



NOV 30 1973

CDC
ATLANTA

Morbidity and Mortality

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

DATE OF RELEASE: NOVEMBER 30, 1973 - ATLANTA, GEORGIA 30333

EPIDEMIOLOGIC NOTES AND REPORTS
WATERBORNE SHIGELLOSIS - Pennsylvania

On August 11, 1973, approximately 150 persons attended a wedding reception at a country club in Bucks County, Pennsylvania. Over the next 3 days, 90 of 119 persons interviewed developed a gastrointestinal illness characterized by nausea (76%), abdominal cramps (72%), diarrhea (66%), vomiting (44%), and fever (36%). Food-specific attack rates were significantly higher among persons who had consumed either of 2 of the 15 different food items served, water or string beans, than among those who had not (Table 1). Analysis of attack rates for persons who had either eaten string beans or drunk water, but not both, revealed that only water was independently significantly associated with illness ($p < .02$). Stool specimens were obtained from 35 wedding reception guests, and 9 grew *Shigella sonnei*; all isolates were resistant to sulfathiazole.

CONTENTS

Epidemiologic Notes and Reports	
Waterborne Shigellosis - Pennsylvania	389
Viral Hepatitis in Young Women after Ear Piercing - Washington	390
Wound Botulism - Colorado	395
International Notes	
Influenza - Canada	396

A questionnaire survey of 139 club members who frequently play golf at the country club but who did not attend the wedding reception was conducted to estimate the extent of illness outside the wedding reception guests. Sixty percent of the 113 golfers responding had experienced a gastrointestinal illness characterized by diarrhea (98%), abdominal cramps (79%), headache (54%), fever (46%), and vomiting (23%) in the previous 3 months; 73% had become ill between July 31 and August 14 (Figure 1). A history of drinking water from

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

DISEASE	47th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 47 WEEKS		
	November 24, 1973	November 25, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	77	85	81	4,358	3,894	4,056
Brucellosis	1	1	5	166	173	196
Chickenpox	1,152	2,129	---	152,182	124,536	---
Diphtheria	7	2	6	175	106	173
Encephalitis, primary:						
Arthropod-borne and unspecified	18	17	25	1,417	1,034	1,308
Encephalitis, post-infectious	3	1	2	255	247	310
Hepatitis, serum (Hepatitis B)	147	130	130	7,311	8,117	6,620
Hepatitis, infectious (Hepatitis A)	1,034	873	1,051	46,716	49,541	49,541
Malaria	5	5	39	228	786	2,712
Measles (rubeola)	221	495	335	25,505	29,169	29,169
Meningococcal infections, total	19	19	46	1,237	1,208	2,227
Civilian	19	19	27	1,211	1,163	1,975
Military	---	---	3	26	45	212
Mumps	1,019	1,177	1,821	62,824	64,242	90,790
Rubella (German measles)	125	209	319	27,199	23,266	46,700
Tetanus	---	1	1	82	107	123
Tuberculosis, new active	484	563	---	28,248	30,701	---
Tularemia	1	5	5	149	127	141
Typhoid fever	5	4	10	601	342	342
Typhus, tick-borne (Rky. Mt. spotted fever)	1	3	3	621	515	398
Venereal Diseases:						
Gonorrhea	13,429	13,666	---	745,886	682,218	---
Syphilis, primary and secondary	403	521	---	23,092	23,032	---
Rabies in animals	31	48	48	3,079	3,705	3,089

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax	1	Poliomyelitis, total:	7
Botulism	17	Paralytic:	5
Congenital rubella syndrome	30	Psittacosis	24
Leprosy: Calif. 5	119	Rabies in man	1
Leptospirosis: Ida. 1, Mich. 1	32	Trichinosis: Conn. 1	74
Plague	2	Typhus, murine	29

SHIGELLOSIS - Continued

Table 1
Food-Specific Attack Rates Among Persons Attending
Wedding Reception
Bucks County, Pennsylvania - August 11, 1973

Food Item	Ate				Did Not Eat			
	Ill	Not Ill	Total	Attack Rate (Percent)	Ill	Not Ill	Total	Attack Rate (Percent)
Water	71	12	83	86	3	6	9	33*
String beans	71	14	85	84	3	4	7	43**
Fruit cup	60	15	75	80	14	3	17	82
Salad	62	15	77	81	12	3	15	80
Roll	58	14	72	81	16	4	20	80
Butter	68	14	82	83	6	4	10	60
Potato	70	16	86	81	4	2	6	67
Sour cream	30	7	37	81	44	11	55	80
Roast beef	73	18	91	80	1	0	1	100
Cheese	49	11	60	82	25	7	32	78
Pepperoni	47	12	59	80	27	6	33	82
Parfait	59	11	70	84	15	7	22	68
Cake	29	6	35	83	45	12	57	79
Tea	9	0	9	100	65	18	83	78
Coffee	38	11	49	78	36	7	43	84

*p<.001

**p<.05

fountains on the golf course was significantly associated with illness ($p<.01$). At least 6 of the golfers who submitted stool specimens at the time of their illness had positive cultures for *S. sonnei*, resistant to sulfathiazole.

Water for the country club and the golf course fountains comes from an old, private, drilled well. The water is routinely chlorinated, but early in July 1973 the automatic chlorinator broke down and was not functioning at the time of the outbreak. Multiple cultures of the water supply at the club showed fecal coliforms, but numerous attempts to iso-

late *Shigella* were unsuccessful. Fluorescein dye tests did not demonstrate contamination of the well from nearby septic tanks.

More than 1,500 golfers played at the club between July 31 and August 14; based on the sample survey results, over 1,000 persons may have acquired shigellosis from the contaminated well.

(Reported by Rose A. Ionnatta, R.N., Director, Personal Health Services, Agnes Farrell, Supervisor, Public Health Nursing, Melvin Salzman, Environmental Specialist, Lower Bucks County; Mills Braunlich, Environmental Health Protection Specialist, Lee Thomas, Director, Bureau of Environmental Health, Edmund K. Lindemuth, M.D., Director, Bucks County Department of Health; Wallace E. Turner, Chief, Field Studies Section, Division of Laboratories, William E. Parkin, D.V.M., Chief, Epidemiology Section, W. D. Schrack, Jr., M.D., Director, Division of Communicable Diseases, Pennsylvania Department of Health; and an EIS Officer.)

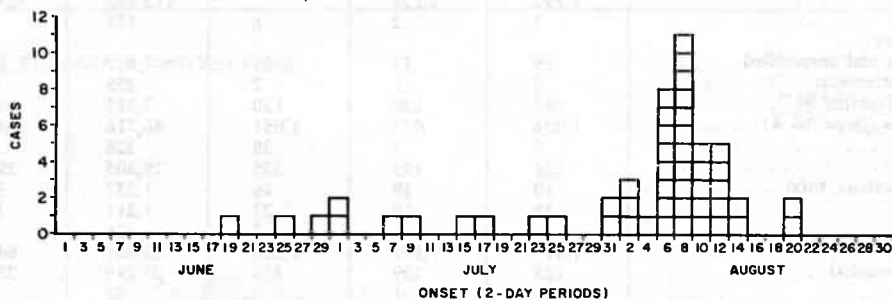
Editorial Note

Although person-to-person transmission is the predominant mode of spread of shigellosis, waterborne outbreaks are not uncommon. Of 358 waterborne outbreaks reported to federal agencies between 1946 and 1970, 33 (9%) were caused by *Shigella* organisms (1). Most involved private water supplies and were caused by direct fecal contamination, back siphonage from a non-potable into a potable water system, or cross-connection between such systems (MMWR, Vol. 22, No. 3). As in this outbreak, despite strong epidemiologic evidence and positive isolates from affected individuals, it is unusual to isolate shigellae from implicated water (2, 3).

References

1. Craun GF, McCabe LJ: Review of the causes of waterborne disease outbreaks. Journal of the American Water Works Association 65:74-84, 1973
2. Drachman RH, Payne FJ, Jenkins AA: An outbreak of waterborne shigella gastroenteritis. Am J Hyg 72:321-334, 1960
3. Green DM, Scott SS, Mowat DAE: Waterborne outbreak of viral gastroenteritis and sonne dysentery. J Hyg (Camb) 66:383-392, 1968

Figure 1
GASTROENTERITIS CASES IN COUNTRY CLUB GOLFERS, BY DATE OF ONSET
BUCKS COUNTY, PENNSYLVANIA - JUNE-AUGUST 1973



VIRAL HEPATITIS IN YOUNG WOMEN AFTER EAR PIERCING - Washington

A complaint that soiled instruments were being used to pierce ears in a local jewelry store prompted an investigation of the practice of ear piercing in Seattle, Washington, during the first 6 months of 1973. Interviews with persons who underwent ear piercing and with those persons who performed the procedure revealed that instruments were not always sterilized adequately between procedures; aqueous zephiran and 70% alcohol were common disinfectants in use. Case

reports of viral hepatitis were subsequently examined for a possible association with the ear piercing procedure.

A review of the 702 cases of viral hepatitis reported in Seattle in 1972 disclosed that 48 cases had occurred in women (ages 12-24 years) who gave no history of exposure to another person with hepatitis or to other sources, such as hypodermic needles, raw oysters, illicit drugs, or transfusions. Each

(Continued on page 395)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING NOVEMBER 24, 1973 AND NOVEMBER 25, 1972 (47th WEEK)

AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post Infectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972			1973	1973
UNITED STATES	77	1	1,152	7	175	18	17	3	147	1,034	873
NEW ENGLAND	1	-	230	-	3	-	-	-	1	33	77
Maine *	-	-	1	-	-	-	-	-	-	3	6
New Hampshire *	-	-	15	-	-	-	-	-	-	1	6
Vermont	-	-	9	-	-	-	-	-	-	4	7
Massachusetts	-	-	146	-	1	-	-	-	-	18	32
Rhode Island	1	-	20	-	2	-	-	-	1	3	8
Connecticut	-	-	39	-	-	-	-	-	-	4	18
MIDDLE ATLANTIC	14	-	16	-	-	1	1	-	18	85	143
Upstate New York	4	-	1	-	-	1	-	-	3	40	29
New York City	-	-	13	-	-	-	1	-	4	19	32
New Jersey	10	-	NN	-	-	-	-	-	4	13	34
Pennsylvania	-	-	2	-	-	-	-	-	7	13	48
EAST NORTH CENTRAL	13	-	392	-	1	7	8	-	10	134	147
Ohio *	5	-	26	-	1	2	2	-	-	18	30
Indiana	-	-	25	-	-	-	-	-	-	7	1
Illinois	-	-	-	-	-	2	-	-	2	32	39
Michigan	7	-	160	-	-	3	5	-	6	71	72
Wisconsin	1	-	181	-	-	-	1	-	2	6	5
WEST NORTH CENTRAL	4	-	142	-	7	7	3	1	3	47	14
Minnesota	-	-	12	-	-	-	-	-	-	1	4
Iowa	3	-	104	-	-	6	3	1	2	16	3
Missouri	1	-	3	-	-	1	-	-	-	13	2
North Dakota	-	-	10	-	-	-	-	-	-	-	1
South Dakota	-	-	-	-	7	-	-	-	-	9	-
Nebraska	-	-	3	-	-	-	-	-	-	1	-
Kansas	-	-	10	-	-	-	-	-	1	7	4
SOUTH ATLANTIC	27	1	57	3	8	-	1	-	34	204	139
Delaware	-	-	6	-	-	-	-	-	-	1	3
Maryland	-	-	1	-	-	-	-	-	16	18	16
District of Columbia	-	-	2	-	-	-	-	-	-	-	-
Virginia	6	-	-	-	-	-	-	-	2	8	18
West Virginia *	6	-	48	-	-	-	-	-	1	7	8
North Carolina	7	-	NN	-	-	-	1	-	1	11	21
South Carolina	1	-	-	-	-	-	-	-	-	15	7
Georgia	-	1	-	1	1	-	-	-	-	20	10
Florida	7	-	-	2	7	-	-	-	14	124	56
EAST SOUTH CENTRAL	4	-	19	-	1	-	-	1	5	48	54
Kentucky	1	-	19	-	-	-	-	-	1	11	11
Tennessee	3	-	NN	-	-	-	-	1	2	31	19
Alabama	-	-	-	-	1	-	-	-	1	5	12
Mississippi	-	-	-	-	-	-	-	-	1	1	12
WEST SOUTH CENTRAL	4	-	75	-	18	-	2	-	13	228	88
Arkansas *	-	-	2	-	-	-	1	-	-	2	6
Louisiana *	-	-	NN	-	1	-	-	-	-	-	7
Oklahoma	-	-	3	-	-	-	-	-	6	12	21
Texas	4	-	70	-	17	-	1	-	7	214	54
MOUNTAIN	-	-	78	2	50	-	-	-	4	81	63
Montana	-	-	25	-	-	-	-	-	-	6	14
Idaho	-	-	-	-	-	-	-	-	-	4	9
Wyoming	-	-	-	-	-	-	-	-	-	1	2
Colorado *	-	-	15	-	-	-	-	-	-	14	10
New Mexico	-	-	37	-	27	-	-	-	-	23	7
Arizona *	-	-	-	2	23	-	-	-	2	18	16
Utah	-	-	1	-	-	-	-	-	2	15	3
Nevada	-	-	-	-	-	-	-	-	-	-	2
PACIFIC	10	-	143	2	87	3	2	1	59	174	148
Washington	-	-	131	1	76	-	-	-	3	19	17
Oregon	-	-	-	-	4	-	-	-	6	19	35
California	10	-	-	1	5	3	2	1	49	134	93
Alaska	-	-	9	-	2	-	-	-	1	1	-
Hawaii	-	-	3	-	-	-	-	-	-	1	3
Guam *	-	-	-	-	-	-	-	-	-	-	2
Puerto Rico	-	-	-	-	-	-	-	-	1	12	5
Virgin Islands	-	-	-	-	-	-	-	-	-	-	-

*Delayed reports: Aseptic meningitis: N.H. 1, Ark. 1, La. 3
 Brucellosis: Ark. 1, Ariz. delete 1
 Chickenpox: Me. 17, N. H. 9, Guam 1
 Diphtheria: Ariz. 1

Hepatitis B: La. delete 2, Colo. delete 2, Guam 3
 Hepatitis A: Me. 9, Ohio delete 1, W. Va. delete 1,
 Ark 6, La. delete 1, Colo. 2, Ariz. 5

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING NOVEMBER 24, 1973 AND NOVEMBER 25, 1972 (47th 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	5	228	221	25,505	29,169	19	1,237	1,208	1,019	62,824	125	27,199
NEW ENGLAND	—	17	41	7,535	3,753	—	50	54	171	3,859	6	3,692
Maine*	—	—	—	69	252	—	1	4	8	415	—	72
New Hampshire*	—	—	35	948	512	—	7	3	10	211	—	379
Vermont	—	2	—	120	128	—	3	—	—	274	—	47
Massachusetts*	—	7	2	3,961	1,023	—	13	24	40	1,083	6	2,075
Rhode Island	—	1	4	624	525	—	3	12	54	643	—	221
Connecticut	—	7	—	1,813	1,313	—	23	11	59	1,233	—	898
MIDDLE ATLANTIC	1	36	40	2,639	1,095	3	172	144	54	7,704	7	4,267
Upstate New York	—	17	—	818	132	2	62	33	NN	NN	1	463
New York City	1	3	2	930	401	—	36	43	13	4,680	3	485
New Jersey	—	5	27	500	498	1	41	27	5	1,583	—	3,015
Pennsylvania	—	11	11	391	64	—	33	41	36	1,441	3	304
EAST NORTH CENTRAL	1	31	58	8,872	11,793	4	170	185	250	16,010	26	6,304
Ohio	—	5	—	294	280	3	74	74	13	2,910	1	704
Indiana	—	3	2	683	1,320	—	5	13	13	1,528	1	982
Illinois	1	17	15	2,126	4,305	—	27	39	40	2,653	4	1,040
Michigan	—	6	19	4,470	2,219	1	48	51	132	4,484	11	1,927
Wisconsin	—	—	22	1,299	3,669	—	16	8	52	4,435	9	1,651
WEST NORTH CENTRAL	—	8	—	456	1,104	1	94	88	125	5,335	—	1,236
Minnesota	—	2	—	22	23	—	12	24	—	97	—	221
Iowa	—	1	—	279	783	1	22	6	101	3,343	—	206
Missouri	—	1	—	53	169	—	34	26	7	748	—	273
North Dakota	—	1	—	67	58	—	3	—	3	75	—	277
South Dakota	—	—	—	2	11	—	4	2	—	20	—	23
Nebraska	—	1	—	6	23	—	10	10	10	179	—	141
Kansas	—	2	—	27	37	—	9	20	4	873	—	95
SOUTH ATLANTIC	1	36	21	1,293	2,279	2	207	267	87	7,247	14	2,275
Delaware	—	—	—	10	53	—	1	1	1	280	—	15
Maryland	1	7	—	13	15	—	27	39	4	679	—	11
District of Columbia	—	2	—	8	2	—	4	11	—	145	—	3
Virginia	—	8	3	425	71	2	43	60	6	742	2	631
West Virginia	—	—	2	224	300	—	6	8	44	2,514	1	339
North Carolina	—	7	—	4	38	—	42	32	NN	NN	—	202
South Carolina	—	1	4	70	217	—	13	22	2	366	—	86
Georgia	—	3	—	152	185	—	23	21	—	32	—	12
Florida	—	8	12	387	1,398	—	48	73	30	2,489	11	976
EAST SOUTH CENTRAL	—	14	2	631	1,076	2	115	94	55	5,179	21	1,439
Kentucky	—	9	1	394	539	—	40	29	17	1,550	—	416
Tennessee	—	—	—	165	194	—	44	30	29	2,440	12	591
Alabama	—	5	—	13	154	2	18	20	7	717	4	205
Mississippi	—	—	1	59	189	—	13	15	2	472	5	227
WEST SOUTH CENTRAL	1	13	6	731	1,640	4	192	143	85	4,399	7	1,504
Arkansas*	—	—	—	72	13	—	13	12	4	399	—	112
Louisiana*	—	2	—	87	105	—	45	44	—	93	—	99
Oklahoma	—	2	—	60	10	—	32	9	2	462	—	180
Texas	1	9	6	512	1,512	4	102	78	79	3,445	7	1,113
MOUNTAIN	—	9	20	953	1,945	1	37	30	46	2,672	8	2,435
Montana	—	1	12	223	18	1	8	5	13	269	4	515
Idaho	—	1	—	256	153	—	4	8	—	120	1	45
Wyoming	—	—	—	81	51	—	1	1	4	433	—	7
Colorado	—	2	1	108	537	—	11	5	15	536	—	1,556
New Mexico	—	2	5	133	131	—	3	3	14	1,008	3	209
Arizona	—	2	2	22	895	—	6	1	—	140	—	19
Utah	—	1	—	129	159	—	2	6	—	157	—	80
Nevada	—	—	—	1	1	—	2	1	—	9	—	4
PACIFIC	1	64	33	2,395	4,484	2	200	203	146	10,419	36	4,047
Washington	—	4	22	1,065	988	1	21	17	67	1,758	8	735
Oregon	—	4	—	461	159	—	16	14	14	1,923	3	813
California	1	53	11	784	3,226	1	155	160	48	5,606	15	2,454
Alaska	—	2	—	65	13	—	8	9	17	856	10	19
Hawaii	—	1	—	20	98	—	—	3	—	276	—	26
Guam	—	—	—	52	16	—	—	13	—	28	—	14
Puerto Rico	—	—	11	1,968	932	—	8	4	17	861	—	38
Virgin Islands	—	—	—	7	3	—	—	2	1	32	—	2

*Delayed reports: Measles: Me. 1, N.H. 1, Mass. delete 1
Meningococcal infections: La. delete 3
Mumps: Me. 2, Ark. 2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING NOVEMBER 24, 1973 AND NOVEMBER 25, 1972 (47th WEEK) - Continued

AREA	TETANUS		TUBERCULOSIS (New Active)		TULA- REMI A	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
	Cumulative 1973	1973	Cum. 1973	Cumulative 1973	1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973	
									1973	1973			
UNITED STATES	82	484	28,248	149	5	601	1	621	13,429	403	31	3,079	
NEW ENGLAND	2	29	1,060	-	-	17	-	3	159	3	-	114	
Maine	-	4	99	-	-	-	-	-	12	-	-	61	
New Hampshire	-	1	52	-	-	-	-	-	12	1	-	37	
Vermont	-	2	29	-	-	-	-	-	13	-	-	3	
Massachusetts	-	13	559	-	-	14	-	2	-	2	-	6	
Rhode Island	1	-	89	-	-	-	-	-	23	-	-	1	
Connecticut	1	9	232	-	-	3	-	1	99	-	-	6	
MIDDLE ATLANTIC	7	92	5,515	-	-	65	1	35	2,000	90	-	51	
Upstate New York	1	13	973	-	-	10	-	13	319	2	-	25	
New York City	3	42	2,035	-	-	25	-	4	803	53	-	-	
New Jersey	2	16	973	-	-	20	-	5	482	22	-	-	
Pennsylvania	1	21	1,534	-	-	10	1	13	396	13	-	26	
EAST NORTH CENTRAL	13	80	4,167	3	-	49	-	19	1,751	17	3	296	
Ohio	3	17	1,240	-	-	20	-	14	502	4	-	32	
Indiana	4	16	526	-	-	1	-	-	160	3	-	53	
Illinois*	3	31	1,287	1	-	11	-	5	273	1	-	72	
Michigan	1	16	1,037	2	-	13	-	-	575	6	-	10	
Wisconsin	2	-	77	-	-	4	-	-	241	3	3	129	
WEST NORTH CENTRAL	6	22	1,170	18	2	27	-	25	673	12	7	968	
Minnesota	-	4	139	-	2	7	-	2	148	3	2	363	
Iowa	-	2	115	-	-	-	-	7	142	-	-	197	
Missouri	5	15	570	17	-	12	-	9	192	9	1	90	
North Dakota	1	-	36	-	-	-	-	-	7	-	1	142	
South Dakota	-	1	80	-	-	1	-	1	27	-	-	81	
Nebraska	-	-	74	-	-	1	-	2	84	-	-	3	
Kansas	-	-	156	1	-	6	-	4	73	-	3	92	
SOUTH ATLANTIC	18	103	5,616	18	-	252	-	307	3,235	100	2	275	
Delaware	-	1	87	-	-	1	-	8	12	-	-	4	
Maryland	-	15	621	6	-	9	-	14	336	11	-	15	
District of Columbia	-	7	269	-	-	1	-	-	297	14	-	-	
Virginia	3	9	759	5	-	3	-	61	408	15	2	86	
West Virginia	1	7	273	-	-	11	-	4	62	2	-	22	
North Carolina	-	16	892	2	-	5	-	141	446	6	-	13	
South Carolina	2	17	457	-	-	6	-	32	220	12	-	6	
Georgia	2	10	899	3	-	3	-	46	363	4	-	88	
Florida	10	21	1,359	2	-	213	-	1	1,091	36	-	41	
EAST SOUTH CENTRAL	8	38	2,562	10	-	43	-	112	1,032	31	5	387	
Kentucky	1	10	567	1	-	11	-	-	147	18	1	203	
Tennessee	5	16	806	7	-	15	-	52	453	11	4	141	
Alabama	2	9	719	-	-	10	-	28	232	1	-	42	
Mississippi*	-	3	470	2	-	7	-	32	200	1	-	1	
WEST SOUTH CENTRAL	15	37	2,941	91	-	26	-	104	1,948	47	5	539	
Arkansas	1	1	349	62	-	5	-	20	109	2	3	113	
Louisiana*	4	-	414	1	-	6	-	-	372	11	-	49	
Oklahoma	4	2	250	21	-	2	-	74	110	-	-	151	
Texas	6	34	1,928	7	-	13	-	10	1,357	34	2	226	
MOUNTAIN	-	13	938	7	-	14	-	8	411	10	-	53	
Montana	-	1	48	-	-	-	-	1	7	1	-	10	
Idaho	-	-	32	-	-	1	-	2	19	-	-	-	
Wyoming	-	1	27	2	-	1	-	1	6	-	-	-	
Colorado	-	-	181	-	-	2	-	1	167	3	-	-	
New Mexico	-	4	203	2	-	4	-	3	56	-	-	7	
Arizona*	-	7	342	-	-	6	-	-	106	1	-	33	
Utah	-	-	46	2	-	-	-	-	17	-	-	3	
Nevada	-	-	59	1	-	-	-	-	33	5	-	-	
PACIFIC	13	70	4,279	2	3	108	-	8	2,220	93	9	396	
Washington	3	3	323	1	-	7	-	5	237	-	-	9	
Oregon	-	3	223	-	-	2	-	2	118	-	-	8	
California	10	58	3,378	1	3	94	-	1	1,785	93	9	371	
Alaska	-	-	103	-	-	4	-	-	36	-	-	8	
Hawaii	-	6	252	-	-	1	-	-	44	-	-	-	
Guam*	-	-	36	-	-	-	-	-	-	-	-	-	
Puerto Rico	9	8	458	-	-	11	-	-	52	6	3	52	
Virgin Islands	-	-	2	-	-	-	-	-	5	2	-	-	

*Delayed reports: TB: Ill. 3

RMSF: Miss. delete 1

Gonorrhea: La. delete 6, Ariz. 131, Guam 13

Syphilis: Ariz. 5, Guam 1

Rabies in animals: Ariz. delete 1

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING NOVEMBER 24, 1973

Week No.
47

(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	640	396	18	38	SOUTH ATLANTIC	963	516	37	28		
Boston, Mass.	182	100	6	12	Atlanta, Ga.	170	75	13	6		
Bridgeport, Conn.	41	24	1	4	Baltimore, Md.	236	145	7	—		
Cambridge, Mass.	25	17	—	5	Charlotte, N. C.	51	26	2	—		
Fall River, Mass.	31	20	—	1	Jacksonville, Fla.	70	32	2	4		
Hartford, Conn.	53	37	2	1	Miami, Fla.	61	35	—	2		
Lowell, Mass.	23	16	—	3	Norfolk, Va.	48	28	1	3		
Lynn, Mass.	20	10	—	1	Richmond, Va.	85	40	5	4		
New Bedford, Mass.	22	18	1	1	Savannah, Ga.	25	11	—	2		
New Haven, Conn.	59	30	4	—	St. Petersburg, Fla.	64	47	—	4		
Providence, R. I.	54	31	2	3	Tampa, Fla.	45	27	5	1		
Somerville, Mass.	16	15	—	2	Washington, D. C.	71	27	1	2		
Springfield, Mass.	37	28	1	3	Wilmington, Del.	37	23	—	—		
Waterbury, Conn.	32	22	—	—	EAST SOUTH CENTRAL	484	266	20	18		
Worcester, Mass.	45	28	1	2	Birmingham, Ala.	92	42	4	1		
MIDDLE ATLANTIC	2,883	1,757	87	134	Chattanooga, Tenn.	43	18	—	2		
Albany, N. Y.	43	22	2	1	Knoxville, Tenn.	36	32	—	5		
Allentown, Pa.	28	19	1	—	Louisville, Ky.	61	32	4	2		
Buffalo, N. Y.	91	50	3	4	Memphis, Tenn.	90	48	3	2		
Camden, N. J.	33	18	3	1	Mobile, Ala.	40	24	1	2		
Elizabeth, N. J.	17	14	—	—	Montgomery, Ala.	24	13	2	—		
Erie, Pa.	40	23	2	5	Nashville, Tenn.	98	57	5	6		
Jersey City, N. J.	66	39	1	3	WEST SOUTH CENTRAL	880	480	43	27		
Newark, N. J.	52	25	4	1	Austin, Tex.	26	17	1	4		
New York City, N. Y. †	1,605	976	48	47	Baton Rouge, La.	24	13	1	—		
Paterson, N. J.	43	28	1	1	Corpus Christi, Tex.	33	16	2	—		
Philadelphia, Pa.	291	164	9	32	Dallas, Tex.	138	68	10	—		
Pittsburgh, Pa.	189	107	6	19	El Paso, Tex.	28	19	—	1		
Reading, Pa.	36	25	—	2	Fort Worth, Tex.	53	31	2	4		
Rochester, N. Y.	124	89	2	10	Houston, Tex.	166	69	7	3		
Schenectady, N. Y.	32	24	—	—	Little Rock, Ark.	41	22	5	2		
Scranton, Pa.	45	32	1	1	New Orleans, La.	144	94	5	2		
Syracuse, N. Y.	65	47	3	—	Oklahoma City, Okla.*	62	36	3	1		
Trenton, N. J.	26	17	—	1	San Antonio, Tex.	81	42	5	1		
Utica, N. Y.	20	14	—	2	Shreveport, La.	36	25	—	4		
Yonkers, N. Y.	37	24	1	4	Tulsa, Okla.	48	28	2	5		
EAST NORTH CENTRAL	2,186	1,246	98	80	MOUNTAIN	497	301	27	9		
Akron, Ohio	43	29	—	—	Albuquerque, N. Mex.	29	17	4	—		
Canton, Ohio	45	30	1	2	Colorado Springs, Colo.	26	14	1	2		
Chicago, Ill.	606	327	27	13	Denver, Colo.	123	72	8	1		
Cincinnati, Ohio	134	78	5	5	Las Vegas, Nev.	37	18	3	—		
Cleveland, Ohio	150	84	6	4	Ogden, Utah	30	15	—	1		
Columbus, Ohio	139	80	4	11	Phoenix, Ariz.	119	79	6	2		
Dayton, Ohio	75	37	6	3	Pueblo, Colo.	26	19	—	2		
Detroit, Mich.	301	176	13	13	Salt Lake City, Utah	54	34	3	—		
Evansville, Ind.	41	27	—	4	Tucson, Ariz.	53	33	2	1		
Fort Wayne, Ind.	25	11	2	—	PACIFIC	1,349	831	42	29		
Gary, Ind.	44	13	3	3	Berkeley, Calif.	12	10	—	—		
Grand Rapids, Mich.	50	29	2	3	Fresno, Calif.	47	28	—	1		
Indianapolis, Ind.	148	80	9	4	Glendale, Calif.	22	20	—	—		
Madison, Wis.	31	17	1	6	Honolulu, Hawaii	43	20	2	—		
Milwaukee, Wis.	102	69	12	1	Long Beach, Calif.	104	62	1	3		
Peoria, Ill.	29	14	2	—	Los Angeles, Calif.	390	229	15	6		
Rockford, Ill.	34	20	2	3	Oakland, Calif.	55	34	3	—		
South Bend, Ind.	25	19	—	3	Pasadena, Calif.	19	16	—	—		
Toledo, Ohio	103	71	2	—	Portland, Oreg.	122	86	2	2		
Youngstown, Ohio	61	35	1	2	Sacramento, Calif.	63	35	2	—		
WEST NORTH CENTRAL	703	430	26	35	San Diego, Calif.	98	64	4	1		
Des Moines, Iowa	52	31	2	2	San Francisco, Calif.	152	92	4	3		
Duluth, Minn.	21	11	—	2	San Jose, Calif.	51	30	4	2		
Kansas City, Kans.	23	11	—	—	Seattle, Wash.	95	57	3	5		
Kansas City, Mo.	100	63	3	1	Spokane, Wash.	35	24	1	4		
Lincoln, Nebr.	25	19	—	4	Tacoma, Wash.	41	24	1	2		
Minneapolis, Minn.	94	64	5	2	Total	10,585	6,223	398	398		
Omaha, Nebr.	72	40	3	2	Expected Number	12,849	7,442	545	454		
St. Louis, Mo.	202	120	12	14	Cumulative Total (includes reported corrections for previous weeks)	599,877	352,674	22,562	24,002		
St. Paul, Minn.	65	47	—	3							
Wichita, Kans.	49	24	1	4							

†Delayed Report for Week ending November 17, 1973

*Estimate based on average percent of divisional total.

VIRAL HEPATITIS — Continued

of the 48 young women was interviewed by telephone to determine if her ears had been pierced before the onset of disease and if the time interval was consistent with the incubation period of hepatitis-A or hepatitis-B. Seven of the 48 women had had their ears pierced within 6 months before onset of jaundice and in only one was this interval from piercing to onset less than 3½ months; in this single instance the interval was 2 weeks. None of these 7 women had had hepatitis-B antigen determinations performed when they were ill with viral hepatitis, and their illnesses could not be further classified as either hepatitis-A or hepatitis-B on the basis of clinical or epidemiologic information.

In order to ascertain the frequency of ear piercing in women this age, 100 women (14-24 years) were surveyed consecutively as they visited a local family planning clinic; only 1 had had her ears pierced in the previous 7 months.

A frequency of 7 (15%) of 48 women having the ear piercing procedure within this period before onset of viral hepatitis compared with an expected frequency of 1% demonstrates a statistically significant association between viral hepatitis and ear piercing ($p < 0.001$). In addition, 2 of the 7 ill women had their ears pierced at the same establishment and had no other recognized contact. Differences in ear piercing frequency between the 2 groups could not be explained by large differences in age distributions since the mean age of the 48 ill young women (16.5 years) is only 2.4 years less than the mean age of the controls (18.9 years). The use of inadequately sterilized instruments suggests that these instruments may have transmitted hepatitis virus infection from one person to another.

Surveillance for cases of viral hepatitis spread by instruments used in ear piercing is being continued, and physicians and jewelers in the community are being advised to use disposable equipment or to sterilize effectively reusable equipment. (Reported by Carl J. Johnson, M.D., North District Health Officer, Herb Anderson, R.S., Environmental Epidemiologist, Jean Spearman, R.N., P.H.N., Epidemiologist, Julia Madsen,

R.N., Clinic Nurse, Seattle-King County Department of Public Health.)

Editorial Note

Although outbreaks of viral hepatitis have been related to tattooing (1), this is the first report of an association between viral hepatitis and ear piercing. In spite of possible limitations in selection of a comparison group (the 2 groups of women were of similar ages but because of differing socioeconomic, cultural, or geographical backgrounds might not have had the same tendency to have their ears pierced) this report emphasizes that when instruments penetrate the skin and are used on more than 1 person, there is a danger of transmitting either hepatitis-A or hepatitis-B infection. Six of these cases had incubation periods compatible with hepatitis-B (approximately 6 weeks to 6 months) while the seventh had an incubation period possibly compatible with hepatitis-A (approximately 2 to 6 weeks).

At present there is virtually no regulation of ear piercing by most state or local health departments, and judging from the above report there may be inadequate appreciation of proper sterilization techniques to prevent the spread of hepatitis. Destruction of the hepatitis-B virus and probably the hepatitis-A virus can be achieved by heating instruments at 60° C. for 10 hours, 98° C. for 1 minute, boiling for 20 minutes, or autoclaving at 121° C. for 15 minutes (2). Destruction of the hepatitis-A virus and perhaps the hepatitis-B virus can probably be achieved with a solution of 0.5%-1.0% sodium hypochlorite (3). Because of their demonstrated effectiveness against other viruses, including some other enteroviruses, 2% glutaraldehyde, 10% formalin, and ethylene oxide gas have empirically been used for sterilizing materials contaminated with hepatitis viruses A and B.

References

1. Mowat NAG, Albert-Recht F, Brunt PW, et al: Outbreak of serum hepatitis associated with tattooing. *Lancet* 1:33-34, 1973
2. Cossart YE: Epidemiology of serum hepatitis. *Brit Med Bull* 28:156-162, 1972
3. Neefe JR, Stokes J, Baty JB, et al: Disinfection of water containing causative agent of infectious (epidemic) hepatitis. *JAMA* 128:1076-1080, 1945

WOUND BOTULISM — Colorado

On August 19, 1973, a 19-year-old man from Nebraska injured his left hand after he was thrown onto a dirt road from his car in an automobile accident. The back of his hand and wrist was lacerated and abraded, and the left fourth finger was traumatically avulsed. The patient was taken to a nearby hospital where his wound was debrided, the fourth finger removed at the proximal I-P joint, and a skin graft placed over the wound. Intravenous Keflin* therapy, 1 gm 4 times a day, was given for 4 days and was followed by a 3-day course of oral ampicillin.

On August 26, the patient complained of neurologic symptoms including diplopia, dizziness, and slurred speech. The following day he had difficulty swallowing. His wound at this time appeared clean. On August 30, because of his neurologic symptoms, the patient was transferred to a Denver hospital. On admission he was noted to have bilateral ptosis, nystagmus, and weakness of his tongue and neck flexor and limb muscles. His sensorium was clear. Cerebrospinal fluid examination and a Tensilon* test were normal. A diagnosis of

wound botulism was made, and the patient was placed on intravenous aqueous penicillin therapy, 2 million units every 4 hours, for 7 days.

Serum obtained from the patient did not have botulinal toxin; accordingly, botulinal antitoxin was not given. Culture of necrotic tissue obtained from the wound on August 30 subsequently grew *Staphylococcus* and *Pseudomonas* organisms. No anaerobic organisms were isolated.

The patient underwent a tracheostomy on his second hospital day because of respiratory distress. Repetitive nerve stimulation studies performed on the sixth day of hospitalization were normal; however, repeat studies on the twelfth day revealed signs of neuromuscular block consistent with the diagnosis of botulism. He remained in the hospital intensive care unit on a respirator until mid-October when he began to show a marked improvement. He was discharged from the hospital on November 4.

(Reported by Michael Cherington, M.D., neurologist, Stanley Ginsburg, M.D., neurologist, Charles Freed, M.D., neurosurgeon, Denver; and an EIS Officer.)

Editorial Note

Although laboratory confirmation was not obtained, the

*Inclusion of trade names does not imply endorsement by the Public Health Service or the U.S. Department of Health, Education, and Welfare.

BOTULISM — Continued

clinical and electromyographic findings in this case are consistent with a diagnosis of wound botulism. This is the tenth reported case of wound botulism known to CDC (1).

Reference

1. Merson MH, Dowell VR: The epidemiologic, clinical, and laboratory aspects of wound botulism. *N Engl J Med* 289:1005-1010, 1973

INTERNATIONAL NOTES
INFLUENZA — Canada

A 72-year-old retired physician and his wife returned to Hamilton, Ontario, Canada, from The International Congress of Allergology in Tokyo on October 28, 1973. The following day the physician became ill with malaise, anorexia, fever, and left-sided pleuritic chest pain. He was admitted to a local hospital where a chest X-ray showed a left lower lobe infiltrate. The patient improved without antibiotic therapy and was discharged on November 8, 1973.

On November 1, 1973, his wife became ill with fever, malaise, cough, and pharyngitis. A viral culture yielded an influenzavirus similar to A/England/42/72. Her husband had a diagnostic serologic rise to his wife's virus confirming that both he and his wife had influenza caused by a virus similar to A/England/42/72.

(Reported by W. J. Walker, M.D., private physician, Hamilton, Ontario; Bryce Larke, M.D., Virologist, St. Joseph's Hospital, Hamilton, Ontario; and The Epidemiology Bureau, Laboratory Center for Disease Control, Department of National Health and Welfare, Canada.)

Erratum, Vol. 22, No. 44, p. 371

In the article "Shiga Bacillus Dysentery — California," correct the first sentence, second paragraph of the Editorial Note to read: Unlike other forms of shigellosis, Shiga bacillus dysentery is frequently a serious intestinal infection that may be responsible for substantial morbidity and which may result in death if diagnosis and treatment are delayed or if the patient is treated inappropriately.

The Morbidity and Mortality Weekly Report, circulation 36,000, is published by the Center for Disease Control, Atlanta, Ga.

Director, Center for Disease Control
Director, Bureau of Epidemiology, CDC
Editor, MMWR
Managing Editor, MMWR

David J. Sencer, M.D.
Philip S. Brachman, M.D.
Michael E. Gregg, M.D.
Deborah L. Jones, B.S.

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
Attn: Editor
Morbidity and Mortality Weekly Report
Atlanta, Georgia 30333

DHEW Publication No. (CDC) 74-8017

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
CENTER FOR DISEASE CONTROL
ATLANTA, GEORGIA 30333

OFFICIAL BUSINESS

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF HEW
HEW 399



3-G-65
Pat Rogers
Special Projects Activity
(Ref Collection) Methods Dev Br
Training Program