# FOODBORNE OUTBREAKS

ANNUAL SUMMARY 1971 ISSUED OCTOBER 1972

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<sup>1</sup> - U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE Health Services and Mental Health Administration

# PREFACE

Summarized in this report is information received from state and city health departments, Food and Drug Administration, and other pertinent sources. Much of the information is preliminary. It is intended primarily for the use of those with responsibility for disease control activities. Anyone desiring to quote this report should contact the Enteric Diseases Section for confirmation and interpretation.

Contributions to the Status Report are most welcome. Please address to the:

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\*Through June 1972

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#### SECTION A. FOODBORNE OUTBREAKS

This is the sixth annual summary of foodborne disease outbreaks compiled by the Epidemiology Program, Center for Disease Control (CDC). These summaries are based on the analysis of data voluntarily transmitted from various sources, including local and state health departments, federal agencies, and other CDC programs. A foodborne outbreak is defined in these reports as illness caused by ingestion of a pathogenic organism or noxious agent contained in food and affecting two or more persons. There is one exception; a single case of botulism constitutes an outbreak. This 1971 Annual Summary compliments and summarizes data included in the previous report, "Foodborne Outbreaks Status Report, January-June 1971". In addition, tabular comparisons of the 1970 and 1971 data are presented. Waterborne epidemics, included in the previous foodborne annual reports, are not reported in this 1971 report. A subsequent review of waterborne epidemics will be issued at a later time.

Food poisoning in the United States is grossly underreported. In the State of Washington, where foodborne disease surveillance has been developed to a high degree, 57 outbreaks were reported to the CDC in 1971. Projecting from this figure, the estimated number of outbreaks for the entire United States was about 3,100 in 1971; ' however, only 320 outbreaks were actually reported to the CDC. The fact that only 10 percent of the "expected" number of outbreaks were reported for the country serves to emphasize the need for improvement in both surveillance systems and investigations. In 1971, for the second time in 5 years, the number of reported outbreaks (320) decreased when compared with the number for the previous year (366). This decline probably does not reflect a decrease in the number of outbreaks of foodborne illness. Rather, it suggests that foodborne disease surveillance may occupy a position of low priority relative to competing health problems.

Foodborne disease surveillance involves at least three interrelated objectives: disease control, knowledge of disease causation, and administrative guidance.

1. <u>Disease Control</u>: Early identification and withdrawal of contaminated food prevents, further spread of an epidemic. The demonstration of improper food handling procedures during an investigation and subsequent correction of these procedures prevents future outbreaks. Analysis of laboratory data by serotype for apparently unrelated outbreaks may reveal hitherto unsuspected sources of infection, for example the presence of <u>S. new-brunswick</u> in dry milk products in 1968 (Collins, <u>et al</u>., 1968).<sup>1</sup>

2. <u>Knowledge of Disease Causation</u>: The predominant role of <u>C</u>. <u>perfringens</u> in food poisoning was only first defined in 1951. Similarly, knowledge of the importance of food poisoning due to <u>V</u>. <u>parahemolyticus</u> in Japan has developed only in the past 10 years and in the United States only in the past 2 years. Careful investigation and analysis provides information about the causative agent, its source, its reservoirs, and the factors that permit it to cause food poisoning. Once this information is known, control measures can be developed.

3. <u>Administrative Guidance</u>: Comprehensive and adequate surveillance help allow for rational planning, allocation of budgets, setting of priorities, and institution of training programs for county and state health departments.

1. Collins RN, Treger MD, Goldsby JB, et al: Interstate outbreak of Salmonella newbrunswick infection traced to powdered milk. JAMA 203:838-844, 1968 For the past 3 years a revised CDC form has been available for summarizing foodborne outbreaks (See example in Section D). This form has aided in standardization of reported data for computer analysis. A second purpose of the form is to provide a check list of parameters which describe and define an outbreak. Thirdly, the form serves as a means by which precise data can be easily recorded and forwarded to the CDC for inclusion in this report. It is hoped that this simplified procedure will further stimulate the reporting of foodborne outbreaks.

Even though reported outbreaks are generally well documented, it is readily apparent from the listing of outbreaks in this summary that there is considerable variation in the completeness and depth of investigations. In 1970 the etiology was not specified or was not confirmed by laboratory results in 62 percent of outbreaks; for 1971 this "unknown-unconfirmed" category accounted for 71 percent of all reported outbreaks. Thus, it is difficult to draw definite conclusions about patterns of foodborne illness from these data. At most, the predominance of certain etiologies and various trends within these etiologies are discernable.

In this report a distinction has been made between confirmed and unconfirmed outbreaks. Confirmation in almost all instances refers to laboratory support of epidemiologic evidence--a major exception being infectious hepatitis. Unconfirmed outbreaks refer to those outbreaks in which epidemiologic evidence is inadequately supported by laboratory data.

For each outbreak in which more than one number was reported for the number ill or exposed, the lowest number was always used. The calculations based on these data thus represent minimal numbers.

Figure 1 shows the geographic distribution of outbreaks in the United States in 1971. There were no reports of outbreaks in three states or in Guam for the year.

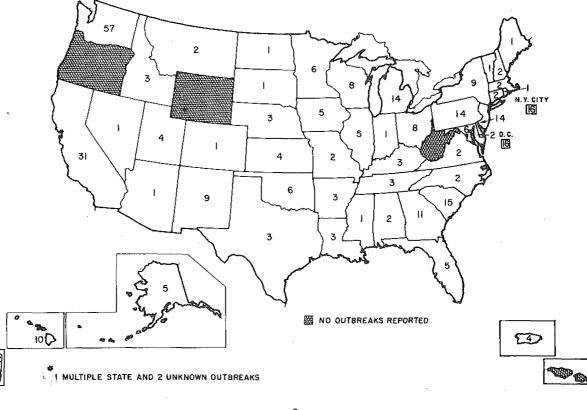


Figure / NUMBER OF OUTBREAKS OF FOODBORNE ILLNESS BY STATE, 1971

Figure 2 depicts the major etiologic categories responsible for outbreaks of food poisoning and their relative percents reported to CDC from all sources in 1971. There were a total of 320 outbreaks in 1971 compared with 366 in 1970. Bacterial etiology predictably accounted for the majority of all foodborne outbreaks of known etiology (62.8 percent), followed by chemical food poisoning (9.4 percent). Parasitic and viral agents were incriminated in 2.6 percent of the outbreaks. In 25.3 percent of outbreaks, no etiology could be determined. In Figure 2 the subcategory "Other" under the "Bacterial" heading includes outbreaks attributed to <u>Bacillus Cereus</u>, Escherichia coli, groups A and D streptococcus, and Vibrio parahemolyticus.

# Figure 2

# FOODBORNE DISEASE OUTBREAKS (CONFIRMED AND UNCONFIRMED), BY CAUSATIVE ORGANISM, UNITED STATES, 1971

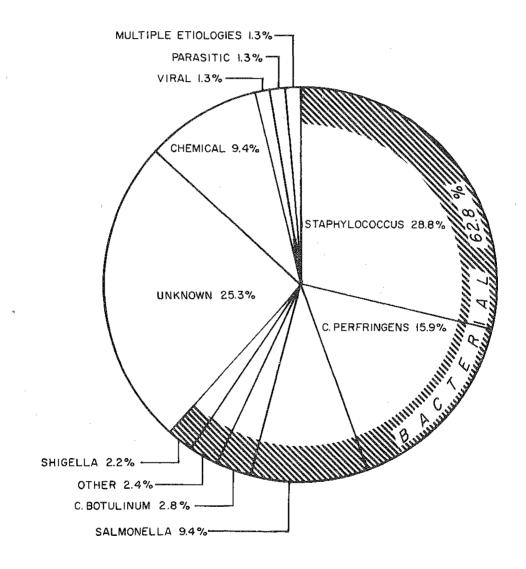


Figure 3 illustrates the relative percents of individuals involved in the major etiologic categories of food poisoning for 1971. A total of 13,453 individuals developed food poisoning in 1971, compared with 23,448 in 1970, and 28,563 in 1969. The 1969 data were biased by one large outbreak of <u>C</u>. <u>perfringens</u> involving 13,000 school children. The difference in the 1971 and 1970 data results from 46 fewer reported outbreaks in 1971 and from a decrease in outbreaks involving over 100 persons from 55 in 1970 to 22 in 1971. Over 89 percent of individuals experienced food poisoning of bacterial etiology. In 1971, staphylococcal food poisoning occurred in 38.0 percent of all patients, followed by <u>C</u>. <u>perfringens</u> (28.7 percent), shigellosis (6.7 percent), salmonellosis (5.6 percent), and group A streptococcus (3.7 percent, notably in only 1 outbreak). The remaining bacterial etiologies (others in Figure 3) (<u>B</u>. <u>cereus</u>, <u>C</u>. <u>botulinum</u>, group D streptococcus, <u>V</u>. <u>parahemolyticus</u> and <u>E</u>. <u>coli</u>) affected less than 6 percent of all patients. Parasitic, chemical, and viral food poisoning involved only 1.9 percent of all patients. Food poisoning of unknown etiology caused 8.2 percent of the cases.

> Figure 3 INDIVIDUALS INVOLVED IN FOODBORNE DISEASE OUTBREAKS (CONFIRMED AND UNCONFIRMED), BY CAUSATIVE ORGANISM, UNITED STATES, 1971

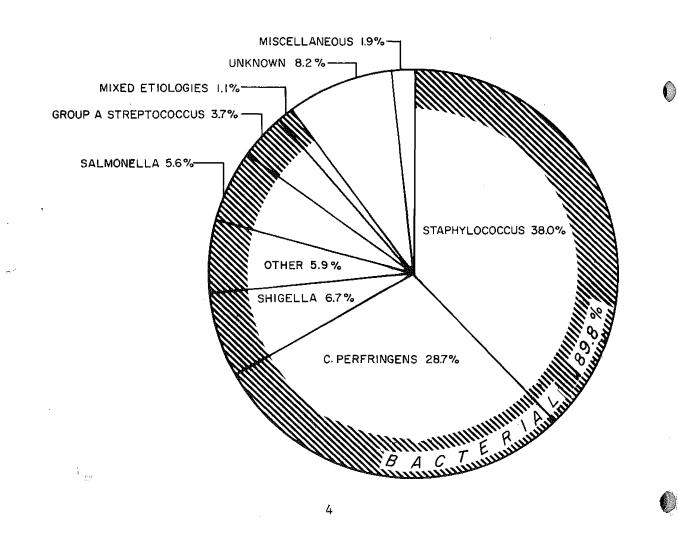


Table 1 lists the sources that initially reported outbreaks to CDC. The category, "Department of Health," includes monthly reports of EIS Officers at state and local health departments. Of the 320 outbreaks recorded for 1971, 291 (91 percent) emanated from state, local, or territorial health departments, 22 (7 percent) were reported directly from other federal agencies such as Food and Drug Administration, United States Department of Agriculture, and United States Armed Forces. For the second time since 1966, the number of reported outbreaks failed to increase over the number for the previous year. The decline from 364 reports in 1970 to 320 in 1971 reflects a slight decrease in reporting from all sources except the United States Department of Agriculture.

Table 2 shows the number of outbreaks reported for 1970 and 1971. The two health departments contributing the most reports for 1971 were Washington State (18 percent), and California (10 percent). In 1971, four state health departments did not report, compared to 5 in 1970. It is of interest that Wyoming is the only state that reported no outbreaks of foodborne illness in either 1970 or 1971. The apparent decrease in outbreaks from New York City is also notable. These figures probably do not indicate the prevalence of foodborne disease in the respective areas, but rather may reflect the interest of the various health departments in local investigation and national reporting.

Table 3 (A & B) records the number and percentage of confirmed and unconfirmed outbreaks and cases by etiology. Bacterial diseases accounted for almost 63 percent of the outbreaks and almost 90 percent of total cases. In Table 4 the 1970 and 1971 data are compared. In 1971, C. perfringens accounted for almost 16 percent of all outbreaks and almost 29 percent of all patients; in 1970, C. perfringens was implicated in 15 percent of food poisoning outbreaks and was responsible for nearly 30 percent of all patients. Thus the relative number of foodborne outbreaks and total cases related to C. perfringens remained basically unchanged (though the total number of cases substantially decreased). The high number of unconfirmed C. perfringens outbreaks (94 percent of all C. perfringens outbreaks) suggests the need for improvement in anaerobic culturing. In 1971, salmonella caused 9 percent of all food poisoning outbreaks and 6 percent of all cases. This represents a decrease in salmonellosis cases when compared with the 1970 data, 13 percent of outbreaks and 20 percent of cases. The most common type of food poisoning in 1971 was staphylococcal gastroenteritis accounting for almost 29 percent of all outbreaks and 38 percent of all cases. In 1970, staphylococci were implicated in 27.5 percent of outbreaks and 20 percent of all cases. Thus, there were relatively more cases of staphylococcal etiology in 1971, though the relative number of outbreaks remained unchanged. For 1971, the above three etiologies were responsible for 54 percent of all foodborne outbreaks and 72 percent of all ill individuals; in 1970 the corresponding figures were 55 percent and 70 percent. Considering all etiologies, 13,453 persons suffered from food poisoning in 1970 compared with 23,448 in 1970.\*

Table 5 lists the median and range of the number of persons involved in all of the confirmed and unconfirmed outbreaks for 1970 and 1971. In general, food poisoning outbreaks of <u>B</u>. <u>cereus</u>, <u>C</u>. <u>botulinum</u>, staphylococcus, parasitic, viral, chemical, and unknown etiology involved small groups of persons (<10) both years. The median number of persons involved in foodborne outbreaks of staphylococcal, <u>C</u>. <u>perfringens</u> and salmonella origin remained about the same over the past 2 years, while the size of <u>E</u>. <u>coli</u> and shigella outbreaks has increased in 1971. Of interest, the median number of persons, 7, involved in foodborne outbreaks considering all etiologies has remained relatively constant over the past 3 years.

Table 6 lists the median attack rate and range of attack rates by specific etiology. Attack rates were exceedingly high (>80 percent) for <u>C</u>. <u>botulinum</u> and most chemical food poisonings, moderately high (40-80 percent) for <u>C</u>. <u>perfringens</u>, <u>E</u>. <u>coli</u>,

\*Of the 23,448 cases in 1970, 262 were related to waterborne outbreaks.

salmonella, shigella, staphylococcus, and unknown etiology food poisoning, and low (40 percent) for <u>V</u>. <u>parahemolyticus</u> and viral food poisoning. In some etiologic categories the number of outbreaks was too small to draw reliable conclusion.

Table 7 categorizes the total of confirmed and unconfirmed outbreaks by the size of the outbreak and by etiology. It is apparent the <u>C</u>. <u>perfringens</u>, salmonella, shigella, and staphylococcal food poisoning sometimes involve large groups of people; <u>C</u>. <u>botulinum</u>, parasitic, viral, and chemical food poisoning are usually prevalent in small groups. Over 70 percent of outbreaks of unknown etiology involved groups of 10 or less.

Table 8 lists the vehicles of infection by specific etiology. The three most commonly incriminated vehicles in decreasing order of frequency were pork (including ham, salami), beef, and fowl. Other vehicles of importance were fish, bakery products, vegetables, and fruits. Pork tended to be associated with staphylococcal food poisoning and beef with <u>C. perfringens</u> food poisoning. No particular food was widely associated with salmonella food poisoning. Similar relationships were apparent in the 1970 data except that salmonella in 1970 was more common in fowl. Bakery products had a 50 percent decrease in frequency between 1970 and 1971.

Table 9 delineates the various places where improper food handling occurred and which allowed the reported outbreaks to materialize. The heading, "Food Processing Establishments," refers to the place or site of improper food handling in preparation for marketing. The heading, "Food Service Establishments," refers to the place or site of improper food handling that occurs during food processing in commercial establishments for public consumption, in contradistinction to the heading, "Home," which refers to mishandled food in the home itself. The column, "Unknown-Unspecified," includes those outbreaks reported with insufficient information, precluding specific classification. In 1971, 36 percent of the vehicles were improperly handled during processing in a commercial eating place, while only 8 percent were improperly handled in preparation for marketing. The homemaker was culpable 17.5 percent of the time. Although, the site of improper food handling could not be determined 39.5 percent of the time in 1971, this figure represents an improvement compared with 1970 when 50 percent of the time the site of improper handling could not be determined.

Table 10 lists the place where the suspect food was ingested according to specific etiology. It is apparent that the majority of foodborne outbreaks, 66 percent, occurred in homes and restaurants; these two locations account for 47 percent of those who became ill with food poisoning. Illness due to <u>C</u>. <u>botulinum</u>, <u>T</u>. <u>spiralis</u>, and chemical poisonings tended to be caused by foods eaten at home while those due to <u>C</u>. <u>perfringens</u>, staphylococcus and salmonella were common in both public facilities and at home.

Table 11 lists the monthly incidence of all outbreaks by specific etiology. An outbreak is assigned to a particular month according to the date of onset of the first case. Outbreaks of food poisoning are distributed over the calendar year; as in 1970, there may be a slight propensity for more cases to occur during the months May through August.

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# Initial Reporting Source of Foodborne Illness Annual Summary - 1971

Number of Reports	Reporte	ers	
291	DH	-	Department of health, state or local; includes reports of EIS Officers located at state and local health departments
14	FDA	-	Food and Drug Administration
7	MMWR	-	Morbidity and Mortality Weekly Report, CDC
2	AF	-	Armed Forces installation and U.S. Public Health Service, Bureau of Indian Affairs
6	USDA	-	United States Department of Agriculture
320	Total		

#### Table 2

Outbreaks of Foodborne Illness by Location, 1970 - 1971\*

	<u>1970</u>	<u>1971</u>		<u>1970</u>	<u>1971</u>
Alabama	0	2	Missouri	3	2
Alaska	2	5	Montana	1	2
Arizona	2	1	Nebraska	2	3
Arkansas	2	3	Nevada	$\overline{1}$	1
California	26	31	New Hampshire	1	2
Colorado	1	1	New Jersey	8	14
Connecticut	3	2	New Mexico	5	9
Delaware	1	2	New York City	43	16
District of Columbia	0	1	New York State	6	9
Florid <b>a</b>	8	5	North Carolina	5	2
Georgia	12	11	North Dakota	1	1
Hawaii	3	10	Ohio	2	8
Idaho	4	3	Oklahoma	2	6
Illinois	7	5	Oregon	3	0
Indiana	3	1	Pennsylvania	13	14
Iowa	1	4	Puerto Rico	3	4
Kansas	2	4	Rhode Island	1	1
Kentucky	2	3	South Carolina	4	15
Louisiana	7	3	South Dakota	0	1
Maine	0	1	Tennessee	8	3
Maryland	4	6	Texas	1	3
Massachusetts	3	2	Utah	3	4
Michigan	3	14	Vermont	0	1
Minnesota	11	6	Virginia	6	2
M <b>ississi</b> ppi	0	1	Washington	68	57
Other			West Virginia	2	0
Virgin Islands	1	0	Wisconsin	4	8
Guam and Trust Territories	1	2	Wyoming	0	0
			Others*	0	3
3		197 197	) Total <u>305</u> 1 Total <u>320</u>		

1971 Total <u>320</u>



\* Annual Summaries, 1970 - 1971 \*\* Others include 2 unknown and 1 multiple state outbreaks

#### Table 3a

Confirmed and Unconfirmed Foodborne Outbreaks by Bacterial Etiology, 1971

			Out	breaks				Patients					
	Conf	irmed	Unconfirmed		Te	Total		Confirmed		Unconfirmed		Total	
	#	%*	#	<u>%</u> *	#	%*	#	<u>%}</u>	#	%¢	#	%8:	
B. cereus	0	0	1	0.4	1	0.3	0	0	3	0	3	0	
C. botulinum	6	6.4	3	1.3	9	2.8	15	0.4	6	0.1	21	0.2	
C. perfringens	3	3.2	48	21.2	51	15.9	106	2.7	3,750	39.6	3,856	28.7	
E. coli	1	1.1	1	0.4	2	0.6	387	9.7	8	0.1	395	2.9	
Salmonella	28	29.8	2	0.9	30	9.4	729	18.3	31	0.3	760	5.6	
Shige11a	6	6.4	1	0.4	7	2.2	806	20.3	100	1.1	906	6.7	
Staphylococcus	26	27.7	66	29.2	92	28.8	930	23.4	4,185	44.2	5,115	38.0	
Group A streptococcus	1	1.1	0	0	1	0.3	498	12.5	0	0	498	3.7	
Group D streptococcus	0	0	1	0.4	1	0.3	0	0	3	0	3	0	
V. parahemolyticus	3	3.2	0	0	3	0.9	370	9.3	0	0	370	2.8	
Multiple etiologies	0	0	4	1.8	4	1.3	0	0	153	1.6	153	1.1	
Subtotal	74	78.7	127	56.2	201	62.8	3,841	96.6	8,239	87.0	12,080	89.8	

Table 3b

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#### Confirmed and Unconfirmed Foodborne Outbreaks by Nonbacterial Etiology, 1971

-			Out	breaks			Patients					
-	#	%*	_#	<u>%*</u>	#	%*	#	%¥	#	<u>%</u> *	#	% <u>æ</u>
<u>PARASITIC</u> <u>Trichinella</u> spiralis VIRAL	4	4.3	0	0	4	1.3	18	0.5	0	0	18	0.1
Infectious hepatitis CHEMICAL	3	3.2	1	0.4	4	1.3	10	0.3	. 12	0.1	22	0.2
Chinese restaurant syndrome (MSG)	0	0	1	0.4	1	0.3	0	0	7	0.1	7	0.1
Fish toxin Heavy metal	2 4	2.1 4.3	1 9	0.4 4.0	3 13	0.9 4.1	7 19	0.2 0.5	34 53	0.4 0.6	41 72	0.3 0.5
Other chemical <u>UNKNOWN</u>	7 0	7.4 0	6 81	2.7 35.8	13 81	4.1 25.3	83 0	2.1 0	27 1,103	0.3 11.6	110 1,103	0.7 8.2
BACTERIAL SUBTOTAL (From Table 3a) TOTAL (Bacterial and	74	78.7	127	56.2	201	62.8	3,841	96.6	8,239	87.0	12,080	89.8
nonbacterial)	94	100.1	226	100.0	320	100.0	3,978	100.0	9,475	100.0	13,453	100.0

\*Percent of total confirmed outbreaks by specific etiology. \*Percent of total of unconfirmed outbreaks by specific etiology. \*Percent of total outbreaks. %Percent of persons ill in total confirmed outbreaks. %Percent of persons ill in total of unconfirmed outbreaks. %Percent of total persons ill.

Confirmed and Unconfirmed Foodborne Outbreaks by Bacterial Etiology, 1970 - 1971\*

			1970				1971	
	Outb	reaks	Pat	ients	Outb	reaks	Pat	ients
	#	<u>%</u> @	#	% <del>*</del>	#	<u>%</u>	#	%*
B. cereus	3	1.0	49	0.2	1	0.3	3	0
C. botulinum	7	1.9	14	0	9	2.8	21	0.2
C. perfringens	54	14.7	6,952	29.7	51	15.9	3,856	28.7
E. coli	7	1.9	1,297	5.5	2	0.6	395	2.9
Salmonella	48	13.1	4,747	20.4	30	9.4	760	5.6
Shigella	8	2.2	1,668	7.1	7	2.2	906	6.7
Staphylococcus	102	27.5	4,699	119.8	92	28.8	5,115	38.0
Group A streptococcus	0	0	0	0	1	0.3	498	3.7
Group D streptococcus	1	0.3	23	0.1	1	0.3	3	0
Vibrio parahemolyticus	2	0.5	168	0.7	3	0.9	370	2.8
Multiple etiologies	0	0	0	0	4	1.3	153	1.1
Subtotal	232	63.1	19,617	83.5	201	62.8	12,080	89 <b>.8</b>

#### Table 4b

Confirmed and Unconfirmed Foodborne Outbreaks by Nonbacterial Etiology, 1970 - 1971  $\!\!\!\!*$ 

			1970				1971	
	Out	breaks	Pat	Patients		Outbreaks		ients
	#	% <b>e</b>	<u>#</u>	%*	#	% <b>e</b>	##	<u>%+</u>
<u>PARASITIC</u> Trichinella spiralis	9	2.5	41	0.2	4	1.3	18	0.1
<u>VIRAL</u> Infectious hepatitis	4	1.1	107	0.5	4	1.3	22	0.2
<u>CHEMICAL</u> Chinese restaurant syndrome (MSG)	5	1.4	23	0.1	1	0.3	7	0.1
Fish toxin		0		0	3	0.9	41	0.3
Heavy metals	3	1.0	24	0.1	13	4.1	72	0.5
Other chemical	14	3.7	248	1.0	13	4.1	110	0.7
UNKNOWN	99	27.2	3,388	14.6	81	25.3	1,103	8.2
BACTERIAL SUBTOTAL (From Table 4a)	232	63.1	19,617	83.5	201	62.8	12,080	89.8
<u>TOTAL</u> (Bacterial and nonbacterial)	366	100.0	23,448	100.0	320	100.0	13,453	100.0

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\*Annual Summaries 1970 and 1971. @Percent of total outbreaks (bacterial and nonbacterial).

\*Percent of persons ill in all outbreaks.

Number of Persons Ill in Outbreaks of Foodborne Illness, by Specific Etiology (confirmed and unconfirmed), 1970 - 1971\*

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		1970			1971	
	Number of <u>Outbreaks</u> **	Median	Range	Number of Outbreaks**	Median	Range
BACTERIAL						
<ul> <li>B. <u>cereus</u></li> <li>C. <u>botulinum</u></li> <li>C. <u>perfringens</u></li> <li>E. <u>coli</u></li> <li>Salmonella</li> <li>Shigella</li> <li>Staphylococcus</li> <li>Group A streptococcus</li> <li>Group D streptococcus</li> <li>V. parahemolyticus</li> </ul>	3 7 53 6 47 7 100 0 1 2	6 1 35 41 19 28 6 23 84	3-40 1-4 2-689 3-150 2-353 3-334 2-318	1 9 51 2 30 7 89 1 1 3	3 26 198 15 100 6 498 3 25	1-5 2-430 8-387 2-186 21-440 1-212 - 25-320
Multiple etiologies	0			4	33	12-76
<u>PARASITIC</u> T. spiralis	. 9	2	2 <b>-1</b> 5	4	3	2-10
<u>I. spiralis</u> VIRAL		2	2-15	4	5	2-10
Infectious hepatitis	4	11	9-77	4	6	5-6
CHEMICAL						
Chinese restaurant syndrome (MSG) Fish toxin Heavy metals	5	2	2-11	1 3 13	7 7 3	6-28 1-20
Other chemicals	16	2	2-131	13	4	1-61
UNKNOWN	99	6	2-425	81	5	1-183
TOTAL	359	8	1-689	317	7	1-498

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\*Annual Summaries, 1970 - 1971 \*\*Excludes those outbreaks not giving adequate information on number of people ill.

Median Attack Rate, Range of Attack Rates, and Number of Outbreaks of Foodborne Illness by Specific Etiology (confirmed and unconfirmed), 1970-1971\*

	Number of outbreaks**	Median attack rates	Range of attack rates
BACTERIAL			
<u>B</u> . <u>cereus</u>	1	100.0	-
<u>C. botulinum</u> C. perfringens E. coli	6	100.0	.1-100.0
<u>C</u> . <u>perfringens</u>	42	51.0	1.8-100.0
<u>E. coli</u>	2	65.5	36.4- 94.6
Salmonella	28	49.2	2.9-100.0
Shigella	6	51.7	16.4- 88.0
Staphylococcus	74	71.6	.8-100.0
Group A streptococcus			
Group D streptococcus			
V. parahemolyticus	3	33.3	25.0- 58.2
Multiple etiologies	4	43.9	24.0- 72.1
PARASITIC			
<u>T</u> . <u>spiralis</u>			,
VIRAL			
Infectious hepatitis	2	33.9	26.1- 41.7
CHEMICAL			
Chinese restaurant			
syndrome (MSG)	1	53.9	-
Fish toxin	3	87.5	77.8-100.0
Heavy metals	10	100.0	55.0-100.0
Other chemicals	12	92.9	33.3-100.0
UNKNOWN	75	80.0	4.0-100.0

\*Annual Summary, 1970 - 1971 \*\*Excludes those outbreaks with inadequate information for these calculations.

Number of Persons	Ill in Foodborne Disease Outbreaks, by	
Specific Etiology	(confirmed and unconfirmed), 1970 - 1971*	

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	Size of Outbreak										
	<u>1-3</u>	4-10	<u>11-30</u>	31-100	101-300	<u>301-1000</u>	<u>1000+</u>	<u>Total</u>			
BACTERIAL											
<u>B. cereus</u>	1							1			
C. botulinum	8	1						9			
C. perfringens	8	11	9	15	5	2	1	51			
<u>E. coli</u>		1				1		2			
Salmonella	3	9	14	2	2			30			
Shigella			2	2	2	1		7			
Staphylococcus	25	37	6	16	5			89			
Group A streptococcus						1		1			
Group D streptococcus	1							1			
<u>V. parahemolyticus</u>			2			1		3			
Multiple etiologies			2	2				4			
PARASITIC											
<u>T</u> . <u>spiralis</u>	3	1						4			
VIRAL											
Infectious hepatitis		4						4			
CHEMICAL											
Chinese restaurant											
s <b>y</b> ndrome (MSG)		1						1			
Fish toxin		2	1					3			
Heavy metals	9	1	3					13			
Other chemicals	6	5	1	1				13			
UNKNOWN	33	27	9	11	1			81			
TOTAL 1971 **	97	100	49	49	15	6	1	317			
TOTAL 1970***	116	78	61	52	40	13	2	362			

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\* Annual Summaries 1970 and 1971 \*\*In three staphylococcal outbreaks the number of ill was not reported. \*\*\*In four outbreaks the number ill was not reported; 1 <u>C</u>. <u>perfringens</u>, 1 salmonella, and 2 staphylococcal outbreaks.

# Vehicles Associated with Foodborne Illness, by Specific Etiology (confirmed and unconfirmed), 1970 - 1971\*

	Bee <b>t</b> **	Veal	Pork***	Lamb or mutton	Chicken*	Turkey*	Shellfish	Other fish	Other meat	Eggs	Milk	Cheese	Other dairy	Bakery products	Fruits & vegetables	Chinese food	Multiple vehicles	Other	Unknown	Total
<u>BACTERIAL</u> <u>B. cereus</u>																1				1
<u>c. botulinum</u>								1							3	T		3	2	9
	19		1		2	-	•		-	-				-		1	0		2	
<u>C. perfringens</u>	19		1		3	7	2	1	1	1		_		1	1	1	2	3	8	51
<u>E. coli</u>	_				_		1					1								2
Salmonella	2		3		1	4		2		1				1			4	5	7	30
Shigella						1									1			2	3	7
Staphylococcus	7		37	1	4	3	2	3	3	2			1	3	1	1	3	8	13	92
Group A streptococcus													1							1
Group D streptococcus	1																			1
V. parahemolyticus							3													3
Multiple etiologies	3				1															4
PARASITIC																				
T. spiralis			4																	4
VIRAL																				
infectious hepatitis							1											1	2	4
CHEMICAL																				
Chinese restaurant _syndrome (MSG)																1				1
Fish toxin								3												3
Heavy metals															1			10	2	13
Other chemicals	1							1			1			4				6		13
UNKNOWN	10		4		2	1	1	4	1		1	2		3	3	1	1	11	36	81
TOTAL 1971	43		49	1	11	16	10	15	5	4	2	3	2	12	10	5	10	49	73	320
TOTAL 1970	60	3	37		17	29	13	10	8	5	4	2	9	24	20	9	8	- 27	71	356

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\* Annual Summaries 1970 and 1971

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\*\*Includes some outbreaks due to meat and/or gravy and/or dressing \*\*\*Includes ham, salami

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#### Place Where Food was Mishandled in Foodborne Outbreaks Reported by Specific Etiology (confirmed and unconfirmed) 1970 - 1971

	Food processing establishments	Food service establishments	Homes	Unknown- Unspecified	<u>Total</u>
<u>BACTERIAL</u> <u>B. cereus</u>				1	1
<u>C. botulinum</u>	1		6	2	9
C. perfringens		33	2	16	51
<u>E. coli</u>	1			1	2
Salmonella		15	10	5	30
Shigella		1		6	7
Staphylococcus	8	40	23	21	92
Group A streptococcus				1	1
Group D streptococcus				1	1
V. parahemolyticus		3			3
Multiple etiologies		1	2	1	4
· · · · · · · · · · · · · · · · · · ·					
PARASITIC					
<u>T</u> . <u>spiralis</u>	3	1			4
VIRAL					
Infectious hepatitis			1	3	4
CHEMICAL					
Chinese restaurant syndrome	(MSG)	1			1
Fish toxin		1	1	1	3
Heavy metal	7	3	1	2	13
Other chemicals	6	1	3	3	13
UNKNOWN	1	14	7	59	81
TOTAL 1971	27	114	56	123	320
TOTAL 1970	21	115	42	185	363

\*Annual Summaries 1970 and 1971

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# Place of Acquisition of Foodborne Illness by Specific Etiology (confirmed and unconfirmed) 1970 - 1971\*

	Restaurant	Delicatessen	Cafeteria	Ноте	Picnic	School	Church	Camp	Other or Unknown	<u>Total</u>
BACTERIAL					·					
<u>B.</u> <u>cereus</u>				1						1
<u>C</u> . <u>botulinum</u>				8					1	9
C. perfringens	15		5	8	2	8	3		10	51
<u>E. coli</u>				1	1					2
Salmonella	9			14			1		6	30
Shigella	2			1	3	1				7
Staphylococcus	24	1	1	32	2	7	2	1	22	92
Group A streptococcus						1				1
Group D streptococcus				1						ĺ
V. parahemolyticus					2				1	3
Multiple etiologies				2			2			4
PARASITIC										
<u>Trichinella</u> spiralis				4						4
VIRAL										
- Infectious hepatitis	2			2						4
CHEMICAL										
Chinese restaurant syndrome (MSG)	1									1
Fish toxin				1					2	3
Heavy metal	1	1		8			1		2	13
Other chemical		1		9					3	13
Unknown	33			31	2	5	1		9	81
Total 1971	87	3	6	123	12	22	10	1	56	320
Total 1970	114	3	15	132	7	26	3	6	60	366

\*Annual Summaries 1970 and 1971

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Monthly Occ	currence	of Outbi	eak of	Foodborne	Illness	Ъу	Specific
	(confi	rmed and	luncon	firmed) Et:	Lology		
	•	1	970 - 1	971*			

							19	71						
	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	May	Jun	<u>Jul</u>	Aug	Sep	<u>Oct</u>	Nov	Dec	Unk.	Total
BACTERIAL														
<u>B</u> . <u>cereus</u>			1											1
<u>C</u> . <u>botulinum</u>			1			2	2	2	1		1			9
<u>C</u> . <u>perfringens</u>	1	9	8	5	4	2	3	5	2	3	7	2		51
<u>E. coli</u>					1					1				2
Salmonella	• 3		1	1	1	3	6	7	3	1		3	1	30
Shige11a	1	1			1		2	1				1		7
Staphylococcus	4	4	6	6	7	17	10	9	4	7	8	6	4	92
Group A streptococcus										1				1
Group D streptococcus	1													1
V. parahemolyticus								3						3
Multiple etiologies	1	1		1	1							•		4
PARASITIC														
<u>T</u> . spiralis							2	1					1	4
VIRAL										÷*,	4 î.	ant dina A		
Infectious hepatitis			-			1		1			288 C.		2	4
CHEMICAI,										÷		ek îles. L		
Chinese restaurant										5 				
syndrome (MSG)			1											1
Fish toxin		1				1		1				1 4 A		3
Heavy metals		1		1	6	1		1	1		2			13
Other chemicals	4		2	1	1		1			2	1	1		13
UNKNOWN	8	4	7	6	10	4	14	4	4	3	5	6	6	81
TOTAL 1971	23	21	27	21	32	31	40	35	15	18	24	19	14	320
TOTAL 1970	22	27	27	28	39	33	29	40	28	37	32	22	2	366
XAmural Gummandar 1070	and	0771												

\*Annual Summaries 1970 and 1971

 $(\mathbf{A})$ 

FORM APPROVED BUDGET BUREAU NO. 68-R1034

#### DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE Health Services and Mental Health Administration NATIONAL COMMUNICABLE DISEASE CENTER EPIDEMIOLOGY PROGRAM ATLANTA, GEORGIA 30333

#### INVESTIGATION OF A FOODBORNE OUTBREAK

1. Where did the outbreak occur?		2. Date of outbreak: (Date of onset 1st case)
State(1,2) City o	or Town County	(3-8)
3. Indicate actual (a) or estimated (e) numbers: Persons exposed	No. histories obtained(18-20) No. persons with symptoms(21-23)	Approx. for majority(46-48)
Persons ill (12-14) Hospitalized(15-16) Fatal cases(17)	Vomiting(27-29) Fever(36-38)	6. Duration of Illness (hours): Shortest(49-51) Longest(52-54) Approx. for majority(55-57)

#### 7. Food-specific attack rates: (58)

	Food Items Served	P P	lumber of pe specil	rsons who fied food	ATE	Number who did NOT eat specified food				
			Not III	Total	Percent III	111	Not III	Total	Percent III	
	•	ļ								
<u></u>						·				
)	(							<u> </u>		
					+					
	9 1									

9. Manner in which incriminated food	was marketed: (Check all applicable)	10. Place of Preparation of	11. Place where eaten: (66)
- '		Contaminated Item: (65)	
(a) Food Industry (61)	(c) Notwrapped 🗌 1 (63)	Restaurant 1	Restaurant 🛄 1
Raw 🗋 1	Ordinary Wrapping 🔲 2	Delicatessen 🛄 2	Delicatessen 🛄 2
Processed 🛄 2	Canned 🗌 3	Cafeteria 🗍 3	Cafeteria 🔲 3
Home Produced	CannedVacuum Sealed 🔲 4	Private Home	Private Home 🛄 4
Raw	Other (specify)	Caterer	Picnic
Processed 4	· · · · · · · · · · · · · · · · · · ·	Institution:	Institution:
		School	School
(b) Vending Machine 🔲 1 <sup>(62)</sup>	·(d) Room Temperature□ 1 <sup>(64)</sup>	Church	Church
	Refrigerated	Camp	Camp 8 Other, specify 9
	Frozen	Other, specifγ	Other, specify 🛛 🛄 9
	Heated		
If a commercial product, indicate bran			

HSM 4.245 (NCDC) Rev. 3–69

(Over)

12. Food specimens	examin	ed: (67)	)		13. Environmenta	al speciment	s examined: (68)
Specify by "X"	whethe	r food ex	amined was original	l (eaten at time of	Item		Findings
outbreak) or che outbreak)	eck-up	prepared	d in similar manner l	out not involved in	Example: meat gi	rinder	C. perfringens, Hobbs Type 10
Item	Orig.	Check up	Find Qualitative	lings Quantitative			
Example: beef	x		C. perfringens, Hobbs type 10	2X10 <sup>6</sup> /gm			
,							······································
			<b></b>	·	14. Specimens fro	m patients	examined (stool, vomitus, etc.): (69)
					Item	No, Persons	Findings
					Example: stool	11	C. perfringens, Hobbs Type 10
			······				
15. Specimens from	food h	andlers (	stool, lesions, etc.);	(70)	16. Factors contri	ibuting to o	utbreak (check all applicable):
·,							Yes No
Item Example: lesion		C. p	Findings erfringens, Hobbs ty	pe 10	<ol> <li>Inadequate co</li> <li>Contaminated</li> <li>Food obtaine</li> <li>Poor personal</li> </ol>	ooking lequipment d from unsa hygiene of	ing temperature       1       2       (71)
17. Etiology: (77, Pathogen		L			Suspected		[] 1 (79)
Chemical Other							2 3

 Name of reporting agency: (80)

 Investigating official:

 Date of investigation:

 NOTE: Epidemic and Laboratory Assistance for the investigation of a foodborne outbreak is available upon request by the State Health Depart 

ment to the National Communicable Disease Center, Atlanta, Georgia 30333.

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#### Section E - Line Listing of Foodborne Outbreaks

Explanation of line listing:

Listing is by specific etiology. Under each etiology confirmed outbreaks are listed first in chronological order. Unconfirmed outbreaks are listed next in chronological order, denoted by the prefix "probable" (prob.).

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For all instances in which there was any question as to the accuracy of information, a question mark is included.

Onset - the month is followed by the day of the month. In some outbreaks involving continual exposure over a period of time, the onset is expressed as a range between onset of the first and last case.

Lab data - usually refers to cultural confirmation.

P - patient
V - vehicle
H - food handler

Symptoms:

N - nauseaF - feverV - vomitingA - anorexiaC - cramps, abdominal painO - otherD - diarrheaLFT - liver function testsH - headacheIf the second second

Reporter - see Table 1 for explanation of abbreviations

Other symbols and abbreviations:

x - mean med.- median N - approximately

Explanation of code letters in parentheses - (A), (B), (C), (D) - in line listing under column headed "Comment". These letters refer to data presented in Table 9.

- (A) "Food processing establishments" Site or place of food improperly handled in preparation for marketing.
- (B) "Food service establishments" Site or place of food improperly handled during food processing in a commercial establishment for public consumption.
- (C) "Homes" Food mishandled in homes.
- (D) "Unknown-Unspecified" Information lacking, precluding classification.

	ENT OF OOU	ÓNGER			T A -	0. <b>10</b> k m k		<b>61 T</b> 1770				
	ETIOLOGY	ONSET	REPORTED FROM	VEHICLE	LA.	B DATA	₩ i11 (at	incub.	AL DATA Duratic of dis.	n	REPORTER	COMMENT
					Ρ.	V.	H. risk)	_(hrs.)	(hrs.)	Symptoms	<u>.</u>	
	BACTERIAL											
	CLOSTRIDIUM BOTULINUM											
	<u>C. botulinum</u> type A	6-29	New York	home-prepared antipasto	4	+	2(2)	24		descending paralysis	MMWR	Home (C)
	<u>C. botulinum</u> type A	6-30	New York	commercial vichyssoise s	+ soup	+	2(2)	24		descending paralysis	MMWR.	Home (A)
	<u>C</u> . <u>botulinum</u> type E	7-20	Alaska	smoked whitefish		+	2	51		N,V,paralysis	DH	Home (C)
	<u>C</u> . <u>botulinum</u> type A	8-11	Maryland		+		1			descending paralysis	DH	Home? (D)
	<u>C</u> . <u>botulinum</u> type B	8-21	Pennsylvania	home-canned peppers	+	+	3(3)	24		N,V,C,D, descending paralysis	DH	Home (C)
20	<u>C. botulinum</u> type A	9-12	California	home-canned chili peppers	+	+	84(250)	14	72	D,N	ЪН	Restaurant (D)
-	prob. <u>C</u> . <u>botulinum</u>	7-21	Washington	home-canned beets			2(2)	72	144		DH	Home (C)
	prob. C. botulinum	11-8	California	home-canned celery?	-		2			descending paralysis	DH	Home (C)
	CLOSTRIDIUM PERFRINGEN	<u>s</u>										
	prob. <u>C</u> . perfringens	2-6	Pennsylvania				84(250)	14	72	D,N	DH	Restaurant (D)
	prob. <u>C</u> . <u>perfringens</u>	7-11	Washington	barbecued beef	+	-	30(53)	11	31	D,C,N	DH	Picnic (B)
	prob. <u>C</u> . <u>perfringens</u>	7 <b>-</b> 25	Ohio	beef noodle casserole			26(67)	10		D,C	DH	Picnic (B)
	prob. <u>C</u> . <u>perfringens</u>	7-26	Washington	chili	+		3(3)	15	18	D,C,N	DH	Restaurant (B)
	prob. <u>C</u> . <u>perfringens</u>	8-7	Louisiana	chicken salad sandwic	eh		208 (400)	18	25	D,C,N,V,F	DH	Church (D)
	prob. <u>C</u> . perfringens	8-9	California	spaghetti and meat sauce	1		43(400)	12	24	D,C,N,V	DH	Wedding re- ception (B)
	*For listing of outbre	aks Janu	ary - July, 1971, s	see report Food	lborn	e Outb	reaks January,	- June, 1	971			
	$\sim$					C	$\mathbf{>}$					$\bigcirc$
<u></u>				<u>Annantas ann an Annaith</u>				<u></u>		<u></u>	<u>adadinili ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( </u>	<u></u>
	Ĉ					Ċ						<u></u>
	prob. C. perfringens	8-19	Ohio ,	chicken			168(296)	13	24	D,N,C	DH	Cafeteria
	<u> </u>			salad sandwic	h							(B)
	prob. <u>C</u> . <u>perfringens</u>	8-30	New Jersey	roast beef		-	50(80)	10	25	D,C	DH	Fire Depart- ment (B)
	prob. <u>C</u> . <u>perfringens</u>	8-31	Ohio	roast beef		÷	5(6)	9	20	D,C	DH	Restaurant (B)
	and C perfringers	9~6	Washington	prawns?			7(380)	12	24	C,D,N,V	DH	Home (B)
	prob. <u>C</u> . <u>perfringens</u>	9-15	Mississippi	turkey salad		+ '	1000(1923)	8	12	D	USDA	School (B)
	prob. <u>C</u> . <u>perfringens</u>			Mexican food		·	26(149)	24	18	D,C	DH	Church (B)
	prob. <u>C</u> . <u>perfringens</u> prob. <u>C</u> . <u>perfringens</u>	10-6 10-16	California Pennsylvania	Mexican rood		-	430(695)	9	72	d,C	DH	Restaurant (D)
	mab C postringons	10-30	Washington	wieners			3(3)	15	27	D,C,N,V	DH	Home (D)
	prob. <u>C</u> . <u>perfringens</u>		-	chili		+	20(40)	8	_,	D,C,N	DH	Church (C)
	prob. <u>C</u> . <u>perfringens</u>	11-3	Washington				75 (500)	U		N,C,D	DH	School (D)
	prob. <u>C. perfringens</u>	11-8	New Hampshire	turkey		+		70	18		DH	School (B)
ა	prob. <u>C</u> . perfringens	11-8	North Dakota	meatballs		+	75(900)	12	10	D,C,N,V		(D)
<u>-</u>	prob. <u>C</u> . perfringens	11-10	Utah	beef	+		9(10)	12		D,C	DH	
	prob. C. perfringens	11-11	Washington	barbecued chicken	+	+	2(2)	14	30		DH	Home (D)
	prob. <u>C</u> . perfringens	11-19	Georgia	roast		÷	30(75)	7	15	D,N,C	DH	Fraternity house (B)
	prob. <u>C</u> . <u>perfringens</u>	11-28	Ohio	turkey and dressing		÷	10(10)	12	30	D,C	DH	Home (C)
	prob. <u>C</u> . <u>perfringens</u>	12-3	Ohio	creamed chicken			2(5)	11	24	D,C	DH	Restaurant (B)
	prob. <u>C</u> . perfringens	12-8	Alaska	roast turkey			58(501)	13	12	D,C,N,F	AF	Dining hall (B)
	ESCHERICHIA COLI											
	<u>E. coli</u>	10-30	13 states and Washington, D.C.	imported cheese	+	<b>+</b> .	387(409)	18	48		DH	Home (A)

# SECTION F FOODBORNE OUTBREAKS, JULY - DECEMBER, 1971\*

					LAB DATA		<b># ill</b>	incub.	Duratio	חר		
				<u>P</u> .			(at	period	of dis.			
n				Ρ.	۷.	н.	risk)	(hrs.)	(hrs.)	Symptoms		
ALMONELLA												
. heidelberg	7-4	Illinois	roast pork	-	+		14(20)	30		N,V,D,F,C	DH	Home (C)
<u>. javiana</u>	7-5	Kansas		÷	-	+	23(76)	40	72	D,C,N,V,F	DH	Restaurant (C)
. <u>manhattan</u>	7-10	Californía		+			23(79)	49	409	C,D,N,V,F	DH	Clubhouse (D)
<u>infantis</u>	7-21	Georgia	chef, shrimp, and tossed salads	+	÷	+	18	24	24	D,F,V,C,N	DH	Restaurant (B)
5. <u>typhi-murium</u> bhage type E-1	7 <b>-</b> 23	Pennsylvania	potato salad?	+		+	33(130)	432	27	F,H,D,C,V	DH	Church (B)
. thompson	8-1	Iowa	deviled eggs, ham, dip	+	+	+	71(15 <b>0</b> )	18	72	D,F,N,V	DH	Country club (B)
. thompson	8-1	Iowa	potato salad?	+		+	24(70)	18	72	D,F,N,V	DH	Home (B)
. thompson	8-7	Maine	chicken salad	+		+	17 (33)	18		D,C,F,N,V	DH	Home (C)
. typhi-murium	8-8	Minnesota	turkey and rice stuffing	÷	÷	-	8(35)	48	9	D,F,C	DH	Home (C)
. <u>typhi-murium</u>	8-22	New Jersey	roast beef	+	+	+	22(36)	18	72	D	DH	Home (B)
. typhi-murium	<b>9-</b> 5	Minnesota	lemon meringue pie	+	+		5(21)	24			DH	Home (C)
. thompson	9-10	Wisconsin	pork spare ribs	÷		+	4			D	DH	Restaurant (B)
. derby	12-25	Kansas		+			11(13			D,N,V	DH	Home (C)
almonella group B	8-14	South Carolina		+			15(106)		18	D',F,C	DH	Nursing home (D)
. enteritidis	10-9	Idaho	chicken		+		6(120)	5	12	D,N,V,C	DH	Restaurant (B)
almonella unknown type		Connecticut	turkey	+	+	-	2(2)	24		F,D	USDA	Home (C)
rob. Salmonella roup C	8-23	Puerto Rico	semiliquid diet	+			20(77)				DH	Nursing home(B)
rob. <u>S</u> . <u>manhattan</u>	7-12	New York City	beef stew	-	÷		2(2)	1		D	DH	Restaurant (B)
Q					Ą	0				t		
	aniai ang kanang sanang sa	aa	แรงสองสองสองสองสองสองสองสองสองสองสองสองสอง	nadishdaddi	atioinen i sister	<u>ganippininas</u>	komunationalisiiniis	<u>yi jahasintintaantiin</u>	andinintation (data)	<u></u>		<u>in an an</u>
Ĉ					ł	Â						$\sim$
SHIGELIA	7 16	0-1: (					10/05)	16	70		DU	
<u>S. sonneí</u>	7-16	California	chicken sprea				22(25)	15	72	N,C,D	DH	Home (D)
<u>S. sonnei</u>	7-21	Pennsylvania	fruit salad	+			80(253)	48	72	N,V,F,C,D	DH	Picnic (D)
prob. shigella	8-22	Alaska		+			100		36	N,V,C,D	DH	Restaurant (D)
STAPHYLOCOCCUS			1				2010-12	r	0	NUDO	<b>1</b> .11	Destaurest
<u>S. aureus</u> S. aureus	3-25 7-8	Oklahoma Washington	ham turkey meat	+ -	+ +	+	56(61) 4(4)	5 5	8 12	N,V,D,C N,V,D,C	DH DH	Restaurant Restaurant
	11-21	Wisconsin	baked ham	+	' +	+		5	24	V,D,C,N,F	DH	(B)
S. <u>aureus</u>						т						Home (B)
<u>S. aureus</u>	12-23	California	ham	+	+		29(45)	4	6	N,V,C,D	AF	Party (B)
<u>S</u> . <u>aureus</u>	12-21 12-25	Hawaii Kentucky	raw pork dish ham	+++	`+ +	+	8(11) 10(36)	4 5	6	N,V,C,D,chills C,N,V,D	DH DH	Luau (D) Restaurant
<u>S</u> . <u>aureus</u>	<b>-</b> 4'4J	muttery			•		20 (30)	2	v	لو ۷ وندو <del>ک</del>	511	(C)

22

prob. staph.

4-5

Michigan

egg salad

4(4) 2 6

D,V,C,F

Home (C)

DH

2	prob. staph.	6-19	Pennsylvania	ham			48(250)	3	24	N,V,D	DH	Union Hall (C)
23	prob. staph.	6-26	Pennsylvania	chicken and ham	-	+	40 <b>(90)</b>	4	24	N,V,C,D	DH	Home (B)
	prob. staph.	7-2	California				(2)		24	N,V,C,D	DH	Home (D)
	prob. staph.	7-6	Washington	spareribs?		-	4(4)	5	3	N,V,D	DH	Restaurant (B)
	prob. staph.	7-14	Texas	cream puffs			8(9)	2	24	N, V	DH	Home (C)
	prob. staph.	7-20	Michigan	hamburger?	-	-	7(7)	3	36	N,V,D	DH	Restaurant (B)
	prob. staph.	7-22	Idaho	salami	-	+ ·	6(11)	4		N,V,D	DH	Home (C)
	prob. staph.	7 <b>-</b> 24	Minnesota	shrimp salad		+	8(11)	3	24	N,V,D	DH	Home (D)
	prob. staph.	7-26	California	baked ham		÷	1(2)	1	18	N,V,C,D	DH	Home (B)
	prob. staph.	7-27	California	ham salad		+	2(2)	2	44	N,V,D	DH	Home (B)
	prob. staph.	7-15	Multiple states	Genoa salami		+	34	4	48	N,V,D,C	DH	Home (A)
	prob. staph.	8-3	Michigan	bacon-egg salad sandwich			1(1)	3	3 <b>6</b>	N,V,D	DH	Office building (D)

	ETIOLOGY	ONSET	REPORTED FROM	VEHICLE		LAB DATA	A		CLINICAL	DATA		REPORTER	COMMENT	
					P.	V	H.	<pre># ill (at risk)</pre>	incub. period (hrs.)	Duratio of dis. (hrs.)	n Symptoms			
prob.	staph.	8-1	New Mexico	potato salad		+		36(51)	4			DH	Private club (C)	
prob.	staph.	8-6	Montana	potato salad			-+-	70(108)	3	24	V,C,D,F	DH	School (B)	
prob.	staph.	8-8	New Mexico	macaroni	-	-		3	10	48	N,V,C,D	DH	Home (C)	
prob.	staph.	8-17	Washington	ham				2(2)	4		N,V,D	DH	Home (C)	
prob.	staph.	8-22	Delaware	chicken				10(27)	12	36	N,V,C,D,F	DH	Convent (B)	
prob.	staph.	8-25	Michigan		-	+	-	10(140)	5	16	D,C,N,V	DH	Restaurant (B)	
prob.	staph.	8-25	Nebraska		-	+		7(7)	3		V,C,D	DH	Home (A)	
prob.	staph.	8-30	Washington	roast beef	÷			2(2)		12	D,C,N,V	DH	Food stand (B)	
prob.	staph.	9-8	Nebraska	ham	-			5	3	24	V,C,D	DH	Food stand (B)	
prob.	staph.	9-10	Wisconsin	ham		+	+	40			N,V,C	DH	School (B)	
prob.	staph.	9-12	Washington	roast beef				3(4)	3		N,V,C	DH	Restaurant (B)	
prob.	staph.	9 <b>-</b> 24	Pennsylvania	macaroni salad		+	-	212(433)	3	41	V,D,N,F,H	Other	School (B)	
prob.	staph.	10-8		pies	+			1(1)			N,V,C	DH	Restaurant (B)	
prob.	staph.	10-13	Washington	scallops?		-		3(3)	4	12	N,V,D,C	DH	Restaurant (B)	
prob.	staph.	10-22	California	ham		-		5(8)	4	24	N,V,D	DH	Restaurant (B)	
prob.	staph.	10-28	Arkansas	eggs		+	+	66(187)	4		N,V,C,D	DH	Prison (B)	
prob.	staph.	11-6	Washington	salami		+		2(2)	41	24	N,V,D,C	DH	Home (C)	
prob.	staph.	11-8	Washington	TV dinner?				5(5)	2	12	N,V,C,D	DH	Home (C)	
	<u>}</u>					Ş	Ì						,	
Ċ		<u>a (1997) - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1</u>	, , , , , , , , , , , , , , , , , , ,	da un de la classificita da de la construcción de la construcción de la construcción de la construcción de la c	<u>antri con</u>			etrotistanossa koisastistaise		ililitiininnetteetteetteet	is all state the second se	nan kan an an a shi balan kiman kan kan an a		
prob.	staph.	11-15	Ok lahoma 🔥	ham		+	-	10(33)	4			DH	Conference (B)	
prob.	staph.	11-19	Delaware	turkey				70 <b>(</b> 400)	3	24	N,V,C,D	DH	School (B)	
prob.	staph.	11-20	Georgia		-			18(95)			V,C,D,N	DH	Cafeteria (D)	
prob.	staph.	11-21	Rhode Island	eclairs		+						DH	Home (B)	
prob.	staph.	11-21	Michigan	pork chops				6(6)	8	16		DH	Campground (B)	
prob.	staph.	12-19	Oklahoma			+		4	3	8	N,V,C,D	DH	(D)	
prob.	staph.	12-25	California	ham				8(6)	3	5	N,V,D	DH	Church (D)	
prob.	staph.	?	New York	chicken salad	l			10(55)	4	24	N,V,D	DH	Nursing home (D)	

	prob. staph	?	Kentucky				50(80)	5	24	N,V,C	DH	Camp (C)
с П	VIBRIO PARAHEMOLYTICUS											
	V. parahemolyticus	8-14	Maryland	steamed crabs	+	+	320 (550)	15	72	D,C,N,V,F	DH	Picnic (B)
	V. parahemolyticus	8-28	Maryland	steamed crabs	+	+	25(75)	12	72	D,C,N,V,F	DH	Picnic (B)
	V. parahemolyticus	8-31	Maryland	crab salad	÷	+	25(100)	18	72	D,C,N,V,F	DH	Hospital (B)
	TRICHINELLA SPIRALIS											
	<u>T</u> . <u>spiralis</u>	7-14	New York	pork sausage	+	+	3	300		H,D	MMWR	Home (A)
	<u>T</u> . <u>spiralis</u>	7-25	Arizona	pork?		+	2	5	30	D,F	MMWR	Home (A)
	<u>T</u> . <u>spiralis</u>	8-1	Ohio	pork sausage	+		10	14		D, myalgia	MMWR	Home (B)
	<u>T</u> . <u>spiralis</u>			pork sausage	+	-	3	<b>8</b> 6	800		MMWR.	Home (A)
	VIRAL											
	infectious hepatitis	6-18	Oklahoma				5			N,V,F, jaundice	DH	Restaurant (D)
	infectious hepatitis	8-9	Massachusetts	clams			5(12)	500		jaundice	MMWR	Home (C)

Internal         Months         Months         Months         Months         Description           p         y         h         (13)         period         (13)	ETIOLOGY	ONSET	REPORTED FROM	VEHICLE	LAB DATA			/	CLINICAL	DATA		REPORTER	COMMENT	
p.	ETIOLOGY	UNDEI	REPORTED TROM		1	5114.1			incub.	Duration				
matrix         matrix         pilence saled         pilence saled         pilence saled           matrix         generic         6         950         jesuifier         78         Rose (0)           meneticies         generic         news         +         122(b)         1         3         generics         DB         Rose (0)           meneticies         10-7         Menetics         news         -         12(1)         1         3         generics         DB         Rose (0)           generics         3-11         Reserves         Nows         -         2(2)         1         3         generics         DB         Rose (0)           generics         3-11         Reserves         DB         Rose (1)         Rose (2)         Rose (2) <throse (2)<="" th=""> <throse (2)<="" th=""> <thros< th=""><th></th><th></th><th></th><th></th><th>P.</th><th>v</th><th>H.</th><th></th><th></th><th></th><th>Symptoms</th><th></th><th></th></thros<></throse></throse>					P.	v	H.				Symptoms			
matrix         matrix         pilence saled         pilence saled         pilence saled           matrix         generic         6         950         jesuifier         78         Rose (0)           meneticies         generic         news         +         122(b)         1         3         generics         DB         Rose (0)           meneticies         10-7         Menetics         news         -         12(1)         1         3         generics         DB         Rose (0)           generics         3-11         Reserves         Nows         -         2(2)         1         3         generics         DB         Rose (0)           generics         3-11         Reserves         DB         Rose (1)         Rose (2)         Rose (2) <throse (2)<="" th=""> <throse (2)<="" th=""> <thros< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></thros<></throse></throse>														
Description         Data	infectious hepatitis		New York		ıd			6(23)			jaundice	DH	Home (D)	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	prob. infectious hepatitis		Hawaii					6	900		jaundice		Home (D)	
And Linking         D. 1         Mathematical Mathmatical Mathematical Mathematical Mathematical Mathmatica	CHEMICAL													
Construction         Construction<	Andromeda toxin	10-?	Washington	honey		+		12(14)	1	6		DH	Home (A)	
Status         T-A         More Tork CLry         matermalon         4(4)         6         48         S,V,G,D         DB         Head (D)           fish nozia         6-4         Florida         barresucia         6-(6)         4         24         0,T         DH         Ship (C)           isthmol_antificence         10-30         Takio         isfant         +         1(3)         2         22.         DH         DE         Workbard           phenolphtalstn         12-2         Georgie         cake         +         4(4)         1         D         DE         Workbard           tin         11-30         Washington         fruit contial         +         3(3)         1         24         N,V,C,H         DH         New (O)           zine         8-27         California         puchi         17         15 min.         10         N,V,C,H         DH         New (O)           zine         11-11         New Merico         spaghetti sauce         4(5)         1         45         N,V,C,D         DH         Rescure <ttr>         5-3         Norto Rico         caajo         7(7)         18         5,X,Y,C,F         DH         Rescure<ttr>         5-10         Beansylvanta         -<!--</td--><td>prob. andromeda toxin (honey from Alpine Lau</td><td></td><td></td><td>honey</td><td></td><td></td><td></td><td>1(2)</td><td>1</td><td>3</td><td></td><td>DH</td><td>Home (A)</td></ttr></ttr>	prob. andromeda toxin (honey from Alpine Lau			honey				1(2)	1	3		DH	Home (A)	
Just Landel         H. J.	chocolate laxative	3-11	Kansas	brownies				5(5)	3					
Section and three in 10-30         Table         infanc - from in cake         1(3)         2         22         PE         Bowe (0)           phenolphtalete         12-2         Georgin         cake         +         4(4)         1         D         D3         Workbond (6)           tin         11-30         Wathington         fruit cocktail         +         3(3)         1         24         N,V,C,H         DK         Bloss (A)           gine         8-27         California         punch         20(20)         15 min.         10         N,V,C,H         DK         Bloss (A)           sine         12-11         Wer Moxico         spaghetti seace         4(3)         1         48         N,V,C,D         DH         Bestimut           sine         12-11         Wer Moxico         spaghetti seace         4(3)         1         48         N,V,C,D         DH         Bestimut           sine         12-11         Wer Moxico         spaghetti seace         4(3)         1         48         N,V,C,D         DH         Bestimut           sine         5-3         Space o Riso         cuariso         7(7)         18         D,N,V,C,F         DH         Bestimut           5-10	prob. chemical	7⇔4	New York City	watermelon				4(4)	б	48	N,V,C,D	DH	Home (D)	
International and the second phenolphical end         i commuta         i commuta           phenolphical end         12-2         Georgin         cake         +         4(4)         1         D         DH         Modebend           ina         11-30         Washington         fruit costrail +         3(3)         1         24         N, V, C, H         DE         Home (G)           sine         8-27         California         puestic         20(20)         15 min.         10         N, V, C, H         DE         Home (A)           sine         9-4         Rebracka         fruit punch         17         15 min.         2         D, C         DH         Boy's old           sine         11-11         Wey Morizo         spaghetti sauce         4(3)         1         48         N, V, C, D         DH         Boy's old           UNMONON         5-3         Fuerto Rico         cuajo         7(7)         18         D, N, V, C, T         DH         Besteaura           5-10         Pennsylvania         -         -         36(50)         13         24         D, N, V, C, T         DH         Besteaura           7-2         South Carolina         -         2(4)         1         N, V, D </td <td>fish toxin</td> <td>8-4</td> <td>Florida</td> <td>barracuda</td> <td></td> <td></td> <td></td> <td>6(6)</td> <td>4</td> <td>24</td> <td>D,V</td> <td>DH</td> <td>Ship (C)</td>	fish toxin	8-4	Florida	barracuda				6(6)	4	24	D,V	DH	Ship (C)	
participation         in 1         consist         cont         (c)         cont         (c)           tin         11-30         Washington         fruit contrial         +         3(3)         1         24         3,7,6,E         DR         Bose (A)           tine         8-27         California         purch (galivanized container)         20(20)         15 min.         10         N,V,6,D         DR         Bowe (A)           zine         9-4         Nebrasks         fruit punch         17         15 min.         10         N,V,6,D         DR         Bowe (C)           zine         9-4         Nebrasks         fruit punch         17         15 min.         2         D,G         DR         Bowe (C)           UNEXCENT         5-3         Puerco Rico         cuajo         7(7)         18         D,N,V,C,F         DR         Bestaura           5-10         Penmsylvania         -         -         -         36(50)         13         2.4         D,N,V,C,F         DR         Restaura           5-12         South Carolina         -         -         2(4)         1         K,V,C,D         DR         Restaura           7-2         Texau         corned Seef	methanol antifreeze	10-30	Idaho		+			1(3)	2	22		DH	Home (C)	
Lin       in 1 1 2 minungeen       Joint Finden       10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	phenolphtalein	12-2	Georgia	cake		+		4(4)	1		D		Workbench (C)	
21.0       0.1.0	tin	11-30	Washington	fruit cocktai	.1	+		3(3)	1	24	N,V,C,H	DH	Home (A)	
sinc       11-11       New Mexico       spagherti sauce       4(5)       1       45       N, V, C, D       DH       Home (C)         DENNOMN       5-3       Puerto Rico       cuajo       7(7)       18       D, N, V, C, F       DH       Restaura         5-10       Pennaylvania       -       -       -       36(50)       13       24       D, N, V, C, F       DH       Restaura         5-10       Pennaylvania       -       -       -       36(50)       13       24       D, N, V, C, F       DH       Restaura         5-12       South Carolina       -       -       -       36(50)       3       D, V, C, V       DH       Restaura         0       -       -       -       -       -       30(50)       3       D, V, C, V       DH       Restaura         0       -       -       -       -       -       -       -       0	zinc	8-27	California	(galvanized		,		20(20)	15 min	. 10	N,V,C,D	DH	Church (I	
Link       Link <thlink< th="">       Link       Link</thlink<>	zinc	9-4	Nebraska	fruit punch				17	15 min	. 2	D,C	DH		
DIMENSION       5-3       Puerto Rico       cuajo       7(7)       18       D,N,V,C,F       DH       Restaure (1)         5-10       Pennsylvania       -       -       -       36(50)       13       24       D,N,V,C,F       DH       Restaure (2)         5-10       South Carolina       -       -       -       36(50)       13       24       D,N,V,C,F       DH       Restaure (2)         5-10       South Carolina       -       -       -       36(50)       13       24       D,N,V,C,F       DH       Restaure (2)       Restaure (2)         5-10       South Carolina       -       -       -       36(50)       13       24       D,N,V,C,F       DH       Restaure (2)         5-10       South Carolina       -       -       2(4)       1       K,V,D       DH       Restaure (2)         5-29       South Carolina       -       -       2(4)       1       K,V,D       DH       Restaure (2)         7-2       Texas       corned beef       -       1(1)       1       6       N,D       DH       Book (1)         7-3       Usashington       maccornel acearoni al ade?       -       2(2)       7 <th< td=""><td>zinc</td><td>11-11</td><td>New Mexico</td><td>spaghetti sau</td><td>ice</td><td></td><td></td><td>4(5)</td><td>1</td><td></td><td>•</td><td>DH</td><td>Home (C)</td></th<>	zinc	11-11	New Mexico	spaghetti sau	ice			4(5)	1		•	DH	Home (C)	
5-3       Puerto Rico       cuajo       7(7)       18       D,N,V,C,F       DH       Restaura (B)         5-10       Pennsylvania       -       -       -36(50)       13       24       D,N,V,C,F       DH       Restaura (B)         5-12       South Carolina       5(50)       3       D,V,C,F       DH       Restaura (B)         5-29       South Carolina       -       -       2(4)       1       N,V,D       DH       Restaura (D)         7-2       Taxas       corned beef       1(1)       1       6       N,D       DH       Restaura (D)         7-3       Washington       "sloppy joes"       -       2(2)       7       48       N,V,C,D,F       DH       Home ( (D)         7-4       Washington       macroni salad?       -       -       10(12)       35       24       N,D,V,C       DH       Home ( (D)         7-12       South Carolina       -       2(6)       7       N,V,C       DH       Restaura (B)       1       5       N,V,C,D,F       DH       Home ( (B)         7-12       South Carolina       -       2(2)       7       7       N,V,D       DH       Restaura (B)         7-14	UNKNOWN										•			
5-12South Carolina5(50)3 $D, V, C, Y$ DH(D) (B)5-12South Carolina $5(50)$ 3 $D, V, C, Y$ DH(D) (B)5-29South Carolina $ 2(4)$ 1 $N, V, D$ DHRestau (D)7-2Texascorned beef $1(1)$ 16 $N, D$ DHRestau (D)7-3Washington"sloppy joes" $ 2(2)$ 748 $N, V, C, D, F$ DHHome ( (C)7-4Washingtonmacaroni adal? $ 10(12)$ $35$ 24 $N, p, v, C$ DHHome ( (C)7-12South Carolina $ 2(6)$ 7 $N, V, C$ DHHome ( (C)7-14New Hampshire $ 33(111)$ $35$ $N, V, C, D, F$ DHPicnic (C)7-15South Carolina $ 2(2)$ 77 $N, V, D$ DHRestau (B)		5-3	Puerto Rico	cuajo				7(7)	18		D,N,V,C,F	DH	Restaura (B)	
5-12       South Carolina       5(50)       3       D, V, C, F       DH       (D) (B) (B)         5-12       South Carolina       -       2(4)       1       N, V, D       DH       Restau (D)         5-29       South Carolina       -       2(4)       1       N, V, D       DH       Restau (D)         7-2       Texas       corned beef       1(1)       1       6       N, D       DH       Home ( (D)         7-3       Washington       "sloppy joes"       -       2(2)       7       48       N, V, C, D, F       DH       Home ( (C)         7-4       Washington       macaroni salad?       -       10(12)       35       24       N, D, V, C       DH       Home ( (C)         7-12       South Carolina       -       2(6)       7       N, V, C, D, F, C       DH       Here tau (C)         7-14       New Hampshire       -       33(111)       35       N, V, C, D, F       DH       Picnic (G)         7-15       South Carolina       -       2(2)       7       7       N, V, D       DH       Restau (B)		5-10	Pennsvlvania		-	-	-	36(50)	13	24	D,N,V,C	DH	Restaura	
7-2Texascorned beef1(1)16N,DDHHome (D)7-3Washington"sloppy joes"-2(2)748N,V,C,D,FDHHome (C)7-4Washingtonmacaroni salad?10(12)3524N,D,V,CDHHome (C)7-8Washingtonmarcaroni and cheese-2(6)7N,V,CDHHome (C)7-12South Carolina6(6)15N,V,C,D,F,CDHRestau (C)7-14New Hampshire-33(111)35N,V,C,D,FDHPicnic (B)7-15South Carolina-2(2)77N,V,DDHRestau (B)										3		DH	Ice comp	
7-2Texascorned beef1(1)16N,DDHHome (D)7-3Washington"sloppy joes"-2(2)748N,V,C,D,FDHHome (C)7-4Washingtonmacaroni salad?10(12)3524N,D,V,CDHHome (C)7-8Washingtonmarcaroni and cheese-2(6)7N,V,CDHHome (C)7-12South Carolina6(6)15N,V,C,D,F,CDHRestau (C)7-14New Hampshire-33(111)35N,V,C,D,FDHPicnic (B)7-15South Carolina-2(2)77N,V,DDHRestau (B)	0					Ş	Ş						9	
7-2Texascorned beef1(1)16N,DDHHome (D)7-3Washington"sloppy joes"-2(2)748N,V,C,D,FDHHome (C)7-4Washingtonmacaroni salad?10(12)3524N,D,V,CDHHome (C)7-8Washingtonmarcaroni and cheese-2(6)7N,V,CDHHome (C)7-12South Carolina6(6)15N,V,C,D,F,CDHRestau (C)7-14New Hampshire-33(111)35N,V,C,D,FDHPicnic (B)7-15South Carolina-2(2)77N,V,DDHRestau (B)		<u>Langar (1997) (</u>	<u></u>	titimerizatinizi terihtere anteraria inter	sicialitati	uninani di kana		<u>, (, , , , , , , , , , , , , , , , , , </u>		kinganitanan girtair	<u>anatalisesi menten senatur terrakata</u>	<u>e reio un láthan catharráin an dáidean</u>	ulininenneter försatte böra och störförda för	
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7-4Washingtonmacaroni salad?-10(12)3524N,D,V,CDHHome (7-8Washingtonmarcaroni and cheese-2(6)7N,V,CDHHome (7-12South Carolina-6(6)15N,V,C,D,F,CDHRestau (C)7-14New Hampshire-33(111)35N,V,C,D,FDHPicnic 		7-3	Washington	"sloppy io	es"	-				48				
7-8Washington and cheese and cheesemarcaroni and cheese-2(6)7N,V,CDHHome ( Home ( C)7-12South Carolina-6(6)15N,V,C,D,F,CDHRestau (C)7-14New Hampshire-33(111)35N,V,C,D,FDHPicnic (B)7-15South Carolina-2(2)77N,V,DDHRestau (B)				macaroni	-									
and cheese-6(6)15N,V,C,D,F,CDHRestau (C)7-12South Carolina-33(111)35N,V,C,D,FDHPicnic7-14New Hampshire-33(111)35N,V,C,D,FDHPicnic7-15South Carolina-2(2)77N,V,DDHRestau (B)		7-8	Washington			-		2(6)	7		N.V.C	חת	Home (	
7-14New Hampshire-33(111)35N,V,C,D,FDHPicnic7-15South Carolina-2(2)77N,V,DDHRestau (B)				and cheese						5			Restau	
7-15 South Carolina - 2(2) 7 7 N,V,D DH Restau (B)		7-14	New Hamoshire			-		337111	[) 35		N.V.С.Р.Ж	עת		
										7			Restau	
		7-15	5 South Carolina	a				1(3)			N,V,D	DH		

7-17	Wisconsin	chicken salad			3	3			DH	Restaurant (B)
7-19	Wisconsin	chicken salad			2	5			DH	(B) Restaurant (B)
7-27	New Jersey	soft drink	-		18(37)	4	1	N,V	DH	Other (D)
7-28	Washington	cream pie		-	3(3)	12		D,C,F	DH	Home (B)
7-28	South Carolina			-	3(4)	3		N,V,C,D	DH	Restaurant (D)
8-1	New York City	beef patty			3(4)	2		D,C,N,V,F	DH	Home (C)
8-12	Washington	crab raviatte			2(5)	21	8	N,C,D	DH	Restaurant (B)
8-14	Illinois	barbecue		-	4	3	24	V <sub>●</sub> D	DH	Restaurant (D)
8-22	Florida	pork	-		14(40)	4	48	N,V,D,F	DH	Home (D)
9-11	California				29(52)	49	35	N, V, C, D	DH	School (D)
9-28	Georgia	chicken?	-		2	16	72	N,V,C,D	DH	Home (D)

1(15)

96

D,C

DH

Home (D)

7-17 California

27

cheese

COMMENT		Home (D)	School (D)	Restaurant (D)	Church (B)	Ship (D)	Home (D)	Restaurant (B)	Home (A)	(B)	(B)	Home (D)	Restaurant (D)	Home (D)	Restaurant	(D) (D)	Home (B)	× .	Ô
RE PORTER		HQ	HC	Ηđ	DH	DH	Hď	HQ	DH	ЪН	HQ	ЪĦ	НД	HC	Ηđ	Ηđ	HC		
	n Symptoms	N,V,C,D	N,C,D	N,C,V,D	D, N, V, C, F	C,V,F	D,V,C,F	N,V,C,D	N, V, D, C								N,V,D,F		
CLINICAL DATA	Duration of dis. (hrs.)				30	72	24	24	Ø	48	36	9							
CLINIC	incub. period (hrs.)		6	1	33		13	7	ڡ	10	36	5					33		
	# ill (at risk)	3(3)	10(200)	(4)	60 (80)	29	10(12)	2(2)	3(4)	3(3)	35(45)	2(5)	19(19)	3 (3)	3(4)	40(284)	32 (37)		
LAB DATA	Ρ. V. H.		ı	ł	ı T		1 1 1	•	1		1	ı							0
VEHICLE				tarter sauce?	punch		cheese?	Chinese food	chocolate cake . with custard filling				beef	candy	french fries		Mexican food		
REPORTED FROM		South Carolina?	South Carolina?	Washington	New Jersey	Michigan?	New York City	Washington	Washington	Utah	Utah	New York City?	New York	New York	New York	New York?	Ohio		
ONSET		9-30	9-30	10-6	10-18	10-23	11-4	11-11	11-12	11-26	11-29	12-12							
ETIOLOGY		·																	Õ
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The State Epidemiologists are the key to all disease surveillance activities. They are responsible for collecting, interpreting, and transmitting data and epidemiologic information from their individual States; their contributions to this report are gratefully acknowledged. In addition, valuable contributions are made by State Laboratory Directors; we are indebted to them for their valuable support.

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