CENTER FOR DISEASE CONTROL

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WEEKLY REPORT

For Week Ending October 31, 1970

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE / HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

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EPIDEMIOLOGIC NOTES AND REPORTS

ASEPTIC MENINGITIS, Richmond, Virginia

Ninety-one cases of aseptic meningitis have been diagnosed in the Richmond, Virginia, area since the latter part of June 1970. A total of 180 cases have been reported from Virginia in the same period. These partial totals are already higher than for any year in the 10-year period 1960-1969 (Table 1).

Table 1
Reported Cases of Aseptic Meningitis
Richmond and Virginia – 1960-1970

	Year										
	'60	'61	'62	'63	'64	'65	'66	'67	'68	'69	'70*
Virginia	45	86	47	29	24	17	31	64	106	31	180
Richmond	NA**	NA	NA	2	NA	1	0	0	0	0	91

*To October 17
**Not available

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The majority of cases have occurred in east Richmond, a predominantly Negro area. The outbreak reached a peak during the week ending August 29 and now appears to be abating (Figure 1). A striking feature of this epidemic is the age distribution. The highest attack rate was for children less than 1 year of age (Table 2). A review of 39 hospital charts of Richmond residents revealed that 28.2 percent of the cases occurred in children less than 1, 74.4 percent occurred in children less than 5, and all of the 39 patients were less than 15 years old. Twenty-two cases (56.4 percent) occurred in males, and 36 cases

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TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

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

DISEASE	43rd WEEK ENDED		MEDIAN	CUMULATIVE, FIRST 43 WEEKS		
	October 31, 1970	October 25, 1969	1965 - 1969	1970	1969	MEDIAN 1965 - 1969
Aseptic meningitis	137	101	90	5,071	2,866	2,515
Brucellosis	1	12	4	172	198	206
Diphtheria	9	3	3	378	144	144
Encephalitis, primary:						
Arthropod-borne & unspecified	33	44	49	1,302	1,063	1,367
Encephalitis, post-infectious	2	1	7	339	262	581
Hepatitis, serum	148	119	787	5,987	4,358	33,591
Hepatitis, infectious	1,059	1,182		46,457	38,992	
Malaria	46	79	49	2,812	2,553	1,689
Measles (rubeola)	548	296	300	41,286	21,479	59,379
Meningococcal infections, total	38	41	40	2,041	2,543	2,542
Civilian	24	41	39	1,828	2,336	2,336
Military	14	–	1	213	207	189
Mumps	1,626	1,123	- - -	82,213	72,697	- - -
Poliomyelitis, total	–	–	3	24	16	52
Paralytic	–	–	1	24	15	40
Rubella (German measles)	275	348	- - -	51,411	51,028	- - -
Tetanus	2	7	3	104	132	161
Tularemia	–	5	5	129	124	152
Typhoid fever	13	13	12	286	269	327
Typhus, tick-borne (Rky. Mt. spotted fever)	1	2	2	324	426	265
Rabies in animals	46	35	46	2,535	2,829	3,427

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	2	Psittacosis: Calif.-1, Tex.-1	27
Botulism: Kans.-1	12	Rabies in Man:	2
Leprosy:	99	Rubella congenital syndrome:	51
Leptospirosis: Fla.-4, Ohio-1	40	Trichinosis:	85
Plague:	11	Typhus, murine:	32

ASEPTIC MENINGITIS – *(Continued from front page)*

Figure 1
ASEPTIC MENINGITIS CASES, BY WEEK OF ONSET
RICHMOND, VIRGINIA, AREA – 1970

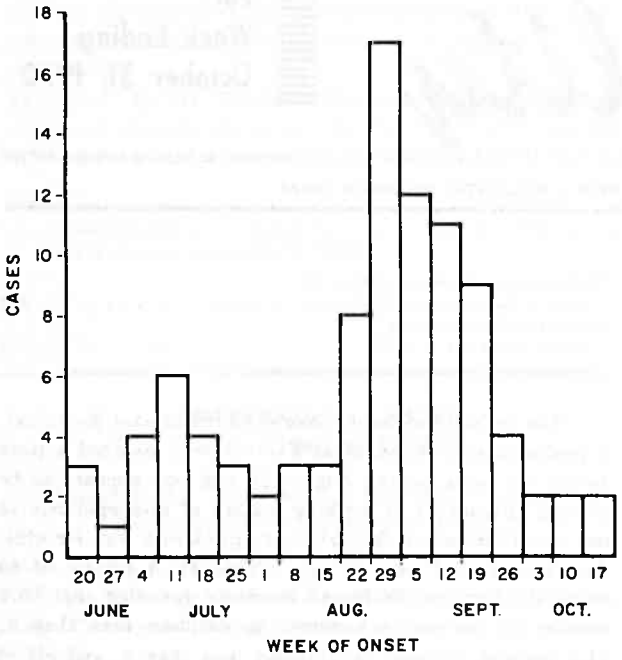


Table 2
Age Specific Attack Rates, Aseptic Meningitis
Richmond – 1970*

Age (Years)	Number of Cases	Percent of Total	Attack Rate* per 1,000
Under 1	11	28.2	3.14
1–4	18	46.2	1.16
5–9	8	20.5	0.34
10–14	2	5.1	0.09

*Based on review of 39 cases.

(92.3 percent) occurred in Negroes. The Negro population accounts for approximately 50 percent of the total population of the greater Richmond area.

The clinical syndrome has been mild, with the majority of patients presenting with fever, stiff neck, nausea, and vomiting (Table 3). Of a total of 44 initial spinal taps, the average values of cell counts were 201 white blood cells per mm^3, 57 polymorphonuclear leukocytes per mm^3, protein 62 mg percent, and sugar 64 mg percent. All 37 for which culture results were obtainable were negative for bacteria. The Virginia State Health Laboratory has isolated virus from 14 different patients; echovirus type 3 has been identified in 12 of the 14 (five in throat culture alone, three in cerebrospinal fluid alone, and two in both).

Table 3
Clinical Syndrome, 44 Patients – Richmond, Virginia

	Percent
Fever	100
Stiff neck	64.4
Nausea and vomiting	60.0
Headache	42.2
Anorexia	42.4
Irritability	33.0
Lethargy or listlessness	33.0
Neck and/or back pain	6.7
Abdominal pain	6.7
Myalgias (extremities)	4.4
Rash	4.4
Loose stools or diarrhea	4.4

(Reported by William E. Laupus, M.D., Chairman, Pediatrics Department, Robert Mallanovich, Senior Resident in Pediatrics, Medical College of Virginia; Robert Robinson, M.D., Chief, Communicable Diseases, Richmond City Health Department; H.E. Gillespie, M.D., Acting State Epidemiologist, W. French Skinner, M.P.H., State Laboratory Director, Jeannie O'Grady, B.S., Virologist, Virginia State Health Department; and an EIS Officer.)

SALMONELLA SURVEILLANCE
ANNUAL SUMMARY – 1969

For 1969, 21,413 isolations of salmonellae from humans were reported, representing an 8.5 percent increase over the 19,740 reported for 1968 and an 8.6 percent increase over the 19,723 for 1967. A total of 9,453 recoveries of salmonellae from nonhuman sources were reported, an increase of 6.5 percent over 1968 and 7.5 percent over 1967.

The seasonal distribution of salmonella isolations from humans in 1965 through 1969 shows a consistent pattern, with the most isolations in July through October and the least in January through April.

During the 7-year period 1963-1969, 276 different salmonella serotypes have been recovered from humans; 67 of these were isolated only once. *Salmonella enteritidis* isolations steadily increased in frequency, from 801 in 1963 to 1,988 in 1969. The number of *S. thompson* isolations more than tripled in the same time period. On the other hand, the frequency of *S. oranienburg* isolations has decreased by 55 percent since 1965. The frequency of *S. derby* isolations has remained at relatively low levels since reaching a peak of 2,360 in 1964.

A total of 165 different salmonella serotypes were reported in 1969, compared with 154 in 1968. The 10 most frequently isolated serotypes (Table 4) accounted for 15,457 (72.2 percent) of the 21,413 isolations. The frequency of isolation of *S. thompson* showed the greatest increase, with a rise of 57 percent over 1968. The same 10 serotypes were most frequently reported in 1968, but with minor differences in rank. This table also demonstrates the close correlation between human and nonhuman serotypes of salmonellae, with five serotypes appearing on both lists.

Table 4
The Ten Most Frequently Isolated Serotypes from Human and Nonhuman Sources – 1969

Human				Nonhuman		
Serotype	Number	Percent	Rank Last Year	Serotype	Number	Percent
1 *typhi-murium**	5,773	27.0	1	*typhi-murium**	1,476	15.6
2 *enteritidis*	1,988	9.3	2	*heidelberg*	966	10.2
3 *newport*	1,611	7.5	4	*cholerae-suis var. kunzendorf*	680	7.2
4 *heidelberg*	1,428	6.7	3	*anatum*	534	5.6
5 *infantis*	1,096	5.1	6	*saint-paul*	463	4.9
6 *thompson*	1,056	4.9	7	*thompson*	315	3.3
7 *saint-paul*	986	4.6	5	*montevideo*	304	3.2
8 *typhi*	549	2.6	8	*infantis*	279	3.0
9 *blockley*	505	2.4	10	*senftenberg*	257	2.7
10 *javiana*	465	2.2	9	*derby*	245	2.6
Total	15,457	72.2		Total	5,519	58.4
Total (all serotypes)	21,413			Total (all serotypes)	9,453	
*Includes *var. copenhagen*	259	1.2		*Includes *var. copenhagen*	272	2.9

California reported the largest number, 2,239, of isolations. New York, Massachusetts, Florida, Illinois, and Texas reported over 1,000 isolations. The incidence of salmonella infection for the entire country was 10.6 per 100,000 population. Hawaii again reported the highest incidence, 57.0 isolations per 100,000. Other areas with incidence rates higher than 20 per 100,000 were Alaska, Massachusetts, the District of Columbia, and Florida. Regional differences with regard to serotypes were again apparent. For example, Hawaii, which accounted for only 2.1 percent of all isolations, reported 93 percent (50 of 54) of all *S. weltevreden* isolations. Florida, Texas, Georgia, and Louisiana accounted for 77 percent of the 465 *S. javiana* isolations. Georgia reported all 15 *S. atlanta* isolations. Texas reported 13 of the 15 *S. lomita* isolations and 13 of the 14 *S. saphra* isolations. Appropriately, 86 of 106 (81 percent) *S. miami* isolations were made in Florida.

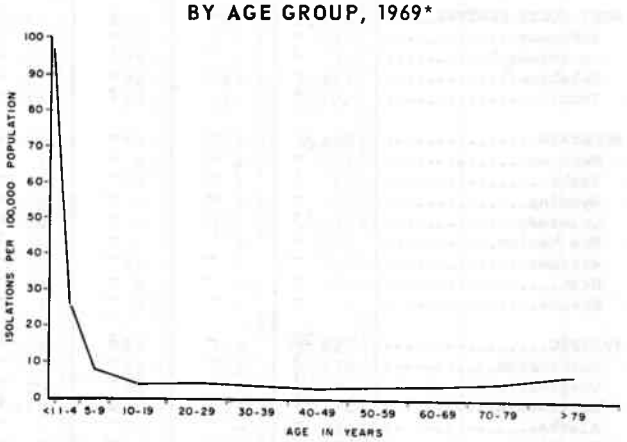
In 1969, CDC received reports of 19 outbreaks involving 1,023 individuals. Seven of the nine foodborne outbreaks were traced to a specific contaminated food: three were caused by turkey, one by chicken, one by beef, one by spaghetti and meatballs, and one by muktuk (whale skin and blubber). In two foodborne outbreaks, the specific food food could not be identified. Three outbreaks involving four persons were traced to household pets infected with the same serotypes. Six outbreaks involving 137 individuals occurred in hospitals or nursing homes; the sources of infection in the five *S. infantis* outbreaks and the one *S. indiana* could not be determined. One four-case outbreak of typhoid fever was traced to an *S. typhi* carrier employed by a restaurant. No deaths occurred in any of these reported outbreaks.

Of the 15,749 patients reported by age, 10,729 (68.1 percent) were less than 20 years old. The number of isolations per 100,000 population in various age groups (Figure 2) closely approximates those for the years 1963 through 1968. However, the rates for children less than 10, particularly for infants, appear to have increased over the past 6 years. Of the 21,137 patients whose sex was reported, 10,663 (50.4 percent) were males and 10,474 (49.6 percent) were females. Although there was no overall sex predilection, among those under 20 years there was a preponderance of males, and the opposite was true for those over 20. This difference may be related to an inherent susceptibility of males, especially in infancy, and a higher degree of exposure of adult females because of their more intimate contact with sick children.

Of 549 isolations of *S. typhi* reported, 92 were from cases of typhoid fever and 158 from asymptomatic carriers. The clinical classification was not reported for the remaining 299. Typhoid cases showed no significant sex predilection (F:M = 1.04:1); however, females predominated as carriers (F:M = 3.65:1). Most cases (74.3 percent) occurred in persons less than 30 years of age, whereas most carriers (85.7 percent) were 50 years of age or older.

A total of 9,453 salmonella isolations from nonhuman sources were reported, a 6.5 percent increase over 1968.

Figure 2
RATE OF HUMAN ISOLATIONS OF SALMONELLAE, BY AGE GROUP, 1969*



*POPULATION DATA OBTAINED FROM CURRENT POPULATION REPORTS, SERIES P-25, NO. 428, AUGUST 19, 1969

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

OCTOBER 31, 1970 AND OCTOBER 25, 1969 (43rd WEEK)

AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	DIPHTHERIA	ENCEPHALITIS			HEPATITIS			MALARIA	
				Primary including unsp. cases		Post Infectious	Serum	Infectious			
	1970	1970	1970	1970	1969	1970	1970	1970	1969	1970	Cum. 1970
UNITED STATES	137	1	9	33	44	2	148	1,059	1,182	46	2,812
NEW ENGLAND	5	–	–	–	–	–	6	124	201	2	78
Maine	1	–	–	–	–	–	–	27	4	1	9
New Hampshire	—	—	—	—	–	—	—	—	6	—	6
Vermont	–	–	–	–	–	–	–	6	7	–	5
Massachusetts	4	–	–	–	–	–	1	49	154	1	37
Rhode Island	–	–	–	–	–	–	–	16	16	–	9
Connecticut	–	–	–	–	–	–	5	26	14	–	12
MIDDLE ATLANTIC	38	–	–	7	3	–	65	218	217	6	282
New York City	20	–	–	–	1	–	32	63	31	2	38
New York, Up-State	3	–	–	2	1	–	6	66	70	–	84
New Jersey	9	–	–	–	–	–	21	47	61	3	73
Pennsylvania	6	–	–	5	1	–	6	42	55	1	87
EAST NORTH CENTRAL	23	–	–	13	13	–	24	194	165	3	166
Ohio	12	–	–	6	5	–	5	43	42	–	28
Indiana	2	–	–	2	–	–	2	10	11	–	19
Illinois	3	–	–	1	3	–	2	36	37	1	45
Michigan	6	–	–	4	5	–	15	84	72	2	74
Wisconsin	–	–	–	–	–	–	–	21	3	–	–
WEST NORTH CENTRAL	4	1	1	5	1	–	7	24	22	5	275
Minnesota.*	4	–	–	–	–	–	3	2	3	–	22
Iowa.*	–	1	–	3	1	–	–	4	4	–	23
Missouri	–	–	–	–	–	–	1	7	11	1	26
North Dakota	–	–	–	1	–	–	–	–	–	–	3
South Dakota	–	–	1	–	–	–	–	1	–	–	2
Nebraska	–	–	–	–	–	–	–	6	1	–	6
Kansas	–	–	–	1	–	–	3	4	3	4	193
SOUTH ATLANTIC	19	–	1	2	19	1	11	136	137	11	534
Delaware	–	–	–	–	1	–	–	2	1	–	2
Maryland	1	–	–	–	2	–	1	22	13	1	70
Dist. of Columbia	1	–	–	–	–	–	1	1	21	–	2
Virginia	—	—	—	—	1	—	—	—	3	—	70
West Virginia	–	–	–	–	14	–	–	21	8	1	11
North Carolina	2	–	–	1	–	–	5	22	25	4	204
South Carolina	3	–	–	1	–	–	–	13	10	–	49
Georgia	1	–	–	–	–	–	–	13	23	3	77
Florida	11	–	1	–	1	1	4	42	33	2	49
EAST SOUTH CENTRAL	5	–	4	1	1	–	–	49	57	1	177
Kentucky	1	–	–	–	–	–	–	22	26	–	143
Tennessee	1	–	–	1	1	–	–	16	15	–	–
Alabama	3	–	4	–	–	–	–	6	9	1	23
Mississippi	–	–	–	–	–	–	–	5	7	–	11
WEST SOUTH CENTRAL	6	–	2	–	1	–	3	68	95	3	496
Arkansas	–	–	–	–	–	–	–	2	1	–	13
Louisiana.*	3	–	1	–	–	–	2	11	48	3	37
Oklahoma*	–	–	–	–	–	–	–	14	8	–	87
Texas	3	–	1	–	1	–	1	41	38	–	359
MOUNTAIN	17	–	–	1	3	–	5	45	39	4	274
Montana	–	–	–	–	–	–	–	3	–	–	10
Idaho	1	–	–	–	–	–	–	2	2	–	6
Wyoming	–	–	–	–	–	–	–	–	2	–	–
Colorado	11	–	–	–	2	–	1	16	13	4	236
New Mexico	5	–	–	1	–	–	–	1	11	–	9
Arizona	–	–	–	–	1	–	–	16	8	–	10
Utah	–	–	–	–	–	–	4	7	2	–	3
Nevada	–	–	–	–	–	–	–	–	1	–	–
PACIFIC	20	–	1	4	3	1	27	201	249	11	530
Washington	1	–	–	–	–	–	–	41	34	–	45
Oregon	1	–	–	–	1	–	1	28	21	1	17
California	17	–	1	4	2	1	26	126	190	3	337
Alaska	–	–	–	–	–	–	–	2	3	–	1
Hawaii	1	–	–	–	–	–	–	4	1	7	130
Puerto Rico	1	–	–	–	–	–	6	23	28	–	10
Virgin Islands	—	—	—	—	–	—	—	—	–	—	–

*Delayed reports: Brucellosis: Okla. 1
Encephalitis, primary: Minn. 5
Hepatitis, infectious: La. delete 1
Malaria: Iowa 2, Okla. 2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

OCTOBER 31, 1970 AND OCTOBER 25, 1969 (43rd WEEK) - CONTINUED

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		POLIOMYELITIS		
		Cumulative			Cumulative			Cum.	Total	Paralytic	
	1970	1970	1969	1970	1970	1969	1970	1970	1970	1970	Cum. 1970
UNITED STATES.....	548	41,286	21,479	38	2,041	2,543	1,626	82,213	-	-	24
NEW ENGLAND.....	5	922	1,124	3	87	100	243	9,512	-	-	-
Maine*.....	-	225	9	-	3	7	10	715	-	-	-
New Hampshire.....	---	59	240	---	8	3	---	339	---	---	-
Vermont.....	-	8	3	-	7	-	29	643	-	-	-
Massachusetts*.....	2	412	224	1	38	38	19	2,923	-	-	-
Rhode Island.....	-	120	27	-	6	14	72	1,709	-	-	-
Connecticut.....	3	98	621	2	25	38	113	3,183	-	-	-
MIDDLE ATLANTIC.....	22	5,001	7,606	15	378	425	218	7,985	-	-	-
New York City.....	12	949	4,954	-	84	81	26	2,898	-	-	-
New York, Up-State...	5	323	609	-	72	82	NN	NN	-	-	-
New Jersey.....	-	1,713	936	14	152	166	48	2,156	-	-	-
Pennsylvania.....	5	2,016	1,107	1	70	96	144	2,931	-	-	-
EAST NORTH CENTRAL.....	49	9,973	2,390	6	240	347	460	22,161	-	-	2
Ohio.....	17	3,840	400	2	90	130	54	3,863	-	-	-
Indiana.....	-	273	468	-	20	45	15	1,949	-	-	-
Illinois.....	5	3,093	590	3	59	49	5	1,794	-	-	-
Michigan.....	12	1,781	318	1	61	98	154	5,447	-	-	1
Wisconsin.....	15	986	614	-	10	25	232	9,108	-	-	1
WEST NORTH CENTRAL.....	4	3,884	808	2	107	127	96	4,296	-	-	1
Minnesota.....	1	40	8	-	16	28	4	404	-	-	-
Iowa.....	-	1,153	336	-	13	19	86	2,606	-	-	-
Missouri.....	-	1,276	31	1	58	52	2	387	-	-	1
North Dakota.....	-	320	16	-	5	2	3	325	-	-	-
South Dakota.....	-	96	3	-	1	1	-	41	-	-	-
Nebraska.....	3	931	407	-	7	9	1	389	-	-	-
Kansas.....	-	68	7	1	7	16	-	144	-	-	-
SOUTH ATLANTIC.....	11	7,299	2,589	-	397	447	99	9,259	-	-	1
Delaware.....	-	264	394	-	3	13	6	327	-	-	-
Maryland.....	-	1,377	77	-	41	41	12	980	-	-	-
Dist. of Columbia....	-	344	28	-	3	9	3	193	-	-	-
Virginia.....	---	2,011	888	---	41	55	---	2,055	---	---	-
West Virginia.....	1	320	214	-	10	19	31	2,306	-	-	1
North Carolina*.....	3	885	319	-	85	82	NN	NN	-	-	-
South Carolina.....	2	599	126	-	45	57	9	906	-	-	-
Georgia.....	2	17	2	-	35	76	-	3	-	-	-
Florida*.....	3	1,482	541	-	134	95	38	2,489	-	-	-
EAST SOUTH CENTRAL.....	15	1,422	115	1	148	159	131	4,801	-	-	-
Kentucky.....	1	802	66	-	52	54	107	1,766	-	-	-
Tennessee.....	1	390	19	1	61	64	15	2,695	-	-	-
Alabama.....	13	140	6	-	24	24	9	292	-	-	-
Mississippi.....	-	90	24	-	11	17	-	48	-	-	-
WEST SOUTH CENTRAL.....	344	8,188	4,726	4	269	339	80	7,816	-	-	19
Arkansas.....	-	30	16	-	22	31	-	127	-	-	-
Louisiana.....	-	148	123	1	65	91	-	38	-	-	-
Oklahoma.....	25	579	142	1	21	34	14	2,547	-	-	-
Texas.....	319	7,431	4,445	2	161	183	66	5,104	-	-	19
MOUNTAIN.....	42	1,641	1,012	1	46	49	141	3,856	-	-	1
Montana.....	33	100	60	-	1	8	6	755	-	-	-
Idaho.....	-	69	90	1	7	11	2	93	-	-	-
Wyoming.....	-	11	-	-	2	-	-	36	-	-	-
Colorado.....	3	187	141	-	16	8	126	1,340	-	-	1
New Mexico.....	6	240	268	-	1	6	3	732	-	-	-
Arizona.....	-	977	442	-	15	10	4	776	-	-	-
Utah.....	-	36	10	-	3	4	-	124	-	-	-
Nevada.....	-	21	1	-	1	2	-	-	-	-	-
PACIFIC.....	56	2,956	1,109	6	369	550	158	12,527	-	-	-
Washington.....	25	579	63	3	47	56	58	4,619	-	-	-
Oregon.....	5	373	200	1	29	18	17	1,097	-	-	-
California.....	26	1,674	790	2	290	455	53	5,150	-	-	-
Alaska.....	-	141	13	-	-	11	-	390	-	-	-
Hawaii.....	-	189	43	-	3	10	30	1,271	-	-	-
Puerto Rico.....	2	958	1,715	-	5	19	7	811	-	-	-
Virgin Islands.....	---	6	43	---	1	-	---	3	---	---	-

* Delayed reports: Measles: Me. 2, Mass. delete 6, Fla. 25
Meningococcal infections: N.C. delete 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

OCTOBER 31, 1970 AND OCTOBER 25, 1969 (43rd WEEK) - CONTINUED

AREA	RUBELLA		TETANUS		TULAREMIA		TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. Spotted)		RABIES IN ANIMALS	
	1970	Cum. 1970	1970	Cum. 1970	1970	Cum. 1970	1970	Cum. 1970	1970	Cum. 1970	1970	Cum. 1970
UNITED STATES	275	51,411	2	104	–	129	13	286	1	324	46	2,535
NEW ENGLAND	19	2,590	–	4	–	1	–	9	–	–	–	96
Maine*	3	445	–	–	–	–	–	–	–	–	–	38
New Hampshire	—	152	—	–	—	–	—	–	—	–	—	1
Vermont	1	59	–	–	–	–	–	–	–	–	–	48
Massachusetts	7	1,230	–	2	–	1	–	7	–	–	–	4
Rhode Island	2	118	–	–	–	–	–	–	–	–	–	1
Connecticut	6	586	–	2	–	–	–	2	–	–	–	4
MIDDLE ATLANTIC	38	4,080	–	10	–	2	4	59	1	14	6	220
New York City	8	635	–	3	–	–	4	20	–	–	–	–
New York, Up-State	7	456	–	3	–	1	–	19	–	6	6	204
New Jersey	5	866	–	3	–	–	–	10	–	4	–	–
Pennsylvania	18	2,123	–	1	–	1	–	10	1	4	–	16
EAST NORTH CENTRAL	57	10,681	1	20	–	20	–	38	–	9	2	205
Ohio	4	2,075	1	2	–	2	–	13	–	8	–	51
Indiana	3	1,942	–	8	–	14	–	3	–	–	1	22
Illinois	6	1,729	–	4	–	2	–	8	–	1	1	59
Michigan	21	2,784	–	6	–	–	–	12	–	–	–	23
Wisconsin	23	2,151	–	–	–	2	–	2	–	–	–	50
WEST NORTH CENTRAL	12	3,343	–	4	–	29	–	9	–	4	10	518
Minnesota	–	122	–	1	–	1	–	1	–	–	–	104
Iowa	4	2,023	–	1	–	–	–	1	–	1	2	103
Missouri	4	428	–	1	–	25	–	3	–	3	2	95
North Dakota	1	154	–	–	–	1	–	2	–	–	4	39
South Dakota	–	1	–	1	–	1	–	–	–	–	–	85
Nebraska	3	566	–	–	–	–	–	2	–	–	–	6
Kansas	–	49	–	–	–	1	–	–	–	–	2	86
SOUTH ATLANTIC	16	6,418	–	26	–	14	1	39	–	217	7	503
Delaware	–	46	–	–	–	–	–	–	–	5	–	–
Maryland	–	322	–	–	–	–	–	9	–	21	1	3
Dist. of Columbia	–	20	–	1	–	–	–	1	–	–	–	–
Virginia	—	720	—	1	—	6	—	8	—	57	—	199
West Virginia	1	1,373	–	–	–	–	–	–	–	5	4	131
North Carolina	–	43	–	3	–	4	–	3	–	86	–	2
South Carolina	–	653	–	1	–	–	–	–	–	35	–	–
Georgia	–	–	–	6	–	3	–	8	–	8	2	97
Florida	15	3,241	–	14	–	1	1	10	–	–	–	71
EAST SOUTH CENTRAL	16	2,768	–	13	–	8	1	36	–	38	4	198
Kentucky	2	948	–	1	–	2	–	9	–	3	1	109
Tennessee	9	1,413	–	4	–	6	–	17	–	22	1	53
Alabama	5	314	–	6	–	–	–	8	–	10	2	35
Mississippi	–	93	–	2	–	–	1	2	–	3	–	1
WEST SOUTH CENTRAL	31	8,933	–	15	–	35	4	32	–	35	9	411
Arkansas	–	35	–	3	–	18	1	8	–	6	1	70
Louisiana	–	150	–	4	–	5	3	10	–	1	1	63
Oklahoma	1	813	–	–	–	6	–	1	–	22	1	83
Texas	30	7,935	–	8	–	6	–	13	–	6	6	195
MOUNTAIN	14	2,047	–	–	–	12	–	15	–	6	–	82
Montana	–	321	–	–	–	1	–	1	–	1	–	1
Idaho	2	197	–	–	–	–	–	–	–	2	–	–
Wyoming	–	134	–	–	–	–	–	2	–	1	–	3
Colorado	7	411	–	–	–	–	–	3	–	2	–	34
New Mexico	3	221	–	–	–	–	–	6	–	–	–	15
Arizona	2	600	–	–	–	–	–	2	–	–	–	13
Utah	–	163	–	–	–	11	–	1	–	–	–	3
Nevada	–	–	–	–	–	–	–	–	–	–	–	13
PACIFIC	72	10,551	1	12	–	8	3	49	–	1	8	302
Washington	14	4,754	–	2	–	2	–	4	–	–	–	9
Oregon	16	910	–	3	–	2	–	1	–	–	–	4
California	42	4,567	1	7	–	4	3	41	–	1	8	280
Alaska	–	106	–	–	–	–	–	2	–	–	–	9
Hawaii	–	214	–	–	–	–	–	1	–	–	–	–
Puerto Rico.*	–	27	1	12	–	–	–	3	–	–	1	42
Virgin Islands	—	1	—	–	—	–	—	1	—	–	—	–

*Delayed reports: Rubella: Me. 4, Fla. delete 25
Typhoid fever: P.R. delete 2

Week No. 43

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDED OCTOBER 31, 1970

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

Area	All Causes		Pneumonia and Influenza	Under 1 year
	All Ages	65 years and over	All Ages	All Causes
NEW ENGLAND:	785	491	64	34
Boston, Mass.	248	144	34	9
Bridgeport, Conn.	35	22	5	1
Cambridge, Mass.	27	19	2	–
Fall River, Mass.	28	19	2	–
Hartford, Conn.	67	32	–	5
Lowell, Mass.	42	28	4	1
Lynn, Mass.	25	14	1	1
New Bedford, Mass.	35	28	2	–
New Haven, Conn.	68	43	–	8
Providence, R. I.	49	33	4	2
Somerville, Mass.	18	15	1	1
Springfield, Mass.	51	29	4	4
Waterbury, Conn.	38	27	–	–
Worcester, Mass.	54	38	5	2
MIDDLE ATLANTIC:	3,156	1,841	122	141
Albany, N. Y.	53	32	2	3
Allentown, Pa.	43	27	3	2
Buffalo, N. Y.	142	83	6	3
Camden, N. J.	40	22	7	–
Elizabeth, N. J.	28	19	2	1
Erie, Pa.	40	25	3	3
Jersey City, N. J.	70	38	4	9
Newark, N. J.	63	25	2	5
New York City, N. Y.†	1,582	925	55	72
Paterson, N. J.	61	35	5	3
Philadelphia, Pa.	445	255	4	21
Pittsburgh, Pa.	158	84	7	11
Reading, Pa.	57	33	1	2
Rochester, N. Y.	126	80	2	1
Schenectady, N. Y.	20	12	5	–
Scranton, Pa.	43	27	3	–
Syracuse, N. Y.	88	52	2	5
Trenton, N. J.	43	27	2	–
Utica, N. Y.	25	19	5	–
Yonkers, N. Y.	29	21	2	–
EAST NORTH CENTRAL:	2,540	1,423	81	142
Akron, Ohio	59	36	1	2
Canton, Ohio	26	17	3	1
Chicago, Ill.	735	389	22	48
Cincinnati, Ohio	149	89	3	6
Cleveland, Ohio	192	98	3	17
Columbus, Ohio	136	68	6	8
Dayton, Ohio	82	43	1	8
Detroit, Mich.	311	164	3	12
Evansville, Ind.	52	37	3	1
Flint, Mich.	70	30	2	8
Fort Wayne, Ind.	53	28	2	2
Gary, Ind.	30	14	3	4
Grand Rapids, Mich.	60	37	3	4
Indianapolis, Ind.	159	92	1	7
Madison, Wis.	43	24	5	3
Milwaukee, Wis.	107	76	2	2
Peoria, Ill.	41	25	2	1
Rockford, Ill.	41	25	8	3
South Bend, Ind.	45	29	4	2
Toledo, Ohio	92	57	2	2
Youngstown, Ohio	57	45	2	1
WEST NORTH CENTRAL:	846	521	29	44
Des Moines, Iowa	53	27	3	2
Duluth, Minn.	31	21	5	3
Kansas City, Kans.	40	14	2	5
Kansas City, Mo.	126	72	3	9
Lincoln, Nebr.	34	22	1	–
Minneapolis, Minn.	102	72	3	5
Omaha, Nebr.	102	67	3	5
St. Louis, Mo.	238	146	5	11
St. Paul, Minn.	69	46	1	2
Wichita, Kans.	51	34	3	2
Las Vegas, Nev.*	15	7	–	2

Area	All Causes		Pneumonia and Influenza	Under 1 year
	All Ages	65 years and over	All Ages	All Causes
SOUTH ATLANTIC:	1,106	594	48	63
Atlanta, Ga.	106	61	4	4
Baltimore, Md.	235	128	6	10
Charlotte, N. C.	58	23	–	6
Jacksonville, Fla.	80	42	2	5
Miami, Fla.	94	59	2	3
Norfolk, Va.	55	26	4	3
Richmond, Va.	86	42	7	4
Savannah, Ga.	32	9	4	5
St. Petersburg, Fla.	90	69	4	4
Tampa, Fla.	64	33	8	7
Washington, D. C.	155	77	5	5
Wilmington, Del.	51	25	2	7
EAST SOUTH CENTRAL:	619	347	25	31
Birmingham, Ala.	97	49	2	6
Chattanooga, Tenn.	44	27	3	4
Knoxville, Tenn.	41	27	2	–
Louisville, Ky.	129	77	9	5
Memphis, Tenn.	142	74	3	9
Mobile, Ala.	44	26	3	2
Montgomery, Ala.	28	13	1	–
Nashville, Tenn.	94	54	2	5
WEST SOUTH CENTRAL:	1,206	630	45	86
Austin, Tex.	44	26	4	–
Baton Rouge, La.	38	20	3	4
Corpus Christi, Tex.	38	18	–	2
Dallas, Tex.	189	86	4	12
El Paso, Tex.	46	26	5	9
Fort Worth, Tex.	82	41	3	8
Houston, Tex.	242	110	3	20
Little Rock, Ark.	54	28	2	2
New Orleans, La.	132	70	2	5
Oklahoma City, Okla.	92	49	3	8
San Antonio, Tex.	121	81	6	4
Shreveport, La.	84	48	9	10
Tulsa, Okla.	44	27	1	2
MOUNTAIN:	457	264	23	22
Albuquerque, N. Mex.	42	27	6	4
Colorado Springs, Colo.	32	19	5	2
Denver, Colo.	123	67	5	2
Ogden, Utah	19	11	1	3
Phoenix, Ariz.	118	62	–	7
Pueblo, Colo.	16	10	1	–
Salt Lake City, Utah	50	29	1	3
Tucson, Ariz.	57	39	4	1
PACIFIC:	1,605	937	35	92
Berkeley, Calif.	15	11	2	–
Fresno, Calif.	54	30	4	2
Glendale, Calif.	34	15	1	1
Honolulu, Hawaii	53	22	–	7
Long Beach, Calif.	99	63	2	1
Los Angeles, Calif.	455	272	7	28
Oakland, Calif.	103	67	1	4
Pasadena, Calif.	21	15	–	–
Portland, Oreg.	147	98	–	5
Sacramento, Calif.	55	32	–	6
San Diego, Calif.	89	58	1	7
San Francisco, Calif.	194	101	6	11
San Jose, Calif.	46	25	2	2
Seattle, Wash.	137	75	4	13
Spokane, Wash.	54	28	3	4
Tacoma, Wash.	49	25	2	1
Total	12,320	7,048	472	655
Expected Number	12,508	7,160	426	544
Cumulative Total (includes reported corrections for previous weeks)	551,603	314,387	21,411	26,329

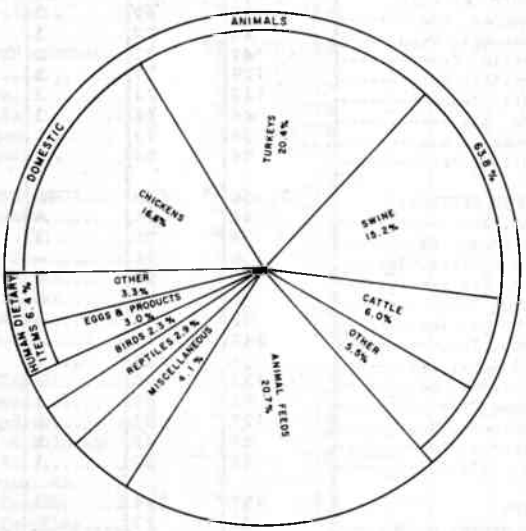
*Mortality data are being collected from Las Vegas, Nev., for possible inclusion in this table, however, for statistical reasons, these data will be listed only and not included in the total, expected number, or cumulative total, until 5 years of data are collected.

† Delayed Report for Week ended October 24, 1970

SALMONELLA – (*Continued from page 423*)

Turkey, chicken, eggs, and egg products, which together were responsible for four of nine reported foodborne outbreaks (44 percent), accounted for 40.0 percent of all nonhuman isolations (Figure 3). The two most common serotypes from turkeys were *S. heidelberg,* 495 isolations (25.6 percent), and *S. saint-paul,* 272 (14.1 percent). *S. typhi-murium* including *var. copenhagen* replaced *S. heidelberg* as the most common serotype isolated from chickens, with 298 isolations (19.0 percent), and was followed by *S. heidelberg,* with 285 (18.2 percent). The two most common serotypes isolated from eggs and egg products were *S. thompson,* 39 isolations (14.0 percent), and *S. montevideo,* 32 (11.5 percent).

Figure 3
NONHUMAN SALMONELLA ISOLATIONS FROM THE INDICATED SOURCES IN THE UNITED STATES, 1969



Swine and cattle accounted for 21.2 percent of all nonhuman recoveries. *S. cholerae-suis var. kunzendorf*, with 677 isolations (47.1 percent), and *S. typhi-murium* including *var. copenhagen,* with 227 (15.8 percent), were the two most common serotypes isolated from swine. The two most common from cattle were *S. typhi-murium* including *var. copenhagen*, 343 isolations (60.6 percent), and *S. dublin*, 121 (21.4 percent).

Salmonella isolations (20.7 percent of nonhuman isolations) from animal feed and feed ingredients totaled 1,953, compared with 2,055 isolations (23.1 percent) in 1968. The two most common serotypes were *S. anatum,* with 182 isolations (9.3 percent), and *S. montevideo*, with 159 (8.1 percent).

Reptiles and their environment accounted for 270 isolations (2.9 percent). Turtles and turtle water, which accounted for 241 (89.3 percent) of the reptile recoveries, constitute a source of infection for children who keep these animals as pets. The two most common serotypes were *S. newport*, with 35 isolations (13.0 percent), and *S. urbana*, 31 (11.5 percent).

(Reported by the Salmonellosis Unit, Bacterial Diseases Branch, Epidemiology Program, CDC.)

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ATLANTA, GEORGIA 30333

NOTE: THE DATA IN THIS REPORT ARE PROVISIONAL AND ARE BASED ON WEEKLY TELEGRAMS TO THE CDC BY THE INDIVIDUAL STATE HEALTH DEPARTMENTS. THE REPORTING WEEK CONCLUDES AT CLOSE OF BUSINESS ON FRIDAY; COMPILED DATA ON A NATIONAL BASIS ARE OFFICIALLY RELEASED TO THE PUBLIC ON THE SUCCEEDING FRIDAY.