CENTER FOR DISEASE CONTROL

Morbidity and Mortality

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WEEKLY REPORT

For Week Ending July 6, 1974

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

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CURRENT TRENDS
SURVEILLANCE OF CHILDHOOD LEAD POISONING
United States

The Childhood Lead Poisoning Control Program (CLPC) began operation in fiscal year (FY) 1972, under the Bureau of Community Environmental Management, Health Services and Mental Health Administration. Since July 1, 1973, the program has been administered by CDC. Program responsibility has been given to the Environmental Health Services Division of the Bureau of State Services at the Center.

At present, 39 screening projects are in full operation in 21 states and the District of Columbia through the CLPC Program. An additional 38 screening projects were funded at the end of FY 1974. These grants are awarded under Title I authority (screening of children) of the 1971 Lead Based Paint Poisoning Prevention Act. Thus, emphasis of Federal project expenditures is on the detection of children with elevated blood lead levels and follow-up and referrals as

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

DISEASE	27th WEEK ENDING		MEDIAN 1969-1973	CUMULATIVE, FIRST 27 WEEKS		
	July 6, 1974	July 7, 1973		1974	1973	MEDIAN 1969-1973
Aseptic meningitis	47	88	80	1,057	1,211	1,070
Brucellosis	1	4	3	76	93	93
Chickenpox	1,475	1,228	– – –	95,006	140,442	– – –
Diphtheria	2	–	2	147	100	90
Encephalitis:						
Primary: Arthropod-borne and unspecified	7	20	20	435	573	570
Post-Infectious	5	5	8	135	159	168
Hepatitis, Viral:						
Type B	147	122	118	4,791	4,061	4,061
Type A	636	696	782	22,303	26,309	28,841
Type unspecified	110			4,395		
Malaria	9	3	44	84	121	1,371
Measles (rubeola)	284	288	476	18,375	22,720	25,182
Meningococcal infections, total	22	20	26	793	885	1,527
Civilian	22	19	19	771	863	1,347
Military	–	1	1	22	22	155
Mumps	600	784	898	41,162	50,874	61,964
Pertussis	24	– – –	– – –	659	– – –	– – –
Rubella (German measles)	84	141	423	8,696	24,882	35,489
Tetanus	2	–	2	30	39	55
Tuberculosis, new active	469	461	– – –	15,927	16,439	– – –
Tularemia	3	3	3	69	78	67
Typhoid fever	11	5	7	182	384	149
Typhus, tick-borne (Rky. Mt. spotted fever)	25	29	19	328	282	179
Venereal Diseases:						
Gonorrhea	17,040	13,228	– – –	443,170	403,254	– – –
Syphilis, primary and secondary	385	360	– – –	12,340	12,699	– – –
Rabies in animals	31	58	53	1,435	1,970	1,970

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	2	Poliomyelitis, total:	2
Botulism:	6	Paralytic:	2
Congenital rubella syndrome:	34	Psittacosis:	13
Leprosy: *	59	Rabies in man:	–
Leptospirosis:	22	Trichinosis: Mich. 3, N.Y.C. 1	59
Plague: N. Mex. 1	1	Typhus, murine: Calif. 1	11

*Leprosy: La. delete 2

LEAD POISONING – Continued

appropriate. Projects are expected to secure local funds and help from other local agencies to insure treatment of poisoned children and reduction of housing hazards.

In 1973, amendments to the Lead Based Paint Poisoning Act authorized grants for establishing a centralized State laboratory capability for lead analysis. Before the end of FY 1974, Federal grants were awarded to 28 State laboratories under this authority.

It is estimated that 2.5 million U.S. children between the ages of 1 and 6 years are at risk of becoming lead-poisoned because of their dilapidated, hazardous housing, that 600,000 of them have elevated blood lead levels, that as many as 125,000 of those may actually be lead poisoned, and that some 6,000 children may suffer neurologic damage, including mental retardation *(1)*.

Tables 1 and 2 summarize provisional data reported for FY 1973 and the first 3 quarters of FY 1974. Approximately 480,000 children were screened between July 1, 1972, and April 1, 1974, representing about 17% of the estimated target group of 2.9 million children between the ages of 1-6 years at risk throughout the country over the 2-year period.

Overall, 12.2% of children screened in FY 1973 were found to have elevated blood lead (EBL) levels ($\geq$40 μg/100 ml whole blood) on initial testing, and 15.0% of children screened in the first 3 quarters of FY 1974 had EBL levels initially. At least 7.2% of children screened in FY 1973 and 5.8% of children screened in the 1st 3 quarters of FY 1974 were confirmed as having EBL levels through a second, confirmatory test.*

In FY 1973, at least 8,016 children with EBL levels on initial testing (23.8%) did not receive a confirmatory test during that period. In FY 1974, at least 4,200 children with EBL levels on initial testing (13.8%) apparently did not receive a confirmatory test.

For those children with initial EBL levels who are not found to have EBL levels upon receiving a confirmatory test, it is not clear what proportion of the results is attributable to biological variability and what proportion to errors in specimen collection and laboratory analysis.

The number of children who received chelation therapy represents 16.4% of children with confirmed EBL levels in FY 1973, and 22.0% of children with confirmed EBL levels in FY 1974.

(Reported by the Environmental Health Services Division, Bureau of State Services, CDC.)

Reference

1. Gilsinn JF: Estimates of the nature and extent of lead poisoning in the United States (NBS Tech Note 746). Washington, National Bureau of Standards, US Dept of Commerce, Dec 1972, p 105

*Confirmatory test refers to a second testing of children who have blood lead levels $\geq$ 40 μg on their first test. The result of the confirmatory test may or may not confirm the initial elevated blood lead level.

INTERNATIONAL NOTES

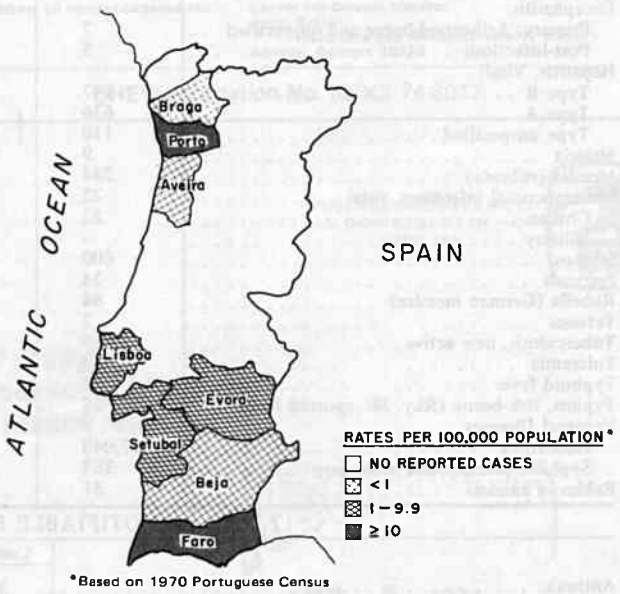
FOLLOW-UP ON CHOLERA – Portugal

On July 5, 1974, the World Health Organization reported an additional 96 cases of cholera in Portugal with 1 death. This brings the total number of cases reported since May to 368 (4.2 cases per 100,000 population) and the total number of deaths to 8 (case-fatality ratio = 2.2%).

Cases continue to be reported more frequently in the 3 districts of Faro, Porto, and Lisboa–all coastal population centers (Figure 1). Cases have also occurred in 5 of the other 15 districts.

(Reported by the World Health Organization, Geneva, Switzerland; and the Enteric Diseases Section, Bacterial Diseases Division, Bureau of Epidemiology, CDC.)

Figure 1
CHOLERA CASES BY DISTRICT
PORTUGAL – AS OF JULY 5, 1974



Editorial Note

Cholera vaccination is not required for entry into the United States. Travelers from the United States whose itinerary includes only Portugal are not required to present a valid International Certificate of Cholera Vaccination upon arrival in Portugal. However, to facilitate travel, persons going to Portugal and then to other countries are advised to have a validated International Certificate of Cholera Vaccination because some of those other countries may still have entry requirements for cholera vaccination.

Travelers to Portugal and to other cholera-infected areas should avoid eating uncooked vegetables, unpeeled fruits, and raw seafood since these foods are considered to be potential vehicles in the spread of cholera. Similarly, travelers should consume only bottled drinking water and other bottled beverages and should not swim at beaches in water contaminated with human sewage.

Table 1
Results of Screening in Childhood Lead Poisoning Control Projects – United States
FY 1973 (July 1, 1972 to June 30, 1973)*

Projects	Number of Children Screened	Number of Screened Children with Initial Blood Lead Level ⩾ 40 μg	Number of Children with Confirmed Blood Lead Level ⩾ 40 μg	Number of Children Chelated
Hartford	3,404	95	17	6
Boston	23,818	NA	NA	236
Chelsea	558	207	93	9
Somerville	1,909	199	129	12
Waltham	1,246	37	10	1
Nashua	272	13	2	0
DHEW Region I	**31,206**	**551**	**251**	**264**
Albany Co.	1,787	NA	280	10
Erie Co.	2,885	540	540	220
New York City	74,682	7,981	NA	NA
Onandago Co.	3,955	162	63	23
Hoboken	1,597	NA	173	20
Newark	5,513	NA	813	141
DHEW Region II	**90,419**	**8,683**	**1,869**	**414**
Allegheny Co.	1,431	142	34	2
Philadelphia	10,092	1,756	1,501	28
Baltimore	3,424	465	377	47
Wilmington	1,183	125	64	12
Washington, D.C.	8,948	2,250	1,685	161
Norfolk	4,798	493	478	19
DHEW Region III	**29,876**	**5,231**	**4,139**	**269**
Chattanooga	2,008	63	42	0
Nashville	2,245	594	161	1
Charleston	1,181	NA	198	25
Greenville	1,199	NA	50	0
Savannah	1,902	NA	183	11
DHEW Region IV	**8,535**	**657**	**634**	**37**
Cleveland	4,528	847	180	43
Cincinnati	1,916	299	252	14
Toledo	966	NA	343	178
Detroit	6,712	657	379	NA
Chicago	59,869	10,739	7,684	1,133
Peoria	2,121	104	36	7
Rockford	1,652	106	105	5
Springfield	2,033	265	215	65
Milwaukee	5,731	2,083	1,823	561
DHEW Region V	**85,528**	**15,100**	**11,017**	**2,006**
New Orleans	8,567	2,127	1,421	8
Tulsa	2,809	112	24	1
DHEW Region VI	**11,376**	**2,239**	**1,445**	**9**
Des Moines	2,345	NA	75	42
St. Louis	8,046	1,022	294	202
DHEW Region VII	**10,391**	**1,022**	**369**	**244**
Denver	4,238	96	7	0
DHEW Region VIII	**4,238**	**96**	**7**	**0**
Los Angeles Co.	1,856	186	71	22
Sacramento	1,877	NA	17	0
DHEW Region IX	**3,733**	**186**	**88**	**22**
Multnomah Co.	2,044	NA	71	0
DHEW Region X	**2,044**	**NA**	**71**	**0**
United States (Projects) Total	**277,346**	**33,765**	**19,890**	**3,265**

NA = not available
*Provisional 5/24/74

Table 2
Results of Screening in Childhood Lead Poisoning Control Projects -- United States
First 3 Quarters of FY 1974 (July 1, 1973 to March 30, 1974)*

Projects	Number of Children Screened	Number of Screened Children with Initial Blood Lead Level ⩾ 40 μg	Number of Children with Confirmed Blood Lead Level ⩾ 40 μg	Number of Children Chelated
Hartford	2,930	216	39	11
Boston	20,969	3,218	NA	131
Chelsea	968	149	39	6
Somerville	1,591	166	85	6
Waltham	350	7	6	0
Lowell	550	107	97	9
DHEW Region I	**27,358**	**3,863**	**266**	**163**
Albany Co.	950	162	16	7
Erie Co.	1,658	420	421	140
New York City	20,412	NA	NA	NA
Onandago Co.	4,870	368	94	68
Hoboken	1,883	172	66	19
Newark	3,671	924	NA	123
DHEW Region II	**33,444**	**2,046**	**597**	**357**
Allegheny Co.	3,213	357	55	7
Philadelphia	7,501	1,790	707	51
Baltimore	4,878	1,259	652	59
Wilmington	1,393	224	23	4
Washington, D.C.	8,974	2,333	1,872	103
Norfolk	4,750	853	387	38
DHEW Region III	**30,709**	**6,816**	**3,696**	**262**
Chattanooga	1,772	96	43	3
Nashville	3,155	880	241	2
Charleston	848	215	112	36
Greenville	1,265	74	33	0
Savannah	3,628	953	443	41
DHEW Region IV	**10,668**	**2,218**	**872**	**82**
Cleveland	8,433	2,040	1,017	42
Cincinnati	2,611	469	182	14
Toledo	1,613	262	114	143
Detroit	11,255	1,508	683	88
Chicago	40,539	5,681	2,663	737
Peoria	2,197	94	65	19
Rockford	1,561	202	140	17
Springfield	1,290	158	120	18
Milwaukee	3,805	1,273	585	454
DHEW Region V	**73,304**	**11,687**	**5,569**	**1,532**
New Orleans	9,751	1,466	378	5
Tulsa	2,362	140	28	1
Houston	1,747	150	10	0
DHEW Region VI	**13,860**	**1,756**	**416**	**6**
Des Moines	2,646	243	72	43
St. Louis	2,254	818	183	142
Burlington	704	80	37	2
DHEW Region VII	**5,604**	**1,141**	**292**	**187**
Denver	2,518	442	45	0
DHEW Region VIII	**2,518**	**442**	**45**	**0**
Los Angeles Co.	2,210	124	26	18
Sacramento	1,361	84	23	0
DHEW Region IX	**3,571**	**208**	**49**	**18**
Multnomah Co.	1,399	144	44	0
DHEW Region X	**1,399**	**144**	**44**	**0**
United States (Projects) Total	**202,435**	**30,321**	**11,846**	**2,607**

NA = not available
*Provisional 5/24/74

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING JULY 6, 1974 AND JULY 7, 1973 (27th WEEK)

AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod-borne and Unspecified		Post Infectious	Type B	Type A	Type Unspecified		
	1974	1974	1974	1974	Cum. 1974	1974	1973	1974	1974	1974	1974	1974	Cum. 1974
UNITED STATES	47	1	1,475	2	147	7	20	5	147	636	110	9	84
NEW ENGLAND	4	–	237	–	–	–	–	–	–	28	10	–	5
Maine *	–	–	1	–	–	–	–	–	–	3	1	–	–
New Hampshire *	–	–	7	–	–	–	–	–	–	1	–	–	–
Vermont	–	–	9	–	–	–	–	–	–	4	–	–	–
Massachusetts	4	–	–	–	–	–	–	–	–	5	9	–	1
Rhode Island	–	–	63	–	–	–	–	–	–	4	–	–	3
Connecticut	–	–	157	–	–	–	–	–	–	11	–	–	1
MIDDLE ATLANTIC	–	–	203	–	1	1	2	–	22	95	16	3	13
Upstate New York	–	–	58	–	–	1	1	–	3	6	1	–	3
New York City	–	–	142	–	–	–	–	–	2	5	–	1	5
New Jersey	–	–	NN	–	–	–	–	–	5	13	14	2	3
Pennsylvania	–	–	3	–	1	–	1	–	12	71	1	–	2
EAST NORTH CENTRAL	1	–	604	–	2	1	9	–	31	115	29	–	9
Ohio	–	–	128	–	1	–	9	–	–	22	–	–	4
Indiana	–	–	23	–	–	–	–	–	–	–	13	–	–
Illinois	–	–	–	–	1	1	–	–	15	45	14	–	2
Michigan *	1	–	193	–	–	–	–	–	14	45	2	–	2
Wisconsin	–	–	260	–	–	–	–	–	2	3	–	–	1
WEST NORTH CENTRAL	5	–	117	–	–	–	1	1	7	28	7	1	3
Minnesota	2	–	3	–	–	–	–	–	–	7	1	1	1
Iowa	2	–	37	–	–	–	1	1	4	5	1	–	–
Missouri	1	–	8	–	–	–	–	–	1	2	1	–	1
North Dakota	–	–	3	–	–	–	–	–	–	–	–	–	–
South Dakota	–	–	–	–	–	–	–	–	–	4	–	–	1
Nebraska	–	–	6	–	–	–	–	–	–	–	–	–	–
Kansas	–	–	60	–	–	–	–	–	2	10	4	–	–
SOUTH ATLANTIC	10	–	114	–	1	2	4	–	15	126	10	1	14
Delaware	–	–	1	–	–	–	–	–	–	1	–	–	–
Maryland	3	–	3	–	–	1	–	–	2	3	2	–	2
District of Columbia	–	–	3	–	–	–	–	–	–	–	–	–	2
Virginia *	3	–	10	–	–	1	1	–	3	3	1	–	3
West Virginia	–	–	55	–	–	–	–	–	–	2	–	–	–
North Carolina	1	–	NN	–	1	–	1	–	2	2	–	1	3
South Carolina	–	–	42	–	–	–	–	–	1	3	3	–	–
Georgia	–	–	–	–	–	–	–	–	–	20	–	–	–
Florida	3	–	–	–	–	–	2	–	7	92	4	–	4
EAST SOUTH CENTRAL	4	–	46	–	–	1	1	2	9	33	–	–	3
Kentucky	–	–	37	–	–	–	–	–	2	11	–	–	2
Tennessee	2	–	NN	–	–	–	1	–	5	18	–	–	1
Alabama	1	–	9	–	–	1	–	2	2	3	–	–	–
Mississippi	1	–	–	–	–	–	–	–	–	1	–	–	–
WEST SOUTH CENTRAL	6	1	84	–	9	–	2	–	3	57	1	2	5
Arkansas	–	–	–	–	–	–	–	–	2	4	1	–	–
Louisiana *	–	–	NN	–	–	–	–	–	–	–	–	–	1
Oklahoma	---	---	---	---	–	---	2	---	---	---	---	---	1
Texas	6	1	84	–	9	–	–	–	1	53	–	2	3
MOUNTAIN	–	–	25	–	27	–	1	–	7	31	13	1	4
Montana	–	–	1	–	–	–	–	–	1	2	–	–	–
Idaho	–	–	–	–	–	–	–	–	–	1	–	–	–
Wyoming	–	–	–	–	–	–	–	–	–	–	–	–	–
Colorado	–	–	14	–	–	–	–	–	2	1	6	–	2
New Mexico	–	–	3	–	10	–	–	–	1	12	–	–	1
Arizona	–	–	–	–	17	–	–	–	3	11	4	–	–
Utah	–	–	7	–	–	–	–	–	–	4	3	–	–
Nevada	–	–	–	–	–	–	1	–	–	–	–	1	1
PACIFIC	17	–	45	2	107	2	–	2	53	123	24	1	28
Washington	1	–	6	2	98	–	–	–	5	19	12	–	–
Oregon	3	–	–	–	–	–	–	1	1	11	1	–	–
California *	12	–	–	–	5	2	–	1	44	89	10	1	28
Alaska	–	–	6	–	4	–	–	–	3	3	–	–	–
Hawaii	1	–	33	–	–	–	–	–	–	1	1	–	–
Guam	–	–	–	–	–	–	–	–	–	–	–	–	2
Puerto Rico	–	–	12	–	–	–	–	–	–	8	–	–	–
Virgin Islands	–	–	–	–	–	–	–	–	–	–	–	–	–

*Delayed reports: Chickenpox: Me. 10, N.H. 9, Calif. 20
Encephalitis, Post: Mich. 1
Hepatitis B: La. delete 2
Hepatitis A: N.H. 1
Hepatitis unspecified: Va. delete 2

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING JULY 6, 1974 AND JULY 7, 1973 (27th WEEK) – Continued

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1974	Cumulative		1974	Cumulative		1974	Cum. 1974	1974	1974	Cum. 1974	Cum. 1974
		1974	1973		1974	1973						
UNITED STATES	284	18,375	22,720	22	793	885	600	41,162	24	84	8,696	30
NEW ENGLAND	31	855	7,234	1	41	41	60	5,533	–	5	882	–
Maine *	3	37	63	–	2	1	2	765	–	–	242	–
New Hampshire *	1	197	848	–	7	6	–	265	–	–	15	–
Vermont	–	57	116	–	1	2	–	27	–	2	17	–
Massachusetts *	4	347	3,835	1	12	11	7	879	–	3	309	–
Rhode Island	–	57	594	–	7	3	43	2,213	–	–	18	–
Connecticut	23	160	1,778	–	12	18	8	1,384	–	–	281	–
MIDDLE ATLANTIC	81	7,433	2,155	3	105	122	71	3,244	–	4	962	2
Upstate New York	34	734	706	–	45	43	36	771	–	1	215	1
New York City	10	481	831	–	14	24	22	518	–	1	108	–
New Jersey	23	5,395	334	1	32	28	9	632	–	1	424	1
Pennsylvania	14	823	284	2	14	27	4	1,323	–	1	215	–
EAST NORTH CENTRAL	142	7,202	7,953	1	92	115	168	11,908	6	16	2,888	5
Ohio *	1	2,977	264	–	31	51	22	2,929	–	1	476	2
Indiana	3	202	568	–	8	4	13	907	–	1	462	–
Illinois	99	1,775	1,886	–	10	23	21	1,024	1	10	456	2
Michigan	26	1,846	4,167	1	29	32	78	5,212	2	2	1,093	1
Wisconsin	13	402	1,068	–	14	5	34	1,836	3	2	401	–
WEST NORTH CENTRAL	18	644	426	7	65	70	53	2,591	1	–	204	7
Minnesota	1	78	18	2	21	4	–	35	–	–	10	1
Iowa *	9	112	275	1	11	17	–	1,606	–	–	14	–
Missouri	8	250	47	2	18	30	14	346	–	–	32	2
North Dakota	–	25	56	–	2	3	–	17	–	–	11	1
South Dakota	–	27	–	–	3	4	–	2	–	–	25	–
Nebraska	–	2	3	–	1	5	4	73	1	–	6	–
Kansas	–	150	27	2	9	7	35	512	–	–	106	3
SOUTH ATLANTIC	4	418	1,121	5	156	148	53	4,893	1	26	908	7
Delaware	–	6	8	–	3	1	3	81	–	2	24	–
Maryland	–	21	2	–	17	20	1	88	–	–	1	–
District of Columbia	–	3	3	–	–	4	–	43	–	–	3	–
Virginia	–	21	403	1	28	27	24	476	–	3	38	2
West Virginia	3	114	181	–	6	4	14	2,812	–	–	140	–
North Carolina	–	4	4	–	36	31	NN	NN	1	–	53	–
South Carolina	–	39	54	–	13	10	–	105	–	20	508	1
Georgia	–	4	145	1	7	17	–	–	–	–	2	–
Florida	1	206	321	3	46	34	11	1,288	–	1	139	4
EAST SOUTH CENTRAL	–	169	582	1	88	84	70	5,124	3	11	449	2
Kentucky	–	110	361	–	36	31	13	2,089	–	–	160	–
Tennessee	–	33	162	1	39	33	35	2,204	2	9	218	1
Alabama	–	13	5	–	9	14	22	467	1	2	56	–
Mississippi	–	13	54	–	4	6	–	364	–	–	15	1
WEST SOUTH CENTRAL	1	161	617	2	136	129	43	2,807	5	3	285	2
Arkansas	–	6	68	1	10	13	2	121	3	–	8	–
Louisiana	–	13	84	–	27	26	–	176	–	–	62	1
Oklahoma	---	23	50	---	13	15	---	347	---	---	33	–
Texas	1	119	415	1	86	75	41	2,163	2	3	182	1
MOUNTAIN	–	715	540	–	24	27	32	974	3	3	374	–
Montana	–	369	13	–	1	6	20	166	–	1	63	–
Idaho	–	50	236	–	2	4	–	154	–	–	12	–
Wyoming	–	1	72	–	3	–	–	9	–	–	–	–
Colorado *	–	29	95	–	4	6	9	468	–	2	155	–
New Mexico	–	52	109	–	2	3	2	155	1	–	97	–
Arizona	–	12	14	–	5	4	–	–	–	–	–	–
Utah	–	3	1	–	4	2	1	18	2	–	14	–
Nevada	–	199	–	–	3	2	–	4	–	–	33	–
PACIFIC	7	778	2,092	2	86	149	50	4,088	5	16	1,744	5
Washington	–	55	972	–	8	16	9	1,501	–	2	325	–
Oregon	–	–	440	–	9	12	12	710	–	2	182	1
California	7	665	599	2	64	117	26	1,736	5	12	1,223	4
Alaska	–	1	65	–	2	4	–	95	–	–	–	–
Hawaii	–	57	16	–	3	–	3	46	–	–	14	–
Guam	–	7	11	–	1	–	–	315	–	–	4	–
Puerto Rico	3	511	1,655	–	4	4	12	761	1	–	17	3
Virgin Islands	–	22	–	–	–	–	–	30	–	–	–	1

*Delayed reports: Measles: Mass. delete 2, Iowa 5
Mumps: Me. 12, N.H. 1
Pertussis: Ohio delete 21
Rubella: Me. 4, Ohio 21, Col. 38

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING JULY 6, 1974 AND JULY 7, 1973 (27th WEEK) – Continued

AREA	TUBERCULOSIS (New Active)		TULAREMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES						RABIES IN ANIMALS
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1974	Cum. 1974	Cum. 1974	1974	Cum. 1974	1974	Cum. 1974	1974	Cumulative 1974	Cumulative 1973	1974	Cumulative 1974	Cumulative 1973	Cum. 1974
UNITED STATES	469	15,927	69	11	182	25	328	17,040	443,170	403,254	385	12,340	12,699	1,435
NEW ENGLAND	15	647	–	–	6	2	2	386	10,371	11,134	7	249	377	10
Maine	2	50	–	–	–	–	–	–	834	604	–	16	12	1
New Hampshire	–	16	–	–	1	–	–	16	362	378	–	8	4	2
Vermont	1	11	–	–	–	–	–	13	324	166	–	1	13	1
Massachusetts	6	364	–	–	2	1	1	162	4,340	5,387	4	100	188	3
Rhode Island	2	61	–	–	2	1	1	15	1,009	1,152	–	10	9	3
Connecticut	4	145	–	–	1	–	–	180	3,502	3,447	3	114	151	–
MIDDLE ATLANTIC	98	2,800	1	1	30	2	28	2,115	53,456	55,995	78	2,743	2,890	16
Upstate New York	17	385	1	–	6	–	12	336	10,118	10,265	–	272	176	9
New York City	37	1,068	–	1	20	–	–	756	23,129	26,053	44	1,565	1,799	–
New Jersey	17	532	–	–	4	–	–	537	7,486	8,050	16	448	522	–
Pennsylvania	27	815	–	–	–	2	16	486	12,723	11,627	18	458	393	7
EAST NORTH CENTRAL	73	2,125	5	2	17	2	5	3,422	64,396	46,905	65	902	718	97
Ohio *	14	595	–	–	5	–	3	769	19,383	14,860	8	147	149	–
Indiana	5	329	–	–	1	–	–	298	6,665	5,743	7	100	171	10
Illinois	38	613	3	1	6	2	2	1,394	15,397	6,964	38	391	98	22
Michigan	13	545	–	1	4	–	–	590	16,050	14,326	11	213	259	1
Wisconsin	3	43	2	–	1	–	–	371	6,901	5,012	1	51	41	64
WEST NORTH CENTRAL	24	576	11	–	6	–	4	658	22,967	22,160	8	304	159	344
Minnesota	5	95	–	–	3	–	–	69	5,131	4,457	1	44	57	142
Iowa	4	60	–	–	–	–	1	83	3,070	2,932	2	19	21	75
Missouri	10	288	9	–	1	–	3	266	7,366	7,560	5	205	60	21
North Dakota	1	14	–	–	–	–	–	8	355	322	–	3	1	69
South Dakota	1	33	2	–	–	–	–	50	1,081	1,151	–	2	2	–
Nebraska	2	30	–	–	–	–	–	22	1,906	2,318	–	5	2	3
Kansas	1	56	–	–	2	–	–	160	4,058	3,420	–	26	16	34
SOUTH ATLANTIC	82	3,301	8	1	28	13	192	5,175	113,704	101,492	122	3,955	3,666	172
Delaware	–	45	–	–	–	–	3	13	1,499	1,377	–	44	56	1
Maryland	17	448	–	–	2	1	30	606	11,322	8,490	3	397	374	2
District of Columbia	3	213	–	–	1	–	–	282	8,301	8,197	11	331	435	–
Virginia *	14	403	3	–	1	4	62	---	9,554	9,837	9	432	365	56
West Virginia	3	162	–	1	7	–	1	52	1,307	1,584	–	9	11	21
North Carolina *	4	512	3	–	3	2	51	447	14,695	15,069	10	485	317	12
South Carolina	15	334	–	–	2	2	29	1,009	12,170	10,976	5	446	547	3
Georgia	12	433	2	–	2	3	14	1,033	23,674	19,226	17	432	609	50
Florida	14	751	–	–	10	1	2	1,733	31,182	26,736	67	1,379	952	27
EAST SOUTH CENTRAL	20	1,441	7	1	20	5	49	1,042	38,005	33,830	11	633	845	151
Kentucky	–	342	1	–	9	–	4	104	4,657	4,177	1	144	314	95
Tennessee	14	482	4	1	9	5	33	465	14,869	12,633	4	249	229	36
Alabama	6	414	2	–	2	–	6	286	10,452	9,736	4	125	96	19
Mississippi	–	203	–	–	–	–	6	187	8,027	7,284	2	115	206	1
WEST SOUTH CENTRAL	71	2,095	31	1	13	1	42	1,416	60,862	55,303	22	1,179	1,445	369
Arkansas	10	269	21	–	1	1	7	139	6,072	6,891	–	63	84	45
Louisiana	9	247	2	–	2	–	–	7	12,341	11,647	1	332	437	18
Oklahoma	---	157	6	---	–	---	29	---	5,217	5,580	---	74	98	86
Texas	52	1,422	2	1	10	–	6	1,270	37,232	31,185	21	710	826	220
MOUNTAIN	12	528	4	–	12	–	5	687	16,802	14,856	4	298	422	82
Montana	3	42	–	–	–	–	1	35	950	851	–	3	3	–
Idaho	–	21	–	–	–	–	1	48	985	870	–	6	7	–
Wyoming	–	11	1	–	3	–	1	22	353	256	–	5	20	5
Colorado	–	100	–	–	–	–	1	140	4,616	3,908	–	68	118	27
New Mexico	–	106	2	–	2	–	1	131	2,467	2,597	–	41	44	24
Arizona *	6	195	1	–	6	–	–	260	5,183	4,316	4	117	88	25
Utah	2	20	–	–	–	–	–	37	888	763	–	9	8	1
Nevada	1	33	–	–	1	–	–	14	1,360	1,295	–	49	134	–
PACIFIC	74	2,414	2	5	50	–	1	2,139	62,607	61,579	68	2,077	2,177	194
Washington	10	156	–	2	11	–	–	178	5,819	5,644	10	53	79	–
Oregon	3	98	–	–	–	–	1	147	5,351	5,369	–	42	38	8
California	59	1,929	2	2	38	–	–	1,706	48,676	47,908	57	1,957	1,965	179
Alaska	–	49	–	–	–	–	–	58	1,372	1,514	1	3	45	7
Hawaii	2	182	–	1	1	–	–	50	1,389	1,144	–	22	50	–
Guam	–	21	–	–	–	–	–	–	135	163	–	2	1	–
Puerto Rico	10	287	–	–	2	–	–	88	1,593	2,270	16	453	419	32
Virgin Islands	–	3	–	–	–	–	–	2	159	125	2	20	13	–

*Delayed reports: Tuberculosis: Ohio 3, N.C. delete 2, Ariz. 13
RMSF: Va. delete 1

Week No. 27

TABLE IV. DEATHS IN 121 UNITED STATES CITIES FOR WEEK ENDING JULY 6, 1974

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

Area	All Causes					Pneumonia and Influenza All Ages
	All Ages	65 years and over	45-64 years	25-44 years	Under 1 year	
NEW ENGLAND	606	364	166	35	17	45
Boston, Mass.	166	89	51	12	6	16
Bridgeport, Conn.	27	16	7	3	1	–
Cambridge, Mass.	32	26	5	–	1	8
Fall River, Mass.	25	19	6	–	–	–
Hartford, Conn.	48	20	19	5	3	1
Lowell, Mass.	20	13	1	2	–	–
Lynn, Mass.	17	8	8	–	–	–
New Bedford, Mass.	28	20	8	–	–	5
New Haven, Conn.	57	33	15	3	3	3
Providence, R. I.	61	37	18	1	1	7
Somerville, Mass.	13	11	2	–	–	–
Springfield, Mass.	35	18	11	2	1	1
Waterbury, Conn.	27	22	–	4	1	–
Worcester, Mass.	50	32	15	3	–	4
MIDDLE ATLANTIC	2,559	1,493	690	160	105	95
Albany, N. Y.	53	28	16	3	3	–
Allentown, Pa.	15	9	5	–	–	2
Buffalo, N. Y.	164	85	57	11	4	12
Camden, N. J.	22	13	6	1	–	3
Elizabeth, N. J.	18	8	8	2	–	1
Erie, Pa.	29	16	9	1	1	6
Jersey City, N. J.	57	39	14	3	–	3
Newark, N. J.	34	16	8	3	5	–
New York City, N. Y. *	1,277	751	330	89	45	44
Paterson, N. J.	28	11	13	1	1	–
Philadelphia, Pa.	397	239	97	27	20	4
Pittsburgh, Pa.	168	92	49	10	13	10
Reading, Pa.	21	14	3	–	1	–
Rochester, N. Y.	90	58	21	3	5	3
Schenectady, N. Y.	18	15	2	–	–	–
Scranton, Pa.	30	20	8	1	1	1
Syracuse, N. Y.	59	31	19	1	5	–
Trenton, N. J.	18	8	9	1	–	1
Utica, N. Y.	21	15	5	1	–	3
Yonkers, N. Y.	40	25	11	2	1	2
EAST NORTH CENTRAL	2,063	1,196	557	157	64	54
Akron, Ohio	40	22	12	1	4	–
Canton, Ohio	42	31	5	3	1	2
Chicago, Ill.	604	322	176	63	15	14
Cincinnati, Ohio	134	82	35	9	4	7
Cleveland, Ohio	154	84	49	13	3	3
Columbus, Ohio	89	56	15	7	7	1
Dayton, Ohio	71	36	21	3	5	1
Detroit, Mich.	290	165	90	21	4	9
Evansville, Ind.	37	29	6	1	1	–
Fort Wayne, Ind.	29	19	8	1	–	4
Gary, Ind.	19	11	7	–	1	–
Grand Rapids, Mich.	38	26	7	4	–	2
Indianapolis, Ind.	132	79	28	11	5	1
Madison, Wis.	21	11	6	–	1	2
Milwaukee, Wis.	119	76	33	6	1	2
Peoria, Ill.	29	16	9	–	4	–
Rockford, Ill.	41	23	10	3	2	5
South Bend, Ind.	32	21	8	1	2	1
Toledo, Ohio	87	51	19	8	3	–
Youngstown, Ohio	55	36	13	2	1	–
WEST NORTH CENTRAL	692	448	157	25	37	19
Des Moines, Iowa	41	31	7	1	–	–
Duluth, Minn.	15	10	4	–	–	1
Kansas City, Kans.	35	22	8	2	1	1
Kansas City, Mo.	107	75	25	–	5	2
Lincoln, Nebr.	28	22	4	–	2	3
Minneapolis, Minn.	82	54	16	2	8	1
Omaha, Nebr.	61	34	13	6	4	2
St. Louis, Mo.	205	117	58	9	13	5
St. Paul, Minn.	74	53	12	2	3	2
Wichita, Kans.	44	30	10	3	1	2
SOUTH ATLANTIC	1,085	572	327	90	52	42
Atlanta, Ga.	131	55	48	14	8	3
Baltimore, Md.	211	95	71	25	11	4
Charlotte, N. C.	37	23	7	3	3	–
Jacksonville, Fla.	86	45	26	5	3	–
Miami, Fla.	137	79	39	8	4	5
Norfolk, Va.	45	24	12	5	–	5
Richmond, Va.	59	37	18	2	2	4
Savannah, Ga.	19	15	4	–	–	1
St. Petersburg, Fla.	85	69	12	2	1	5
Tampa, Fla.	64	40	17	2	3	8
Washington, D. C.	164	71	58	22	7	4
Wilmington, Del.	47	19	15	2	10	3
EAST SOUTH CENTRAL	584	341	154	42	24	20
Birmingham, Ala.	101	54	34	8	2	1
Chattanooga, Tenn.	69	39	23	3	–	2
Knoxville, Tenn.	38	27	6	3	1	2
Louisville, Ky.	95	59	25	4	4	8
Memphis, Tenn.	138	82	31	10	10	1
Mobile, Ala.	37	21	9	5	–	2
Montgomery, Ala.	18	9	4	3	2	1
Nashville, Tenn.	88	50	22	6	5	3
WEST SOUTH CENTRAL	888	472	253	68	41	30
Austin, Tex.	30	20	5	4	–	4
Baton Rouge, La.	16	10	4	2	–	2
Corpus Christi, Tex.	30	11	9	4	4	–
Dallas, Tex.	127	58	47	6	5	–
El Paso, Tex.	41	23	8	6	–	8
Fort Worth, Tex.	62	38	15	1	7	1
Houston, Tex.	204	90	79	15	13	2
Little Rock, Ark.	31	15	7	2	2	3
New Orleans, La.	130	79	30	12	1	1
San Antonio, Tex.	112	65	28	7	4	2
Shreveport, La.	45	27	8	3	4	3
Tulsa, Okla.	60	36	13	6	1	4
MOUNTAIN	488	283	122	35	16	24
Albuquerque, N. Mex.	62	32	14	5	5	8
Colorado Springs, Colo.	31	22	5	2	1	6
Denver, Colo.	98	60	25	4	3	2
Las Vegas, Nev.	21	7	6	4	3	–
Ogden, Utah	16	14	1	–	–	2
Phoenix, Ariz.	131	66	41	14	1	3
Pueblo, Colo.	21	13	7	–	1	2
Salt Lake City, Utah	48	28	14	1	2	–
Tucson, Ariz.	60	41	9	5	–	1
PACIFIC	1,322	812	319	94	47	24
Berkeley, Calif.	20	17	3	–	–	–
Fresno, Calif.	44	24	10	3	4	1
Glendale, Calif.	17	14	1	2	–	–
Honolulu, Hawaii	51	25	16	5	3	–
Long Beach, Calif.	93	67	14	5	2	2
Los Angeles, Calif.	390	233	88	38	14	3
Oakland, Calif.	76	51	18	4	3	–
Pasadena, Calif.	30	23	7	–	–	4
Portland, Oreg.	133	90	25	7	6	1
Sacramento, Calif.	50	30	17	2	–	1
San Diego, Calif.	80	44	24	9	2	3
San Francisco, Calif.	130	77	36	7	4	–
San Jose, Calif.	42	28	9	2	–	2
Seattle, Wash.	97	52	29	5	6	1
Spokane, Wash.	32	19	11	2	–	1
Tacoma, Wash.	37	18	11	3	3	5
Total	10,287	5,981	2,745	706	403	353
Expected Number	11,738	6,789	3,187	803	428	322

*Estimate based on average percent of divisional total

EPIDEMIOLOGIC NOTES AND REPORTS

AN OUTBREAK OF HEPATITIS AMONG U.S. ARMY PERSONNEL – Germany

In the third quarter of 1971, an increase in viral hepatitis cases was noted among U.S. Army personnel stationed within an area in Germany called the Nurnberg Medical Department Activity (MEDDAC)*. By the first quarter of 1974, 1,347 cases had been reported within the area, with a peak incidence occurring in the third quarter of 1973 (Figure 2). No deaths due to hepatitis were recorded.

Epidemiologic investigation of the outbreak focused on 723 Army personnel admitted consecutively to the U.S. Army Hospital, Nurnberg, between October 1972 and December 1973. Review of admission cards revealed that: 1) the mean age of the patients was 20.6 years; 2) 99% were males; 3) the mean duration of Army service was 17 months; and 4) the mean duration of time served in Europe was 12 months.

These data were compared with demographic data on all 13,839 soldiers assigned to the largest Army unit located within the Nurnberg MEDDAC area. The comparison showed that soldiers who were younger than 22 and were ranked lower than Private, First Class, were significantly more likely to develop hepatitis than the overall control population ($p<0.01$). However, further statistical analysis revealed that the rank variable was a function of age.

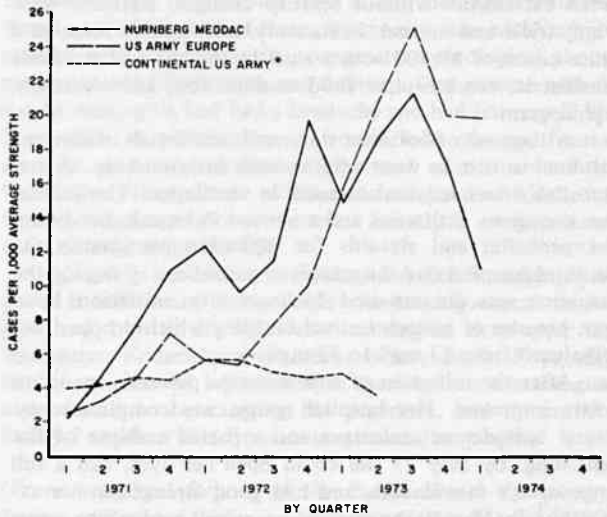
Detailed interviews were conducted with 212 of the 723 hospitalized patients and 215 soldiers, serving as controls, who were matched for age, sex, race, rank, and time in service. Eighty-three percent of the cases admitted to illicit drug use within the past 4 months–39% to oral use only (usually hashish-pipe sharing), 3% to parenteral use only, and 45% to a combination of oral and parenteral use. In contrast, 48% of the controls admitted to illicit drug use–45% to oral use only, 0.5% to parenteral use only, and 3% to both.

A history of recent exposure to a person with hepatitis was given by 88% of the cases; 26% of these said their exposure occurred during parenteral drug sharing. In comparison, 21% of the controls gave a history of recent exposure; none had been exposed during parenteral drug sharing.

Tests for the presence of the hepatitis B surface antigen (HBsAg) by the counterelectrophoresis technique yielded a positivity rate of nearly 40%. For those who admitted to parenteral drug use, the positivity rate was 57%. In addition, antigenic subtyping of 29 HBsAg-positive specimens was performed at the Walter Reed Army Institute of Research. The majority of the specimens were of the ayw subtype; the subtype most commonly found in both acute hepatitis cases and HBsAg carriers in the local German population is adw *(1)*.

Approximately 1 year after this outbreak began, similar increases in hepatitis cases were noted among all U.S. Army personnel stationed in Europe. This group (which includes the Nurnberg MEDDAC) reported a total of 6,030 cases between 1971 and 1973, with the highest attack rate (25/1,000/year) occurring in the 3rd quarter of 1973 (Figure 2). By contrast, the attack rate for all U.S. Army personnel stationed in the continental United States during this time period has remained between 3.7 and 5.7/1,000/year.

Figure 2
HEPATITIS CASES PER 1,000 AVERAGE STRENGTH BY QUARTER
NURNBERG MEDDAC, US ARMY EUROPE, AND CONTINENTAL US ARMY – 1ST QUARTER 1971–1ST QUARTER 1974



*Source: *Health of the Army* 28(5):8, May 1973 (Data for the 3rd and 4th quarters of 1973 and the 1st quarter of 1974 were not available.)

(Reported by Willard Cates, Jr., M.D., MAJ, MC, Chief, Preventive Medicine, and John W. Warren, M.D., MAJ, MC, Chief, OPD/ER, Nurnberg MEDDAC; Gilbert LaVoie, M.D., MAJ, MC, Chief, Epidemiology, U.S. Army Medical Command Europe; and Robert T. Cutting, M.D., COL, MC, Chief, Health and Environment, Office of the Surgeon General, Washington, D.C.)

Reference

1. Shober A, Thomsen R, Kaboth U: Serologische subtypes des hepatitis-B antigens. Dtsch Med Wochenschr 97:1579-1583, 1972

*To provide medical services to troops stationed in Europe, the Army has divided the continent into geographic areas called MEDDACs. Each MEDDAC area has its own referral hospital and gives medical care to troops stationed permanently or temporarily in that area. The Nurnberg MEDDAC is the second largest MEDDAC in Europe, and its hospital is the third largest Army hospital in Europe.

BOTULISM – Idaho, Utah

On May 10, 1974, a 2-1/2-year-old girl from Pocatello, Idaho, was noticed by her mother to be having difficulty swallowing and drinking liquids. The next day she developed bilateral ptosis, complained of dizziness, and could not keep her head erect. The mother took the child to a family physician who made a tentative diagnosis of accidental drug ingestion and recommended that the child be closely observed.

Later that day the patient developed dysphagia, dysarthria, generalized weakness, and dyspnea. The next day the child was admitted to the local hospital where she had a normal lumbar puncture and a negative Tensilon* test. Because of increasing respiratory distress, she was transferred that evening to a hospital in Salt Lake City, Utah.

On admission to that hospital the patient appeared alternately somnolent and alert, had a normal pulse and blood

*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

pressure, and had labored respirations of 50 per minute. Her temperature was 101.6°F. On physical examination there were rales at both lung bases and no bowel sounds. Neurologic examination revealed motor paralysis of cranial nerves 3, 4, 6, 7, 9, 10, and 12. Pupils were equal and reactive to light. There was marked proximal and distal muscle weakness of all extremities without sensory changes. Reflexes were symmetrical and normal. Laboratory examination revealed a white count of 17,500 with a shift to the left and a normal hematocrit, cerebrospinal fluid examination, and electroencephalogram.

A diagnosis of botulism was made, and 2 vials of bivalent botulinal antitoxin were administered intravenously. A tracheostomy was required to assist in ventilation. The patient was also given cathartics and enemas to evacuate her bowel and penicillin and steroids for aspiration pneumonia. On the third hospital day she was given guanidine, 10 mg/kg; the guanidine was discontinued 24 hours after initiation, however, because of gastrointestinal bleeding which dropped her hematocrit from 43 mg% to 33 mg%.

After the initiation of antitoxin, the patient's condition slowly improved. Her hospital course was complicated by several episodes of atelectasis and a partial collapse of the right lung. By May 23 she could open her eyes, had a full range of eye movements, and had good strength in her extremities. By May 30 she no longer required respiratory assistance, and her tracheostomy tube was removed on June 5. The patient was discharged from the hospital on June 15.

On May 10, the patient had attended a large church supper where many commercial and some home-canned foods were served; however, no other church members who were at the supper became ill. On May 9, the patient and her father had consumed some home-canned tomato juice from the same jar; however, her father had no signs or symptoms suggestive of botulism.

A pretreatment serum specimen examined at CDC revealed the presence of type A botulinal toxin in the child's serum. No toxin was detected in a pretreatment stool specimen, but *Clostridium botulinum* type A was isolated from it. No toxin or *C. botulinum* was found in the father's stool specimen obtained 4 days after onset of the child's symptoms. A low concentration (death of mice with 1:2 dilution only) of type A toxin, *C. botulinum* type A, and 3 other organisms–an unidentified gram-positive diplococcus, *Enterbacter agglomerans*, and an unidentified yeast-like organism–were found in the original opened jar of home-canned tomato juice. The pH of the tomato juice was 4.2.

The incriminated tomato juice had been prepared in 1972 using standard red tomatoes and golden yellow low-acid tomatoes. The tomatoes were washed, cooked very slowly until they were soft, and then boiled for approximately 10 minutes to loosen the tomato skins. Tomato juice was then strained into bottles and the pulps discarded. The jars were sealed with a 2-piece closure, placed in a cold-pack canner, and boiled for 20 minutes; pressure canning was not used. The jars were then cooled and placed on a shelf at room temperature.

(Reported by Roger Bow, M.D., private physician, Pocatello; Harry Ferguson and Craig Madson, Environmental Health Specialists, Southeastern District Health Department, Idaho; John Mather, M.D., State Epidemiologist, Idaho State Department of Environmental and Community Services; Gerald Moress, M.D., private physician, Salt Lake City; Terry Furgiuele, M.D., Resident, Primary Children's Hospital, Salt Lake City; Taira Fukushima, M.D., Director, Bureau of Disease Prevention, and Lyman J. Olsen, M.D., Director of Health, Utah State Division of Health; the Food and Drug Administration; and 3 EIS Officers.)

Editorial Note

This is the third botulism outbreak traced to a high-acid home-canned food (pH≤4.5) that has been reported to CDC since October 1973 (MMWR, Vol. 22, No. 50 and Vol. 23, No. 10). Because *C. botulinum* has generally been thought to be incapable of multiplying and producing toxin in high-acid foods, these reports have prompted numerous inquiries.

Two major hypotheses have been proposed to explain this phenomenon. One is that the presence of other microorganisms (such as the diplococcus, *E. agglomerans*, and a yeast-like organism found in the tomato juice) in food that has been inadequately heated during canning may allow *C. botulinum* spores to germinate and produce toxin *(1,2)*. The other hypothesis is that there is an unequal distribution of acid substances in food that has been inadequately heated during canning which allows germination and multiplication of *C. botulinum* spores in the less acidic portions *(1,2)*. The second hypothesis probably relates more to the preparation of fruits than tomato juice.

In this outbreak, the use of low-acid as well as standard tomatoes in the preparation of the tomato juice may have also facilitated spore germination by raising the pH to a higher level than if only standard red tomatoes had been used.

References

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INTERNATIONAL NOTES
DEATHS FROM BACTERIAL MENINGITIS
United Kingdom, 1973

In 1973, 1,760 cases of bacterial meningitis proven by isolation of an organism from the cerebrospinal fluid (CSF) were reported by laboratories in the United Kingdom. Of these, 195 (11%) were fatal. The corresponding figures for 1972 were 1,636 and 135 (8%). Although a slightly greater tendency to report fatal than recovered cases could account for the high proportion of deaths, other patients who develop permanent central nervous system complications are not included in these figures. However, many of the patients who died had severe congenital or other abnormalities predisposing to infection.

Neisseria meningitidis was the organism most frequently isolated from the patients reported. Indeed, the higher total of cases of bacterial meningitis reported last year is accounted for mainly by a 40% rise in the number due to this organism, from 601 in 1972 to 843 in 1973. A similar trend was noted in notifications of meningococcal infection to the Registrar General. However, this may be no more than the effect of a

natural periodicity in the incidence of infection with this organism. *Hemophilus influenzae,* isolated from 340 patients, was the second most commonly isolated organism, although about 20% fewer cases were reported in 1973 than in 1972, and streptococci were isolated from a further 324 patients. These 3 organisms together accounted for 1,507 (86%) of all the cases of bacterial meningitis reported last year; *Escherichia coli* and the staphylococci together accounted for a further 136 (8%).

The sex and ages of those who died from bacterial meningitis are shown in Table 3. More males died than females, and deaths appeared to be most common at the extremes of life. More children than adults died, and 66 (34%) of the deaths were in infants less than 1 year old.

Of the more commonly isolated organisms, the highest percentage of deaths to isolations and the greatest number of deaths were caused by streptococci; a relatively large number of these patients were adults (Table 3). Of the 56 who died from pneumococcal meningitis, 16 patients had preceding illnesses. These were otitis media (5), blood dyscrasia (4), carcinoma (3), acute sinusitis (1), diabetes (1), and rheumatoid arthritis treated with steroids (1); 1 child had multiple congenital defects. Twenty-three deaths were caused by other types of streptococci. Three of these patients were premature infants, 2 others had spina bifida, and 1 had otitis media. From 1 of the premature infants, the organism was grown from aural and umbilical swabs (as well as blood and CSF) and also from a vaginal swab from its mother. In another unusual outbreak, the same *Streptococcus* type found in the CSF of a newly born infant who died was isolated from the blood of her twin sister and her mother and also from a vaginal swab from the mother.

A high proportion of deaths was also evident in patients with meningitis due to *E. coli* and *Staphylococcus aureus.* Fourteen of the 18 who died from *E. coli* meningitis were less than 1 year of age, and of these, 9 were neonates with complications such as prematurity, congenital neurological abnormality, or a difficult birth and delivery. One patient with *S. aureus* meningitis had had a headache and had felt unwell for 3 months; at postmortem a frontal lobe abscess, frontal sinusitis, and osteomyelitis of the roof of the sinus were found. One other patient, an alcoholic admitted with delirium tremens, died, and *S. aureus* and a hemolytic streptococcus were isolated from the CSF.

Mortality was lowest in meningitis due to *N. meningitidis* and to *H. influenzae.* Ten patients with meningococcal meningitis and 1 with *H. influenzae* meningitis developed the Waterhouse-Friderichsen syndrome before death. Four of 7 family contacts of 1 patient with meningococcal meningitis were found to be carrying the organism, and in another family 2 children died from meningococcal meningitis.

(From a Special Report of the Public Health Laboratory Service of England, Wales, and Northern Ireland, April 1974).

Table 3
Deaths From Bacterial Meningitis – United Kingdom, 1973

	Total Isolations (CSF)	Deaths		Age of fatalities (Years)									Sex		
		Total	Percent of Isolations	Neonates	<1	1-4	5-14	15-24	25-44	45-64	65+	NS	M	F	NS
N. meningitidis	843	52	6	–	16	19	6	5	2	3	1	–	26	23	3
H. influenzae	340	9	3	–	3	6	–	–	–	–	–	–	5	4	–
S. pneumoniae	260	56	22	1	8	3	–	–	8	17	18	1	32	24	–
Other streptococci	64	23	36	7	1	1	6	–	1	7	–	–	15	8	–
E. coli	81	18	22	13	1	–	1	–	–	2	1	–	13	4	1
S. aureus	30	8	27	–	2	–	–	–	1	4	1	–	4	4	–
S. albus	25	1	4	–	1	–	–	–	–	–	–	–	1	–	–
Mycobacterium sp.	25*	5	20	–	–	–	–	1	2	2	–	–	4	1	–
Listeria sp.	17	3	18	–	–	–	–	–	–	2	1	–	3	–	–
Klebsiella sp.	13	4	31	–	–	–	–	–	1	1	1	1	1	3	–
Proteus sp.	12	3	25	1	–	–	1	–	–	–	1	–	1	2	–
P. aeruginosa	8	1	12	1	–	–	–	–	–	–	–	–	–	1	–
Enterobacter sp.	7	5	71	4	1	–	–	–	–	–	–	–	5	–	–
Other species	35	7	20	5	1	–	–	1	–	–	–	–	3	3	1
Total	1,760	195	11	32	34	29	14	7	15	38	24	2	113	77	5

NS = not stated
*Includes 3 cases diagnosed by CSF microscopy only.

EPIDEMIOLOGIC NOTES AND REPORTS
TURKEY-ASSOCIATED PSITTACOSIS – Missouri, Nebraska, Texas

Between May 6 and June 25, 1974, a total of 154 human cases of psittacosis (ornithosis) were reported among 560 employees of 4 turkey processing plants in Missouri (1), Nebraska (1), and Texas (2) (attack rate 28%). A rise in complement fixation titer to the Chlamydia group antigen was demonstrated in serum specimens from 11 individuals at 3 of the plants. Illnesses were characterized by high fever (103-107°F), headache, severe generalized malaise, and pneumonia. The highest incidence of disease was noted to be in the employees of the kill, pick, and eviscerating areas of the processing plants.

A turkey flock that originated from central Texas was

PSITTACOSIS – Continued

implicated by laboratory confirmation of ornithosis as the source of infection at 1 of the Texas processing plants. Epidemiologic evidence from poultry inspection records from the other Texas plant as well as the Nebraska and Missouri plants implicated birds from the same area in Texas as the source. Psittacosis has been confirmed in other flocks in this general area.

State and federal health officials are investigating the extent of flock involvement in Texas. They will quarantine flocks with evidence of infection until the birds are adequately treated to prevent transmission of the infection to slaughter house workers. As of July 1, Texas officials had quarantined 11 turkey-growing farms where diseased flocks were found. Further investigation is underway.

(Reported by M. S. Dickerson, M.D., State Epidemiologist, and A. B. Rich, D.V.M., Director, Division of Veterinary Public Health, Texas State Department of Health; P. A. Stoez, M.D., State Epidemiologist, Nebraska State Department of Health; H. D. Donnell, M.D., State Epidemiologist, and W. F. Raithel, D.V.M., Director, Bureau of Veterinary Public Health, Missouri Division of Health; and the Veterinary Public Health Branch, Parasitic Diseases and Veterinary Public Health Division, Bureau of Epidemiology, CDC.)

Editorial Note

This is the first reported outbreak of turkey-associated psittacosis in the United States since 1963 (MMWR, Vol. 12, No. 44). Since that year, an average of 45 cases of the disease have been reported annually, mostly associated with other species of birds.

In adults with mild disease, tetracycline in doses of 0.25 to 0.5 gm every 6 hours is the treatment of choice. Intravenous tetracycline of 0.5 to 0.75 gm every 12 hours should be used for severe disease. To prevent relapse, therapy should be continued for at least 2 weeks after the patient has become afebrile.

Erratum, Vol. 23, No. 22, p. 194

In the article "Salmonellosis – Philippines, California," paragraph 4, line 2, correct the sentence to read: After 12 days he became afebrile . . . .

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Director, Center for Disease Control — David J. Sencer, M.D.
Director, Bureau of Epidemiology, CDC — Philip S. Brachman, M.D.
Editor, MMWR — Michael B. Gregg, M.D.
Managing Editor, MMWR — 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 cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials.

Address all correspondence to: Center for Disease Control
Attn: Editor
Morbidity and Mortality Weekly Report
Atlanta, Georgia 30333

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