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MORBIDITY AND MORTALITY WEEKLY REPORT

Epidemiologic Notes and Reports

Salmonellosis — Wisconsin

A recent outbreak of salmonellosis in Wisconsin illustrates the value of serotyping *Salmonella*.

For the week ending October 6, 1979, the Wisconsin Division of Health received reports that 7 individuals residing in 3 contiguous, rural counties were infected with *S. saint-paul*. In previous years, 20 to 30 infections with *S. saint-paul* were reported annually for the entire state; this unusual clustering prompted an investigation.

All of the 7 persons from whom isolates were reported had attended the same church dinner. Questionnaires returned by 188 of 352 attendees showed that 19 individuals (10%) had had recent gastrointestinal illness. Symptoms included diarrhea (89%), nausea (79%), chills (79%), and fever (68%). Five culture-positive and 3 culture-negative individuals were hospitalized. Onset of illness ranged from 6 hours to 18 days (median, 42 hours). Two culture-positive cases with lengthy incubation periods occurred in a couple who lived alone. The 62-year-old wife developed symptoms 10 days after the dinner and was subsequently hospitalized. Eight days after her illness began—and while she was still hospitalized—her husband's symptoms began. Her husband's incubation period, therefore, could have been as short as 8 days, or as long as 18 days.

Everyone attending the dinner ate chicken, but all 19 ill persons and only 53 of 169 non-ill persons ate before 12:30 PM ($p<.001$). A food preparer, fearing a shortage of chicken, had hurriedly pan-fried a single batch of chicken for 10 minutes per side, and then placed the batch in a warming roaster at 175 F (79.4 C) until served. These chickens were served until 12:30 PM but removed when several persons complained of undercooked chicken. No samples were available for culture.

Reported by D Burlingame, Buffalo County Public Health Service; L Von Holtum, Pepin County Nursing Service; M Murphy, Eau Clair City Health Dept; A Sexe, Trempealeau County Public Health Nursing Service; W Schell, J Davis, MD, State Epidemiologist, Wisconsin State Dept of Health and Social Services; Field Services Div, and Enteric Diseases Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: This outbreak underscores the need for continuing public education in proper food handling, particularly with regard to adequate cooking of meats. Meat from fowl, swine, and cattle is frequently contaminated with salmonellae. However, adequate refrigeration of meats inhibits multiplication of organisms, and proper cooking will kill the residue. In most common-source outbreaks, the salmonellae enter the kitchen on the meat or in other products of animal origin rather than on the hands of the food preparers. After eating contaminated foods, food handlers, themselves, may become infected and can become vectors for further transmission of infection.

The incubation period for salmonellosis is usually from 12 to 72 hours; however, the onset of illness 1 week after exposure is not uncommon (*1*), and incubation periods of up to 2 weeks have been reported.

Salmonellosis — Continued

S. saint-paul is not a rare cause of human infection: from 500 to 1,200 isolations were reported annually during the last 5 years in the United States. It is one of the group B salmonellae, which include *S. typhimurium*, the most commonly identified serotype in the United States (*2*). This outbreak was detected because a passive surveillance network showed an unusual temporal and spatial clustering of a single serotype, again demonstrating the value of having data on serotypes to use as epidemiologic markers.

References

1. Billie BO, Torre M, Nordbring F. An extensive outbreak of gastroenteritis caused by *S. newport*. Acta Med Scand 1964;175:557-67.
2. MMWR 1980;28:618-9.

Ross River Virus Infection — American Samoa

The first confirmed cases of infection with Ross River virus in American Samoa were recently reported.

From August to October 1979, a large increase was noted in the number of persons complaining of polyarthralgia and fever in American Samoa. Some of them also developed a macular rash on their arms, palms, and feet. Most had low-grade fever (100-102 F) and complained of malaise and arthralgia in the knees and wrists. In most patients, the illness lasted only 4-6 days, but some had persistent arthralgias.

Samoan health authorities suspected infection with Ross River virus and sent serum specimens to CDC for testing. Seven of 15 paired serum samples tested showed diagnostic rises, and 2 had high stable antibody titers to Ross River virus. Additional testing did not reveal evidence of recent infection with other viruses that could cause compatible clinical illness.

In December 1979, investigators from the Pacific Research Unit at the University of Hawaii and from CDC collected serum from 17 patients with febrile illnesses seen at the emergency room of the Lyndon Baines Johnson Hospital in Pago Pago, the capital city. An alphavirus, tentatively identified as Ross River virus, was isolated from 1 of the specimens. Results of serologic tests of rat, domestic animal, and human serum specimens collected in American Samoa by investigators are pending.

Reported by P Molberg, MD, M Beck, MD, and T Liaiga, MO, Dept of Health, American Samoa Government; RB Tesh, MD, DA Shroyer, PhD, Pacific Research Unit, University of Hawaii; Vector-Borne Diseases Div, Bur of Laboratories, Field Services Div, and Viral Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: Although this outbreak apparently ended in October 1979, physicians may encounter persistent arthralgias in travelers who may have contracted Ross River virus infection in the Samoan islands or in Fiji or Australia, where outbreaks of this disease have also recently occurred (*1*).

Six cases have been documented in U.S. travelers since the outbreak in Fiji last year (*1*). All but 2 of the travelers had a history of possible exposure to the virus while in Fiji. One traveler, who was originally thought to have dengue, had recently traveled in Australia, where Ross River virus is endemic; the other had recently traveled to American Samoa.

Reference

1. MMWR 1979;28:323.

Current Trends

Malaria Surveillance and Control — Sutter and Yuba Counties, California

The local health department and the Mosquito Abatement District in Sutter and Yuba counties have conducted an active malaria surveillance and control program since 1974 to confront a set of circumstances unique in the United States. In that year, California's first cases since 1957 of introduced mosquito-transmitted malaria occurred in 3 local residents (*1*). Their sources of infection were recent immigrants from the state of Punjab, India, who had relapsing *Plasmodium vivax* malaria.

The rich Sutter-Yuba agricultural area, with its Punjab-like climate, has attracted large numbers of Punjabi farmers since the 1890s, but immigration has so increased in recent years that today the local Punjabi community is estimated to account for more than 5,000 of Sutter-Yuba's 95,000 residents. Paralleling this phenomenon has been the escalating resurgence of malaria in India since the early 1970s. The World Health Organization estimates that there were 10 to 15 million cases of malaria in India in 1978 compared to less than 1 million in 1970.

Surrounding the local Punjabi population in Sutter-Yuba are 120,000 acres of rice paddies, which provide a prime breeding ground for the *Anopheles freeborni* mosquito, an efficient vector of vivax malaria. (Sutter-Yuba was the last area in California to achieve eradication of endemic malaria.)

Because of the many imported malaria cases in an ecosystem that is ripe for malaria transmission, the health department and the Mosquito Abatement District conduct an extensive malaria awareness campaign through the county medical society, hospitals, clinics, television, radio, newspapers written in English and Punjabi, the local Sikh temple, and community-outreach workers who speak Punjabi. Blood specimens are drawn from all family members of a patient with confirmed disease and from asymptomatic, newly arrived Punjabis sought out by community workers. Definitive malaria treatment with chloroquine and primaquine (after G6PD testing) is offered to those with positive smears or immunofluorescent antibody titers suggestive of latent infection. This is done to decrease the number of clinical malaria relapses and the pool of parasitemic persons potentially infective for *A. freeborni*. Since 1975, 22% (71/322) of those serologically screened have been found to be positive for malarial antibodies.

The routine mosquito-control program of the Sutter-Yuba Mosquito Abatement District (which includes insuring adequate drainage, use of insecticides, and stocking of fish in rice paddies to eat the mosquito larvae) is supplemented by selective use of insecticides for adult mosquitoes. The insecticides are administered by fogging the ½-mile radius of the household and workplace of patients. This begins within 12 hours after the District has been notified of a case and is repeated 7 and 14 days later.

The Sutter-Yuba malaria-control program appears to be preventing malaria transmission. The 3 mosquito-transmitted cases in 1974 occurred after the importation of only 9 cases into the area. Since then, cases imported from Punjab have steadily increased to 44 in 1978, and to 71 in the first 11 months of 1979. Yet, despite intensive surveillance, no cases of malaria in local residents have been recognized. Since 1975, all of the 173 malaria cases in Sutter-Yuba were exposed abroad, and all were due to *P. vivax*.

Reported by M Cusick, MD, J Hornstein, MPH, S Thiara, LVN, Sutter-Yuba Health Dept; E Kauffman, MPH, Sutter-Yuba Mosquito Abatement District; RR Roberto, MD, DPPH, RA Murray, MPH, California State Dept of Health Services, in California Morbidity Weekly Report, no. 49, December 14, 1979; and Parasitology Div, Bur of Laboratories, CDC.

Reference

1. Singal M, Shaw PK, Lindsay RC, Roberto RR. An outbreak of introduced malaria in California possibly involving secondary transmission. Am J Trop Med Hyg 1977;26:1-9.

International Notes

Follow-up on Yellow Fever — Trinidad

Since July 1979, the Ministry of Health, Trinidad and Tobago, has reported a total of 10 yellow fever cases, including 5 deaths. All these cases were sylvatic, involving persons with a history of exposure to mosquitoes in forested areas, where yellow fever infection may occur in wild monkeys. There is no evidence of yellow fever transmission by *Aedes aegypti*, the urban vector.

More than 75% of the population of Trinidad has been vaccinated against yellow fever in immunization programs which are continuing on a selective basis. Control measures for *Aedes aegypti* and surveillance for yellow fever activity are also ongoing. There is no evidence of yellow fever activity on the island of Tobago.

Reported by the Pan American Health Organization; Enteric and Neurotropic Viral Diseases Br, Viral Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: In view of continued enzootic activity and the official yellow fever-infected status of Trinidad, CDC continues to recommend yellow fever vaccination for all travelers to the island of Trinidad. Persons without a valid yellow fever vaccination certificate traveling from Trinidad to other Caribbean and Central American ports of entry may be subject to quarantine restrictions.

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

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

DISEASE	5th WEEK ENDING		MEDIAN 1975-1979	CUMULATIVE, FIRST 5 WEEKS		
	February 2, 1980	February 3, 1979*		February 2, 1980	February 3, 1979*	MEDIAN 1975-1979
Aseptic meningitis	60	32	30	304	262	192
Brucellosis	10	–	2	17	7	8
Chickenpox	5,128	6,052	5,419	20,180	24,048	23,578
Diphtheria	–	2	3	–	13	13
Encephalitis: Primary (arthropod-borne & unspec.)	12	10	11	53	45	49
Post-infectious	3	4	4	8	8	14
Hepatitis, Viral: Type B	302	248	270	1,326	1,147	1,273
Type A	548	570	682	2,239	2,605	3,182
Type unspecified	217	150	157	915	878	821
Malaria	32	7	5	108	35	31
Measles (rubeola)	187	402	402	541	871	1,189
Meningococcal infections: Total	58	63	33	269	265	186
Civilian	58	63	32	268	265	185
Military	–	–	1	1	–	1
Mumps	204	491	648	1,086	1,427	2,794
Pertussis	37	24	24	95	142	134
Rubella (German measles)	80	122	219	259	505	813
Tetanus	–	–	1	4	1	3
Tuberculosis	389	544	583	2,040	2,342	2,342
Tularemia	2	1	1	7	14	10
Typhoid fever	8	8	6	16	26	26
Typhus fever, tick-borne (Rky. Mt. spotted)	1	1	–	2	6	5
Venereal diseases:						
Gonorrhea: Civilian	18,342	20,697	18,990	90,808	92,312	92,312
Military	603	546	547	2,269	2,762	2,762
Syphilis, primary & secondary: Civilian	512	517	500	2,444	2,298	2,298
Military	6	13	11	39	27	29
Rabies in animals	90	56	41	363	245	211

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1980		CUM. 1980
Anthrax	–	Poliomyelitis: Total	–
Botulism (Calif. 2)	3	Paralytic	–
Congenital rubella syndrome	6	Psittacosis † (Ohio 1, N.Dak. 1)	8
Leprosy (Calif. 1, Hawaii 5)	14	Rabies in man	–
Leptospirosis †	3	Trichinosis † (Mass. 3)	4
Plague	–	Typhus fever, flea-borne (endemic, murine) (Hawaii 1)	1

*Delayed reports received for calendar year 1979 are used to update last year's weekly and cumulative totals.

†Delayed reports: Leptospirosis: Ohio +1 (1979); Psittacosis: Ohio +1, Md. +1 (1979); Trichinosis: N.J. +7 (1979)

TABLE III. Cases of specified notifiable diseases, United States, weeks ending February 2, 1980, and February 3, 1979, (5th 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	60	10	5,128	–	–	12	10	3	302	548	217	32	108
NEW ENGLAND	4	–	757	–	–	3	–	–	16	10	6	4	8
Maine†	–	–	199	–	–	–	–	–	–	–	–	–	–
N.H.	1	–	28	–	–	–	–	–	–	–	–	1	1
Vt.	–	–	76	–	–	–	–	–	–	–	–	–	–
Mass.	1	–	238	–	–	2	–	–	6	5	6	3	6
R.I.	–	–	29	–	–	–	–	–	2	2	–	–	1
Conn.	2	–	187	–	–	1	–	–	8	3	–	–	–
MID. ATLANTIC	10	–	346	–	–	–	–	–	48	25	16	7	12
Upstate N.Y.	2	–	159	–	–	–	–	–	10	9	5	–	–
N.Y. City	3	–	69	–	–	–	–	–	30	6	5	3	5
N.J.†	4	–	NN	–	–	–	–	–	8	10	6	3	3
Pa.	1	–	118	–	–	–	–	–	NA	NA	NA	1	4
E.N. CENTRAL	1	–	2,232	–	–	1	–	–	21	53	19	–	1
Ohio	–	–	201	–	–	1	–	–	10	11	7	–	1
Ind.	–	–	307	–	–	–	–	–	2	6	7	–	–
Ill.	–	–	289	–	–	–	–	–	–	16	1	–	–
Mich.	1	–	921	–	–	–	–	–	9	17	4	–	–
Wis.	–	–	514	–	–	–	–	–	–	3	–	–	–
W.N. CENTRAL	1	–	857	–	–	–	1	–	10	20	5	3	5
Minn.	–	–	3	–	–	–	–	–	2	6	–	3	4
Iowa	1	–	452	–	–	–	1	–	3	4	1	–	1
Mo.	–	–	65	–	–	–	–	–	5	3	4	–	–
N. Dak.	–	–	4	–	–	–	–	–	–	–	–	–	–
S. Dak.	–	–	9	–	–	–	–	–	–	4	–	–	–
Nebr.	–	–	4	–	–	–	–	–	–	3	–	–	–
Kans.	–	–	320	–	–	–	–	–	–	–	–	–	–
S. ATLANTIC	14	1	521	–	–	1	2	1	74	96	36	5	13
Del.	–	–	21	–	–	–	–	–	–	–	–	–	–
Md.	1	–	18	–	–	1	–	–	7	1	5	2	2
D.C.	1	–	1	–	–	–	–	–	–	–	–	–	–
Va.	1	–	10	–	–	–	2	–	6	5	9	2	5
W. Va.†	1	–	231	–	–	–	–	–	1	6	–	–	1
N.C.	4	–	NN	–	–	–	–	1	6	12	7	–	1
S.C.†	–	–	11	–	–	–	–	–	9	6	1	–	–
Ga.	–	1	1	–	–	–	–	–	17	24	–	–	–
Fla.†	6	–	228	–	–	–	–	–	28	42	14	1	4
E.S. CENTRAL	4	–	104	–	–	1	–	–	30	40	8	–	–
Ky.	–	–	39	–	–	–	–	–	11	16	–	–	–
Tenn.	–	–	NN	–	–	1	–	–	10	8	2	–	–
Ala.	4	–	44	–	–	–	–	–	5	13	6	–	–
Miss.	–	–	21	–	–	–	–	–	4	3	–	–	–
W.S. CENTRAL	9	–	183	–	–	1	–	–	19	74	61	2	2
Ark.	–	–	2	–	–	–	–	–	1	11	2	1	1
La.	1	–	NN	–	–	1	–	–	3	11	2	–	–
Okla.†	1	–	–	–	–	–	–	–	4	5	4	1	1
Tex.	7	–	181	–	–	–	–	–	11	47	53	–	–
MOUNTAIN	1	–	80	–	–	2	–	–	8	125	32	–	8
Mont.	1	–	23	–	–	–	–	–	–	–	–	–	–
Idaho	–	–	–	–	–	–	–	–	1	3	1	–	–
Wyo.	–	–	–	–	–	–	–	–	–	–	–	–	1
Colo.	–	–	52	–	–	–	–	–	1	14	2	–	3
N. Mex.	–	–	–	–	–	–	–	–	2	1	–	–	–
Ariz.	–	–	NN	–	–	–	–	–	–	39	13	–	3
Utah	–	–	3	–	–	2	–	–	–	4	1	–	–
Nev.	–	–	2	–	–	–	–	–	4	64	15	–	1
PACIFIC	16	9	48	–	–	3	7	2	76	105	34	11	59
Wash.†	–	–	37	–	–	–	2	–	1	7	1	5	9
Oreg.	–	–	1	–	–	1	–	2	8	7	–	–	1
Calif.†	12	9	–	–	–	2	3	–	57	85	33	6	48
Alaska	–	–	5	–	–	–	1	–	2	–	–	–	1
Hawaii	4	–	5	–	–	–	1	–	8	6	–	–	–
Guam	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	–
P.R.	–	–	6	–	–	–	–	–	4	4	2	–	–
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: Bruc.: S.C. –2; Chickenpox: Maine –2, W.Va. –2, Fla. +16, Wash. +299, Calif. +8; Hep. A: Fla. +1; Hep. unsp.: N.J. –1, Okla. +1.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending February 2, 1980, and February 3, 1979, (5th 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	187	541	871	58	269	265	204	1,086	37	80	259	4
NEW ENGLAND	2	25	62	1	7	9	45	180	–	3	23	–
Maine†	–	–	–	–	–	–	9	47	–	1	3	–
N.H.	–	6	1	–	–	1	–	–	–	1	10	–
Vt.	1	17	2	–	–	–	–	–	–	–	–	–
Mass.†	–	–	–	1	4	5	16	61	–	1	3	–
R.I.	–	1	59	–	–	–	1	7	–	–	–	–
Conn.	1	1	–	–	3	3	19	65	–	–	7	–
MID. ATLANTIC	74	108	27	10	40	37	30	117	4	4	15	1
Upstate N.Y.	22	31	11	5	18	15	5	10	4	3	9	–
N.Y. City	4	29	12	3	9	11	4	16	–	1	3	–
N.J.	14	14	–	1	8	9	5	27	–	–	2	–
Pa.	34	34	4	1	5	2	16	64	–	–	1	1
E.N. CENTRAL	15	70	251	4	24	19	54	353	23	31	82	–
Ohio†	–	8	2	3	11	1	23	126	–	1	1	–
Ind.	1	1	20	1	3	5	2	15	–	23	36	–
Ill.	4	8	125	–	2	–	7	48	23	1	3	–
Mich.	2	22	79	–	8	12	12	101	–	3	31	–
Wis.†	8	31	25	–	–	1	10	63	–	3	11	–
W.N. CENTRAL	13	50	64	–	4	7	13	66	–	4	18	1
Minn.	12	30	11	–	1	1	–	3	–	–	2	1
Iowa†	–	1	–	–	–	3	1	9	–	–	–	–
Mo.	1	17	50	–	2	2	5	36	–	–	4	–
N. Dak.	–	–	1	–	1	–	1	1	–	–	1	–
S. Dak.	–	–	–	–	–	–	–	–	–	–	–	–
Nebr.	–	2	–	–	–	–	1	7	–	–	–	–
Kans.	–	–	2	–	–	1	5	10	–	4	11	–
S. ATLANTIC	52	160	53	17	61	84	26	136	2	3	23	1
Del.	–	–	–	–	–	2	2	12	–	–	–	–
Md.	–	1	1	2	9	4	13	56	–	–	–	–
D.C.	–	–	–	–	–	–	–	–	–	–	–	–
Va.†	10	22	6	1	7	11	–	10	–	1	2	–
W. Va.†	–	3	13	–	3	3	3	12	–	–	5	–
N.C.	–	1	1	4	11	10	3	26	–	–	1	–
S.C.	1	1	–	–	5	10	–	2	–	1	9	1
Ga.	30	103	–	2	8	14	–	–	2	–	–	–
Fla.	11	29	32	8	18	30	5	18	–	1	6	–
E.S. CENTRAL	3	28	10	5	26	18	15	73	1	4	14	–
Ky.	2	19	5	–	5	7	12	58	1	2	5	–
Tenn.	1	2	1	4	10	8	1	3	–	1	8	–
Ala.	–	6	3	1	10	1	2	3	–	1	1	–
Miss.	–	1	1	–	1	2	–	9	–	–	–	–
W.S. CENTRAL	7	11	84	5	23	33	7	39	2	2	5	–
Ark.	–	–	5	–	2	3	1	3	–	1	1	–
La.	–	–	6	2	4	5	1	1	–	–	–	–
Okla.	–	1	–	1	2	7	–	–	–	–	–	–
Tex.	7	10	73	2	15	18	5	35	2	1	4	–
MOUNTAIN	5	24	35	2	16	19	3	53	–	1	4	–
Mont.	–	–	12	–	1	2	–	16	–	–	–	–
Idaho	–	–	–	–	1	1	3	4	–	–	–	–
Wyo.	–	–	–	–	1	–	–	–	–	–	–	–
Colo.	1	1	1	1	7	–	–	8	–	–	–	–
N. Mex.	–	–	9	–	–	2	–	–	–	–	–	–
Ariz.	–	9	–	1	4	11	–	9	–	–	–	–
Utah	3	12	11	–	1	2	–	15	–	1	2	–
Nev.	1	2	2	–	1	1	–	1	–	–	2	–
PACIFIC	16	65	285	14	68	39	11	69	5	28	75	1
Wash.†	1	11	221	5	28	5	1	14	2	–	5	–
Oreg.	–	–	1	2	5	1	1	17	–	6	9	–
Calif.	15	52	60	7	35	32	9	36	2	22	61	1
Alaska	–	–	–	–	–	–	–	2	1	–	–	–
Hawaii	–	2	3	–	–	1	–	–	–	–	–	–
Guam	NA	–	–	–	–	–	NA	–	NA	NA	–	–
P.R.	–	1	4	1	2	–	–	5	1	–	–	1
V.I.	–	–	1	–	–	–	–	–	–	–	–	–
Pac. Trust Terr.	NA	–	2	–	–	1	NA	–	NA	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: Measles: Wis. –14, Iowa –1, W.Va. –1; Men. inf.: Ohio +1, Va. –1 civ. +1 mil., W.Va. –1; Mumps: Maine +3, Mass. –1, Wash. +2; Rubella: W.Va. –1, Wash. +1.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending February 2, 1980, and February 3, 1979, (5th 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	389	2,040	7	8	16	1	2	18,342	90,808	92,312	512	2,444	2,298	363
NEW ENGLAND	9	60	–	2	3	–	–	519	2,707	2,446	44	94	45	3
Maine	–	1	–	–	–	–	–	31	176	188	–	–	–	3
N.H.	1	2	–	–	–	–	–	17	102	76	–	–	2	–
Vt.	1	3	–	–	–	–	–	16	82	42	–	–	–	–
Mass.	3	24	–	2	2	–	–	239	997	1,037	28	55	33	–
R.I.	–	8	–	–	1	–	–	27	123	198	–	2	–	–
Conn.	4	22	–	–	–	–	–	189	1,227	905	16	37	10	–
MID. ATLANTIC	78	365	–	–	–	–	–	2,253	9,564	9,253	74	372	365	–
Upstate N.Y.	12	48	–	–	–	–	–	380	1,215	803	6	19	24	–
N.Y. City	25	144	–	–	–	–	–	1,400	4,287	3,770	48	268	257	–
N.J.	12	69	–	–	–	–	–	183	1,514	2,017	9	36	48	–
Pa.	29	104	–	–	–	–	–	290	2,548	2,663	11	49	36	–
E.N. CENTRAL	80	257	–	–	2	–	–	3,081	15,010	14,534	37	164	341	34
Ohio	22	55	–	–	–	–	–	892	4,746	3,757	–	29	69	–
Ind.	5	33	–	–	–	–	–	343	1,646	1,151	12	28	17	5
Ill.	33	115	–	–	–	–	–	626	3,545	4,981	1	52	215	15
Mich.	14	36	–	–	2	–	–	845	3,350	3,291	24	48	29	–
Wis.	6	18	–	–	–	–	–	375	1,723	1,354	–	7	11	14
W.N. CENTRAL	16	73	3	–	–	–	–	774	4,076	4,332	7	23	20	94
Minn.	–	12	–	–	–	–	–	49	683	766	3	7	8	15
Iowa	–	5	–	–	–	–	–	57	480	608	–	1	3	27
Mo.	6	33	2	–	–	–	–	349	1,681	1,688	4	13	4	33
N. Dak.†	–	2	–	–	–	–	–	7	52	77	–	1	–	10
S. Dak.	4	4	–	–	–	–	–	31	127	151	–	–	–	3
Nebr.	3	3	1	–	–	–	–	117	359	280	–	1	–	–
Kans.	3	14	–	–	–	–	–	164	694	762	–	–	5	6
S. ATLANTIC	84	431	1	2	4	1	2	4,344	22,548	21,944	132	589	578	32
Del.	3	5	–	–	–	–	–	74	342	321	1	2	4	–
Md.	12	60	1	–	–	–	–	357	2,047	2,777	21	55	37	–
D.C.	–	16	–	–	–	–	–	329	1,550	1,433	9	42	46	–
Va.	10	57	–	1	1	–	–	445	2,010	2,171	9	47	65	–
W. Va.†	6	29	–	–	–	–	–	59	302	319	1	16	15	1
N.C.	23	80	–	–	–	1	2	716	3,456	3,371	8	50	64	–
S.C.	3	36	–	–	–	–	–	528	2,327	1,770	9	20	23	8
Ga.	10	35	–	–	–	–	–	723	4,134	3,929	35	157	148	18
Fla.†	17	113	–	1	3	–	–	1,113	6,380	5,853	39	200	176	5
E.S. CENTRAL	29	250	1	–	–	–	–	1,678	7,169	8,612	38	214	145	23
Ky.	11	39	–	–	–	–	–	100	1,048	1,140	–	14	14	14
Tenn.†	18	57	1	–	–	–	–	458	2,521	2,987	11	94	63	8
Ala.	–	43	–	–	–	–	–	789	1,971	2,769	11	35	27	1
Miss.†	–	111	–	–	–	–	–	331	1,629	1,716	16	71	41	–
W.S. CENTRAL	25	130	–	–	–	–	–	2,682	11,568	12,747	69	464	359	126
Ark.	–	–	–	–	–	–	–	136	784	1,008	5	14	15	19
La.	5	41	–	–	–	–	–	473	1,557	1,935	17	100	59	1
Okla.	3	14	–	–	–	–	–	197	1,261	1,106	2	5	6	16
Tex.†	17	75	–	–	–	–	–	1,876	7,966	8,698	45	345	279	90
MOUNTAIN	9	82	–	–	–	–	–	855	3,597	3,851	28	61	39	7
Mont.†	–	1	–	–	–	–	–	22	83	220	–	–	3	–
Idaho	–	3	–	–	–	–	–	81	192	150	–	2	2	–
Wyo.	3	3	–	–	–	–	–	17	102	93	1	3	3	–
Colo.†	–	32	–	–	–	–	–	247	939	979	4	19	16	–
N. Mex.	1	16	–	–	–	–	–	90	570	536	2	9	6	–
Ariz.	3	22	–	–	–	–	–	217	889	1,189	20	20	6	7
Utah	2	3	–	–	–	–	–	42	191	173	–	4	–	–
Nev.	–	2	–	–	–	–	–	139	631	511	1	4	3	–
PACIFIC	59	392	2	4	7	–	–	2,156	14,569	14,593	83	463	406	44
Wash.†	5	33	–	–	–	–	–	220	1,306	1,218	7	7	19	–
Oreg.	7	33	–	–	–	–	–	177	934	1,125	3	9	20	–
Calif.	47	318	2	4	7	–	–	1,597	11,761	11,628	67	437	361	44
Alaska	–	–	–	–	–	–	–	120	385	437	–	1	1	–
Hawaii	–	8	–	–	–	–	–	42	183	185	6	9	5	–
Guam	NA	–	–	NA	–	NA	–	NA	–	10	NA	–	–	–
P.R.	7	11	–	–	–	–	–	NA	103	172	NA	31	44	3
V.I.	–	–	–	–	–	–	–	4	11	13	–	3	–	–
Pac. Trust Terr.	NA	–	–	NA	–	NA	–	NA	–	46	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: W.Va. +5, Fla. –1, Miss. –78, Mont. +1, Colo. –1; GC: Mont. +25 civ.; Syphilis: N.Dak. –1 civ., W.Va. –14 civ., Tex. –1 civ., Wash. +40 civ. +4 mil.; An. rabies: Fla. +3, Tenn. +2.

TABLE IV. Deaths in 121 U.S. cities,* week ending February 2, 1980 (5th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	<1	
NEW ENGLAND	735	493	163	30	23	50
Boston, Mass.	193	110	56	11	7	16
Bridgeport, Conn.	43	31	7	2	–	5
Cambridge, Mass.	27	23	3	–	–	5
Fall River, Mass.	26	18	6	–	–	–
Hartford, Conn.	66	38	16	4	4	–
Lowell, Mass.	32	24	6	2	–	2
Lynn, Mass.	23	15	6	2	–	–
New Bedford, Mass.	24	18	5	1	–	2
New Haven, Conn.	62	40	14	2	3	–
Providence, R.I.	66	50	12	–	3	6
Somerville, Mass.	7	5	2	–	–	–
Springfield, Mass.	60	43	11	3	3	2
Waterbury, Conn.	48	36	7	3	1	7
Worcester, Mass.	58	42	12	–	2	5
MID. ATLANTIC	2,954	1,980	674	157	69	154
Albany, N.Y.	44	28	10	2	3	1
Allentown, Pa.	25	19	5	1	–	1
Buffalo, N.Y.	103	65	29	3	3	11
Camden, N.J.	51	37	11	1	2	2
Elizabeth, N.J.	30	27	2	1	–	2
Erie, Pa.†	33	23	9	–	1	1
Jersey City, N.J.	75	42	29	2	1	–
Newark, N.J.	63	31	19	9	4	4
N.Y. City, N.Y.	1,703	1,170	360	99	28	85
Paterson, N.J.	28	24	3	–	–	1
Philadelphia, Pa.†	245	141	66	18	12	9
Pittsburgh, Pa.†	91	60	21	3	6	4
Reading, Pa.	45	37	6	2	–	6
Rochester, N.Y.	141	98	34	6	1	13
Schenectady, N.Y.	30	17	9	2	1	2
Scranton, Pa.†	24	16	7	1	–	1
Syracuse, N.Y.	107	68	26	3	6	3
Trenton, N.J.	52	32	15	1	–	1
Utica, N.Y.	30	21	5	3	–	3
Yonkers, N.Y.	34	24	8	–	1	4
E.N. CENTRAL	2,314	1,424	590	144	77	88
Akron, Ohio	63	35	18	4	4	–
Canton, Ohio	41	31	8	–	–	–
Chicago, Ill.	532	324	130	46	17	18
Cincinnati, Ohio	166	117	39	2	4	18
Cleveland, Ohio	193	115	43	15	11	4
Columbus, Ohio	130	79	34	8	5	9
Dayton, Ohio	103	58	27	2	7	2
Detroit, Mich.	276	156	77	27	6	4
Evansville, Ind.	52	35	11	5	–	3
Fort Wayne, Ind.	57	30	19	2	3	2
Gary, Ind.	26	15	7	3	–	1
Grand Rapids, Mich.	40	26	10	1	–	1
Indianapolis, Ind.	152	89	46	7	5	5
Madison, Wis.	50	32	11	3	4	4
Milwaukee, Wis.	138	92	36	6	1	1
Peoria, Ill.	45	31	9	–	3	9
Rockford, Ill.	43	22	10	6	2	–
South Bend, Ind.	35	24	8	1	–	3
Toledo, Ohio	121	84	28	5	3	3
Youngstown, Ohio	51	29	19	1	2	1
W.N. CENTRAL	775	509	180	36	21	38
Des Moines, Iowa	64	38	16	8	–	–
Duluth, Minn.	21	10	9	1	1	2
Kansas City, Kans.	24	15	4	2	2	–
Kansas City, Mo.	124	85	24	4	3	5
Lincoln, Nebr.	51	38	9	2	–	7
Minneapolis, Minn.	104	68	20	4	7	6
Omaha, Nebr.	97	60	34	2	–	5
St. Louis, Mo.	167	107	41	6	7	5
St. Paul, Minn.	67	52	11	1	–	2
Wichita, Kans.	56	36	12	6	1	6

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	<1	
S. ATLANTIC	1,189	726	301	93	34	61
Atlanta, Ga.	129	67	31	21	5	4
Baltimore, Md.	128	83	34	7	3	3
Charlotte, N.C.	70	41	24	4	1	3
Jacksonville, Fla.	89	46	32	1	3	3
Miami, Fla.	129	80	37	5	–	3
Norfolk, Va.	52	35	11	2	4	3
Richmond, Va.	103	73	24	3	1	12
Savannah, Ga.	34	20	8	5	1	3
St. Petersburg, Fla.	114	100	10	2	1	9
Tampa, Fla.	85	56	11	13	4	7
Washington, D.C.	204	93	66	26	9	6
Wilmington, Del.	52	32	13	4	2	5
E.S. CENTRAL	751	467	183	34	45	42
Birmingham, Ala.	117	76	25	4	7	3
Chattanooga, Tenn.	73	44	20	4	3	6
Knoxville, Tenn.	38	28	8	1	1	–
Louisville, Ky.	128	80	30	6	8	15
Memphis, Tenn.	183	109	42	8	18	8
Mobile, Ala.	63	36	15	7	4	2
Montgomery, Ala.	36	28	6	1	1	2
Nashville, Tenn.	113	66	37	3	3	6
W.S. CENTRAL	1,382	771	355	117	54	51
Austin, Tex.	50	35	9	4	–	4
Baton Rouge, La.	52	25	13	7	4	5
Corpus Christi, Tex.	30	22	2	–	3	1
Dallas, Tex.	225	127	55	20	10	7
El Paso, Tex.	69	38	20	4	–	7
Fort Worth, Tex.	93	51	20	10	6	5
Houston, Tex.	347	161	110	35	9	3
Little Rock, Ark.	66	40	18	3	4	5
New Orleans, La.	132	67	43	10	4	–
San Antonio, Tex.	164	101	38	11	9	8
Shreveport, La.	63	40	15	4	3	2
Tulsa, Okla.	91	64	12	9	2	4
MOUNTAIN	622	375	174	40	12	20
Albuquerque, N.Mex	59	35	19	3	2	4
Colo. Springs, Colo.	32	16	9	2	3	–
Denver, Colo.	116	75	33	6	–	7
Las Vegas, Nev.	75	41	25	5	–	5
Ogden, Utah	21	14	5	1	–	–
Phoenix, Ariz.	150	92	39	7	5	3
Pueblo, Colo.	25	20	2	2	–	1
Salt Lake City, Utah	47	24	17	3	–	–
Tucson, Ariz.	97	58	25	11	2	–
PACIFIC	2,067	1,375	430	123	64	97
Berkeley, Calif.	16	9	5	2	–	1
Fresno, Calif.	85	56	14	4	6	6
Glendale, Calif.	35	28	4	2	1	3
Honolulu, Hawaii	72	41	13	9	3	8
Long Beach, Calif.	118	85	24	3	2	6
Los Angeles, Calif.	570	381	118	38	13	32
Oakland, Calif.	69	44	15	3	5	2
Pasadena, Calif.	33	27	4	1	–	2
Portland, Oreg.	164	111	32	10	9	1
Sacramento, Calif.	63	33	19	4	3	7
San Diego, Calif.	237	164	42	12	7	4
San Francisco, Calif.	167	115	36	6	5	5
San Jose, Calif.	194	115	54	12	5	4
Seattle, Wash.	140	93	33	9	1	9
Spokane, Wash.	64	49	9	3	2	5
Tacoma, Wash.	40	24	8	5	2	2
TOTAL	12,789	8,120	3,050	774	399	601

*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.

Epidemiologic Notes and Reports

Tularemia Acquired from a Bear — Washington

A 30-year-old man shot and killed an apparently healthy black bear on the Olympic Peninsula in western Washington on June 23, 1979. While skinning the bear, the man sustained a small laceration on the dorsum of his left hand.

Within 2 days, the wound suppurated, and the man had onset of fever, myalgias, headache, and painful swelling in the left axilla and epitrochlear region. Approximately 1 week after the injury, a physician prescribed doxycycline. The wound healed, and the systemic symptoms promptly resolved; the lymphadenopathy persisted, however. After 4 days, therapy was changed to cephradine; however, the axillary mass increased in size and became fluctuant. While the patient was on the cephradine (now 2 weeks after the injury), the axillary mass was incised. A culture of purulent exudate revealed no growth; a Gram stain was reported to show no organisms. The complete blood count was normal, and the erythrocyte sedimentation rate was 40 mm/hr. Antibiotic therapy was changed to tetracycline hydrochloride, 2 g daily for 10 days. When the patient was examined on August 6, approximately 7 days after completing the tetracycline course, the surgical wound had healed, but a 3-cm, firm, tender, non-fluctuant left axillary mass was present. The epitrochlear adenopathy had resolved. A repeat 10-day course of tetracycline hydrochloride, 2 g daily, was accompanied by complete clinical resolution, and on August 31 the physical examination was normal.

Reciprocal tularemia agglutination titers were 5120 on August 1 and August 6, and 2560 on August 31. By December 5, the titer had dropped to 1280. The bear skin had been frozen at approximately −20 C since June 24; cultures of subcutaneous tissue and phalangeal bone marrow, taken on September 5, were negative for *Francisella tularensis* and other pathogens.

The patient had neither hunted nor had contact with animals of any species for several months before the June bear hunt, and there was no history of bites by flies or other insects.

Reported by D Chase, MD, Forks, Washington; HH Handsfield, MD, Seattle-King County, Dept of Public Health; J Allard, PhD, J Taylor, MD, MPH, State Epidemiologist, Washington Dept of Social and Health Services; and Bacterial Zoonoses Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: Although tularemia has been demonstrated in many animal species, elevated antibody titers to *F. tularensis* have only recently been found in bears (*1*). This case is believed to be the first reported case of human tularemia associated with bears and would substantiate the significance of the recently found high antibody titers in this species.

Reference

1. Binninger CE, Beecham JJ, Thomas LA, Winward LD. A serological survey for selected infectious diseases in Idaho black bears. J Wildl Dis (in press).

Current Trends

Antigenic Analysis of Influenza B Viruses

Results of hemagglutination-inhibition (HI) tests with ferret sera reveal that recently isolated influenza B viruses have some antigenic heterogeneity and variation of avidity, which make them difficult to characterize. In general, these recently isolated strains from Southeast Asia and the United States are inhibited less by antisera to the prototype B/Hong Kong/5/72 virus than is the 1972 reference strain. However, antisera to some of

Influenza B Virus — Continued

these recent isolates (e.g., B/Singapore/222/79) are generally more broadly reactive (Table 1). A few examples of another distinct antigenic variant, exemplified by B/Buenos Aires/37/79, have been identified; these viruses are poorly cross-reactive with B/Hong Kong/5/72-like and B/Singapore/222/79-like strains in reciprocal HI tests (Table 1).

Reported by the World Health Organization Collaborating Center for Influenza, Virology Div, Bur of Laboratories, CDC.

TABLE 1. Hemagglutination-inhibition (HI) reactions of influenza B viruses* representative of those circulating in 1979-1980

Antigen	Ferret sera		
	B/Hong Kong/5/72	B/Singapore/222/79	B/Buenos Aires/37/79
B/Hong Kong/5/72	160	320	15
B/Singapore/222/79†	40	480	40
B/Buenos Aires/37/79‡	10	40	160

*The antigenic character of influenza virus hemagglutinin can be assessed by HI testing of virus isolates, using sera obtained from ferrets after infection with prototype reference strains. The HI antibody titers obtained with the homologous virus (underlined in the table) are compared with titers given by recent influenza isolates (reading vertically in the table). An isolate which reacts with a reference antiserum at a titer which differs by more than a 2-fold dilution from the titer given by this serum with homologous virus is considered to be antigenically distinct if, on reciprocal testing, the isolate demonstrates normal avidity for antibody (*1*). Antigenic differences between 2 viruses, reflected in reciprocal tests using antisera to both viruses, may be symmetrical (i.e., differences are seen with both sera) or asymmetrical (difference seen with only 1 serum).

†Variant showing asymmetric antigenic drift from B/Hong Kong/5/72.

‡Variant showing reciprocal antigenic drift from B/Hong Kong/5/72.

Reference

1. Dowdle WA, Kendal AP, Noble GR. Influenza viruses. In: Lennette EH, Schmidt NJ, eds. Viral, rickettsial and chlamydial infections. Washington, DC: American Public Health Association, 1979:585-609.

Erratum, Vol. 29, No. 3

p 25 In the article "Human-to-Human Transmission of Rabies via a Corneal Transplant — France," Drs. Galian, Guerin, Lamotte, Le Charpentier, and Mikol should have been named in affiliation with l'hôpital Lariboisière in Paris, not l'hôpital de Gonesse, as stated. Also, the following name was inadvertently omitted: Dr. Cochet, l'hôpital de Gonesse, Gonesse, France.

The Morbidity and Mortality Weekly Report, circulation 96,486, 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.

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