

Morbidity and Mortality

NO 26 73

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

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On October 10, 1973, 2 scheduled flights and 1 charter flight originating in Southern Europe landed in United States airports carrying large numbers of passengers acutely ill with gastrointestinal symptoms. The investigation of these outbreaks is summarized below.

Outbreak 1. Forty-seven (28%) of 170 tourist passengers on a flight originating in Rome experienced the sudden onset of severe vomiting, cramps, and in a few cases diarrhea 1-2 hours after eating a meal taken aboard in Lisbon; no fever was noted. Upon arrival in New York at 4:30 p.m., 35 of the 47 ill patients were briefly examined and released, 2 with severe prostration were admitted to a hospital for observation, and 10 were observed overnight in a hotel. All recovered uneventfully.

Outbreak 2. On a second flight, also originating in Rome, lunch was served shortly after departure from Lisbon at 11:50 a.m. Beginning at 1:00 p.m. and continuing through the flight, 50 (55%) of the 91 tourist passengers experienced severe vomiting, chills, headache, and abdominal cramps; few had diarrhea. A physician on board reported that several older patients became cyanotic and required oxygen; a 4-year-old boy became hypotensive. After arrival in San

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	46th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 46 WEEKS		
	November 17, 1973	November 18, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	93	103	85	4,276	3,809	3,975
Brucellosis	1	5	3	165	172	190
Chickenpox	1,428	1,864	---	151,004	122,407	---
Diphtheria	6	7	7	167	104	167
Encephalitis, primary:						
Arthropod-borne and unspecified	48	29	28	1,399	1,017	1,276
Encephalitis, post-infectious	4	4	4	252	246	306
Hepatitis, serum (Hepatitis B)	154	169	169	7,168	7,987	6,501
Hepatitis, infectious (Hepatitis A)	1,039	1,143	1,143	45,663	48,668	48,668
Malaria	2	3	65	223	781	2,686
Measles (rubeola)	139	278	303	25,283	28,674	28,674
Meningococcal infections, total	17	20	19	1,221	1,189	2,181
Civilian	17	20	20	1,195	1,144	1,951
Military	---	---	1	26	45	211
Mumps	1,061	1,117	1,986	61,801	63,065	88,472
Rubella (German measles)	158	188	319	27,074	23,057	46,405
Tetanus	3	4	4	82	106	120
Tuberculosis, new active	572	646	---	27,731	30,138	---
Tularemia	4	4	1	148	122	138
Typhoid fever	14	14	6	596	338	338
Typhus, tick-borne (Rky. Mt. spotted fever)	4	2	2	621	512	397
Venereal Diseases:						
Gonorrhea	16,920	16,243	---	732,332	668,552	---
Syphilis, primary and secondary	489	589	---	22,684	22,511	---
Rabies in animals	47	54	53	3,049	3,657	3,038

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	7
Botulism:	17	Paralytic:	5
Congenital rubella syndrome:	30	Psittacosis: * N.Y. Ups.-1	24
Leprosy: Calif.-1, Tex.-1	114	Rabies in man:	1
Leptospirosis:	30	Trichinosis:	73
Plague:	2	Typhus, murine:	29

* Delayed Reports: Psittacosis: Ariz.-1

STAPHYLOCOCCAL POISONING — Continued

Juan at 4:50 p.m., 8 patients were hospitalized and responded well to intravenous fluids. No fever was reported. The median incubation period for hospitalized patients was 1½ hours. Stool specimens from 7 hospitalized patients were cultured. Five yielded no enteric pathogens; 2 were positive for *Staphylococcus aureus*, phage non-typable and resistant to penicillin.

Outbreak 3. The third flight, the chartered one, originated in Lisbon. From ½ to 2 hours after lunch was served, approximately 150 (84%) of the 179 passengers began to experience nausea, vomiting, and in a few cases diarrhea. The illness on board was reported as the plane landed in Philadelphia at 7:50 p.m.; further investigation could not be conducted at the time because the passengers had dispersed.

Passengers on the first 2 flights were served identical lunches which consisted of salad, chicken, vegetables, rolls, and custard dessert. All ill passengers questioned on the first flight had eaten the dessert, and one had consumed only coffee and dessert during the flight. Food histories obtained from 43 ill and well passengers on the second flight revealed a significant association between illness and eating the custard dessert ($p < .005$); however, chicken could not be excluded as a vehicle (Table 1).

Table 1
Food Consumption Histories Among Passengers
on Second Flight, October 10, 1973

	Ate			Did Not Eat		
	Ill	Not Ill	Attack Rate (%)	Ill	Not Ill	Attack Rate (%)
Chicken	21	0	100	0	1	0
Salad	19	18	51	2	4	33
Custard	21	13	62	0	9	0*
Rolls and butter	17	15	53	4	7	36

* $p < .005$ by Fisher's Exact Test

The lunch served to passengers aboard the third flight had a different entrée and vegetables but included the same custard dessert. On all 3 flights, first class passengers and crewmembers were served different lunches without the custard dessert; none experienced illness.

Results from several laboratories revealed 10^5 - 10^8 colonies of *S. aureus* per gm of custard dessert from flights 1 and 2. Isolates from 4 dessert samples were phage non-typable and resistant to penicillin, as were isolates from the 2 patients on the flight to San Juan. No staphylococcal enterotoxin could be extracted directly from custard samples.

Epidemiologic investigation revealed that a catering facility located in Lisbon provided the lunches for these flights. The custard, Bavarois, is produced from egg yolk,

sugar, milk, gelatin, chocolate, gooseberry juice, and strawberry jelly; its preparation each morning requires several pouring and chilling steps during a 4-hour period; it is then packed into individual passenger trays and refrigerated in a holding area for 2½ hours until the plane is provisioned. The holding area temperature was noted to be 62°F and apparently had been so for several weeks; therefore, the total time which the custard was held at a temperature greater than 60°F was over 4 hours. Custard from the October 10th batch was kept in the holding area an additional 2½ hours for flight 3, which departed Lisbon later than flights 1 and 2.

The only other flight that departed Lisbon with the same dessert on October 10 also reported gastrointestinal illness subsequently, but few details are known.

The caterer had provided the same dessert for several daily westbound flights since October 3, apparently using the same method of preparing and storing the custard. It is not known whether outbreaks occurred on these other flights; none were reported.

(Reported by Joseph Constantino, M.D., Corporate Medical Director, Bruce H. Bennett, M.D., Medical Director, Miami Office, Pan American World Airways; Julio Borrás, M.D., Medical Director, Presbyterian Hospital, San Juan, Puerto Rico; Mary Ramirez, Chief, Department of Sanitary Bacteriology, Instituto de Laboratorios, Departamento de Salud, Puerto Rico; Robert A. Graves, Laboratory Manager, Miami Regional Laboratories, Florida Division of Health; the Food and Drug Administration; the San Juan Tropical Disease Laboratories, Bureau of Laboratories; the Quarantine Branch, the Enteric Disease Section, and the Epidemiologic Services Laboratory Section, Bacterial Diseases Branch, Bureau of Epidemiology, CDC.)

Editorial Note

The finding of non-typable *S. aureus* of identical anti-biogram in the incriminated custard and in 2 patients' stools confirms the diagnosis of staphylococcal food poisoning. There was evidence of opportunity for production of large amounts of enterotoxin in the custard, since it was held for more than 4 hours between 40 and 140°F. The type of enterotoxin produced by *S. aureus* isolated from the custard is being investigated.

It is interesting to note the apparently higher attack rate among passengers aboard the third flight; custard for that flight was stored 2½ hours longer than the custard for the first 2 flights.

Reporting of illness aboard 2 of the flights prior to landing allowed early investigation to exclude cholera on clinical and epidemiologic grounds. Such prompt reporting and close coordination between airlines and quarantine personnel are required in emergencies to assure appropriate care of passengers and to evaluate potential public health problems.

INTERNATIONAL NOTES
INFLUENZA — United Kingdom

In late September and October 1973, an influenza outbreak occurred in a girls' boarding school in the Midlands; 89 of 178 girls aged 11-18 years were affected. Ten strains of influenza B virus have been isolated so far. All are antigenically similar to B/HK/5/72.

In late October, another outbreak of influenza occurred in a boys' school in the Midlands. Ten influenza virus strains so far isolated have been identified as being similar to B/HK/5/72.

(Reported by the World Health Organization: Weekly Epidemiological Record 48(46):438, 16 Nov 1973)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING NOVEMBER 17, 1973 AND NOVEMBER 18, 1972 (46th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972	1973	1973	1973	1972
UNITED STATES	93	1	1,428	6	167	48	29	4	154	1,039	1,143
NEW ENGLAND	1	-	215	-	3	-	2	-	2	50	84
Maine *	-	-	3	-	-	-	-	-	-	-	14
New Hampshire *	-	-	28	-	-	-	-	-	1	4	6
Vermont	-	-	12	-	-	-	-	-	-	4	5
Massachusetts	-	-	106	-	1	-	-	-	-	23	37
Rhode Island	-	-	26	-	2	-	-	-	-	7	6
Connecticut	1	-	40	-	-	-	2	-	1	12	16
MIDDLE ATLANTIC	5	-	11	-	-	1	-	1	20	93	174
Upstate New York	1	-	1	-	-	-	-	1	1	27	40
New York City	3	-	8	-	-	-	-	-	3	14	41
New Jersey	-	-	NN	-	-	-	-	-	4	27	53
Pennsylvania	1	-	2	-	-	1	-	-	12	25	40
EAST NORTH CENTRAL	7	-	476	1	1	9	12	-	31	187	172
Ohio	4	-	94	1	1	4	2	-	9	38	34
Indiana	-	-	31	-	-	-	-	-	1	12	10
Illinois	-	-	-	-	-	3	2	-	9	47	46
Michigan	3	-	113	-	-	2	5	-	12	79	71
Wisconsin	-	-	238	-	-	-	3	-	-	11	11
WEST NORTH CENTRAL	9	1	195	-	7	18	3	-	2	45	30
Minnesota	6	-	74	-	-	-	-	-	-	3	3
Iowa	-	-	111	-	-	-	2	-	-	3	5
Missouri	2	-	4	-	-	17	-	-	1	13	14
North Dakota	-	-	4	-	-	-	1	-	-	-	2
South Dakota	-	-	-	-	7	-	-	-	-	12	1
Nebraska	1	1	2	-	-	1	-	-	-	1	3
Kansas	-	-	-	-	-	-	-	-	1	13	2
SOUTH ATLANTIC	35	-	122	-	5	7	1	-	17	243	163
Delaware	-	-	2	-	-	-	-	-	-	1	3
Maryland	1	-	3	-	-	3	-	-	3	17	20
District of Columbia	-	-	4	-	-	-	-	-	-	2	1
Virginia	25	-	1	-	-	-	-	-	2	10	11
West Virginia	-	-	107	-	-	-	-	-	-	9	13
North Carolina	1	-	NN	-	-	1	-	-	5	22	37
South Carolina	-	-	5	-	-	-	1	-	1	11	4
Georgia	-	-	-	-	-	-	-	-	-	39	25
Florida*	8	-	-	-	5	3	-	-	6	132	49
EAST SOUTH CENTRAL	13	-	107	-	1	7	3	1	12	48	102
Kentucky	-	-	12	-	-	-	-	-	2	13	24
Tennessee	1	-	NN	-	-	4	1	1	1	16	32
Alabama	10	-	2	-	1	2	-	-	8	16	44
Mississippi	2	-	93	-	-	1	2	-	1	3	2
WEST SOUTH CENTRAL	2	-	54	2	18	2	3	1	10	146	147
Arkansas *	-	-	3	-	-	-	-	-	-	1	7
Louisiana *	-	-	NN	-	1	-	-	-	-	18	29
Oklahoma	1	-	2	-	-	2	1	-	5	13	21
Texas	1	-	49	2	17	-	2	1	5	114	90
MOUNTAIN	-	-	35	2	47	-	-	-	-	31	56
Montana	-	-	26	-	-	-	-	-	-	14	4
Idaho	-	-	-	-	-	-	-	-	-	5	14
Wyoming	-	-	-	-	-	-	-	-	-	2	1
Colorado	-	-	7	-	-	-	-	-	-	3	7
New Mexico	-	-	2	2	27	-	-	-	-	3	15
Arizona *	-	-	-	-	20	-	-	-	-	-	10
Utah	-	-	-	-	-	-	-	-	-	3	5
Nevada*	-	-	-	-	-	-	-	-	-	1	-
PACIFIC	21	-	213	1	85	4	5	1	60	196	215
Washington	2	-	180	-	75	-	-	1	13	26	31
Oregon	-	-	-	1	4	-	-	-	5	21	26
California	18	-	-	-	4	3	5	-	38	137	134
Alaska	-	-	9	-	2	-	-	-	4	9	18
Hawaii	1	-	24	-	-	1	-	-	-	3	6
Guam*	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico	-	-	2	-	-	-	-	-	1	13	24
Virgin Islands	-	-	-	-	-	-	-	-	-	-	-

* Delayed Reports: Aseptic meningitis: Me. 1, Fla. 7, Guam 1
 Brucellosis: Ariz. 1
 Chickenpox: Me. 23, Guam 1
 Diphtheria: Fla. 4, Ariz. 1

Encephalitis, primary: N.H. 1
 Hepatitis B: Fla. 11, Ark. 1, La. delete 3, Ariz. 1
 Hepatitis A: Me. 4, Fla. 99, Ark. 1, La. delete 2,
 Ariz. 12, Nev. 15, Guam 2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING NOVEMBER 17, 1973 AND NOVEMBER 18, 1972 (46th WEEK) — Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES	2	223	139	25,283	28,674	17	1,221	1,189	1,061	61,801	158	27,074
NEW ENGLAND	—	17	8	7,493	3,568	—	50	53	147	3,686	8	3,686
Maine *	—	—	—	68	250	—	1	4	5	405	—	72
New Hampshire	—	—	5	912	463	—	7	3	2	201	—	379
Vermont	—	2	—	120	128	—	3	—	—	274	—	47
Massachusetts*	—	7	2	3,960	898	—	13	23	39	1,043	5	2,069
Rhode Island	—	1	—	620	524	—	3	12	42	589	—	221
Connecticut	—	7	1	1,813	1,305	—	23	11	59	1,174	3	898
MIDDLE ATLANTIC	1	35	8	2,599	1,087	3	169	143	54	7,650	27	4,260
Upstate New York	—	17	2	818	132	1	60	33	NN	NN	23	462
New York City	—	2	—	928	394	2	36	43	18	4,667	2	482
New Jersey	—	5	—	473	498	—	40	27	28	1,578	—	3,015
Pennsylvania	1	11	6	380	63	—	33	40	8	1,405	2	301
EAST NORTH CENTRAL	—	30	46	8,814	11,639	5	166	180	322	15,760	46	6,278
Ohio*	—	5	3	294	275	3	71	72	116	2,897	4	703
Indiana	—	3	3	681	1,308	1	5	13	40	1,515	10	981
Illinois	—	16	7	2,111	4,264	1	27	39	54	2,613	8	1,036
Michigan	—	6	12	4,451	2,165	—	47	48	74	4,352	16	1,916
Wisconsin	—	—	21	1,277	3,627	—	16	8	38	4,383	8	1,642
WEST NORTH CENTRAL	—	8	5	456	1,024	—	93	86	94	5,210	2	1,236
Minnesota	—	2	1	22	23	—	12	24	2	97	—	221
Iowa	—	1	—	279	709	—	21	6	80	3,242	2	206
Missouri	—	1	—	53	166	—	34	26	3	741	—	273
North Dakota	—	1	2	67	58	—	3	—	1	72	—	277
South Dakota	—	—	2	2	8	—	4	2	—	20	—	23
Nebraska	—	1	—	6	23	—	10	10	8	169	—	141
Kansas	—	2	—	27	37	—	9	18	—	869	—	95
SOUTH ATLANTIC	—	35	6	1,272	2,266	3	205	261	117	7,160	24	2,261
Delaware	—	—	1	10	53	—	1	1	4	279	1	15
Maryland	—	6	—	13	15	—	27	39	20	675	—	11
District of Columbia	—	2	—	8	2	—	4	11	4	145	—	3
Virginia	—	8	—	422	71	1	41	58	10	736	—	629
West Virginia	—	—	3	222	300	—	6	8	34	2,470	2	338
North Carolina	—	7	—	4	38	—	42	31	NN	NN	—	202
South Carolina	—	1	—	66	217	—	13	22	5	364	—	86
Georgia	—	3	—	152	185	—	23	19	—	32	—	12
Florida*	—	8	2	375	1,385	2	48	72	40	2,459	21	965
EAST SOUTH CENTRAL	—	14	—	629	1,071	2	113	93	86	5,124	8	1,418
Kentucky	—	9	—	393	538	—	40	28	25	1,533	4	416
Tennessee	—	—	—	165	194	2	44	30	55	2,411	1	579
Alabama	—	5	—	13	154	—	16	20	6	710	—	201
Mississippi	—	—	—	58	185	—	13	15	—	470	3	222
WEST SOUTH CENTRAL	—	12	6	725	1,621	3	191	141	60	4,312	5	1,497
Arkansas	—	—	2	72	13	—	13	12	1	393	—	112
Louisiana*	—	2	—	87	105	—	48	43	—	93	—	99
Oklahoma	—	2	—	60	10	—	32	9	1	460	1	180
Texas	—	8	4	506	1,493	3	98	77	58	3,366	4	1,106
MOUNTAIN	—	9	40	933	1,935	1	36	30	36	2,626	7	2,427
Montana	—	1	40	211	18	—	7	5	2	256	—	511
Idaho	—	1	—	256	152	—	4	8	6	120	2	44
Wyoming	—	—	—	81	51	1	1	—	—	429	—	7
Colorado	—	2	—	107	535	—	11	5	4	521	3	1,556
New Mexico	—	2	—	128	129	—	3	3	4	994	1	206
Arizona*	—	2	—	20	891	—	6	1	—	140	—	19
Utah	—	1	—	129	158	—	2	6	20	157	1	80
Nevada	—	—	—	1	1	—	2	1	—	9	—	4
PACIFIC	1	63	20	2,362	4,463	—	198	202	145	10,273	31	4,011
Washington	—	4	2	1,043	984	—	20	17	38	1,691	9	727
Oregon	—	4	—	461	150	—	16	14	20	1,909	7	810
California	1	52	18	773	3,218	—	154	159	79	5,558	15	2,439
Alaska	—	2	—	65	13	—	8	9	8	839	—	9
Hawaii	—	1	—	20	98	—	—	3	—	276	—	26
Guam	—	—	—	52	16	—	—	13	—	28	—	14
Puerto Rico	—	—	16	1,957	891	—	8	4	9	844	1	38
Virgin Islands	—	—	—	7	3	—	—	2	6	31	—	2

* Delayed Reports: Malaria: Ariz. delete 2
Measles: Mass. delete 17, Fla. 4, Ariz. delete 2
Meningococcal infections: Ohio delete 1, Fla. 1,
La. delete 1, Ariz. 1

Mumps: Me. 18, Fla. 25
Rubella: Me. 2, Fla. 21

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING NOVEMBER 17, 1973 AND NOVEMBER 18, 1972 (46th WEEK) - Continued

AREA	TETANUS Cumulative 1973	TUBERCULOSIS (New Active)		TULA- REMIA Cumulative 1973	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS			
		1973	Cum. 1973		1973	Cum. 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
											1973	1973		
UNITED STATES	82	572	27,731	148	14	596	4	621	16,920	489	47	3,049		
NEW ENGLAND	2	38	1,031	-	-	17	-	3	550	9	-	114		
Maine	-	2	95	-	-	-	-	-	28	-	-	61		
New Hampshire*	-	2	51	-	-	-	-	-	13	-	-	37		
Vermont	-	-	27	-	-	-	-	-	15	-	-	3		
Massachusetts	-	20	546	-	-	14	-	2	269	2	-	6		
Rhode Island *	1	8	89	-	-	-	-	-	56	-	-	1		
Connecticut	1	6	223	-	-	3	-	1	169	7	-	6		
MIDDLE ATLANTIC	7	108	5,423	-	5	65	-	34	1,961	104	1	51		
Upstate New York	1	27	960	-	-	10	-	13	276	7	1	25		
New York City	3	30	1,993	-	3	25	-	4	877	67	-	-		
New Jersey	2	19	957	-	2	20	-	5	267	16	-	-		
Pennsylvania	1	32	1,513	-	-	10	-	12	541	14	-	26		
EAST NORTH CENTRAL	13	64	4,054	3	3	49	-	19	2,047	20	3	293		
Ohio	3	10	1,223	-	1	20	-	14	736	7	-	32		
Indiana	4	8	510	-	-	1	-	-	430	8	-	53		
Illinois	3	35	1,223	1	1	11	-	5	112	1	-	72		
Michigan *	1	11	1,021	2	1	13	-	-	467	3	-	10		
Wisconsin*	2	-	77	-	-	4	-	-	302	1	3	126		
WEST NORTH CENTRAL	6	12	1,148	18	-	25	1	25	820	6	17	961		
Minnesota	-	-	135	-	-	5	-	2	140	-	10	361		
Iowa	-	1	113	-	-	-	-	-	59	-	3	197		
Missouri	5	7	555	17	-	12	1	9	200	6	-	89		
North Dakota	1	-	36	-	-	-	-	-	14	-	1	141		
South Dakota	-	1	79	-	-	1	-	1	64	-	-	81		
Nebraska	-	-	74	-	-	1	-	2	151	-	-	3		
Kansas	-	3	156	1	-	6	-	4	192	-	3	89		
SOUTH ATLANTIC	18	109	5,513	18	3	252	2	307	4,496	140	4	273		
Delaware	-	1	86	-	1	1	-	8	85	2	-	4		
Maryland	-	13	606	6	-	9	-	14	419	12	-	15		
District of Columbia	-	2	262	-	1	1	-	-	474	7	-	-		
Virginia *	3	17	750	5	-	3	1	61	471	16	2	84		
West Virginia	1	9	266	-	-	11	-	4	61	-	-	22		
North Carolina *	-	12	876	2	-	5	1	141	420	26	-	13		
South Carolina	2	10	440	-	-	6	-	32	461	37	-	6		
Georgia	2	14	889	3	-	3	-	46	858	8	-	88		
Florida *	10	31	1,338	2	1	213	-	1	1,247	32	2	41		
EAST SOUTH CENTRAL	8	61	2,524	10	-	43	1	113	1,446	35	4	382		
Kentucky	1	9	557	1	-	11	-	-	201	6	2	202		
Tennessee	5	12	790	7	-	15	-	52	470	11	2	137		
Alabama	2	21	710	-	-	10	1	28	497	9	-	42		
Mississippi	-	19	467	2	-	7	-	33	278	9	-	1		
WEST SOUTH CENTRAL	15	64	2,904	91	-	26	-	104	2,456	53	6	534		
Arkansas*	1	4	348	62	-	5	-	20	251	1	-	110		
Louisiana *	4	4	414	1	-	6	-	-	416	17	2	49		
Oklahoma	4	4	248	1	-	2	-	74	152	2	2	151		
Texas	6	52	1,894	27	-	13	-	10	1,637	33	2	224		
MOUNTAIN	-	27	925	6	-	14	-	8	751	16	-	54		
Montana	-	1	47	-	-	-	-	1	63	-	-	10		
Idaho	-	-	32	-	-	1	-	2	45	-	-	-		
Wyoming	-	1	26	2	-	1	-	1	5	1	-	-		
Colorado	-	-	181	-	-	2	-	1	194	7	-	-		
New Mexico	-	8	199	1	-	4	-	3	225	-	-	7		
Arizona *	-	11	335	-	-	6	-	-	144	5	-	34		
Utah	-	3	46	2	-	-	-	-	47	1	-	3		
Nevada	-	3	59	1	-	-	-	-	28	2	-	-		
PACIFIC	13	89	4,209	2	3	105	-	8	2,393	106	12	387		
Washington	3	2	320	1	-	7	-	5	239	1	-	9		
Oregon	-	2	220	-	-	2	-	2	93	-	-	8		
California	10	81	3,320	1	3	91	-	1	1,917	105	12	362		
Alaska	-	-	103	-	-	4	-	-	101	-	-	8		
Hawaii	-	4	246	-	-	1	-	-	43	-	-	-		
Guam*	-	-	36	-	-	-	-	-	-	-	-	-		
Puerto Rico	9	13	450	-	-	11	-	-	47	13	-	49		
Virgin Islands	-	-	2	-	-	-	-	-	5	-	-	-		

* Delayed Reports: TB: R.I. delete 2, N.C. delete 2, Fla. 33,
Ark. 6, Ariz. delete 21, Alaska 9
Typhoid: Mich. delete 1, Wis. 1
RMSF: Va. delete 1

Gonorrhea: N.H. 4, Fla. 998, La. delete 5, Guam 5
Syphilis: N.H. 1, Fla. 42
Rabies: Ariz. 4

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING NOVEMBER 17, 1973

Week No.

46

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

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
NEW ENGLAND	722	459	26	36	SOUTH ATLANTIC	1,260	694	46	55
Boston, Mass.	226	138	11	11	Atlanta, Ga.	167	85	2	6
Bridgeport, Conn.	42	29	2	4	Baltimore, Md.	226	120	16	3
Cambridge, Mass.	26	16	—	5	Charlotte, N. C.	63	37	4	—
Fall River, Mass.	36	28	—	—	Jacksonville, Fla.	99	49	1	1
Hartford, Conn.	62	34	3	1	Miami, Fla.	96	48	6	5
Lowell, Mass.	32	22	1	2	Norfolk, Va.	65	36	1	12
Lynn, Mass.	18	13	1	3	Richmond, Va.	108	63	3	9
New Bedford, Mass.	28	22	1	1	Savannah, Ga.	26	16	—	2
New Haven, Conn.	43	28	1	—	St. Petersburg, Fla.	91	65	1	5
Providence, R. I.	49	22	2	5	Tampa, Fla.	80	47	6	5
Somerville, Mass.	15	11	—	2	Washington, D. C.	185	94	5	5
Springfield, Mass.	55	37	1	—	Wilmington, Del.	54	34	1	2
Waterbury, Conn.	35	25	—	—	EAST SOUTH CENTRAL	755	416	44	43
Worcester, Mass.	55	34	3	2	Birmingham, Ala.	129	72	9	2
MIDDLE ATLANTIC	3,026	1,831	86	137	Chattanooga, Tenn.	61	34	2	2
Albany, N. Y.	47	30	3	—	Knoxville, Tenn.	44	32	1	—
Allentown, Pa.	29	20	1	5	Louisville, Ky.	149	91	9	15
Buffalo, N. Y.	151	86	4	9	Memphis, Tenn.	175	92	14	4
Camden, N. J.	31	15	1	—	Mobile, Ala.	55	27	2	6
Elizabeth, N. J.	38	19	2	—	Montgomery, Ala.	44	24	3	7
Erie, Pa.	41	22	2	2	Nashville, Tenn.	98	44	4	7
Jersey City, N. J.	48	30	1	5	WEST SOUTH CENTRAL	1,228	689	61	47
Newark, N. J.	80	40	4	2	Austin, Tex.	37	26	3	2
New York City, N. Y.†	1,502	956	29	48	Baton Rouge, La.	39	15	3	4
Paterson, N. J.	34	16	5	4	Corpus Christi, Tex.	26	16	1	1
Philadelphia, Pa.	400	237	17	35	Dallas, Tex.	175	89	9	2
Pittsburgh, Pa.	200	102	7	6	El Paso, Tex.	51	20	4	4
Reading, Pa.	49	32	—	1	Fort Worth, Tex.	87	50	1	3
Rochester, N. Y.	117	74	4	7	Houston, Tex.	206	102	11	5
Schenectady, N. Y.	28	13	1	4	Little Rock, Ark.	44	26	1	1
Scranton, Pa.	39	26	—	2	New Orleans, La.	154	78	5	2
Syracuse, N. Y.	94	51	2	3	Oklahoma City, Okla. *	86	52	4	2
Trenton, N. J.	33	18	1	—	San Antonio, Tex.	171	102	12	6
Utica, N. Y.	23	17	—	2	Shreveport, La.	60	44	5	5
Yonkers, N. Y.	42	27	2	2	Tulsa, Okla.	92	69	2	10
EAST NORTH CENTRAL	2,676	1,555	90	68	MOUNTAIN	468	255	25	19
Akron, Ohio	72	50	6	—	Albuquerque, N. Mex.	57	35	2	6
Canton, Ohio	38	25	1	—	Colorado Springs, Colo.	16	10	1	2
Chicago, Ill.	722	398	24	12	Denver, Colo.	94	48	7	—
Cincinnati, Ohio	175	103	5	2	Las Vegas, Nev.	30	15	1	1
Cleveland, Ohio	264	149	7	4	Ogden, Utah	11	8	—	1
Columbus, Ohio	136	72	4	2	Phoenix, Ariz.	132	67	8	2
Dayton, Ohio	103	61	4	2	Pueblo, Colo.	16	8	—	6
Detroit, Mich.	327	190	5	10	Salt Lake City, Utah	47	22	5	1
Evansville, Ind.	39	23	2	—	Tucson, Ariz.	65	42	1	—
Fort Wayne, Ind.	56	27	3	2	PACIFIC	1,709	1,097	46	47
Gary, Ind.	32	11	2	1	Berkeley, Calif.	20	13	1	2
Grand Rapids, Mich.	46	30	—	2	Fresno, Calif.	56	31	5	1
Indianapolis, Ind.	166	100	11	7	Glendale, Calif.	24	19	—	—
Madison, Wis.	51	24	6	7	Honolulu, Hawaii	56	30	2	1
Milwaukee, Wis.	137	92	1	2	Long Beach, Calif.	114	70	7	1
Peoria, Ill.	41	26	3	1	Los Angeles, Calif.	523	349	9	14
Rockford, Ill.	46	29	3	4	Oakland, Calif.	86	51	3	1
South Bend, Ind.	37	22	1	6	Pasadena, Calif.	54	39	—	4
Toledo, Ohio	109	76	1	2	Portland, Ore.	146	105	4	4
Youngstown, Ohio	79	47	1	2	Sacramento, Calif.	63	40	4	2
WEST NORTH CENTRAL	830	523	33	37	San Diego, Calif.	121	67	3	—
Des Moines, Iowa	60	39	1	3	San Francisco, Calif.	166	106	3	5
Duluth, Minn.	20	12	—	3	San Jose, Calif.	48	29	—	1
Kansas City, Kans.	43	22	—	1	Seattle, Wash.	141	82	1	6
Kansas City, Mo.	134	82	9	3	Spokane, Wash.	62	45	3	4
Lincoln, Nebr.	33	27	1	1	Tacoma, Wash.	29	21	1	1
Minneapolis, Minn.	91	54	6	2	Total	12,674	7,517	457	489
Omaha, Nebr.	73	47	3	—	Expected Number	12,720	7,343	544	440
St. Louis, Mo.	254	161	10	15	Cumulative Total (includes reported corrections for previous weeks)	589,187	346,429	22,145	23,605
St. Paul, Minn.	73	46	2	3					
Wichita, Kans.	49	33	1	6					

† Delayed Report for week ending November 10, 1973

* Estimate based on average percent of divisional total

SURVEILLANCE SUMMARY
SMALLPOX – Worldwide

Through November 13, 1973, a total of 101,823 cases of smallpox had been reported to the World Health Organization (WHO), the highest total of cases recorded during this period since 1967. Over 90% of the cases were reported by Bangladesh, 4 states of India, and 1 province of Pakistan, all of which have experienced widespread epidemics this year.

The seasonal peak in smallpox incidence occurred in the April-May period. In the following months, reported cases declined rapidly in all areas. The low point in the season was reached during September and the first weeks of October. At this time of year, outbreaks are normally the fewest in number, many having terminated spontaneously during the long summer monsoon period.

It was decided this year in the remaining endemic countries to take advantage of this natural decline in incidence and to embark in October on an intensified 3-month campaign. This campaign is designed to detect and eliminate as many as possible of the existing smallpox foci prior to the time that smallpox spreads most extensively. If this effort is successful, endemic areas should be sharply constricted and not so heavily infected as in recent years, thus permitting an increasing concentration of experienced personnel in ever smaller areas in the final phase of the program.

Bangladesh

In Bangladesh, 5 national medical officers and 4 WHO staff have been supplemented by 6 additional WHO staff, and the number of surveillance teams has been increased from 6 to 25. Prospects for interrupting transmission are more encouraging this year than they were last year. Extensive vaccination programs were conducted last spring which should help to reduce the extent of transmission. In addition, problems of population (and smallpox) movement this season due to food shortages are expected to be less of a problem as the November rice crop is predicted to be a record

one. Early results of the intensified effort are encouraging. Many foci which were present before the monsoon have terminated spontaneously, and despite far more intensive field surveillance, the number of cases detected has, as yet, shown no evidence of increasing.

Pakistan

In Pakistan, as well as in the 4 highly endemic states of India (Bihar, Madhya Pradesh, Uttar Pradesh, and West Bengal), all health personnel are participating in week-long village-by-village searches for cases throughout the states and provinces concerned. Such search operations are being conducted in October, November, and December. Immediately after outbreaks are found, containment teams move quickly in an effort to eliminate the foci discovered. Additional WHO staff have been recruited to assist in this effort, and 15 additional epidemiologists in India were specially recruited. Most search operations began only in mid- to late October, and thus only preliminary results are available.

Botswana

In Botswana, no subsequent smallpox cases have been discovered since the single case was reported in week 38. However, intensive epidemiologic studies have now turned up 2 additional cases in August and 1 each in June and July in a barely sustained chain of transmission which appears to relate to the January-April outbreaks among an anti-vaccination religious sect. A full report is awaited.

Importations

In Somalia, 2 cases were imported from Hararghe Province, Ethiopia; in the French Territory of the Afars and Issas, 1 case from Hararghe and a second case, whose source is uncertain, were imported from probably the same focus. In Nepal during October, 8 cases were detected, again originating from outbreaks in India.

(Reported by the World Health Organization: Weekly Epidemiological Record 48(46):434-438, 16 Nov 1973)

TRICHINOSIS – United States, 1972

In 1972, 96 cases of trichinosis were reported to CDC from the United States. Infections ranged from mild to severe; 1 death occurred. Eight outbreaks involving at least 2 cases each were reported in 1972. One outbreak involved 4 persons, 7 outbreaks involved 2-3 persons each. The majority of infections were acquired from commercially prepared pork products consumed at home.

Sixty-six percent of the trichinosis cases were reported from New York, New Jersey, Illinois, and California; 21 of the 50 states reported at least 1 case in 1972. As observed in the past, the majority of trichinosis cases (70) were reported from 3 contiguous geographic areas of the United States: the New England, Middle Atlantic, and East North Central Regions.

Analysis of case reports on 90 patients in 1972 showed a median age of 26 years for males and 32 for females. The median age for all cases was 29. Sex distribution was nearly equal as observed in the preceding 5 years.

Examination of the 85 cases for which month of onset was known revealed no seasonal trend. Similarly, no seasonal pattern was recognized for the preceding 5 years.

In the 76 cases of trichinosis for which the source of infection was known, pork products were incriminated in 70 (92%). Sausage was implicated as the product responsible for infection in 28 (76%) of 37 reports naming a pork product.

(Reported by the Parasitic Diseases Branch, Bureau of Epidemiology, CDC.)

A copy of the original report from which these data were derived is available on request from
Center for Disease Control
Attn: Parasitic Diseases Branch,
Bureau of Epidemiology
Atlanta, Georgia 30333

EPIDEMIOLOGIC NOTES AND REPORTS
 FOLLOW-UP ON SHELLFISH-ASSOCIATED HEPATITIS —
 Southern United States

Approximately 265 clinical cases of viral hepatitis-A have now been identified resulting from the consumption of raw oysters during a 17-day period, September 20 through October 6. The majority of the cases occurred in Houston, Texas, where 250 persons were affected who ate at 9 different restaurants. Twenty-six of the cases resulting from exposure in Houston reside in 17 states. In Calhoun, Georgia, 15 of 150 persons attending a seafood dinner on September 21 and 22 became ill with hepatitis. Investigation revealed that all of the implicated oysters most likely originated from a single Louisiana oyster supplier.

The distribution of oyster shipments from the suspect supplier has been traced to only 6 states: Texas, Louisiana, Alabama, Georgia, Florida, and Tennessee. Surveillance of viral hepatitis has been established at the points of distribution of oyster shipments in these states and uncovered, in Texas, Louisiana, and Alabama, an additional 39 cases of hepatitis-A with a history of eating raw shellfish during September and October. Investigation continues to determine if these cases can be related to the current outbreak.

Evaluation of oyster procurement and the operations among Louisiana oyster suppliers is being conducted by state health authorities and the Food and Drug Administration. The investigation is focusing on the various oyster beds that were harvested during the month of September. The cause or source of the oyster contamination, however, is not yet apparent.

(Reported by Virginia Hamilton, M.D., District Medical Director, Gordon County, Georgia, Health Department; Thomas

McKinley, John D. Smith, Epidemiology Section, John E. McCroan, Ph.D., State Epidemiologist, Georgia Department of Human Resources; Frederick S. Wolf, M.D., State Epidemiologist, Alabama State Department of Health; Charles T. Caraway, D.V.M., State Epidemiologist, Louisiana State Department of Health; E. Charlton Prather, M.D., Chief, Bureau of Preventive Medicine Diseases, Florida Division of Health; Robert A. MacLean, M.D., Chief, Communicable Diseases Division, Houston Department of Public Health, M.S. Dickerson, M.D., State Epidemiologist, Texas State Department of Health; Robert H. Hutcheson, Jr., M.D., State Epidemiologist, Tennessee Department of Public Health; the Food and Drug Administration; the Viral Diseases Branch, Bureau of Epidemiology, CDC; and 6 EIS Officers.)

Editorial Note

A distinct seasonal incidence of hepatitis associated with the ingestion of raw shellfish from commercial sources has been reported (1). A rise in incidence begins in late fall with peak incidence occurring from January through March, followed by a gradual decline during the late spring. The U.S. coastal states appear to have a higher incidence of the disease. Analysis of cases has shown a preponderance among young adult males, commonly from middle and upper-middle socioeconomic classes. The appearance of cases of viral hepatitis-A bearing these epidemiological indices should alert health authorities to the possibility of a shellfish-related epidemic.

Reference

1. U.S. Center for Disease Control: Hepatitis Surveillance Rep 21:25-27, 31 Dec 1964

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The data in this report are provisional, based on weekly telegraphs to CDC by 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.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to: Center for Disease Control
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