana.....	-	-	4	4	-	-	3	2	-	-	-	-
Idaho.....	-	-	2	14	-	-	1	6	-	-	-	-
Wyoming.....	-	-	2	-	-	-	1	-	-	-	-	-
Colorado.....	1	1	3	8	1	1	2	8	-	-	1	-
New Mexico.....	-	-	-	3	-	-	-	-	-	-	-	2
Arizona.....	1	-	4	8	1	-	4	6	-	-	-	-
Utah.....	-	-	1	8	-	-	1	4	-	-	-	-
Nevada.....	-	-	-	-	-	-	-	-	-	-	-	-
PACIFIC.....	4	1	80	141	3	-	75	116	1	1	9	15
Washington.....	-	-	5	26	-	-	5	26	-	-	2	2
Oregon.....	1	-	6	17	-	-	5	8	1	-	1	-
California.....	3	1	69	93	3	-	65	77	-	1	6	13
Alaska.....	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii.....	-	-	-	5	-	-	-	5	-	-	-	-
Puerto Rico.....	-	-	11	7	-	-	11	7	-	-	-	-

Table 3. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED
NOVEMBER 11, 1961 AND NOVEMBER 10, 1962 - (Continued)

Area	Brucellosis		Diphtheria		Encephalitis, Infectious		Hepatitis, Infectious and Serum				Measles	
	45th week	Cumulative 45 weeks	45th week	Cumulative 45 weeks	45th week		45th week				45th week	
							Under 20 yr.	20 & over	Total	Total		
	1962	1962	1962	1962	1962	1961	1962	1962	1962	1961	1962	1961
UNITED STATES.....	3	349	7	383	28	27	418	334	807	1,039	1,890	2,284
NEW ENGLAND.....	-	4	1	3	3	-	66	39	105	51	116	421
Maine.....	-	-	-	-	-	-	31	10	41	8	24	66
New Hampshire.....	-	-	-	-	-	-	3	1	4	8	16	-
Vermont.....	-	1	-	-	-	-	-	-	-	-	11	7
Massachusetts.....	-	1	-	1	-	-	25	22	47	29	40	317
Rhode Island.....	-	-	-	1	2	-	1	1	2	4	-	1
Connecticut.....	-	2	1	1	1	-	6	5	11	2	25	30
MIDDLE ATLANTIC.....	1	9	-	12	6	6	85	93	178	123	235	209
New York.....	-	4	-	10	2	6	38	48	86	69	59	110
New Jersey.....	-	1	-	1	-	-	13	15	28	23	39	30
Pennsylvania.....	1	4	-	1	4	-	34	30	64	31	137	69
EAST NORTH CENTRAL.....	-	78	-	10	3	3	73	64	143	205	809	374
Ohio.....	-	1	-	-	1	3	26	14	41	54	139	29
Indiana.....	-	5	-	5	-	-	7	3	11	29	10	38
Illinois.....	-	55	-	2	2	-	17	17	35	61	24	182
Michigan.....	-	6	-	3	-	-	23	29	52	58	284	58
Wisconsin.....	-	11	-	-	-	-	-	1	4	3	352	67
WEST NORTH CENTRAL.....	2	136	1	86	2	-	16	11	42	75	77	94
Minnesota.....	-	13	-	24	1	-	4	4	9	38	18	35
Iowa.....	2	80	-	15	-	-	5	2	11	21	-	49
Missouri.....	-	4	-	5	-	-	5	2	14	2	11	2
North Dakota.....	-	2	-	7	1	-	-	1	1	1	33	-
South Dakota.....	-	11	-	15	-	-	-	-	-	1	-	3
Nebraska.....	-	12	-	18	-	-	1	2	6	7	15	5
Kansas.....	-	14	1	2	-	-	1	-	1	5	NN	NN
SOUTH ATLANTIC.....	-	27	3	110	2	1	52	29	85	182	88	132
Delaware.....	-	-	-	-	-	-	-	2	2	-	2	1
Maryland.....	-	1	-	-	-	-	2	3	5	12	5	21
District of Columbia..	-	-	-	2	-	-	3	1	4	-	-	3
Virginia.....	-	13	-	12	-	-	7	2	11	41	11	32
West Virginia.....	-	-	-	2	-	-	14	3	17	18	32	53
North Carolina.....	-	2	-	11	1	-	17	4	21	51	9	11
South Carolina.....	-	-	-	10	-	-	-	-	-	16	-	3
Georgia.....	-	3	-	37	-	-	6	3	9	17	3	-
Florida.....	-	8	3	36	1	1	3	11	16	27	26	8
EAST SOUTH CENTRAL.....	-	16	1	29	4	1	39	16	63	156	85	216
Kentucky.....	-	1	-	-	1	1	10	2	20	30	13	15
Tennessee.....	-	7	-	7	3	-	17	8	25	69	66	157
Alabama.....	-	6	1	15	-	-	10	3	13	23	6	27
Mississippi.....	-	2	-	7	-	-	2	3	5	34	-	17
WEST SOUTH CENTRAL.....	-	34	1	113	2	3	27	21	48	54	47	158
Arkansas.....	-	9	-	18	1	1	3	3	6	14	2	3
Louisiana.....	-	8	1	10	-	-	5	5	10	7	3	-
Oklahoma.....	-	6	-	6	-	-	3	1	4	1	1	-
Texas.....	-	11	-	79	1	2	16	12	28	32	41	155
MOUNTAIN.....	-	12	-	9	-	2	8	3	29	43	179	167
Montana.....	-	1	-	6	-	-	-	-	-	4	25	115
Idaho.....	-	1	-	1	-	-	-	-	4	-	7	10
Wyoming.....	-	1	-	-	-	-	-	1	1	4	-	-
Colorado.....	-	2	-	-	-	-	-	-	7	11	60	12
New Mexico.....	-	-	-	2	-	1	5	-	5	9	NN	NN
Arizona.....	-	3	-	-	-	-	-	-	6	8	16	26
Utah.....	-	4	-	-	-	1	3	2	6	4	66	2
Nevada.....	-	-	-	-	-	-	-	-	-	3	5	2
PACIFIC.....	-	33	-	11	6	11	52	58	114	150	254	513
Washington.....	-	-	-	-	-	2	16	9	27	18	116	228
Oregon.....	-	3	-	-	-	-	5	10	15	32	24	45
California.....	-	28	-	6	6	9	30	37	69	92	78	159
Alaska.....	-	1	-	5	-	-	1	1	2	8	20	74
Hawaii.....	-	1	-	-	-	-	-	1	1	-	16	7
Puerto Rico.....	-	-	-	35	-	-	6	9	15	14	17	17

Morbidity and Mortality Weekly Report

Table 3. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED

NOVEMBER 11, 1961 AND NOVEMBER 10, 1962 - (Continued)

Area	Meningococcal Infections		Streptococcal Sore Throat & Scarlet Fever		Tetanus	Tickborne Typhus (Rocky Mt. Spotted)	Tularemia	Typhoid Fever		Rabies in Animals		
	45th wk.	Cumulative 45 weeks	45th week		45th wk.	45th wk.	45th wk.	45th wk.	Cumulative 45 weeks	45th week		Cumulative 45 weeks
	1962	1962	1962	1961	1962	1962	1962	1962	1962	1962	1961	1962
UNITED STATES....	32	1,838	4,687	5,525	8	3	9	12	550	44	58	3,218
NEW ENGLAND.....	-	110	411	184	-	-	-	-	11	-	-	2
Maine.....	-	16	35	3	-	-	-	-	2	-	-	1
New Hampshire.....	-	3	17	-	-	-	-	-	-	-	-	-
Vermont.....	-	4	9	6	-	-	-	-	-	-	-	-
Massachusetts.....	-	43	62	59	-	-	-	-	8	-	-	1
Rhode Island.....	-	13	55	30	-	-	-	-	1	-	-	-
Connecticut.....	-	31	233	86	-	-	-	-	-	-	-	-
MIDDLE ATLANTIC....	4	326	258	203	-	-	-	1	55	7	4	142
New York.....	-	145	152	125	-	-	-	1	28	4	4	91
New Jersey.....	-	80	53	31	-	-	-	-	12	-	-	1
Pennsylvania.....	4	101	53	47	-	-	-	-	15	3	-	50
EAST NORTH CENTRAL..	9	355	373	401	2	-	1	4	90	6	5	705
Ohio.....	3	105	98	74	1	-	-	1	43	5	1	357
Indiana.....	3	30	42	77	1	-	1	1	13	-	3	182
Illinois.....	1	80	38	89	-	-	-	-	17	1	1	90
Michigan.....	2	118	121	73	-	-	-	1	11	-	-	40
Wisconsin.....	-	22	74	88	1	-	-	1	6	-	-	36
WEST NORTH CENTRAL..	1	98	117	161	3	-	5	2	27	6	18	845
Minnesota.....	-	19	17	13	1	-	-	-	-	1	3	200
Iowa.....	-	11	34	41	2	-	-	-	2	1	9	326
Missouri.....	1	23	6	4	-	-	5	2	20	3	3	145
North Dakota.....	-	8	33	26	-	-	-	-	2	-	-	48
South Dakota.....	-	6	1	-	-	-	-	-	1	1	2	98
Nebraska.....	-	17	1	2	-	-	-	-	2	-	1	21
Kansas.....	-	14	25	75	-	-	-	-	-	-	-	7
SOUTH ATLANTIC.....	6	282	504	429	2	3	2	1	99	5	6	326
Delaware.....	1	35	1	2	-	-	-	-	2	-	-	-
Maryland.....	2	22	10	4	-	-	-	-	3	-	-	2
Dist. of Columbia..	-	7	2	-	-	-	-	-	7	-	-	-
Virginia.....	2	62	118	68	-	-	1	-	18	-	2	126
West Virginia.....	1	16	198	104	-	-	-	-	5	5	1	127
North Carolina.....	-	65	54	23	-	3	-	-	6	-	-	-
South Carolina.....	-	18	15	24	-	-	-	-	9	-	-	-
Georgia.....	-	11	6	2	-	-	1	-	24	-	-	9
Florida.....	-	46	100	202	2	-	-	1	25	-	3	62
EAST SOUTH CENTRAL..	2	118	799	1,041	-	-	-	3	54	6	4	330
Kentucky.....	2	34	43	41	-	-	-	-	10	3	2	116
Tennessee.....	-	47	659	957	-	-	-	3	26	3	2	191
Alabama.....	-	20	9	15	-	-	-	-	11	-	-	23
Mississippi.....	-	17	88	28	-	-	-	-	7	-	-	-
WEST SOUTH CENTRAL..	1	151	580	763	1	-	1	-	121	4	16	567
Arkansas.....	1	16	1	3	1	-	1	-	31	-	6	65
Louisiana.....	-	66	3	3	-	-	-	-	31	-	1	20
Oklahoma.....	-	7	7	2	-	-	-	-	6	-	-	28
Texas.....	-	62	569	755	-	-	-	-	53	4	9	454
MOUNTAIN.....	-	59	757	1,001	-	-	-	-	43	-	1	34
Montana.....	-	5	23	63	-	-	-	-	10	-	-	-
Idaho.....	-	3	76	65	-	-	-	-	1	-	-	-
Wyoming.....	-	5	22	102	-	-	-	-	3	-	-	-
Colorado.....	-	9	225	326	-	-	-	-	8	-	-	4
New Mexico.....	-	6	171	285	-	-	-	-	12	-	1	13
Arizona.....	-	14	120	140	-	-	-	-	8	-	-	17
Utah.....	-	9	120	17	-	-	-	-	1	-	-	-
Nevada.....	-	8	-	3	-	-	-	-	-	-	-	-
PACIFIC.....	9	339	888	1,342	-	-	-	1	50	10	4	267
Washington.....	1	22	198	455	-	-	-	-	1	-	-	-
Oregon.....	1	21	28	29	-	-	-	-	1	-	-	17
California.....	7	284	608	713	-	-	-	1	47	10	4	250
Alaska.....	-	8	50	78	-	-	-	-	-	-	-	-
Hawaii.....	-	4	4	67	-	-	-	-	1	-	-	-
Puerto Rico.....	-	9	3	1	2	-	-	-	16	-	-	19

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Table 4 (A). TOTAL DEATHS IN REPORTING CITIES

(Tables 4(A), 4(B), 4(C), and 4(D) will be published in sequence covering a four-week period.°

Area	For weeks ending				Area	For weeks ending			
	10/20	10/27	11/3	11/10		10/20	10/27	11/3	11/10
NEW ENGLAND:					SOUTH ATLANTIC:				
Boston, Mass.	216	242	262	248	Atlanta, Ga.	115	121	92	102
Bridgeport, Conn.	41	43	46	44	Baltimore, Md.	225	215	250	254
Cambridge, Mass.	40	37	37	42	Charlotte, N.C.	29	41	46	53
Fall River, Mass.	35	32	27	32	Jacksonville, Fla.	56	60	87	64
Hartford, Conn.	60	58	46	47	Miami, Fla.	75	70	72	78
Lowell, Mass.	24	38	23	29	Norfolk, Va.	56	48	58	58
Lynn, Mass.	28	32	27	21	Richmond, Va.	93	97	78	93
New Bedford, Mass.	29	29	29	27	Savannah, Ga.	27	42	32	33
New Haven, Conn.	69	34	61	44	St. Petersburg, Fla.	57	66	71	75
Providence, R.I.	62	68	68	69	Tampa, Fla.	76	63	73	67
Somerville, Mass.	17	14	17	12	Washington, D.C.	193	206	227	223
Springfield, Mass.	35	39	40	37	Wilmington, Del.	39	31	40	34
Waterbury, Conn.	32	24	28	23	EAST SOUTH CENTRAL:				
Worcester, Mass.	56	55	66	50	Birmingham, Ala.	72	92	67	93
MIDDLE ATLANTIC:					Chattanooga, Tenn.	46	51	43	53
Albany, N.Y.	28	46	48	51	Knoxville, Tenn.	25	24	26	26
Allentown, Pa.	41	31	37	43	Louisville, Ky.	149	90	90	123
Buffalo, N.Y.	130	146	157	142	Memphis, Tenn.	144	105	103	127
Camden, N.J.	45	34	55	57	Mobile, Ala.	44	50	44	52
Elizabeth, N.J.	45	33	35	28	Montgomery, Ala.	33	38	29	34
Erie, Pa.	41	35	43	45	Nashville, Tenn.	73	60	54	69
Jersey City, N.J.	97	77	66	78	WEST SOUTH CENTRAL:				
Newark, N.J.	118	85	114	97	Austin, Tex.	23	28	39	34
New York City, N.Y.	1,687	1,613	1,650	1,717	Baton Rouge, La.	39	25	20	32
Paterson, N.J.	47	34	41	44	Corpus Christi, Tex.	28	20	30	29
Philadelphia, Pa.	403	509	485	503	Dallas, Tex.	131	118	153	146
Pittsburgh, Pa.	247	187	225	124	El Paso, Tex.	32	36	35	37
Reading, Pa.	30	22	18	20	Fort Worth, Tex.	53	71	66	66
Rochester, N.Y.	109	100	97	110	Houston, Tex.	172	156	187	131
Schenectady, N.Y.	31	19	17	29	Little Rock, Ark.	78	64	56	56
Scranton, Pa.	47	44	32	32	New Orleans, La.	190	172	163	179
Syracuse, N.Y.	61	46	88	71	Oklahoma City, Okla.	77	61	84	95
Trenton, N.J.	51	36	39	32	San Antonio, Tex.	111	98	110	83
Utica, N.Y.	31	23	24	43	Shreveport, La.	65	50	43	57
Yonkers, N.Y.	41	31	34	34	Tulsa, Okla.	52	51	66	61
EAST NORTH CENTRAL:					MOUNTAIN:				
Akron, Ohio.	60	64	61	54	Albuquerque, N. Mex.	34	33	40	75
Canton, Ohio.	29	37	40	31	Colorado Springs, Colo.	14	23	19	16
Chicago, Ill.	853	694	777	780	Denver, Colo.	105	134	102	112
Cincinnati, Ohio.	150	160	148	158	Ogden, Utah.	12	14	15	16
Cleveland, Ohio.	192	196	190	210	Phoenix, Ariz.	115	87	73	63
Columbus, Ohio.	116	102	120	132	Pueblo, Colo.	14	25	17	13
Dayton, Ohio.	80	83	88	102	Salt Lake City, Utah.	66	53	45	54
Detroit, Mich.	350	331	340	339	Tucson, Ariz.	40	49	56	33
Evansville, Ind.	41	44	30	47	PACIFIC:				
Flint, Mich.	50	51	46	30	Berkeley, Calif.	14	16	16	27
Fort Wayne, Ind.	31	37	43	38	Fresno, Calif.	40	49	64	55
Gary, Ind.	28	23	33	34	Glendale, Calif.	55	30	42	22
Grand Rapids, Mich.	40	49	33	52	Honolulu, Hawaii.	42	40	44	51
Indianapolis, Ind.	162	149	139	148	Long Beach, Calif.	55	53	51	49
Madison, Wis.	43	37	27	29	Los Angeles, Calif.	517	506	533	507
Milwaukee, Wis.	166	108	115	128	Oakland, Calif.	103	68	100	102
Peoria, Ill.	19	28	29	32	Pasadena, Calif.	45	36	35	37
Rockford, Ill.	26	32	21	30	Portland, Ore.	111	96	117	110*
South Bend, Ind.	43	30	45	31	Sacramento, Calif.	50	53	48	63
Toledo, Ohio.	114	98	104	99	San Diego, Calif.	92	93	95	82
Youngstown, Ohio.	59	55	63	52	San Francisco, Calif.	242	186	181	191
WEST NORTH CENTRAL:					San Jose, Calif.	58	46	29	37
Des Moines, Iowa.	47	63	49	58	Seattle, Wash.	162	141	132	126
Duluth, Minn.	24	17	20	27	Spokane, Wash.	55	48	49	59
Kansas City, Kans.	28	48	51	39	Tacoma, Wash.	54	37	31	37
Kansas City, Mo.	147	113	135	103	San Juan, P.R.	31	41	17	26
Lincoln, Nebr.	37	19	35	24	° Current Week Mortality for 108 Selected Cities				
Minneapolis, Minn.	134	112	113	129	4(A) Total Mortality, all ages.	11,495			
Omaha, Nebr.	49	102	73	65	4(B) Pneumonia-Influenza Deaths, all ages.	402			
St. Louis, Mo.	257	251	257	259	4(C) Total Deaths under 1 Year of Age.	763			
St. Paul, Minn.	85	83	57	41	4(D) Total Deaths, Persons 65 years and over.	6,446			
Wichita, Kans.	47	49	51	64					

*Estimate - based on average percent of divisional total Totals for previous weeks include reported corrections.

found to include water, dried skim milk powder, sugar, salt, vegetable shortening, dried egg albumen, vanilla and corn starch. Cocoa and banana flavoring are employed for chocolate and banana pies respectively. After baking of the pie shell, a filling consisting of all ingredients except albumen is cooked. The whipped albumen is then folded into the filling without further cooking. The pies are usually topped with a meringue composed of frozen egg albumen, sugar, water, and agar stabilizer. Occasionally a whipped cream topping composed of shortening, milk powder, water and agar stabilizer is added to the meringue for final topping. A 10 minute baking at 450° F is used for finishing the topping.

Sources of all ingredients were determined and the events of the past several months were carefully reviewed. Only one deviation from a routine operation at the bakery was found. For several years, an out-of-state concern had supplied the dried egg albumen but on August 15, after running out of this product, a 25 lb. bag of dried egg albumen was purchased from a local creamery. This was used and a 50 lb. bag was purchased on August 19 from the same source and used until about October 14 when a shipment of the out-of-state egg albumen arrived. Until that time, 36 of the 50 lbs. had been used (14 lbs. still remained). It appears that use of the second shipment coincided closely with the occurrence of the epidemic in the Spokane area. If this product is actually responsible, from knowledge (a) that one lb. is used for 100 pies and, therefore, for 600 servings, (b) that 36 lbs. were used, and (c) that approximately 46% of the pie eaters became sick, it seems possible that a total of approximately 10,000 cases of salmonellosis may have resulted from consumption of pies from this bakery alone (36 lbs. x 100 x .46).

The other possible source of the outbreak, in addition to the dried egg albumen, was the fresh frozen egg albumen used for meringue. This material was also obtained from the same local creamery, which prepares 30 lb. cans of it from eggs obtained from a wide production area.

Over 135 establishments were found to have received pies from this bakery. Included were restaurants, clubs, military posts, schools, churches, hotels, supermarkets, a hospital, and a college located in Washington, as well as adjacent States. After a review of this list and dates of shipments of cream pies, it was clear that every case of confirmed salmonellosis from whom a history of consumption of cream pie had been obtained could be linked to a specific shipment from this bakery.

Laboratory examinations of food and environmental specimens are in progress.

(Reported by Ernest A. Ager, M.D., Chief, Communicable Disease Control, Washington State Department of Health; Hampton Trayner, M.D., Spokane City Health Department; E. O. Ploeger, M.D., Spokane County Health Department; and a team from the Communicable Disease Center.)

INTERNATIONAL NOTES – QUARANTINE MEASURES

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