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International Notes

Chickenpox Mimicking Smallpox — Italy

A 32-year-old Italian man recently diagnosed as a possible smallpox patient has been shown to have chickenpox by a French laboratory and CDC.

The patient developed a vesicular skin rash in Brescia, Italy, on April 12, 1980, after 1 day of fever. New skin lesions in different stages of development appeared over the next 3 days. The lesions were more numerous on the trunk than the extremities, and occurred on the palm (1 lesion) and fingers. The patient had received several previous smallpox vaccinations, the most recent in 1970, and he had a visible vaccination scar. He had not had chickenpox, and was exposed to chickenpox on March 22, 1980, in Italy. Between March 23 and April 11 he visited Japan, Indonesia, and Singapore.

The clinical diagnosis was chickenpox. On April 21, an Italian laboratory found pox virus-like particles resembling Orf (a parapox) virus in electron photomicrographs of material from the patient's skin lesions. Press announcements described the patient as the first case of smallpox in the world in 3 years. Italian health authorities isolated the patient and his wife and father.

On April 25, skin-lesion material supplied by the World Health Organization (WHO) was examined at the National Laboratory of the French Ministry of Health, Paris, and at CDC. Both laboratories found herpes-type virus particles compatible with chickenpox in the electron photomicrographs. Inoculation of chorio-allantoic membrane with material from the patient's lesions showed no growth. Complement-fixation testing at CDC on serum samples drawn from the patient on April 23 showed a reciprocal varicella titer of 256, diagnostic of acute chickenpox.

Reported by the WHO; Viral Exanthems Br, Bur of Laboratories and Bur of Smallpox Eradication, CDC.

Editorial Note: Electron-microscopic examination of material from skin lesions of suspected smallpox patients can differentiate the morphology of the orthopox viruses (which suggests smallpox or vaccinia) from that of herpes (which suggests varicella, chickenpox), although this is technically difficult, as this case illustrates. Electron-microscope identification of smallpox virus should be performed only in laboratories with extensive experience in the technique.

This patient was probably considered a possible smallpox case because he had recently traveled in Southeast Asia, an area still remembered for smallpox activity. The most recent case of smallpox in the countries visited by the patient was in Indonesia in January 1972.

This case is the 73rd suspected case of smallpox investigated by the WHO since January 1979. All 73 rumors were found not to be smallpox. The last naturally occurring smallpox case was in Somalia in October 1977. The last cases in the world were associated with a smallpox laboratory in England in August 1978.

In May 1980 the World Health Assembly of the WHO is expected to formally declare the world free of smallpox.

Epidemiologic Notes and Reports

INH-Resistant Tuberculosis In An Urban High School — Oregon

Isoniazid (INH)-resistant tuberculosis occurred in an Oregon high school student in November 1977. High tuberculin reactor rates and the subsequent development of 4 cases of tuberculosis among school contacts indicated that transmission of drug-resistant *Mycobacterium tuberculosis* had occurred.

A 14-year-old, Korean, female high school student, who had lived in the United States for 1 year, was admitted to a Portland hospital in November 1977 because of 9 months of hematuria and 3 months of cough, night sweats, and weight loss. The admitting chest X ray showed a cavitary lesion, and sputum smears were positive for acid-fast bacilli. The hematuria, originally believed to be renal tuberculosis, was shown to be due to nephrocalcinosis. The patient was treated with INH, ethambutol (EMB), and rifampin (RIF); she improved clinically and returned to school in February 1978. Drug-susceptibility testing showed that the organisms cultured from her sputum were resistant to INH but susceptible to streptomycin (SM), EMB, and RIF.

Thirteen of 16 family members had positive tuberculin tests and were started on INH preventive therapy. One of the other 3 subsequently converted and was started on INH preventive therapy; 1 remained negative, and 1 was an adequately-treated, former tuberculosis patient, who subsequently submitted 3 negative sputum smears.

Thirty-three (26%) of 129 high school students who had 1 or more classes in common with the index patient had a positive tuberculin test in November 1977. Seventeen of the positive students were foreign-born. The 96 initially negative students were retested 3 months later, and 17 (18%) were positive. All students who were not classroom contacts and who remained in school were tuberculin tested by March 1978. One hundred twenty (8%) out of 1,445 were positive.

Eight of 50 classroom contacts and 25 of 120 other students with positive skin tests had abnormal chest X rays. One non-classroom contact (described below) had a right upper lobe infiltrate; the others showed calcified hilar lymph nodes or presumably unrelated abnormalities.

In a comparison school, 8 (2%) of 335 high school students were tuberculin positive. Seven of the 8 reactors were foreign-born.

INH preventive therapy was recommended and offered to all tuberculin-positive students. A chest X ray 1 year after the positive tuberculin test was mandatory for continued school attendance; repeat examinations at 6 months and 2 years were recommended but not required. Most students failed to complete the course of preventive therapy. Four persons, described below, presumably developed tuberculosis as a result of their exposure to the index patient.

The first such patient was a 15-year-old female, a non-classroom contact. She was tuberculin positive and had a right upper lobe infiltrate seen on a chest X ray in November 1977. Sputum smears and cultures were negative. She was treated with INH and EMB. A follow-up X-ray examination in November 1978 showed clearing of the infiltrate with minimal residual right upper lobe fibrosis.

The second patient was a 15-year-old male classroom contact. He was tuberculin positive and had a normal chest film in November 1977. INH preventive therapy was prescribed for him, but he is believed to have taken only one-half of the recommended 1-year course of therapy. A follow-up chest film in January 1979 showed enlarged hilar lymph nodes. Biopsy of the nodes showed caseating granulomata. One acid-fast organism

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compatible with *M. tuberculosis* was seen on microscopy, but no organisms were recovered on culture. He is being treated with INH, RIF, and EMB.

The 17-year-old brother of the index patient had a positive tuberculin test and a normal chest X ray in November 1977. He received INH preventive therapy but took it intermittently. His chest film in February 1979 showed a right apical infiltrate. Sputum cultures grew INH-resistant *M. tuberculosis*. He is being treated with RIF and EMB.

The fourth patient was a 17-year-old woman, another classroom contact. She had a negative tuberculin test in November 1977 and a positive tuberculin test and negative chest X ray in February 1978. She refused INH preventive therapy. The 1-year, follow-up chest film in March 1979 revealed a left apical infiltrate. Sputum cultures have been negative. She refused chemotherapy. She had a normal chest X ray in January 1980.

Reported by C Allen, J Berg, L Blatt, V Foster, J Furlong, CP Schade, MD, Dept of Human Services, Multnomah County; LR Foster, MD, JA Googins, MD, State Epidemiologist, Oregon State Dept of Human Resources; Tuberculosis Control Div, Bur of State Services, CDC.

Editorial Note: This episode emphasizes 2 current problems in the control of tuberculosis in the United States. First, tuberculosis case rates are high among persons in the United States who have come from parts of the world with high tuberculosis case rates (*1*). Second, drug-resistant tuberculosis is transmissible and poses special problems for the patient, the patient's contacts, and the tuberculosis program responsible for the proper management of the patient and the contacts (*2*). Tuberculosis case rates in Asia generally are higher than in the United States. Estimated case rates in 1973 ranged from 23 per 100,000 in Laos to 349 per 100,000 in Korea (*3*). In the United States, Asians constituted only 5% of the reported cases in 1977 and 1978, but they have a case rate estimated to be about 4 times as high as the case rate of all other groups in the United States combined. In addition, drug-resistant disease is more common among Asians. It is estimated that 10% of the tuberculosis cases among Indochinese refugees are resistant to INH (*4,5*).

Persons known to have disease caused by *M. tuberculosis* resistant to 1 or more drugs should be treated with at least 2 drugs to which the organisms are susceptible. The best therapy for persons not having disease but infected with organisms presumably resistant to INH is not clear. INH is the only drug which has been shown to reduce the incidence of tuberculosis among infected persons. However, the effect of INH on the incidence of tuberculosis among persons presumably infected with organisms resistant to INH is not known. The efficacy of other drugs for preventive therapy has not been adequately evaluated.

Unfortunately, this episode does not provide much information about the efficacy of INH preventive therapy among persons infected with INH-resistant organisms. Two of the 4 patients presumed to be secondary cases received no INH before the onset of their illness, and the 2 others apparently did not regularly and continuously ingest INH as prescribed. None of the presumably compliant patients were interviewed about their INH-ingestion habits with the same rigor as those who developed illness. Therefore, comparative attack rates cannot be calculated.

At the present time 3 options which have been recommended for the management of persons presumably infected with INH-resistant organisms are 1) a 1-year course of INH, 2) a 6- to 12-month course of RIF, alone or in combination with INH or another drug (currently RIF does not have FDA approval for preventive therapy of tuberculosis), or 3) frequent medical and roentgenographic follow-up for 2 years (*4*).

References

1. American Thoracic Society. Tuberculosis in the foreign-born. Am Rev Respir Dis 1977;116: 561-4.

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2. MMWR 1978;27:355-6.
3. CDC. Tuberculosis in the world. Atlanta:CDC, 1976:254. (HEW publication no. (CDC) 76-8317).
4. MMWR 1979;28:386-8.
5. Kopanoff DE, Snider DE Jr., Kilburn JO. A survey of tuberculosis primary drug resistance in the United States. Presented Las Vegas: American Thoracic Society Meeting, May 1979.

Follow-up on Cholera in Laotian Refugees — California

One suspected and 2 confirmed cases of cholera have been reported in Indochinese refugees who recently arrived in California from Rangsit refugee transit center in Bangkok, Thailand.

As previously reported (*1*), 2 of 7 members of a Laotian refugee family developed severe diarrheal illnesses on April 17 and 18. They had flown into California on April 17. *Vibrio cholerae* O group 1 (biotype and serotype not yet determined) sensitive to tetracycline *in vitro* was isolated from the stool of a 28-year-old woman (*1*); the same organism was subsequently isolated from her 5-year-old nephew. The other 5 family members have remained well, and their stool cultures were negative for *V. cholerae.*

A third Laotian refugee with cholera-like illness, a 65-year-old woman unrelated to the other infected persons, arrived in California on April 24. She had mild diarrhea during the

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TABLE I. Summary — cases of specified notifiable diseases, United States

[Cumulative totals include revised and delayed reports through previous weeks.]

DISEASE	17th WEEK ENDING		MEDIAN 1975-1979	CUMULATIVE, FIRST 17 WEEKS		
	April 26, 1980	April 28, 1979*		April 26, 1980	April 28, 1979*	MEDIAN 1975-1979
Aseptic meningitis	55	47	38	995	807	608
Brucellosis	–	2	2	50	23	49
Chickenpox	6,702	7,958	6,332	95,295	112,545	100,237
Diphtheria	–	1	1	1	3	34
Encephalitis: Primary (arthropod-borne & unspec.)	16	7	12	191	150	198
Post-infectious	2	11	8	53	72	72
Hepatitis, Viral: Type B	338	308	308	5,238	4,521	4,743
Type A	517	566	621	8,650	9,612	10,745
Type unspecified	244	178	156	3,764	3,302	2,747
Malaria	51	16	10	465	135	108
Measles (rubeola)	762	674	1,353	6,055	6,089	11,266
Meningococcal infections: Total	43	63	40	1,088	1,128	743
Civilian	43	63	40	1,083	1,122	739
Military	–	–	–	5	6	6
Mumps	185	359	556	4,493	6,694	10,181
Pertussis	23	20	20	326	428	399
Rubella (German measles)	131	452	724	1,685	5,476	6,635
Tetanus	–	2	1	12	12	15
Tuberculosis	567	504	662	8,490	8,652	9,536
Tularemia	3	–	2	26	44	44
Typhoid fever	13	6	6	96	123	117
Typhus fever, tick-borne (Rky. Mt. spotted)	4	7	8	22	32	29
Venereal diseases:						
Gonorrhea: Civilian	18,461	16,601	16,696	305,755	306,281	303,151
Military	377	464	463	8,532	9,101	9,101
Syphilis, primary & secondary: Civilian	609	503	435	8,663	7,893	7,893
Military	6	6	5	115	100	100
Rabies in animals	154	150	86	1,860	1,413	893

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1980		CUM. 1980
Anthrax	–	Poliomyelitis: Total	2
Botulism (Calif. 5)	17	Paralytic	1
Congenital rubella syndrome	26	Psittacosis † (Calif. 1)	25
Leprosy (Calif. 5)	55	Rabies in man	–
Leptospirosis	14	Trichinosis (Md. 5)	24
Plague	–	Typhus fever, flea-borne (endemic, murine) (S.C. 1, Tex. 1)	14

*Delayed reports received for calendar year 1979 are used to update last year's weekly and cumulative totals.
†Delayed reports: Psittacosis: Mass. —1 (1980)

TABLE III. Cases of specified notifiable diseases, United States, weeks ending April 26, 1980, and April 28, 1979 (17th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS (VIRAL), BY TYPE			MALARIA	
						Primary		Post-infectious	B	A	Unspecified		
	1980	1980	1980	1980	CUM. 1980	1980	1979*	1980	1980	1980	1980	1980	CUM. 1980
UNITED STATES	55	–	6,702	–	1	16	7	2	338	517	244	51	465
NEW ENGLAND	1	–	527	–	–	–	1	–	9	16	3	2	30
Maine	–	–	17	–	–	–	–	–	–	–	–	2	7
N.H.†	–	–	40	–	–	–	1	–	–	–	–	–	2
Vt.	–	–	2	–	–	–	–	–	–	3	–	–	–
Mass.	–	–	208	–	–	–	–	–	1	4	2	–	16
R.I.	1	–	68	–	–	–	–	–	–	2	–	–	1
Conn.	–	–	192	–	–	–	–	–	8	7	1	–	4
MID. ATLANTIC	8	–	399	–	1	3	–	–	52	49	18	8	72
Upstate N.Y.	–	–	200	–	–	1	–	–	12	13	3	2	10
N.Y. City	1	–	188	–	1	–	–	–	10	6	3	–	25
N.J.	6	–	NN	–	–	–	–	–	15	9	7	1	19
Pa.	1	–	11	–	–	2	–	–	15	21	5	5	18
E.N. CENTRAL	1	–	3,438	–	–	3	–	–	57	75	23	1	20
Ohio†	–	–	142	–	–	–	–	–	9	6	8	–	3
Ind.†	–	–	233	–	–	–	–	–	17	14	7	1	3
Ill.	–	–	1,007	–	–	–	–	–	16	23	1	–	5
Mich.	1	–	1,263	–	–	3	–	–	11	19	7	–	6
Wis.	–	–	793	–	–	–	–	–	4	13	–	–	3
W.N. CENTRAL	5	–	787	–	–	–	–	–	24	28	11	1	18
Minn.	–	–	4	–	–	–	–	–	7	5	1	–	9
Iowa	–	–	350	–	–	–	–	–	4	–	4	–	2
Mo.	2	–	152	–	–	–	–	–	3	5	5	–	3
N. Dak.†	–	–	17	–	–	–	–	–	–	–	–	–	–
S. Dak.	–	–	4	–	–	–	–	–	–	1	–	–	–
Nebr.	–	–	58	–	–	–	–	–	8	5	1	1	2
Kans.	3	–	202	–	–	–	–	–	2	12	–	–	2
S. ATLANTIC	12	–	644	–	–	2	–	2	63	73	34	4	50
Del.	–	–	6	–	–	–	–	–	–	1	1	–	–
Md.	2	–	117	–	–	–	–	–	16	8	3	–	10
D.C.	–	–	6	–	–	–	–	–	–	1	–	–	1
Va.†	2	–	33	–	–	–	–	–	13	6	6	3	17
W. Va.	–	–	105	–	–	–	–	–	1	1	–	–	2
N.C.	1	–	NN	–	–	2	–	–	4	6	5	–	4
S.C.	1	–	34	–	–	–	–	–	3	1	1	1	3
Ga.	–	–	3	–	–	–	–	–	8	19	–	–	4
Fla.	6	–	340	–	–	–	–	2	18	30	18	–	9
E.S. CENTRAL	2	–	72	–	–	–	–	–	15	19	2	–	4
Ky.	1	–	68	–	–	–	–	–	–	–	1	–	2
Tenn.	1	–	NN	–	–	–	–	–	13	13	–	–	–
Ala.	–	–	2	–	–	–	–	–	1	3	1	–	2
Miss.	–	–	2	–	–	–	–	–	1	3	–	–	–
W.S. CENTRAL	6	–	373	–	–	6	1	–	16	74	66	5	39
Ark.†	–	–	13	–	–	–	–	–	7	3	7	–	2
La.	–	–	NN	–	–	–	1	–	2	11	2	–	14
Okla.	1	–	–	–	–	–	–	–	–	4	3	–	7
Tex.	5	–	360	–	–	6	–	–	7	56	54	5	16
MOUNTAIN	3	–	122	–	–	–	1	–	10	60	36	1	20
Mont.†	–	–	45	–	–	–	1	–	–	3	–	–	–
Idaho	–	–	1	–	–	–	–	–	–	–	–	–	–
Wyo.	–	–	–	–	–	–	–	–	–	–	–	–	2
Colo.†	2	–	73	–	–	–	–	–	3	12	4	1	9
N. Mex.	–	–	–	–	–	–	–	–	–	2	–	–	1
Ariz.†	–	–	NN	–	–	–	–	–	3	19	24	–	7
Utah	–	–	–	–	–	–	–	–	–	15	4	–	–
Nev.	1	–	3	–	–	–	–	–	4	9	4	–	1
PACIFIC	17	–	340	–	–	2	4	–	92	123	51	29	212
Wash.	–	–	297	–	–	–	2	–	2	5	–	10	25
Oreg.	–	–	2	–	–	–	–	–	7	9	4	2	13
Calif.†	17	–	–	–	–	2	2	–	80	104	45	14	167
Alaska	–	–	–	–	–	–	–	–	–	2	2	–	1
Hawaii	–	–	41	–	–	–	–	–	3	3	–	3	6
Guam†	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	–
P.R.	–	–	16	–	–	–	–	–	4	–	–	–	1
V.I.	–	–	–	–	–	–	–	–	–	–	–	–	–
Pac. Trust Terr.	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	–

NN: Not notifiable. NA: Not available.

*Delayed reports received for 1979 are not shown below but are used to update last year's weekly and cumulative totals.

†The following delayed reports will be reflected in next week's cumulative totals: Asep. meng.: N.H. +2, Colo. +1; Chickenpox: N.H. +25, Calif. +26, Guam +7; Enceph., post: Ohio +1; Hep. B: N.H. +1, N.Dak. +1, Colo. –1, Guam +1; Hep. A: N.H. +1, N.Dak. +2, Mont. +4, Colo. –2, Ariz. –3; Hep. unsp.: N.H. +1, Ohio –1, Ind. –1, Va. –2, Ark. –1, Ariz. +1; Malaria: Guam +1.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending April 26, 1980, and April 28, 1979 (17th week)

REPORTING AREA	MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1980	CUM. 1980	CUM. 1979*	1980	CUM. 1980	CUM. 1979*	1980	CUM. 1980	1980	1980	CUM. 1980	CUM. 1980
UNITED STATES	762	6,055	6,089	43	1,088	1,128	185	4,493	23	131	1,685	12
NEW ENGLAND	35	436	171	2	64	46	3	429	-	22	127	-
Maine†	17	21	4	-	2	1	1	209	-	14	52	-
N.H.†	1	193	7	-	4	5	1	11	-	1	22	-
Vt.	13	195	59	1	6	3	-	3	-	-	-	-
Mass.	4	22	1	-	24	15	1	110	-	5	36	-
R.I.	-	2	100	-	5	2	-	14	-	2	7	-
Conn.	-	3	-	1	23	20	-	82	-	-	10	-
MID. ATLANTIC	238	1,644	573	4	178	160	14	518	8	20	174	2
Upstate N.Y.	42	362	301	-	61	55	4	63	7	3	90	1
N.Y. City	52	457	232	2	54	43	3	33	-	3	38	-
N.J.†	19	226	28	1	34	43	1	64	1	1	27	-
Pa.	125	599	12	1	29	19	6	358	-	13	19	1
E.N. CENTRAL	102	966	1,398	3	117	116	99	1,789	2	35	429	-
Ohio†	22	148	25	-	40	42	31	731	-	-	2	-
Ind.†	2	51	103	-	18	28	6	69	2	8	159	-
Ill.	16	165	638	-	17	3	5	209	-	17	97	-
Mich.†	11	198	406	3	34	31	46	590	-	2	99	-
Wis.	51	404	226	-	8	12	11	190	-	8	72	-
W.N. CENTRAL	91	733	634	1	39	40	5	151	3	6	141	2
Minn.	91	563	313	-	11	7	1	9	-	2	21	1
Iowa	-	-	14	-	5	5	-	24	-	-	3	-
Mo.	-	59	289	1	13	20	4	59	2	-	33	-
N. Dak.	-	-	6	-	1	1	-	3	-	2	5	-
S. Dak.	-	-	1	-	3	2	-	1	-	-	-	-
Nebr.	-	59	-	-	-	-	-	9	-	-	-	-
Kans.	-	52	11	-	6	5	-	46	1	2	79	1
S. ATLANTIC	197	1,189	884	14	272	281	15	434	3	9	157	2
Del.	-	1	-	-	2	3	1	32	-	-	-	-
Md.	-	27	5	2	27	20	6	142	-	-	-	-
D.C.	-	-	-	-	1	-	-	2	-	-	-	-
Va.†	22	216	81	4	21	40	3	43	-	4	18	1
W. Va.	2	12	41	1	8	3	-	49	-	3	17	-
N.C.	38	76	96	4	51	41	3	66	-	-	39	-
S.C.	-	115	88	-	34	38	-	16	-	-	45	1
Ga.	118	507	111	-	57	43	-	1	3	-	-	-
Fla.	17	235	462	3	71	93	2	83	-	2	38	-
E.S. CENTRAL	11	131	76	6	107	89	27	612	1	2	61	1
Ky.	1	34	15	-	31	13	26	561	-	-	28	1
Tenn.	10	21	13	4	26	28	-	18	1	2	29	-
Ala.	-	16	40	2	31	22	-	10	-	-	3	-
Miss.	-	60	8	-	19	26	1	23	-	-	1	-
W.S. CENTRAL	46	442	669	4	125	187	6	148	3	5	59	1
Ark.†	-	1	6	1	7	15	-	14	2	-	1	-
La.	-	9	170	-	46	78	3	44	-	-	5	-
Okla.	41	323	20	1	10	16	-	-	-	-	1	-
Tex.	5	109	473	2	62	78	3	90	1	5	52	1
MOUNTAIN	8	112	137	1	33	47	1	118	1	2	47	-
Mont.	-	1	43	-	1	4	-	41	-	-	3	-
Idaho	-	-	3	-	3	4	-	11	-	1	9	-
Wyo.	-	-	5	-	2	-	-	-	-	-	-	-
Colo.	1	5	13	1	10	2	-	22	1	-	2	-
N. Mex.†	-	2	28	-	6	3	-	-	-	-	4	-
Ariz.†	5	62	26	-	4	26	1	17	-	-	9	-
Utah	1	39	14	-	1	3	-	22	-	1	17	-
Nev.	1	3	5	-	6	5	-	5	-	-	3	-
PACIFIC	34	402	1,547	8	153	162	15	294	2	30	490	4
Wash.	3	118	838	1	26	25	3	90	-	4	39	-
Oreg.	-	-	48	-	32	12	-	41	-	-	28	-
Calif.	31	278	596	7	93	115	11	155	2	25	421	4
Alaska	-	3	15	-	2	3	-	4	-	-	1	-
Hawaii	-	3	50	-	-	7	1	4	-	1	1	-
Guam	NA	2	2	-	-	-	NA	3	NA	NA	-	-
P.R.	2	46	159	-	7	-	1	80	-	-	6	3
V.I.	-	4	2	-	1	3	-	1	-	-	-	-
Pac. Trust Terr.	NA	3	5	-	-	1	NA	1	NA	NA	1	-

NA: Not available.

*Delayed reports received for 1979 are not shown below but are used to update last year's weekly and cumulative totals.

†The following delayed reports will be reflected in next week's cumulative totals: Measles: N.H. +11, N.J. +133, Ind. −4, Mich. −30, Va. −2, Ark. +4, Ariz. −2; Men. inf.: Ohio +2, Ind. +2; Pertussis: N.Mex. −2; Rubella: Maine +1, N.J. +19, N.Mex. +1.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending April 26, 1980, and April 28, 1979 (17th week)

REPORTING AREA	TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		VENEREAL DISEASES (Civilian)						RABIES (in Animals)
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1980	CUM. 1980	CUM. 1980	1980	CUM. 1980	1980	CUM. 1980	1980	CUM. 1980	CUM. 1979*	1980	CUM. 1980	CUM. 1979*	CUM. 1980
UNITED STATES	567	8,490	26	13	96	4	22	18,461	305,755	306,281	609	8,663	7,893	1,860
NEW ENGLAND	17	251	–	–	5	–	1	500	7,930	7,995	8	246	141	13
Maine	1	17	–	–	–	–	–	23	478	558	–	3	2	12
N.H.	1	6	–	–	–	–	–	14	273	279	–	–	10	–
Vt.	–	9	–	–	–	–	–	11	208	153	–	2	–	–
Mass.	11	128	–	–	3	–	1	167	3,164	3,187	3	158	86	1
R.I.	2	30	–	–	1	–	–	34	472	669	1	11	4	–
Conn.	2	61	–	–	1	–	–	251	3,335	3,149	4	72	39	–
MID. ATLANTIC	91	1,475	1	5	26	–	2	1,875	33,039	32,071	99	1,218	1,225	2
Upstate N.Y.	11	277	–	–	5	–	–	445	6,024	5,045	11	98	98	–
N.Y. City	31	529	1	2	11	–	–	850	13,337	12,782	62	794	823	–
N.J.	24	318	–	–	3	–	1	119	5,903	5,941	14	164	170	2
Pa.†	25	351	–	3	7	–	1	461	7,775	8,303	12	162	134	–
E.N. CENTRAL	100	1,196	1	1	10	–	2	3,307	48,709	47,424	50	836	1,133	271
Ohio†	29	208	–	–	3	–	2	1,243	13,220	12,661	–	138	201	11
Ind.	7	133	–	–	–	–	–	237	4,776	4,143	3	72	68	32
Ill.	39	454	–	–	3	–	–	899	15,348	15,252	36	463	712	166
Mich.†	24	332	1	–	3	–	–	665	10,563	11,077	9	128	119	–
Wis.	1	69	–	1	1	–	–	263	4,802	4,291	2	35	33	62
W.N. CENTRAL	17	282	9	–	1	–	2	783	13,687	14,789	9	92	110	531
Minn.	2	39	1	–	–	–	–	203	2,426	2,591	2	33	33	54
Iowa	4	27	4	–	–	–	–	106	1,507	1,933	1	4	18	109
Mo.	7	137	3	–	–	–	2	245	5,813	6,225	5	51	41	147
N. Dak.	–	11	–	–	–	–	–	9	193	251	–	–	–	46
S. Dak.	–	15	–	–	1	–	–	13	390	497	1	1	–	102
Nebr.	–	12	1	–	–	–	–	59	1,126	971	–	2	2	22
Kans.†	4	41	–	–	–	–	–	148	2,232	2,321	–	1	16	51
S. ATLANTIC	117	1,906	7	1	17	3	6	4,262	73,288	73,535	123	2,067	1,905	120
Del.†	7	29	–	–	1	–	–	42	1,023	1,163	–	5	11	–
Md.†	20	247	1	–	1	–	–	451	7,658	8,819	3	148	130	–
D.C.	NA	90	–	–	3	–	–	204	5,363	4,525	10	148	140	–
Va.	6	216	–	–	2	1	1	455	6,289	6,995	10	180	191	1
W. Va.†	2	76	–	–	2	–	–	38	926	1,063	1	6	27	3
N.C.†	25	336	2	–	1	1	3	554	11,091	11,128	10	151	169	–
S.C.	18	161	–	–	2	–	1	454	7,112	6,438	6	102	97	19
Ga.	17	253	4	–	–	–	–	856	13,429	14,151	36	617	509	68
Fla.†	22	498	–	1	5	1	1	1,208	20,397	19,253	47	710	631	29
E.S. CENTRAL	63	805	2	–	3	–	2	1,930	25,443	25,709	26	677	512	117
Ky.	11	170	–	–	1	–	–	236	3,622	3,437	1	51	57	52
Tenn.	26	260	2	–	–	–	2	763	9,130	8,910	10	255	205	57
Ala.	17	229	–	–	1	–	–	588	7,403	7,610	7	143	102	8
Miss.	9	146	–	–	1	–	–	343	5,288	5,752	8	228	148	–
W.S. CENTRAL	62	815	2	–	3	1	7	2,006	39,331	40,393	126	1,640	1,323	571
Ark.	4	66	2	–	–	1	3	120	2,934	3,331	2	61	39	78
La.	14	170	–	–	–	–	–	501	6,889	7,078	31	388	302	4
Okla.	11	83	–	–	1	–	2	203	3,871	3,662	2	25	26	95
Tex.	33	496	–	–	2	–	2	1,182	25,637	26,322	91	1,166	956	394
MOUNTAIN	9	228	2	–	6	–	–	716	11,897	12,032	12	205	146	46
Mont.	2	12	–	–	1	–	–	20	431	646	–	–	6	3
Idaho	–	9	1	–	–	–	–	32	575	521	–	12	9	–
Wyo.	–	13	–	–	–	–	–	16	345	298	–	7	3	–
Colo.†	–	20	–	–	2	–	–	223	3,112	3,261	3	54	38	–
N. Mex.	6	52	–	–	1	–	–	65	1,524	1,488	8	41	24	12
Ariz.	–	102	1	–	1	–	–	213	3,296	3,297	–	62	42	31
Utah	–	7	–	–	1	–	–	34	581	621	–	5	3	–
Nev.	1	13	–	–	–	–	–	113	2,033	1,900	1	24	21	–
PACIFIC	91	1,532	2	6	25	–	–	3,082	52,431	52,333	156	1,682	1,398	189
Wash.	6	121	–	–	–	–	–	389	4,397	4,504	NA	73	86	–
Oreg.	6	70	–	2	2	–	–	181	3,710	3,407	1	37	71	–
Calif.	79	1,311	2	4	23	–	–	2,410	42,378	41,842	145	1,511	1,198	146
Alaska	–	16	–	–	–	–	–	63	1,228	1,711	–	3	7	43
Hawaii	–	14	–	–	–	–	–	39	718	869	10	58	36	–
Guam†	NA	10	–	NA	–	NA	–	NA	26	32	NA	–	–	–
P.R.	4	46	–	–	–	–	–	42	875	616	10	184	168	16
V.I.	–	–	–	–	–	–	–	2	54	57	–	7	–	–
Pac. Trust Terr.	NA	7	–	NA	–	NA	–	NA	94	148	NA	–	–	–

NA: Not available.

*Delayed reports received for 1979 are not shown below but are used to update last year's weekly and cumulative totals.

†The following delayed reports will be reflected in next week's cumulative totals: TB: Mich. –1, Kans. –1, Del. –1, Md. –1, N.C. –2, Fla. –2, Guam +1; Typhoid fever: W.Va. –1; RMSF: Ohio –2; GC: Pa. +455 civ., Guam +1 civ. +3 mil.; Syphilis: Pa. +9, Mich. +2, Colo. –1.

TABLE IV. Deaths in 121 U.S. cities,* week ending April 26, 1980 (17th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I** TOTAL
	ALL AGES	>65	45-64	25-44	<1	
NEW ENGLAND	642	412	163	36	12	57
Boston, Mass.	176	100	52	13	3	20
Bridgeport, Conn.	43	23	13	4	1	6
Cambridge, Mass.	24	18	5	1	–	4
Fall River, Mass.	31	24	5	2	–	1
Hartford, Conn.	66	36	17	5	3	3
Lowell, Mass.	27	22	3	1	1	3
Lynn, Mass.	17	12	4	1	–	1
New Bedford, Mass.	29	21	7	1	–	2
New Haven, Conn.	44	21	16	4	–	1
Providence, R.I.	65	48	13	1	3	4
Somerville, Mass.	5	5	–	–	–	–
Springfield, Mass.	35	18	14	2	1	6
Waterbury, Conn.	22	20	1	1	–	3
Worcester, Mass.	58	44	13	–	–	3
MID. ATLANTIC	2,723	1,771	605	190	74	114
Albany, N.Y.	52	36	10	3	3	1
Allentown, Pa.	20	20	–	–	–	–
Buffalo, N.Y.	131	76	35	10	3	4
Camden, N.J.	67	39	18	5	3	–
Elizabeth, N.J.	28	24	3	1	–	3
Erie, Pa.†	38	22	11	–	2	3
Jersey City, N.J.	60	34	17	5	4	2
Newark, N.J.††	63	28	16	7	5	3
N.Y. City, N.Y.	1,479	975	310	116	37	60
Paterson, N.J.	30	17	13	–	–	–
Philadelphia, Pa.†	279	172	65	24	11	16
Pittsburgh, Pa.†	105	68	28	5	1	5
Reading, Pa.	33	27	3	3	–	–
Rochester, N.Y.	117	83	22	6	2	8
Schenectady, N.Y.	25	15	8	1	–	–
Scranton, Pa.†	21	15	4	2	–	2
Syracuse, N.Y.	93	62	21	1	3	1
Trenton, N.J.	30	17	10	1	–	–
Utica, N.Y.	24	19	5	–	–	2
Yonkers, N.Y.	28	22	6	–	–	4
E.N. CENTRAL	2,264	1,373	565	140	105	68
Akron, Ohio	71	43	23	2	2	1
Canton, Ohio	31	23	5	2	–	2
Chicago, Ill.	503	289	125	38	28	5
Cincinnati, Ohio	113	63	33	2	11	7
Cleveland, Ohio	196	104	56	15	13	4
Columbus, Ohio	140	78	43	11	3	7
Dayton, Ohio	101	57	26	5	5	1
Detroit, Mich.	299	190	65	27	12	12
Evansville, Ind.	45	36	6	2	1	5
Fort Wayne, Ind.	33	19	8	3	3	2
Gary, Ind.	18	12	4	2	–	–
Grand Rapids, Mich.	45	25	13	1	2	2
Indianapolis, Ind.	152	90	38	9	8	2
Madison, Wis.	46	24	15	5	–	7
Milwaukee, Wis.	130	95	24	4	5	2
Peoria, Ill.	56	35	13	3	3	–
Rockford, Ill.	44	23	12	3	3	3
South Bend, Ind.	59	37	20	2	–	3
Toledo, Ohio	110	76	25	3	4	3
Youngstown, Ohio	72	54	11	1	2	–
W.N. CENTRAL	738	479	173	28	29	24
Des Moines, Iowa	57	33	15	2	4	–
Duluth, Minn.	26	19	5	–	2	–
Kansas City, Kans.	31	15	9	2	2	–
Kansas City, Mo.	171	103	46	7	8	5
Lincoln, Nebr.	27	19	6	1	–	5
Minneapolis, Minn.	110	78	22	2	3	5
Omaha, Nebr.	63	41	18	2	2	1
St. Louis, Mo.	145	97	30	7	6	4
St. Paul, Minn.	49	39	9	–	–	–
Wichita, Kans.	59	35	13	5	2	4

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I** TOTAL
	ALL AGES	>65	45-64	25-44	<1	
S. ATLANTIC	1,237	744	323	85	52	46
Atlanta, Ga.	144	78	35	15	16	2
Baltimore, Md.	262	153	70	23	9	7
Charlotte, N.C.	60	41	14	2	2	1
Jacksonville, Fla.	127	86	30	4	4	4
Miami, Fla.	101	56	28	7	3	4
Norfolk, Va.	55	33	13	6	1	2
Richmond, Va.	78	48	24	2	4	4
Savannah, Ga.	40	23	8	5	1	4
St. Petersburg, Fla.	86	64	17	3	1	4
Tampa, Fla.	78	45	24	3	3	7
Washington, D.C.	153	81	47	13	6	4
Wilmington, Del.	53	36	13	2	2	3
E.S. CENTRAL	766	442	211	48	39	39
Birmingham, Ala.	133	88	36	5	1	3
Chattanooga, Tenn.	64	42	13	6	2	3
Knoxville, Tenn.	27	19	7	1	–	–
Louisville, Ky.	119	70	29	7	10	9
Memphis, Tenn.	185	104	54	10	10	14
Mobile, Ala.	69	33	23	7	–	2
Montgomery, Ala.	35	23	5	–	6	–
Nashville, Tenn.	134	63	44	12	10	8
W.S. CENTRAL	1,282	711	356	89	61	45
Austin, Tex.	43	22	16	2	2	3
Baton Rouge, La.	35	21	9	4	1	–
Corpus Christi, Tex.	49	26	19	–	4	–
Dallas, Tex.	201	107	51	20	9	2
El Paso, Tex.	31	19	3	3	3	1
Fort Worth, Tex.	80	52	20	2	4	10
Houston, Tex.	342	172	106	27	14	6
Little Rock, Ark.	69	40	19	3	2	4
New Orleans, La.	149	81	45	13	5	2
San Antonio, Tex.	104	59	26	8	3	5
Shreveport, La.	87	53	21	4	6	5
Tulsa, Okla.	92	59	21	3	8	7
MOUNTAIN	616	399	127	43	19	20
Albuquerque, N.Mex.	62	40	16	3	–	5
Colo. Springs, Colo.	35	25	6	1	2	1
Denver, Colo.	127	83	27	9	4	6
Las Vegas, Nev.	57	31	15	7	1	3
Ogden, Utah	18	15	1	–	2	–
Phoenix, Ariz.	136	82	37	9	3	2
Pueblo, Colo.	27	20	6	–	1	–
Salt Lake City, Utah	38	26	5	2	3	–
Tucson, Ariz.	116	77	14	12	3	3
PACIFIC	1,768	1,150	400	105	52	65
Berkeley, Calif.	17	13	–	3	–	1
Fresno, Calif.	72	46	11	3	7	6
Glendale, Calif.	23	15	4	2	1	1
Honolulu, Hawaii	44	27	9	2	4	1
Long Beach, Calif.	80	47	27	2	1	–
Los Angeles, Calif.	494	340	103	28	9	14
Oakland, Calif.	83	51	17	7	4	9
Pasadena, Calif.	32	19	8	4	1	2
Portland, Oreg.	137	87	37	7	4	–
Sacramento, Calif.	78	48	20	3	5	7
San Diego, Calif.	158	96	45	10	2	2
San Francisco, Calif.	145	106	25	7	4	4
San Jose, Calif.††	152	97	36	9	5	4
Seattle, Wash.	157	92	39	11	4	9
Spokane, Wash.	48	33	8	4	–	3
Tacoma, Wash.	48	33	11	3	1	2
TOTAL	12,036	7,481	2,923	764	443	478

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Data not available this week. Figures are estimates based on average percent of regional total.

Cholera – Continued

flight, developed profuse watery diarrhea after arrival, and was hospitalized on April 25. An organism tentatively identified as *V. cholerae* has been isolated from her stool. She had been in the Rangsit transit center for 2 months before departure.

This transit center had 7 laboratory-confirmed cases of cholera during April; the date of onset or diagnosis for 4 of these cases was April 22-23. A case-control study to try to determine the vehicle(s) of transmission is in progress. No other cases of cholera have been identified among the Indochinese refugees arriving in the United States.

Reported by A Goldberg, MD, Marin General Hospital, Marin, California; G Schecter, MD, R Gelber, MD, U.S. Public Health Service Hospital, San Francisco; T Hiatt, MD, Marin County Health Dept; R Roberto, MD, C Powers, California Dept of Health Services; Field Services Div and Enteric Diseases Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Reference

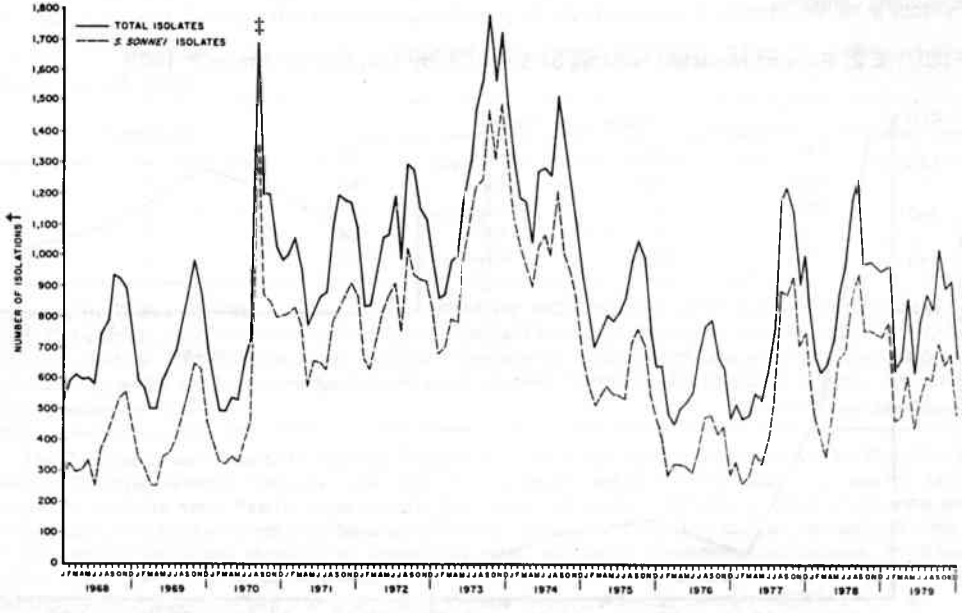
1. MMWR 1980;29:191-2.

Surveillance Summary

Shigellosis – United States, 1979

The number of *Shigella* isolates reported to CDC's Shigella Surveillance Activity has leveled off for the first time since 1977 (Figure 1).

FIGURE 1. Reported isolates of *Shigella* in the United States,* 1968-1979



*No reports from California are included after 1969.

†Adjusted to 4-week month.

‡Approximately 400 isolations in August 1970 due to a common-source outbreak in Hawaii.

Shigellosis – Continued

In 1979, the highest rate of reported *Shigella* isolations was in 2-year-old children (Figure 2). A higher isolation rate was reported for women than men for the age group 20-29; otherwise, the isolation rates by sex were similar. Isolations peaked in the fall months.

Of the reported isolates in 1979,* 73.4% were *S. sonnei*; 24.2%, *S. flexneri*; 1.8%, *S. boydii*; and 0.7%, *S. dysenteriae. S. flexneri* 2a and 3a comprised 47.1% of the total *S. flexneri* isolates subtyped.

Because certain population groups have recurrent problems with shigellosis, available national data were tabulated separately for institutions and American Indian reservations. Forty-eight percent of reports included data on residence of the patient at the time of onset of illness; of these, 1.1% lived in institutions, 2.0% on Indian reservations, and the remainder in other communities. Seventy-three percent of the isolates from residents of institutions were *S. sonnei*, and 25%, *S. flexneri*. By contrast, only 31% of the isolates from residents of Indian reservations were *S. sonnei*; the remainder were *S. flexneri*. Seventy-nine percent of the isolates from residents of other communities were *S. sonnei*, and 20%, *S. flexneri*.

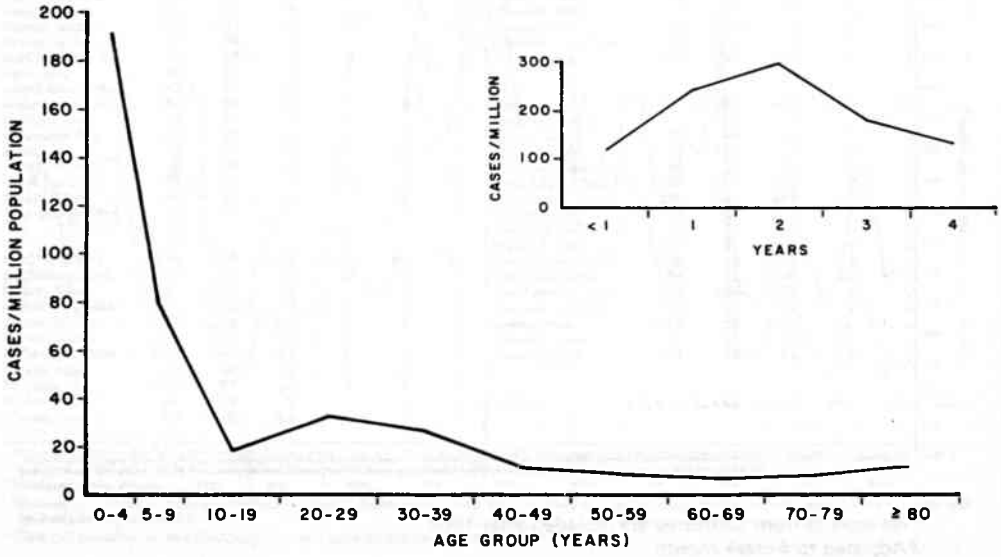
From 1969 through 1976, data from California were not available for the annual tabulations. For 1977, 1978, and 1979, the numbers of reported isolates, including those from California, were 14,019, 15,336, and 15,265, respectively.

Reported by the Statistical Services Br and the Enteric Diseases Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: This report is based on CDC's Shigella Surveillance Activity, a passive, laboratory-based system which receives weekly reports from the 50 states and the District of Columbia. These reports do not distinguish between clinical or sub-clinical infections nor between chronic or convalescent carriers.

*Excluding California.

FIGURE 2. Rate of reported isolates of *Shigella*, by age, United States,* 1979



*Excluding California.

Epidemiologic Notes and Reports

Legionellosis in a Child — Kentucky

A 3-year-old boy from Casey County, Kentucky, with trisomy 21 (Down's syndrome) was admitted to a hospital in Cincinnati on February 26, 1980, for elective repair of tracheal stenosis and revision of a permanent tracheostomy. The patient had had a cough for several weeks and on the evening of admission developed fever to 40.8 C (105.4 F). His heart rate was 128/minute, and his respiratory rate, 30/minute; pulmonary rales were present. A chest radiograph showed dense airspace opacification of the right upper and right lower lobes. His white blood cell count was 18,000/mm^3 with 78% neutrophils, 15% lymphocytes, and 7% monocytes. Urinalysis and serum urea nitrogen, creatinine, and hepatic enzyme concentrations were normal. Gram stain of a tracheal aspirate showed abundant neutrophilic leukocytes, moderate numbers of gram-negative rods and gram-positive cocci, and a few gram-positive diplococci. A specimen of capillary blood, drawn while the patient was breathing 40% oxygen, revealed a P_{O_2} of 53 mm Hg. The patient was treated with penicillin, cefamandole, and gentamicin.

Blood cultures drawn at the time of admission and a tuberculin skin test (PDD, 5 T.U.) were negative. Tracheal aspirate cultures revealed moderately heavy growth of *Streptococcus viridans*, but no viruses, chlamydiae, fungi, or mycobacteria. The pneumonia progressively worsened radiographically.

On March 7, *Legionella pneumophila* serogroup 1 were demonstrated by serogroup-specific direct fluorescent-antibody staining of a tracheal aspirate (25-30 organisms/slide). Treatment with oral erythromycin (50 mg/kg every 6 hours) was initiated; the patient's fever promptly diminished and resolved over 5 days. At discharge on March 14, the chest radiograph had improved.

Indirect fluorescent-antibody *L. pneumophila* titers (confirmed at CDC) are shown in Table 1. Complement-fixation titers on March 7 and 14 for influenza A and B, parainfluenza 1, 2, and 3, respiratory syncytial virus, and *Mycoplasma pneumoniae* were stable.

TABLE 1. *Legionella pneumophila* indirect fluorescent-antibody titers in a child, Kentucky, March 1980

Serogroup	Days after onset			
	9	12	16	21
1	<64	64	1024	1024
2	<64	<64	<64	<64
3	<64	<64	256	512
4	<64	<64	1024	512

Reported by R Sturm, MD, JL Staneck, PhD, JP Myers, MD, University of Cincinnati Medical Center, Ohio; CM Cotrell, MD, University of Kentucky Medical Center, Lexington; R Towbin, MD, Children's Hospital Medical Center, Cincinnati; Special Immunology Laboratory, Bacteriology Div, Bur of Laboratories, and Epidemic Investigations Activity, Special Pathogens Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Continued on next page

The Morbidity and Mortality Weekly Report, circulation 88,700, is published by the Center for Disease Control, Atlanta, Georgia. 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.

The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Center for Disease Control, Attn: Editor, Morbidity and Mortality Weekly Report, Atlanta, Georgia 30333.

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Legionellosis – Continued

Editorial Note: This case report illustrates 4 points: 1) use of rapid diagnostic techniques (*1*) may lead to specific therapy of legionellosis and prompt clinical response; 2) sporadic legionellosis may occur among children (*2*); 3) the antibody response to *L. pneumophila* is not serogroup specific (*3*); and 4) people with trisomy 21, who are predisposed to other respiratory infections (*4*), may also be at increased risk of legionellosis.

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