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EPIDEMIOLOGIC NOTES AND REPORTS

VINYL CHLORIDE AND CONGENITAL MALFORMATIONS – Ohio

In March 1975 the Ohio Department of Health reported a significantly increased rate of central nervous system (CNS) malformations in 3 Ohio communities where polyvinyl chloride (PVC) polymerization plants are located (*1*); the increase was not uniform and appeared most prominent in Painesville, Ohio. The birth defect rates were computed from birth certificate data for 1970-73 and were compared to similar data for the entire state of Ohio. This study suggested a relationship between the increased rates of CNS malformations and the increased risk of exposure to vinyl chloride (VC) in these communities.

Data available through the CDC Birth Defects Monitoring Program (BDMP) (*2*) provided an opportunity to further examine this suggested relationship. Two hospitals that participate in the BDMP are located in cities with PVC polymerization plants: one in Pennsylvania, the other in Painesville, Ohio. CNS malformation rates for these 2 hospitals in 1970-74 were compared with the rates in their respective

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

DISEASE	29th WEEK ENDING		MEDIAN 1970-1974	CUMULATIVE, FIRST 29 WEEKS		
	July 19, 1975	July 20, 1974		1975	1974	MEDIAN 1970-1974
Aseptic meningitis	84	84	172	1,320	1,210	1,334
Brucellosis	5	6	5	118	91	91
Chickenpox	940	928	– – –	113,682	96,940	– – –
Diphtheria	5	6	1	203	154	107
Encephalitis, Primary	17	19	34	386	468	640
Encephalitis, Post-Infectious	10	5	11	185	152	177
Hepatitis, Viral, Type B	240	215	175	6,218	5,814	4,734
Hepatitis, Viral, Type A	624	823	1,014	19,508	23,859	30,925
Hepatitis, Viral, Type unspecified	161	106		4,494	4,657	
Malaria	31	11	21	210	101	623
Measles (rubeola)	358	199	271	20,074	18,835	25,764
Meningococcal infections, total	32	20	19	930	845	938
Civilian	31	20	26	909	822	914
Military	1	–	–	21	23	35
Mumps	574	530	698	44,264	42,245	53,831
Pertussis	27	46	– – –	714	767	– – –
Rubella (German measles)	79	122	185	14,263	9,015	25,166
Tetanus	4	–	1	44	35	55
Tuberculosis	659	600	– – –	18,503	16,933	– – –
Tularemia	4	6	6	63	79	79
Typhoid fever	9	7	7	166	206	173
Typhus, tick-borne (Rky. Mt. spotted fever)	46	34	32	394	418	244
Venereal Diseases:						
Gonorrhea, Civilian	20,410	18,067	– – –	527,957	480,767	– – –
Gonorrhea, Military	585	625	– – –	16,362	16,088	– – –
Syphilis, primary and secondary, Civilian	387	507	– – –	14,013	13,907	– – –
Syphilis, primary and secondary, Military	9	10	– – –	191	255	– – –
Rabies in animals	60	52	63	1,370	1,637	2,068

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	–	Poliomyelitis, total:	1
Botulism:	13	Paralytic:	1
Congenital rubella syndrome:	12	Psittacosis: Calif. 1, Texas 1	22
Leprosy: Calif. 2	103	Rabies in man:	1
Leptospirosis: Ga. 1	20	Trichinosis: NYC 1	50
Plague: Utah 1	7	Typhus, murine: Texas 2	17

VINYL CHLORIDE – Continued

states. No rate increase was seen in the Pennsylvania hospital, but an increase, primarily in the categories of anencephalus and spina bifida, was noted in the Painesville hospital (Table 1).

Table 1
Number of Cases and Rates for Anencephalus and Spina Bifida in the State of Ohio and the Painesville, Ohio, Hospital, by Year, 1970-1974

	Anencephalus				Spina Bifida			
	Hospital		State		Hospital		State	
Year	No. Cases	Rate*	No. Cases	Rate	No. Cases	Rate	No. Cases	Rate
1970	(0)	0.0	(26)	5.0	(3)	31.2	(58)	11.1
1971	(1)	10.3	(38)	7.3	(3)	30.9	(44)	8.5
1972	(3)	35.6	(31)	6.3	(0)	0.0	(47)	9.6
1973	(2)	24.9	(27)	5.4	(2)	24.9	(46)	9.2
1974	(0)	0.0	(22)	4.5	(1)	15.1	(29)	6.0
1970-1974	(6)	14.1	(144)	5.7	(9)	21.2	(224)	8.9

*Rates per 10,000 total white births.

The BDMP hospital data for Painesville, Ohio, were compared with the birth certificate data from the Ohio Department of Health and 1 additional case not included in the BDMP report was added to the case group (total of 15). For each case, 2 controls were selected from the hospital birth registry. Medical records for cases and controls were reviewed to confirm the diagnosis and obtain pertinent demographic data, including parental occupation and residence at time of the infant's birth. In addition, parents of 14 of the affected children were interviewed concerning past occupations and residences.

Results of the study indicated that none of the interviewed parents ever worked at either of the 2 PVC polymerization plants in Painesville (1 set of parents could not be located, but records show they did not work at these plants at the time of their infant's birth); 2 fathers among the parents of the 30 controls were working at 1 of these plants at the time of their infants' births. None of the parents in either group lived within 2 miles of the 2 plants. Statistical analyses comparing the distances from home and workplace to the PVC plants showed no differences between the parents of cases and controls.

(Reported by the Cancer and Birth Defects Division, Bureau of Epidemiology, CDC, in cooperation with the Ohio State Health Department.)

Editorial Note

Vinyl chloride is a known carcinogen (*3*), and concern has arisen over its possible teratogenic effects. This concern stems from recent studies which have shown a) an increase in mutagenicity in bacterial assay systems (*4*), and b) increased chromosomal breakage in PVC polymerization workers (*5*). The Ohio Department of Health study (*1*) is the only report where VC has been suggested as causing birth defects in humans. Although the follow-up study reported here confirmed a moderate increase in CNS malformations in Painesville, Ohio, it could not establish any association between cases and vinyl chloride exposure. This study clearly does not rule out the possibility that VC may also be teratogenic; other studies are currently underway to evaluate the incidence of birth defects among children of parents highly exposed to PVC.

References

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2. Center for Disease Control: Congenital Malformations Surveillance, Annual Summary 1974. Atlanta, CDC, July 1975
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4. Rannug U, Johansson A, Ramel C, Wachmeister CA: The mutagenicity of vinyl chloride after metabolic activation. Ambio 3:194,1974
5. Funes-Cravioto F, Lambert B, Lindsten J, et al: Chromosome aberrations in workers exposed to vinyl chloride. Lancet 1:459, 1975

FOLLOW-UP ON OUTBREAK OF GASTROINTESTINAL ILLNESS AT CRATER LAKE NATIONAL PARK – Oregon

No etiologic agent has yet been demonstrated as the cause of the intestinal illness associated with sewage-contaminated water, that occurred among persons at Crater Lake National Park (MMWR, Vol. 24, No. 28). Rectal swabs and stool specimens from 30 acutely ill persons were negative for salmonellae, shigellae, vibrios, *Yersinia enterocolitica*, and orbivirus. Tests for toxigenic *Escherichia coli* and enteric viruses are in progress.

Three persons with hepatitis who became ill shortly after visiting the park were probably incubating the disease at the time of their visit; 2 of these 3 were reported to have used the park toilet facilities. Surveillance of the exposed population for hepatitis has been initiated by State and Territorial Epidemiologists and by CDC. No definite post-exposure cases of hepatitis among the persons exposed to the water at Crater Lake during the outbreak have been identified. If any persons develop hepatitis between 2 to 6 weeks after exposure at Crater Lake National Park, they are asked to report their illness to their state health departments and to CDC.

(Reported by members of the Oregon State Health Division and the California State Department of Health; and an EIS Officer.)

Addendum

The following persons who contributed to the investigation of this outbreak were inadvertently omitted from the list of persons mentioned in last week's MMWR: Mary Murphy, RN, Nurse Epidemiologist and Monroe Holmes, DVM, Public Health Veterinarian, Oregon State Health Division.

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING JULY 19, 1975 AND JULY 20, 1974 (29th WEEK)

AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod-borne and Unspecified		Post Infectious	Type B	Type A	Type Unspecified		
	1975	1975	1975	1975	Cum. 1975	1975	1974	1975	1975	1975	1975	1975	Cum. 1975
UNITED STATES	84	5	940	5	203	17	19	10	240	624	161	31	210
NEW ENGLAND	3	–	77	–	–	–	1	–	6	17	16	–	8
Maine *	–	–	2	–	–	–	–	–	–	1	–	–	1
New Hampshire *	–	–	–	–	–	–	–	–	–	–	–	–	–
Vermont *	–	–	–	–	–	–	–	–	–	–	1	–	3
Massachusetts	1	–	21	–	–	–	1	–	2	2	13	–	2
Rhode Island	2	–	29	–	–	–	–	–	2	5	–	–	–
Connecticut	–	–	25	–	–	–	–	–	2	9	2	–	2
MIDDLE ATLANTIC	3	–	143	–	–	2	3	1	50	49	19	25	54
Upstate New York	–	–	69	–	–	1	–	–	4	10	3	–	5
New York City	–	–	69	–	–	–	–	–	10	12	–	–	11
New Jersey	1	–	NN	–	–	1	3	–	21	13	9	–	8
Pennsylvania	2	–	5	–	–	–	–	1	15	14	7	25	30
EAST NORTH CENTRAL	3	–	467	1	3	–	2	2	30	99	11	–	3
Ohio	–	–	193	1	1	–	–	–	1	18	–	–	1
Indiana	–	–	8	–	–	–	–	–	1	14	–	–	–
Illinois	–	–	49	–	1	–	2	–	11	25	7	–	2
Michigan	3	–	59	–	1	–	–	1	10	34	3	–	–
Wisconsin	–	–	158	–	–	–	–	1	7	8	1	–	–
WEST NORTH CENTRAL	9	–	20	–	6	7	–	–	22	34	8	–	6
Minnesota	5	–	–	–	–	1	–	–	12	15	–	–	4
Iowa	1	–	3	–	–	–	–	–	3	4	1	–	–
Missouri	3	–	8	–	–	6	–	–	7	15	7	–	2
North Dakota	–	–	–	–	6	–	–	–	–	–	–	–	–
South Dakota	–	–	–	–	–	–	–	–	–	–	–	–	–
Nebraska	–	–	9	–	–	–	–	–	–	–	–	–	–
Kansas	–	–	–	–	–	–	–	–	–	–	–	–	–
SOUTH ATLANTIC	9	2	97	–	–	1	3	–	32	122	35	–	29
Delaware	–	–	1	–	–	–	–	–	–	–	–	–	–
Maryland	2	–	7	–	–	–	–	–	6	11	11	–	3
District of Columbia	–	–	4	–	–	–	–	–	1	1	–	–	7
Virginia *	–	–	2	–	–	–	–	–	3	8	3	–	5
West Virginia	–	–	76	–	–	–	–	–	–	5	1	–	1
North Carolina	2	–	NN	–	–	–	–	–	8	13	6	–	3
South Carolina	1	–	7	–	–	–	–	–	2	12	6	–	1
Georgia	2	2	–	–	–	–	–	–	–	18	–	–	5
Florida	2	–	–	–	–	1	3	–	12	54	8	–	4
EAST SOUTH CENTRAL	4	2	14	–	–	1	–	1	16	37	–	–	8
Kentucky	–	–	10	–	–	–	–	1	4	15	–	–	3
Tennessee	1	2	NN	–	–	1	–	–	8	17	–	–	–
Alabama	2	–	2	–	–	–	–	–	4	1	–	–	4
Mississippi	1	–	2	–	–	–	–	–	–	4	–	–	1
WEST SOUTH CENTRAL	40	1	30	4	6	5	9	2	11	97	20	–	18
Arkansas *	7	1	–	–	–	2	–	–	–	14	–	–	1
Louisiana	14	–	NN	–	–	–	–	–	1	14	5	–	–
Oklahoma *	3	–	4	–	–	3	6	–	1	8	8	–	1
Texas	16	–	26	4	6	–	3	2	9	61	7	–	16
MOUNTAIN	–	–	33	–	14	–	–	–	7	39	21	–	13
Montana	–	–	6	–	–	–	–	–	1	1	2	–	–
Idaho	–	–	2	–	–	–	–	–	–	2	3	–	–
Wyoming	–	–	–	–	–	–	–	–	–	–	–	–	–
Colorado	–	–	25	–	–	–	–	–	2	6	7	–	8
New Mexico	–	–	–	–	1	–	–	–	1	12	–	–	–
Arizona	–	–	–	–	13	–	–	–	3	7	1	–	3
Utah	–	–	–	–	–	–	–	–	–	7	8	–	2
Nevada	–	–	–	–	–	–	–	–	–	4	–	–	–
PACIFIC	13	–	59	–	174	1	1	4	66	130	31	6	71
Washington	–	–	23	–	166	–	–	–	8	12	14	–	4
Oregon	–	–	–	–	–	–	–	–	4	11	1	–	3
California *	9	–	–	–	3	1	1	4	49	88	16	6	61
Alaska	–	–	–	–	5	–	–	–	3	18	–	–	–
Hawaii	4	–	36	–	–	–	–	–	2	1	–	–	3
Guam *	–	–	–	–	–	–	–	–	–	–	–	–	–
Puerto Rico	–	–	–	–	–	–	–	–	–	–	–	–	1
Virgin Islands	–	–	–	–	–	–	–	–	–	–	–	–	–

*Delayed reports: Aseptic meningitis: Ark. 11
Chickenpox: N.H. 3, Okla. delete 1, Calif. 1, Guam 4
Hepatitis A: Me. 6, Va. delete 1
Malaria: Vt. 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING JULY 19, 1975 AND JULY 20, 1974 (29th WEEK) – Continued

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1975	Cumulative		1975	Cumulative		1975	Cum. 1975	1975	1975	Cum. 1975	Cum. 1975
		1975	1974		1975	1974						
UNITED STATES	358	20,074	18,835	32	930	845	574	44,264	27	79	14,263	44
NEW ENGLAND	12	284	882	1	52	43	16	1,495	1	3	1,990	1
Maine	–	11	39	–	6	2	–	71	–	–	30	–
New Hampshire	–	20	207	–	1	7	–	69	–	–	302	–
Vermont *	2	49	56	–	–	1	–	16	–	–	67	–
Massachusetts *	10	110	355	1	18	13	8	184	1	2	1,171	1
Rhode Island	–	2	60	–	3	7	4	565	–	–	25	–
Connecticut	–	92	165	–	24	13	4	590	–	1	395	–
MIDDLE ATLANTIC	59	1,632	7,641	–	98	113	54	2,249	1	10	1,636	7
Upstate New York	24	499	815	–	28	47	7	874	–	3	245	–
New York City	4	121	520	–	28	15	36	599	1	3	149	2
New Jersey	3	456	5,444	–	16	36	1	323	–	1	977	3
Pennsylvania	28	556	862	–	26	15	10	453	–	3	265	2
EAST NORTH CENTRAL	100	6,014	7,323	3	125	101	182	18,565	4	15	3,933	2
Ohio	–	105	2,989	1	27	36	44	2,092	–	–	600	–
Indiana	5	342	206	–	6	9	18	1,923	–	2	884	–
Illinois	83	1,639	1,834	–	19	10	24	2,132	3	2	275	2
Michigan	7	2,970	1,869	–	55	32	8	7,882	–	3	1,370	–
Wisconsin	5	958	425	2	18	14	88	4,536	1	8	804	–
WEST NORTH CENTRAL	73	4,748	669	2	51	68	10	3,185	–	11	1,454	2
Minnesota	–	2	79	2	14	21	–	36	–	–	36	–
Iowa	67	550	134	–	5	13	1	991	–	9	30	–
Missouri	3	257	252	–	21	16	6	890	–	–	727	2
North Dakota	2	1,044	25	–	–	3	–	446	–	–	65	–
South Dakota	–	356	27	–	1	3	–	5	–	–	18	–
Nebraska	–	394	2	–	2	3	2	34	–	1	19	–
Kansas *	1	2,145	150	–	8	9	1	783	–	1	559	–
SOUTH ATLANTIC	8	267	442	9	189	169	56	2,813	8	5	1,483	9
Delaware	–	35	6	–	6	3	–	7	–	–	18	–
Maryland	–	41	22	2	21	18	18	172	–	–	37	1
District of Columbia	–	1	3	–	5	–	–	105	–	–	–	–
Virginia	1	23	21	–	17	28	7	668	3	1	307	–
West Virginia	2	125	129	–	5	6	18	983	–	2	178	–
North Carolina	–	1	4	–	34	37	1	81	4	1	41	3
South Carolina	–	–	44	1	30	15	1	43	–	1	726	1
Georgia	5	16	4	–	9	7	–	11	1	–	–	–
Florida	–	25	209	6	62	55	11	743	–	–	176	4
EAST SOUTH CENTRAL	–	262	179	8	141	92	75	4,110	7	4	913	3
Kentucky	–	81	117	1	58	37	21	1,581	–	–	220	1
Tennessee	–	170	33	–	45	42	45	1,903	6	4	666	1
Alabama	–	3	16	4	26	9	3	357	–	–	20	–
Mississippi	–	8	13	3	12	4	6	269	1	–	7	1
WEST SOUTH CENTRAL	10	269	165	5	152	143	45	4,032	5	2	678	11
Arkansas	–	–	6	–	8	10	–	168	–	–	19	–
Louisiana	–	–	13	1	25	27	2	324	3	–	276	3
Oklahoma	7	123	23	–	9	15	2	159	–	–	82	1
Texas	3	146	123	4	110	91	41	3,381	2	2	301	7
MOUNTAIN	9	1,307	718	–	34	25	18	804	–	4	494	–
Montana *	1	39	372	–	7	1	3	21	–	1	252	–
Idaho	1	7	50	–	5	2	–	12	–	1	74	–
Wyoming	–	1	1	–	–	3	–	2	–	–	–	–
Colorado	2	1,099	29	–	9	6	12	564	–	1	124	–
New Mexico	–	13	52	–	4	2	–	19	–	1	16	–
Arizona	4	64	12	–	1	4	–	–	–	–	2	–
Utah	–	59	3	–	7	4	–	104	–	–	19	–
Nevada	1	25	199	–	1	3	3	82	–	–	7	–
PACIFIC	87	5,291	816	4	88	91	118	7,011	1	25	1,682	9
Washington	6	276	55	–	15	9	48	3,650	–	1	264	–
Oregon	1	190	–	–	4	9	18	565	–	14	146	–
California	78	4,764	701	4	68	67	51	2,727	1	10	1,256	–
Alaska	–	–	–	–	–	3	–	40	–	–	–	–
Hawaii	2	61	60	–	1	3	1	29	–	–	16	–
Guam *	–	21	13	–	2	1	–	22	–	–	7	–
Puerto Rico	–	493	544	–	1	4	–	594	–	–	17	10
Virgin Islands	–	8	22	–	–	–	9	219	–	–	3	2

*Delayed reports: Measles: Vt. 1, Mass. delete 1, Mont. delete 2 Rubella: Kansas delete 75
Mumps: Guam 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING JULY 19, 1975 AND JULY 20, 1974 (29th WEEK) – Continued

AREA	TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES (Civilian Cases Only)						RABIES IN ANIMALS
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1975	Cum. 1975	Cum. 1975	1975	Cum. 1975	1975	Cum. 1975	1975	Cumulative 1975	Cumulative 1974	1975	Cumulative 1975	Cumulative 1974	Cum. 1975
UNITED STATES	659	18,503	63	9	166	46	394	20,410	527,957	480,767	387	14,013	13,907	1,370
NEW ENGLAND	31	777	–	–	8	–	4	561	14,474	12,363	25	493	498	38
Maine	3	52	–	–	–	–	–	65	1,055	978	3	12	19	25
New Hampshire *	1	23	–	–	–	–	–	14	405	376	1	11	7	1
Vermont *	–	12	–	–	–	–	–	11	338	343	–	5	1	–
Massachusetts	15	456	–	–	4	–	1	209	6,798	5,835	12	316	359	6
Rhode Island	6	75	–	–	–	–	3	39	1,130	1,028	2	9	8	1
Connecticut	6	159	–	–	4	–	–	223	4,748	3,803	7	140	104	5
MIDDLE ATLANTIC	106	3,346	2	1	29	13	35	1,589	60,801	58,861	24	2,525	3,058	53
Upstate New York	13	530	1	–	4	–	7	351	10,834	10,978	7	240	304	43
New York City	33	1,356	–	–	13	–	–	---	25,642	25,507	---	1,412	1,761	–
New Jersey	23	678	1	–	4	4	6	288	8,433	8,426	10	410	497	–
Pennsylvania	37	782	–	1	8	9	22	950	15,892	13,950	7	463	496	10
EAST NORTH CENTRAL	86	2,578	4	1	19	2	11	3,207	85,664	76,166	21	1,144	1,162	54
Ohio	20	766	–	–	5	2	10	1,292	23,013	20,093	4	268	160	5
Indiana	8	323	–	–	–	–	–	312	8,021	7,207	3	75	105	4
Illinois	30	680	–	1	10	–	1	756	29,394	24,754	11	552	603	14
Michigan *	26	735	1	–	4	–	–	678	16,860	17,344	3	194	238	3
Wisconsin	2	74	3	–	–	–	–	169	8,376	6,768	–	55	56	28
WEST NORTH CENTRAL	32	692	14	–	6	2	12	1,151	26,127	24,790	13	325	348	335
Minnesota	2	81	–	–	2	–	–	258	5,501	5,237	3	65	47	76
Iowa	2	73	1	–	–	–	–	160	3,600	3,359	1	18	22	67
Missouri	23	347	10	–	4	1	5	449	9,429	8,310	3	173	232	33
North Dakota	–	7	–	–	–	–	–	15	403	385	–	5	4	70
South Dakota *	1	49	–	–	–	–	–	29	995	1,121	–	4	2	47
Nebraska	–	25	1	–	–	1	1	104	2,315	2,066	3	7	7	4
Kansas	4	110	2	–	–	–	6	136	3,884	4,312	3	53	34	38
SOUTH ATLANTIC	137	4,104	13	1	25	16	200	5,269	131,324	122,927	154	4,381	4,346	182
Delaware	1	86	–	–	–	–	3	100	1,796	1,690	–	53	44	–
Maryland	23	670	1	–	3	1	7	781	15,212	12,117	12	327	432	5
District of Columbia	10	213	–	–	–	–	–	367	7,839	11,032	15	374	357	–
Virginia	20	490	6	–	4	7	62	497	12,974	11,088	18	331	448	76
West Virginia	8	152	–	1	4	–	2	50	1,604	1,390	–	13	9	3
North Carolina *	30	655	–	–	2	6	62	732	18,672	16,643	14	558	518	2
South Carolina	4	259	2	–	3	1	43	460	11,866	12,292	4	296	388	8
Georgia	–	577	4	–	–	–	16	716	24,313	23,450	15	570	657	78
Florida	41	1,002	–	–	9	1	5	1,566	37,048	33,225	76	1,859	1,493	10
EAST SOUTH CENTRAL	50	1,554	9	–	15	10	46	1,622	44,435	41,229	18	611	693	107
Kentucky	11	277	1	–	6	1	3	252	5,816	5,113	5	97	160	75
Tennessee	7	576	8	–	6	8	35	805	17,637	16,146	5	226	268	15
Alabama	18	479	–	–	2	–	4	357	12,181	11,434	4	145	133	17
Mississippi *	14	222	–	–	1	1	4	208	8,801	8,536	4	143	132	–
WEST SOUTH CENTRAL	95	2,099	18	4	10	3	82	2,988	66,129	62,944	48	1,228	1,241	315
Arkansas *	9	286	10	–	–	1	9	430	6,958	6,603	–	34	65	49
Louisiana	13	269	–	2	4	–	–	302	12,294	13,382	20	300	360	4
Oklahoma *	5	187	6	–	–	1	62	225	6,166	5,243	2	47	74	70
Texas	68	1,357	2	2	6	1	11	2,031	40,711	37,716	26	847	742	192
MOUNTAIN	21	559	1	–	5	–	3	974	20,650	18,167	3	338	313	142
Montana	6	23	–	–	–	–	1	41	1,135	1,006	–	4	2	103
Idaho	–	14	–	–	–	–	1	28	984	995	–	9	6	–
Wyoming	1	16	1	–	1	–	–	12	476	407	–	6	2	4
Colorado	–	121	–	–	–	–	1	276	5,272	4,997	–	61	76	–
New Mexico	2	77	–	–	2	–	–	254	3,689	2,521	–	94	46	26
Arizona	12	247	–	–	2	–	–	221	5,599	5,292	3	122	137	9
Utah	–	25	–	–	–	–	–	52	1,290	985	–	10	6	–
Nevada *	–	36	–	–	–	–	–	90	2,205	1,964	–	32	38	–
PACIFIC	101	2,794	2	2	49	–	1	3,049	78,353	63,320	81	2,968	2,248	144
Washington *	9	196	1	–	3	–	1	312	7,190	6,415	–	94	68	–
Oregon	1	104	–	–	–	–	–	288	5,834	5,833	1	70	50	4
California	77	2,144	1	2	45	–	–	2,313	62,111	48,415	80	2,772	2,108	137
Alaska *	–	38	–	–	–	–	–	79	1,952	1,409	–	3	1	3
Hawaii	14	312	–	–	1	–	–	57	1,266	1,248	–	29	21	–
Guam *	–	33	–	–	–	–	–	–	230	---	–	3	---	–
Puerto Rico	–	274	–	–	1	–	–	–	1,441	1,819	–	361	495	32
Virgin Islands *	–	3	–	–	2	–	–	6	94	433	–	20	38	–

*Delayed reports: Tuberculosis: N.H. delete 2, Mich. delete 3, N.C. delete 1, Alaska 15, Guam 1
Tularemia: Ark. 2
RMSF: Ark. 1
Gonorrhea: Vt. 9, Nev. 51, Wash. 357 Civil., 102 Mil., Guam 13, V.I. 3
Syphilis: Miss. delete 1, Nev. 1, Wash. 9, V.I. 1
Rabies: S.D. 30, Okla. 1

Week No. 29

TABLE IV. DEATHS IN 121 UNITED STATES CITIES FOR WEEK ENDING JULY 19, 1975

(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	612	376	164	35	16	28
Boston, Mass.	196	107	55	15	9	9
Bridgeport, Conn.	35	22	10	1	–	2
Cambridge, Mass.	27	18	9	–	–	3
Fall River, Mass.	20	9	8	1	–	–
Hartford, Conn.	44	25	11	4	2	–
Lowell, Mass.	25	20	3	2	–	1
Lynn, Mass.	13	9	1	3	–	1
New Bedford, Mass.	29	21	6	1	–	1
New Haven, Conn.	43	27	12	3	–	1
Providence, R. I.	46	22	21	1	2	7
Somerville, Mass.	8	7	1	–	–	–
Springfield, Mass.	48	33	10	1	2	2
Waterbury, Conn.	36	27	6	2	1	–
Worcester, Mass.	42	29	11	1	–	1
MIDDLE ATLANTIC	2,935	1,746	734	238	115	85
Albany, N. Y.	47	26	11	3	4	–
Allentown, Pa.	18	7	7	2	1	–
Buffalo, N. Y.	130	71	39	12	4	4
Camden, N. J.	33	20	8	2	2	3
Elizabeth, N. J.	26	21	4	–	–	–
Erie, Pa.	22	12	8	–	–	2
Jersey City, N. J.	63	30	20	7	3	2
Newark, N. J.	60	28	19	8	3	2
New York City, N. Y. †	1,462	896	322	134	57	36
Paterson, N. J.	24	17	5	1	1	–
Philadelphia, Pa.	485	266	134	47	22	7
Pittsburgh, Pa.	166	87	59	5	11	10
Reading, Pa.	41	27	9	1	1	1
Rochester, N. Y.	114	79	26	4	2	7
Schenectady, N. Y.	30	19	8	1	1	1
Scranton, Pa.	51	35	13	1	–	2
Syracuse, N. Y.	88	57	23	5	1	4
Trenton, N. J.	31	17	10	2	2	1
Utica, N. Y.	21	14	6	1	–	2
Yonkers, N. Y.	23	17	3	2	–	1
EAST NORTH CENTRAL	2,329	1,287	662	164	123	48
Akron, Ohio	81	41	28	6	1	–
Canton, Ohio	34	25	5	2	2	1
Chicago, Ill.	576	286	191	43	38	12
Cincinnati, Ohio	176	103	47	11	7	3
Cleveland, Ohio	180	102	51	11	9	–
Columbus, Ohio	141	68	44	10	12	9
Dayton, Ohio	113	64	32	9	4	–
Detroit, Mich.	298	141	86	33	19	2
Evansville, Ind.	46	33	9	2	–	–
Fort Wayne, Ind.	60	35	17	4	1	4
Gary, Ind.	29	15	9	2	1	1
Grand Rapids, Mich.	52	33	16	–	2	4
Indianapolis, Ind.	145	91	36	8	5	2
Madison, Wis.	30	15	8	3	2	3
Milwaukee, Wis.	136	92	25	9	5	1
Peoria, Ill.	28	10	8	2	7	–
Rockford, Ill.	38	27	5	3	2	3
South Bend, Ind.	22	14	5	1	–	1
Toledo, Ohio	88	54	24	5	4	1
Youngstown, Ohio	56	38	16	–	2	1
WEST NORTH CENTRAL	788	480	192	39	30	18
Des Moines, Iowa	52	33	10	4	1	1
Duluth, Minn.	29	19	9	–	–	1
Kansas City, Kans.	41	23	11	4	–	1
Kansas City, Mo.	118	59	41	5	8	1
Lincoln, Nebr.	28	19	5	–	1	–
Minneapolis, Minn.	107	69	25	2	4	2
Omaha, Nebr.	95	57	22	5	4	–
St. Louis, Mo.	167	113	31	12	8	2
St. Paul, Minn.	63	42	15	1	2	–
Wichita, Kans.	88	46	23	6	2	10
SOUTH ATLANTIC	1,229	661	374	101	42	39
Atlanta, Ga.	118	60	37	13	5	6
Baltimore, Md.	237	107	81	27	10	2
Charlotte, N. C.	73	38	25	2	3	3
Jacksonville, Fla.	62	34	15	6	–	–
Miami, Fla.	114	64	32	10	2	3
Norfolk, Va.	76	37	30	3	5	4
Richmond, Va.	76	45	18	9	3	5
Savannah, Ga.	43	20	13	4	4	2
St. Petersburg, Fla.	69	59	8	1	1	–
Tampa, Fla.	76	42	23	7	1	6
Washington, D. C.	233	124	76	18	5	7
Wilmington, Del.	52	31	16	1	3	1
EAST SOUTH CENTRAL	676	367	206	46	16	23
Birmingham, Ala.	94	43	35	8	5	–
Chattanooga, Tenn.	40	24	11	2	–	2
Knoxville, Tenn.	36	25	7	3	–	–
Louisville, Ky.	135	80	42	5	3	12
Memphis, Tenn.	158	83	53	10	2	3
Mobile, Ala.	50	31	11	4	1	2
Montgomery, Ala.	47	27	12	3	1	2
Nashville, Tenn.	116	54	35	11	4	2
WEST SOUTH CENTRAL	1,222	629	369	99	52	26
Austin, Tex.	39	24	11	4	–	1
Baton Rouge, La.	51	19	19	7	5	2
Corpus Christi, Tex.	44	22	7	3	4	–
Dallas, Tex.	189	95	67	13	4	3
El Paso, Tex.	56	26	14	4	5	2
Fort Worth, Tex.	93	53	22	9	4	2
Houston, Tex.	308	138	108	24	17	6
Little Rock, Ark.	73	37	25	8	1	2
New Orleans, La.	122	66	42	7	3	–
San Antonio, Tex.	117	67	27	10	5	1
Shreveport, La.	50	29	12	3	2	1
Tulsa, Okla.	80	53	15	7	2	6
MOUNTAIN	468	264	121	29	27	13
Albuquerque, N. Mex.	36	23	7	3	–	1
Colorado Springs, Colo.	27	13	7	1	3	–
Denver, Colo.	124	67	42	4	10	3
Las Vegas, Nev.	25	10	7	5	1	2
Ogden, Utah	13	10	3	–	–	3
Phoenix, Ariz.	105	59	26	10	5	–
Pueblo, Colo.	18	12	4	–	–	1
Salt Lake City, Utah	52	28	9	3	7	2
Tucson, Ariz.	68	42	16	3	1	1
PACIFIC	1,681	1,106	380	101	40	31
Berkeley, Calif.	17	11	6	–	–	–
Fresno, Calif.	73	42	15	11	2	1
Glendale, Calif.	33	27	5	1	–	2
Honolulu, Hawaii	63	41	11	8	2	3
Long Beach, Calif.	103	59	36	5	1	1
Los Angeles, Calif.	549	385	105	29	13	8
Oakland, Calif.	62	42	14	2	1	1
Pasadena, Calif.	23	14	8	–	1	1
Portland, Oreg.	134	87	28	7	6	1
Sacramento, Calif.	61	42	12	3	1	2
San Diego, Calif.	131	71	34	11	3	1
San Francisco, Calif.	134	92	29	5	7	–
San Jose, Calif.	61	43	12	4	1	3
Seattle, Wash.	139	85	41	10	1	3
Spokane, Wash.	58	37	16	2	1	4
Tacoma, Wash.	40	28	8	3	–	–
Total	11,940	6,916	3,202	852	461	311
Expected Number	11,901	7,023	3,156	813	375	356

†Delayed report for week ending July 12, 1975

CURRENT TRENDS
PRIMARY AND SECONDARY SYPHILIS – United States, May 1975

In May 1975 some 2,031 primary and secondary syphilis cases were reported, representing a *decrease* of 6.4% from the number reported in May 1974 (provisional data). In the first 5 months (January-May) of 1975 such cases totaled 10,743, representing an increase of 4.1% over the number reported in the same time period of the previous year. *(Reported by Bureau of State Services, Venereal Disease Control Division, CDC.)*

PRIMARY AND SECONDARY SYPHILIS: MAY 1975 and MAY 1974 – PROVISIONAL DATA

Reporting Area	May		Calendar Year Cumulative January – May	
	1975	1974	1975	1974
Connecticut	13	7	92	70
Maine	5	4	15	12
Massachusetts	44	50	254	269
New Hampshire	0	0	10	3
Rhode Island	1	2	4	6
Vermont	0	0	4	1
DHEW REGION I TOTAL	63	63	379	361
New Jersey	55	92	344	376
New York (Excluding NYC)	38	45	189	229
New York City	221	305	1211	1314
DHEW REGION II TOTAL	314	442	1744	1919
Delaware	2	8	36	37
District of Columbia	58	51	261	264
Maryland (Excluding Baltimore)	18	27	94	105
Baltimore	27	42	163	211
Pennsylvania (Excluding Philadelphia)	22	22	160	87
Philadelphia	32	61	192	282
Virginia	36	43	247	337
West Virginia	4	2	14	9
DHEW REGION III TOTAL	199	256	1167	1332
Alabama	15	21	112	102
Florida	304	275	1418	1084
Georgia (Excluding Atlanta)	57	46	266	310
Atlanta*	28	34	166	177
Kentucky	16	36	76	121
Mississippi	24	20	110	96
North Carolina	109	106	457	394
South Carolina	26	75	226	310
Tennessee	31	36	171	195
DHEW REGION IV TOTAL	610	649	3002	2789
Illinois (Excluding Chicago)	30	21	114	115
Chicago	67	53	340	322
Indiana (Excluding Indianapolis)	5	12	46	58
Indianapolis*	0	3	9	27
Michigan	22	28	142	163
Minnesota	22	14	49	33
Ohio	50	25	199	115
Wisconsin	11	5	44	44
DHEW REGION V TOTAL	207	161	943	877

Reporting Area	May		Calendar Year Cumulative January – May	
	1975	1974	1975	1974
Arkansas	4	18	26	58
Louisiana	31	55	212	282
New Mexico	11	3	77	35
Oklahoma	1	11	37	63
Texas	102	95	618	557
DHEW REGION VI TOTAL	149	182	970	995
Iowa	1	1	12	14
Kansas	8	5	47	26
Missouri	23	33	132	159
Nebraska	0	0	4	3
DHEW REGION VII TOTAL	32	39	195	202
Colorado	5	12	52	52
Montana	1	0	4	0
North Dakota	0	2	2	2
South Dakota	0	0	2	2
Utah	5	1	8	6
Wyoming	2	0	3	2
DHEW REGION VIII TOTAL	13	15	71	64
Arizona	22	21	114	95
California (Excluding LA and SF)	152	74	726	458
Los Angeles*	151	157	802	779
San Francisco*	70	88	417	310
Hawaii	9	4	30	16
Nevada	3	1	24	31
DHEW REGION IX TOTAL	407	345	2113	1689
Alaska	0	0	1	0
Idaho	3	2	9	5
Oregon	13	7	51	37
Washington	21	9	98	51
DHEW REGION X TOTAL	37	18	159	93
UNITED STATES TOTAL	2031	2170	10743	10321
Puerto Rico	74	77	346	383
Virgin Islands	2	4	13	17
U.S. INCL. TERR.	2107	2251	11102	10721

Note: Cumulative totals include revised and delayed reports through previous months.
Source: HSM 9.98 CDC, Venereal Disease Control Division, Atlanta, Ga. 30333

*County Data.

EPIDEMIOLOGIC NOTES AND REPORTS
TRICHINOSIS OUTBREAK – Illinois

From March 9 through April 8, 1975, 23 (46%) of 50 persons who consumed raw, homemade summer sausage in the period February 21 through March 28 had onset of an illness characterized by fever (86%), periorbital edema (73%), myalgia (69%), diarrhea (52%), nausea (17%), abdominal pain (13%), vomiting (13%), headache (13%), blurred vision and dizziness (13%), conjunctivitis (8%), and skin rash (8%). The average incubation period was 13 days with a range of 2 to 24 days. A diagnosis of trichinosis was made, and 17 of 21 ill persons whose sera were tested by the bentonite flocculation test had titers ranging from 1:10 to 1:1280. Twelve patients (52%) were hospitalized for an average of 10 days (range 4 to 22 days). One patient required an additional 4 days of hospitalization for intractable diarrhea.

The sausage was composed of 2 parts pork to 1 part beef using a traditional family recipe. In the past the sausage had usually been made from farm-raised swine; in this outbreak, however, the suspect batch of sausage was prepared from U.S.D.A.-inspected pork. The Illinois Department of Public Health and the Illinois Department of Agriculture Laboratories confirmed the presence of *Trichinella spiralis* larvae in 1 of the 3 batches of sausage prepared this year. Quantitative studies by the Illinois Department of Agriculture Laboratory revealed approximately 5 larvae per gram of sausage.

(Reported by Mary B Kruse, RN, Acting Administrator, Monroe County Health Department; Raymond Hill, DVM, Illinois Department of Agriculture Diagnostic Laboratory; Division of of Public Health Laboratories (Springfield Branch); Muriel A

TRICHINOSIS -- Continued

Matthews, RN, Field Epidemiologist, Region 4; Russell James Martin, DVM, Chief Public Health Veterinarian, and Byron J Francis, MD, State Epidemiologist, Illinois Department of Public Health; and an EIS Officer.)

Editorial Note

This is the largest reported outbreak of trichinosis in the United States since the 1968 outbreak in Missouri, which also involved summer sausage (*1*). Health workers should remember that although the prevalence of *Trichinella spiralis* infection in swine in this country has been greatly reduced it has not been eliminated. A recent survey reported the incidence to be approximately 0.125% in grain-fed swine slaughtered in the United States (*2*). Because current meat-inspection procedures do not include an examination for trichina, all pork products should be cooked thoroughly before consumption.

References

1. Center for Disease Control: Trichinosis Surveillance, Annual Summary 1969. Atlanta, CDC, May 1970
2. Leighty JC: The role of meat inspection in preventing trichinosis in man. J Am Vet Med Assoc 165:994-995, 1974

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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 cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials.

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