

MNWR

MORBIDITY AND MORTALITY WEEKLY REPORT

- Epidemiologic Notes and Reports**
505 Psittacosis — California
513 Follow-up on Mount St. Helens
International Notes
506 *Salmonella hadar* — England and Wales
Current Trends
514 Influenza Nomenclature

Epidemiologic Notes and Reports

Psittacosis — California

Since July 1975, the number of laboratory-confirmed cases of psittacosis in pet birds has increased greatly in California. Twenty-seven cases were reported in the last 6 months of 1975; 67 cases in 1976; 120 cases in 1977; 192 cases in 1978; 271 cases in 1979; and 147 cases in the first 3 months of 1980. The infected birds were from private homes, private aviaries, pet shops, wholesale dealers, and commercial breeders. The majority of the birds had been imported into the United States through privately owned quarantine stations operated under United States Department of Agriculture (USDA) supervision.

This increase in psittacosis in pet birds has been associated with an increase in human cases in California. In the 10-year period 1965-1974, an average of 8 human cases per year occurred in the state, as compared to 24 cases per year in the period 1975-1978. In 1979, 30 human cases were reported including 1 fatality. Below is the description of a recent investigation of 2 human cases of psittacosis in the state.

On March 6, 1980, a California physician saw a 17-year-old boy who had missed a week of school complaining of fever, chills, and a productive cough. After physical examination revealed moist rales and an expiratory wheeze, the physician prescribed a 10-day course of erythromycin (400 mg twice daily) and a bronchodilator.

The 16-year-old brother of this patient presented to the same physician on March 13. This boy had been absent from school for several days with fatigue, fever, and a productive cough. Upon examination, the physician noted moist rales in the lung and enlarged, red, lymphoid follicles on the posterior pharyngeal wall.

At this time the physician discovered that both boys were exposed to 2 rosella parakeets purchased by their father from a California quarantine station on February 5 and 11, 1980. The parakeets were kept in cages in a small room upstairs in the family's home. The father initially had taken care of the birds but turned over this responsibility to his sons when he left on a trip. Around February 21, the bird purchased on February 5 became ill; it died on February 24. The second bird also became ill and died February 27. No postmortem examination was done on either bird.

Suspecting psittacosis, the physician took acute- and convalescent-phase serum specimens from both boys and placed the 16-year-old on a 10-day course of tetracycline (250 mg 4 times daily). The brothers recovered without complications. Titers obtained by complement-fixation tests of serum specimens from the first ill boy fell from 256 to 64 between March 13-27. Titers for the second patient rose from 16 to 256 during the same time.

Investigation revealed that these birds were part of a shipment of 618 psittacines that had been imported from Belgium and arrived in California on December 20, 1979. At

Psittacosis — Continued

that time, they were immediately started on treatment with chlortetracycline (CTC) mixed in their feed. Actual amounts eaten by individual birds were not noted; however, it was documented that this group ate about 50% less of their daily ration during the first 10 days of treatment than they did during the final 10 days of the 32-day treatment period. Birds that survived the quarantine period were released on January 23. Some of the 49 birds that had died during the quarantine period were thought to have had fowl pox. However, several dead birds were noted to have enlarged spleens and livers during postmortem examinations. *Chlamydia psittaci* was isolated from one of these postmortem specimens.

On February 14, a pair of rosella parakeets from this shipment was purchased by a private individual. Five days later the female bird died and the male developed labored breathing. It died on February 23; fluorescent-antibody (FA) tests of tissue specimens were positive for *C. psittaci*. Positive FA results were also obtained with specimens from 4 of 5 dead birds submitted to a laboratory by another individual who had purchased 20 birds from this same shipment on March 1. At least 5 additional FA-confirmed cases of psittacosis in birds were documented by private veterinary practitioners. Veterinarians diagnosed psittacosis (unconfirmed) in approximately 50 other birds that were purchased by private individuals from this same lot.

Reported by E Bayer, DVM, Public Health Veterinarian, J Chin, MD, State Epidemiologist, California Dept of Health Services; S McDonald, DVM, Brookfield Zoo, Brookfield, Illinois; Bacterial Zoonoses Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: Although psittacosis is a relatively rare disease in the United States, the number of cases has risen in recent years. The number of cases not associated with poultry processing progressively rose from 36 to 1973 to 146 in 1978. Most of these cases were associated with exposure to psittacine birds of domestic or foreign origin.

All birds entering the United States, except from Canada, are required by the USDA to undergo a 30-day quarantine. Most birds are quarantined in privately owned facilities under USDA supervision. Although the quarantine period was primarily implemented to prevent introduction of viscerotropic velogenic Newcastle disease, quarantined psittacine birds are also treated with CTC to control psittacosis. The data reported from California support the experimental studies showing that a 30-day CTC treatment is sometimes not adequate, and a 45-day treatment for preventing psittacosis infections in larger psittacine birds may be more effective.

References

1. Arnstein P, Eddie B, Meyer KF. Control of psittacosis by group chemotherapy of infected parrots. *Am J Vet Res* 1968;29:2213-27.
2. Wachendorfer JG. Epidemiology and control of psittacosis. *J Am Vet Med Assoc* 1973; 162:298-303.

International Notes

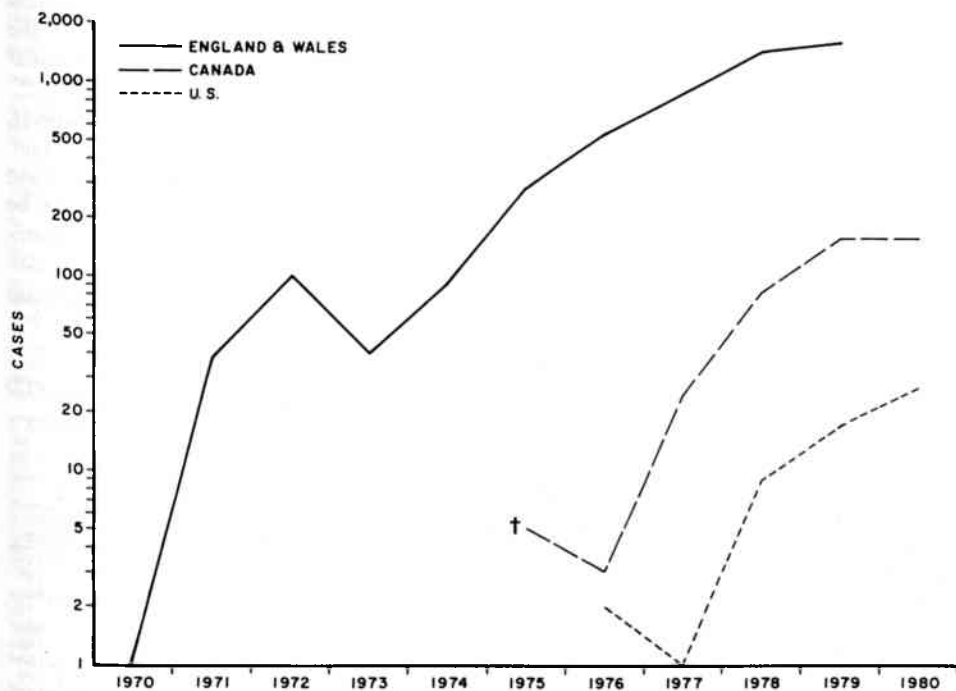
Salmonella hadar — England and Wales

The importance of *Salmonella hadar* as a cause of human infections in England and Wales has increased dramatically since 1974 (Figure 1). Previously this serotype was uncommon; up to 1971, only 8 strains had been isolated from humans, according to the Public Health Laboratory's Division of Enteric Pathogens (PHLDEP), the *Salmonella*

Salmonella hadar - Continued

reference center for England and Wales. In 1975, *S. hadar* accounted for 3% of all isolations from humans, but in 1979 it was responsible for 15% of human isolations. *S. hadar* is now the second most prevalent serotype isolated from humans in England and Wales. (*S. typhimurium* is first, accounting for 35% of human isolations.)

FIGURE 1. Human cases of *Salmonella hadar* gastroenteritis in England, Canada, and the United States,* 1970-1980†



*Data for England adapted from material provided by the Central Public Health Laboratories, London; those for Canada provided by the National Enteric Reference Center, Ottawa; and those for the United States provided by the CDC *Salmonella* Surveillance Program, Atlanta.

†All cases represented except 1 in 1971.

In 1973 and 1974, *S. hadar* became established in the flocks of the largest turkey breeder in Britain. Subsequent distribution of infected breeding stock spread the serotype to numerous rearing units throughout the country. The serotype seems to be particularly prevalent in large turkeys produced for the commercial catering trade, and it is likely that special genetic lines of turkeys are affected, with the nucleus breeding flock remaining a reservoir of infection. The recycling of waste products from processing plants has contributed to the spread, and *S. hadar* is now prevalent in broiler chicken flocks; since 1978, about 10% of strains from chickens received in the PHLDEP are *S. hadar*.

Turkey was the vehicle of infection for 46% of all the general outbreaks of food poisoning caused by *S. hadar* between 1975 and 1979. Many of these outbreaks occurred in restaurants and hotels using large birds. Inquiries showed that poor catering practices such as insufficient thawing, inadequate cooking, and storage of cooked meat without

Salmonella hadar — Continued

refrigeration were contributing factors. Since 1978, about 10% of the outbreaks have involved chickens.

Because of the increased prevalence of *S. hadar*, a phage-typing scheme has been developed. Currently, 35 phage types are recognized; about 90% of all isolations from humans and poultry belong to phage type 2. The remaining phage types occur in humans, turkeys, chickens, and, to a lesser extent, bovines. The scheme has been used to study strains isolated since 1971. Type 2 can be traced back to the large turkey breeding unit in 1973 and 1974. This, however, was not the origin of the phage type in Britain because an isolation was made from a chicken in 1971. Nevertheless, the establishment of the phage type in that breeding unit was the main event in the epidemiology of *S. hadar* in Britain (1).

S. hadar needs to be eradicated from turkey breeding flocks in Britain. However, effective control will also require intervention measures at other points in the chain. These should include heat treatment of animal feeds, better animal husbandry, and improvement in catering practices. About 50% of salmonellosis cases in Britain can be traced to poultry, and until the upsurge of *S. hadar*, broiler chickens were mainly responsible. The recent epidemiology of *S. hadar* demonstrates how the introduction of *Salmonella* organisms at a strategic point in the production chain can have a major impact on human disease.

Reported by Dr. B Rowe, Div of Enteric Pathogens, Central Public Health Laboratory, London.

(Continued on page 513)

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

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

DISEASE	42nd WEEK ENDING		MEDIAN 1975-1979	CUMULATIVE, FIRST 42 WEEKS		
	October 18, 1980	October 20, 1979		October 18, 1980	October 20, 1979	MEDIAN 1975-1979
Aseptic meningitis	235	277	146	5,589	6,597	3,796
Brucellosis	1	3	5	145	141	185
Chickenpox	649	679	918	158,904	173,997	153,564
Diphtheria	—	—	—	3	58	73
Encephalitis: Primary (arthropod-borne & unsp.)	37	25	44	872	872	981
Post-infectious	3	5	5	174	196	197
Hepatitis, Viral: Type B	336	276	299	14,206	11,696	12,104
Type A	484	593	629	22,368	24,048	24,779
Type unspecified	210	253	152	9,334	8,309	6,751
Malaria	32	17	15	1,559	605	450
Measles (rubeola)	28	90	110	13,031	12,438	24,545
Meningococcal infections: Total	39	29	25	2,138	2,153	1,419
Civilian	39	27	25	2,127	2,133	1,409
Military	—	2	1	11	20	20
Mumps	68	153	291	7,455	11,719	17,104
Pertussis	37	27	39	1,377	1,126	1,287
Rubella (German measles)	26	83	78	3,404	10,956	15,223
Tetanus	—	1	1	56	57	60
Tuberculosis	480	516	557	21,951	22,202	24,350
Tularemia	2	3	3	166	168	113
Typhoid fever	14	17	12	389	420	343
Typhus fever, tick-borne (Rky. Mt. spotted)	5	8	13	1,063	965	965
Veneral diseases:						
Gonorrhea: Civilian	17,735	19,960	21,518	802,912	805,988	805,988
Military	384	634	514	22,162	22,430	22,430
Syphilis, primary & secondary: Civilian	552	601	520	21,411	20,005	19,585
Military	4	4	5	253	248	248
Rabies in animals	100	104	72	5,237	4,179	2,532

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1980		CUM. 1980
Anthrax	1	Poliomyelitis: Total	8
Botulism Calif. 3	48	Paralytic Wash. 1	6
Cholera	8	Psittacosis Colo. 1, Calif. 1	91
Congenital rubella syndrome	46	Rabies in man	—
Leprosy: Tex. 1, Utah 2	169	Trichinosis Mass. 1, N.J. 2	96
Leptospirosis	59	Typhus fever, flea-borne (endemic, murine) Tex. 2	61
Plague Calif. 1	16		

All delayed reports and corrections will be included in the following week's cumulative totals.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending October 18, 1980, and October 20, 1979 (42nd week)

REPORTING AREA	ASEPTIC MENINGITIS			BRUCELLOSIS			CHICKENPOX			DIPHTHERIA			ENCEPHALITIS			HEPATITIS (VIRAL), BY TYPE			MALARIA				
	Primary		Post-infectious		B		A		Unspecified		1980		1980		1980		1980		1980				
	1980	1979	1980	1979	1980	1979	1980	1979	1980	1979	1980	1979	1980	1979	1980	1979	1980	1979	1980	1979	1980	CUM. 1980	
UNITED STATES	235		1		649			-		3			37	25	3		336	484	210		32		1,559
NEW ENGLAND	10				93			-						1			17	7	7				93
Maine	1				34			-										1	1				14
N.H.					8			-															7
Vt.					2			-										1					1
Mass.	6				26			-									6	1	6				49
R.I.	1				1			-									2						9
Conn.	2				22			-				1					9	4					13
MID. ATLANTIC	30				48			-		1			3				42	52	14		7		210
Upstate N.Y.	11				22			-		1			2				4	5	3		2		34
N.Y. City	2				17			-		1			1				4	5	4		1		57
N.J.	11				NN			-		1							26	23	4				53
Pa.	6				9			-		1							8	19	3		4		66
E.N. CENTRAL	42				204			-		1			10	9			58	61	34		2		91
Ohio	21				14			-					6	5			10	9	11				14
Ind.					17			-						2			12	14	6				12
Ill.					23			-					1				20	24	10		2		34
Mich.	18				46			-		1			2				16	14	6				22
Wis.	3				104			-					2						1				9
W.N. CENTRAL	18				55			-		1			2				9	14	8		1		65
Minn.								-															21
Iowa	3				32			-					1				3	1					7
Mo.	13				1			-		1			1				3	3	8				13
N. Dak.					3			-															
S. Dak.								-															
Nebr.	1				1			-										1					4
Kans.	1				18			-									3	8					7
S. ATLANTIC	51				61			-					6	3			80	96	27				164
Del.					4			-															
Md.	5				3			-					4	1			14	6	6				27
D.C.								-									1						2
Va.	8				2			-					1	1			10	8	4				58
W. Va.	3				12			-					1				2	7					4
N.C.	22				NN			-					1				10	9	1				16
S.C.	4							-									12	4	1				10
Ga.					5			-									13	24					16
Fla.	9				35			-									1	18	38	15			31
E.S. CENTRAL	9				6			-					2	3			29	38	7				11
Ky.					3			-									4	18					3
Tenn.	5				NN			-									12	7	2				
Ala.	3				3			-									4	2	5				6
Miss.	1							-					3				9	11					2
W.S. CENTRAL	13				29			-					9	3			31	70	56		1		140
Ark.								-									2	10	3				9
La.	1				NN			-									6	15	3				42
Okla.	3							-									6	4	3				12
Tex.	9				29			-					4	3			17	41	47				77
MOUNTAIN	7				70			-					2	1			11	45	23		4		83
Mont.	1				37			-									1						1
Idaho								-										1					1
Wyo.	1							-															2
Colo.	4				24			-															
N. Mex.	1				6			-					1	1			6	19	4		1		33
Ariz.								-										2					6
Utah					NN			-									2	18	17				16
Nev.					3			-					1				1		1				15
PACIFIC								-									1	4	1		1		9
Wash.	55				83			-					3	2			59	101	34		17		702
Oreg.	4				61			-									7	14	4				48
Calif.	4				1			-									17	23	3		1		40
Alaska	47							-					3	1			35	61	27		15		591
Hawaii					19			-										1					6
					2			-										2				1	17
Guam	NA				NA			-									NA	NA	NA		NA		3
P.R.	2				28			-									2	10	4				3
V.I.	NA				NA			-									NA	NA	NA		NA		
Pac. Trust Terr.	NA				NA			-									NA	NA	NA		NA		

NA: Not notifiable.

NA: Not available.

All delayed reports and corrections will be included in the following week's cumulative totals.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending October 18, 1980, and October 20, 1979 (42nd 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	28	13,031	12,438	39	2,138	2,153	68	7,455	37	26	3,404	56
NEW ENGLAND	1	672	290	1	113	123	2	572	-	1	206	3
Maine	-	33	17	-	5	7	2	295	-	-	68	1
N.H.	-	328	33	-	8	13	-	22	-	-	37	-
Vt.	-	226	119	-	14	7	-	12	-	-	3	-
Mass.	-	58	15	-	39	45	-	120	-	1	70	-
R.I.	-	2	102	-	9	7	-	27	-	-	9	1
Conn.	1	25	4	1	38	44	-	96	-	-	19	1
MID. ATLANTIC	3	3,797	1,530	2	380	335	10	840	3	2	559	7
Upstate N.Y.	1	697	648	-	117	115	3	1,136	2	1	213	2
N.Y. City	2	1,192	779	1	100	77	-	92	-	1	99	2
N.J.	-	827	57	-	79	84	3	111	1	-	101	-
Pa.	-	1,081	46	1	84	59	4	511	-	-	146	3
E.N. CENTRAL	13	2,442	3,259	7	249	239	18	2,796	7	8	822	3
Ohio	-	380	282	2	81	96	3	1,136	3	-	8	1
Ind.	-	92	214	-	39	42	3	129	-	3	349	-
Ill.	6	347	1,446	2	51	20	3	369	1	1	164	-
Mich.	6	247	831	2	62	62	5	837	2	1	127	1
Wis.	1	1,376	486	1	16	19	4	325	1	3	174	1
W.N. CENTRAL	3	1,320	1,754	4	87	67	7	290	1	-	194	3
Minn.	3	1,104	1,218	1	25	12	-	16	1	-	27	1
Iowa	-	-	16	2	11	11	4	48	-	-	9	-
Mo.	-	65	410	1	37	33	2	101	-	-	41	1
N. Dak.	-	1	21	-	1	1	-	4	-	-	5	-
S. Dak.	-	-	2	-	5	4	-	2	-	-	2	-
Nebr.	-	83	20	-	-	-	-	9	-	-	1	-
Kans.	-	67	67	-	8	6	1	110	-	-	109	1
S. ATLANTIC	2	1,949	1,943	6	508	521	12	1,023	4	2	339	10
Del.	-	3	1	-	2	5	-	40	-	-	1	-
Md.	-	83	16	-	47	45	4	339	-	-	71	1
D.C.	-	-	-	-	2	-	-	4	-	-	1	-
Va.	-	335	275	-	50	74	-	66	-	2	53	3
W. Va.	-	14	57	-	19	8	3	109	-	-	25	1
N.C.	-	130	113	-	92	80	-	93	1	-	46	1
S.C.	-	159	168	-	57	59	-	206	-	-	53	3
Ga.	-	826	488	-	92	76	-	5	2	-	-	-
Fla.	2	399	825	6	147	174	5	161	1	-	89	1
E.S. CENTRAL	-	333	207	1	186	158	3	869	1	-	82	4
Ky.	-	55	37	-	58	33	1	754	-	-	38	1
Tenn.	-	172	61	-	50	44	-	29	1	-	39	2
Ala.	-	22	85	1	51	38	1	25	-	-	3	1
Miss.	-	84	24	-	27	43	1	61	-	-	2	-
W.S. CENTRAL	1	958	917	4	232	321	1	266	3	1	133	18
Ark.	-	14	7	-	19	24	-	21	1	-	4	2
La.	-	12	250	2	90	118	-	68	-	1	12	5
Okl.	-	776	22	-	17	33	-	-	1	-	6	1
Tex.	1	156	638	2	106	146	1	177	1	-	111	10
MOUNTAIN	-	488	320	5	85	86	4	200	12	7	155	-
Mont.	-	2	53	-	3	10	-	56	-	-	45	-
Idaho	-	-	18	-	4	1	-	16	1	-	21	-
Wyo.	-	-	36	-	3	8	-	-	-	-	1	-
Colo.	-	24	68	4	23	5	3	56	-	-	12	-
N. Mex.	-	13	38	-	9	5	-	-	9	-	5	-
Ariz.	-	393	77	1	15	36	1	36	-	6	37	-
Utah	-	47	18	-	5	9	-	27	2	1	28	-
Nev.	-	9	12	-	23	12	-	9	-	-	6	-
PACIFIC	5	1,072	2,218	9	298	303	11	599	6	5	914	8
Wash.	-	177	1,131	2	54	52	-	134	3	-	84	-
Oreg.	-	-	61	3	50	25	4	75	-	-	62	-
Calif.	5	883	942	4	185	210	7	359	3	5	751	8
Alaska	-	6	17	-	9	6	-	12	-	-	12	-
Hawaii	-	6	67	-	-	10	-	19	-	-	5	-
Guam	NA	6	12	-	1	1	NA	10	NA	NA	2	-
P.R.	4	157	358	-	9	5	4	141	-	-	20	13
V.I.	NA	6	5	-	1	3	NA	2	NA	NA	-	-
Pac. Trust Terr.	NA	6	8	-	-	1	NA	20	NA	NA	1	-

NA: Not available.

All delayed reports and corrections will be included in the following week's cumulative totals.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending October 18, 1980, and October 20, 1979 (42nd week)

REPORTING AREA	TUBERCULOSIS		TULA-REMIA	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. 1979	CUM. 1979	
UNITED STATES	480	21,951	166	14	389	5	1,063	17,735	802,912	805,988	552	21,411	20,005	5,237
NEW ENGLAND	23	622	6	-	11	-	13	430	20,461	19,816	5	417	395	54
Maine	2	45	-	-	1	-	-	22	1,178	1,399	-	5	10	23
N.H.	-	15	-	-	-	-	-	8	729	738	-	3	16	7
Vt.	3	22	-	-	-	-	-	8	472	487	-	5	1	-
Mass.	13	341	4	-	7	-	6	167	8,608	7,882	4	246	220	14
R.I.	3	60	1	-	1	-	2	33	1,315	1,607	1	27	15	1
Conn.	2	139	1	-	2	-	5	192	8,159	7,703	-	131	133	9
MID. ATLANTIC	74	3,590	3	4	78	1	47	2,162	88,779	87,906	69	2,988	2,992	65
Upstate N.Y.	13	716	1	-	14	-	14	403	16,662	14,992	10	269	214	33
N.Y. City	22	1,280	1	1	33	-	3	1,050	34,517	34,532	46	1,940	2,024	-
N.J.	39	773	1	3	18	1	18	283	16,411	15,679	8	364	394	13
Pa.	NA	821	-	-	13	-	12	426	21,209	22,703	5	415	360	19
E.N. CENTRAL	34	3,116	1	1	42	-	26	3,087	124,963	125,731	40	2,021	2,551	791
Ohio	10	564	-	-	11	-	13	864	33,294	34,728	9	308	506	50
Ind.	6	329	-	-	-	-	2	379	12,477	10,794	2	152	183	67
Ill.	12	1,106	-	1	18	-	6	863	39,131	39,117	25	1,156	1,421	431
Mich.	NA	922	1	-	9	-	3	678	28,462	29,550	1	327	373	15
Wis.	6	195	-	-	4	-	2	303	11,599	11,542	3	78	68	228
W.N. CENTRAL	18	801	27	-	26	-	53	1,045	38,858	39,773	14	296	260	1,700
Minn.	2	143	1	-	3	-	-	95	6,269	6,586	3	99	71	189
Iowa	3	77	1	-	2	-	3	96	4,130	4,771	1	23	28	371
Mo.	11	374	22	-	18	-	34	468	17,338	16,953	8	142	121	333
N. Dak.	1	42	-	-	-	-	-	18	550	683	-	3	2	198
S. Dak.	-	41	-	-	1	-	2	16	1,137	1,339	-	4	2	385
Nebr.	-	30	1	-	1	-	4	85	2,966	2,843	-	7	5	88
Kans.	1	94	2	-	1	-	10	267	6,468	6,598	2	18	31	136
S. ATLANTIC	135	4,843	9	3	41	4	678	4,608	202,426	194,988	135	5,188	4,734	415
Del.	2	66	-	-	1	-	2	44	2,848	3,234	-	14	24	1
Md.	11	589	2	-	2	-	72	508	21,703	23,829	5	357	306	31
D.C.	-	281	-	-	4	-	-	244	13,988	12,834	14	388	366	-
Va.	5	535	-	-	7	1	93	320	18,321	18,592	13	461	381	17
W. Va.	10	175	-	1	4	-	5	58	2,718	2,680	-	15	44	22
N.C.	31	879	3	2	5	2	305	1,098	30,005	28,144	23	386	369	20
S.C.	6	424	-	-	3	-	141	433	19,064	18,262	11	304	242	57
Ga.	28	634	4	-	-	-	54	917	39,514	36,852	27	1,492	1,332	204
Fla.	42	1,260	-	-	15	1	6	986	54,265	50,561	42	1,771	1,670	63
E.S. CENTRAL	68	2,058	10	-	11	-	109	1,545	65,806	68,549	23	1,768	1,331	287
Ky.	24	467	-	-	3	-	18	284	9,700	9,209	-	110	135	123
Tenn.	14	667	7	-	1	-	59	691	23,879	24,776	8	738	565	117
Ala.	23	536	1	-	3	-	17	260	19,317	20,124	6	391	244	47
Miss.	7	388	2	-	4	-	15	310	12,910	14,440	9	529	387	-
W.S. CENTRAL	48	2,488	68	1	61	-	117	2,154	101,708	103,430	129	4,330	3,662	1,217
Ark.	7	278	42	-	5	-	28	216	8,098	8,066	12	175	128	159
La.	8	470	-	-	2	-	3	447	18,585	18,302	34	1,089	925	14
Okla.	4	255	18	-	4	-	59	236	10,237	10,224	3	85	74	215
Tex.	29	1,488	8	1	50	-	27	1,255	64,788	66,838	80	2,981	2,535	829
MOUNTAIN	17	609	31	1	22	-	16	627	30,933	32,475	14	525	396	221
Mont.	1	29	9	-	1	-	3	NA	1,020	1,607	NA	5	8	52
Idaho	-	24	1	-	1	-	1	18	1,323	1,460	-	25	25	2
Wyo.	-	20	4	-	-	-	2	14	909	947	1	11	8	15
Colo.	2	99	8	-	7	-	5	163	8,470	8,581	7	136	77	54
N. Mex.	-	111	1	1	3	-	4	58	3,641	3,990	3	89	71	42
Ariz.	11	259	1	-	7	-	-	132	8,420	9,072	-	176	114	52
Utah	1	39	5	-	3	-	1	34	1,572	1,647	-	16	3	3
Nev.	2	28	2	-	-	-	-	208	5,578	5,171	3	67	90	1
PACIFIC	63	3,824	11	4	97	-	4	2,077	128,978	133,320	123	3,878	3,684	487
Wash.	6	341	-	-	3	-	-	NA	10,851	11,814	NA	189	178	-
Oreg.	7	151	4	-	9	-	1	312	9,194	8,298	2	91	144	4
Calif.	49	3,198	6	4	85	-	3	1,619	103,084	106,535	120	3,457	3,261	438
Alaska	-	53	1	-	-	-	-	75	3,222	4,110	-	8	21	45
Hawaii	1	81	-	-	-	-	-	71	2,627	2,563	1	133	80	-
Guam	NA	37	-	NA	1	NA	-	NA	86	96	NA	4	-	-
P.R.	NA	127	-	-	8	-	-	46	2,201	1,798	8	497	462	44
V.I.	NA	-	-	NA	-	NA	-	NA	108	134	NA	10	7	-
Pac. Trust Terr.	NA	33	-	NA	-	NA	-	NA	334	390	NA	-	1	-

NA: Not available.

All delayed reports and corrections will be included in the following week's cumulative totals.

TABLE IV. Deaths in 121 U.S. cities,* week ending
October 18, 1980 (42nd week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I** TOTAL	REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I** TOTAL
	ALL AGES	>65	45-64	25-44	<1			ALL AGES	>65	45-64	25-44	<1	
NEW ENGLAND	645	427	146	36	25	41	S. ATLANTIC	1,138	643	309	85	54	42
Boston, Mass.	177	106	40	20	7	17	Atlanta, Ga. ††	130	69	36	13	7	3
Bridgeport, Conn.	36	27	7	2	—	—	Baltimore, Md.	200	104	62	17	6	1
Cambridge, Mass.	19	14	4	1	—	—	Charlotte, N.C.	53	23	21	4	2	2
Fall River, Mass.	28	20	6	2	—	—	Jacksonville, Fla.	119	72	33	5	7	4
Hartford, Conn.	64	39	15	3	5	2	Miami, Fla.	99	58	23	9	7	1
Lowell, Mass.	19	11	8	—	—	—	Norfolk, Va.	55	33	12	2	3	3
Lynn, Mass.	21	15	5	—	—	—	Richmond, Va.	69	42	21	4	1	7
New Bedford, Mass.	21	16	5	—	—	1	Savannah, Ga.	32	18	11	2	1	4
New Haven, Conn.	57	33	12	—	12	2	St. Petersburg, Fla.	89	71	9	2	3	8
Providence, R.I.	61	42	14	3	1	4	Tampa, Fla.	68	43	12	4	5	3
Somerville, Mass.	8	7	—	1	—	1	Washington, D.C.	186	95	56	18	11	6
Springfield, Mass.	44	33	8	2	—	4	Wilmington, Del.	38	15	13	5	1	—
Waterbury, Conn.	32	25	4	1	—	3							
Worcester, Mass.	58	39	18	1	—	5							
							E.S. CENTRAL	595	342	159	31	31	28
MID. ATLANTIC	2,573	1,708	595	138	74	102	Birmingham, Ala.	76	40	16	3	9	4
Albany, N.Y.	61	39	17	2	1	2	Chattanooga, Tenn.	43	28	12	1	—	2
Allentown, Pa.	23	18	3	2	—	—	Knoxville, Tenn.	59	42	14	—	—	—
Buffalo, N.Y.	132	90	32	4	3	2	Louisville, Ky.	131	64	45	8	8	6
Camden, N.J.	38	29	6	1	1	2	Memphis, Tenn.	117	77	32	4	—	8
Elizabeth, N.J.	24	18	4	1	—	2	Mobile, Ala.	46	24	9	5	6	2
Erie, Pa. †	22	12	8	2	—	—	Montgomery, Ala.	44	28	10	2	3	1
Jersey City, N.J.	56	39	15	1	1	1	Nashville, Tenn.	79	39	21	8	5	5
Newark, N.J.	60	23	23	6	5	4							
N.Y. City, N.Y.	1,349	895	304	76	41	54	W.S. CENTRAL	1,289	738	314	114	58	36
Paterson, N.J.	32	20	9	1	2	1	Austin, Tex.	37	19	6	5	4	1
Philadelphia, Pa. †	308	188	82	23	7	17	Baton Rouge, La.	34	19	12	2	1	—
Pittsburgh, Pa. †	53	33	15	2	3	—	Corpus Christi, Tex.	29	17	8	3	—	1
Reading, Pa.	35	29	3	2	—	1	Dallas, Tex.	181	102	44	13	13	3
Rochester, N.Y.	120	88	21	4	6	6	El Paso, Tex.	62	38	11	5	4	7
Schenectady, N.Y.	35	25	8	—	—	1	Fort Worth, Tex.	90	58	20	6	5	2
Scranton, Pa. †	32	25	6	1	—	2	Houston, Tex.	366	178	104	45	10	5
Syracuse, N.Y.	91	66	17	4	2	4	Little Rock, Ark.	55	29	16	4	2	5
Trouton, N.J.	32	20	7	4	1	—	New Orleans, La.	130	86	24	11	4	—
Utica, N.Y.	31	21	8	1	—	—	San Antonio, Tex.	193	118	45	13	12	7
Yonkers, N.Y.	39	30	7	1	1	3	Shreveport, La.	39	27	8	3	1	1
							Tulsa, Okla.	73	47	16	4	2	4
E.N. CENTRAL	2,185	1,331	551	144	85	66	MOUNTAIN	639	385	138	49	41	28
Akron, Ohio	53	39	9	4	1	—	Albuquerque, N. Mex.	93	61	17	9	3	12
Canton, Ohio	40	25	12	—	1	2	Colo. Springs, Colo.	30	19	6	1	3	1
Chicago, Ill.	486	293	123	36	15	8	Denver, Colo.	129	79	26	7	13	3
Cincinnati, Ohio	169	104	41	9	11	15	Las Vegas, Nev.	72	40	22	6	1	5
Cleveland, Ohio	169	100	48	8	7	4	Ogden, Utah	20	13	3	—	2	1
Columbus, Ohio	132	69	39	14	8	3	Phoenix, Ariz.	145	79	34	17	10	2
Dayton, Ohio	112	71	24	6	6	1	Pueblo, Colo.	15	11	3	—	—	—
Detroit, Mich.	285	160	71	27	11	3	Salt Lake City, Utah	70	38	13	5	7	2
Evansville, Ind.	42	29	6	5	1	3	Tucson, Ariz.	65	45	14	4	2	2
Fort Wayne, Ind.	45	29	12	2	—	2							
Gary, Ind.	20	9	8	—	1	—							
Grand Rapids, Mich.	54	32	15	4	2	1							
Indianapolis, Ind.	150	84	43	10	10	4	PACIFIC	1,618	1,033	387	101	50	61
Madison, Wis.	40	26	12	—	—	5	Berkeley, Calif.	20	12	5	2	—	—
Milwaukee, Wis.	106	81	19	2	4	6	Fresno, Calif.	73	45	11	8	6	7
Peoria, Ill.	51	33	14	1	2	—	Glendale, Calif.	22	14	4	2	2	2
Rockford, Ill.	45	32	6	3	1	2	Honolulu, Hawaii	61	29	6	21	8	—
South Bend, Ind.	31	22	8	1	—	1	Long Beach, Calif.	79	50	18	3	3	2
Toledo, Ohio	86	55	20	7	2	6	Los Angeles, Calif.	426	280	96	30	9	9
Youngstown, Ohio	69	38	21	5	2	—	Oakland, Calif.	46	40	15	4	4	5
							Pasadena, Calif.	38	33	5	—	—	—
							Portland, Oreg.	85	57	24	—	3	2
W.N. CENTRAL	703	461	158	28	35	17	Sacramento, Calif.	92	55	28	2	2	5
Des Moines, Iowa	51	35	12	1	1	—	San Diego, Calif.	131	81	35	10	4	1
Duluth, Minn.	36	24	10	—	—	2	San Francisco, Calif.	153	103	30	14	3	4
Kansas City, Kans.	35	21	8	3	2	1	San Jose, Calif.	152	82	40	14	8	13
Kansas City, Mo.	123	81	28	4	8	5	Seattle, Wash.	135	90	37	2	4	7
Lincoln, Nebr.	34	25	6	2	1	1	Spokane, Wash.	54	42	10	1	1	3
Minneapolis, Minn.	62	39	13	5	1	1	Tacoma, Wash.	31	20	8	1	1	1
Omaha, Nebr.	76	58	14	1	1	1							
St. Louis, Mo.	158	88	40	9	14	3							
St. Paul, Minn.	81	56	19	2	4	—							
Wichita, Kans.	47	34	8	1	3	3	TOTAL	11,385	7,068	2,757	726	453	421

*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 totals.

Salmonella — Continued

Editorial Note: Since turkey breeder stock from England is exported to both Canada and the United States, the introduction of *S. hadar* into the Western Hemisphere could have been expected. The rapid increase in the number of *S. hadar* isolates in the United Kingdom has been followed by parallel increases in isolates in both Canada and the United States, although the numbers of isolates have been much smaller (Figure 1). Canada began to notice an increase in *S. hadar* isolates from humans in 1977, a few years after England did. In 1979, Canada reported 155 isolations of *S. hadar* and this year, as of August 1980, the number of reports has already surpassed last year's total. Canada has associated 1 outbreak in British Columbia involving at least 14 people with the ingestion of poorly cooked turkeys (2). Canada reports the same phage type as found in England (type 2) and indicates that the majority of its isolates have been dulcitol negative. The majority of England's strains are dulcitol positive.

In the United States, although the number of *S. hadar* isolates is still small, a steady increase has been observed. In 1977, there were none; in 1978, 9; in 1979, 17; and in January-August 1980, 26. The biochemical properties and phage typing of the recent U.S. isolates has not been studied. *S. hadar* has been isolated from turkey breeding farms in Minnesota, but, to date, no human isolate has been linked epidemiologically to turkeys.

Reported by H Lior National Enteric Reference Center, Ottawa; S Acres, MD, Dept of National Health and Welfare, Ottawa; and Enteric Diseases Br, Bacterial Diseases Div, Bureau of Epidemiology, CDC.

References

1. Rowe B, Hall MLM, Ward LR, De Sa JDH. Epidemic spread of *Salmonella hadar* in England and Wales. *Br Med J* 1980;280:1065-6.
2. Laboratory Center for Disease Control. An outbreak of salmonellosis—British Columbia. *Canada Diseases Weekly Report* 1980 May 3:85.

Epidemiologic Notes and Reports**Follow-up on Mount St. Helens**

On October 16, 1980, Mount St. Helens began its sixth major eruption. It had been over 2 months since the last significant activity.

The first phase of the recent series of eruptions began as weak harmonic tremors at 8:47 PM (PDT). By 9:12 PM, an ash plume appeared that rose to a height of 45,000 feet. Incandescent pyroclastic flow was observed on the north flank of the mountain, reaching approximately one-third the distance to Spirit Lake. The ash plume diminished and ceased after 11 PM. The lower arm of the plume at 5,000 to 6,000 feet traveled in a southerly direction, while the upper part of the plume traveled in a southwesterly direction, reaching the Oregon coast in the vicinity of Lincoln City. The cities of Cougar and Yale, Washington (about 11 and 16 miles, respectively, from Mount St. Helens) received a shower of pumice for several minutes. A trace ($\leq 1/8$ inch) of light, powdery ash fell at Ridgefield, Battleground, LaCenter, and Vancouver, Washington. In Oregon the following cities reported trace amounts of ashfall: Portland, Forest Grove, Milwaukie, Salem, Scappoose, Hillsboro, Beaverton, and Lincoln City. The Oregon Department of Environmental Quality began monitoring the total suspended particulates shortly after the eruption, but the results are not yet available. There have been no reported casualties around the volcano.

Mount St. Helens – Continued

A second eruption began the next morning. The plume reached 47,000 feet; its bottom arm traveled southeasterly towards north-central Oregon. A light dusting of ash was reported in Hood River and The Dalles, Oregon. Incandescent pyroclastic flow was also observed during this eruptive phase.

A third eruption occurred that night with seismic activity, ash plume to 45,000 feet, and an accompanying incandescent pyroclastic flow.

The last eruption began in the afternoon on October 18, with harmonic tremors and a burst of steam and ash. The ash cloud rose to 25,000 feet. Later that evening a dome at the crater was observed to be growing at a rate of 15-20 feet an hour, up to 80 feet high and 235 feet across. The rate of growth had slowed to 16 inches an hour by October 20. The volcano thus appears to still be active, and further eruptions are possible.

In light of the recent eruptions and the possibility of more eruptions in the near future, CDC will continue surveillance of hospital emergency room visits in the Portland, Oregon/Vancouver, Washington, area.

Reported by Chronic Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: As a result of the series of volcanic eruptions that began on May 18, 1980, CDC began issuing a series of bulletins entitled the Mount St. Helens Volcano Health Reports. Twenty-one of these reports, aimed at giving epidemiologic evaluations of health effects related to the eruptions, had been issued before last week's increased activity. An index to these reports, published in Health Report #21 (September 5), provides an extensive listing of subheadings in 8 major categories: disaster planning; casualties; volcanic eruptions and ashfall; air sampling and monitoring; ash analysis; ash exposure and health effects; public health aspects of ash; and literature review.

Copies of the index issue or any other in the series are available upon request from CDC: ATTN: Mount St. Helens Volcano Health Reports, Bur of Epidemiology, Chronic Diseases Div, Atlanta, GA 30333. There is no set schedule for future reports; they will be issued when new public health developments occur, studies are completed, or—as occurred last week—the volcano becomes active.

Current Trends

Influenza Nomenclature

The nomenclature recommended by the World Health Organization (WHO) for influenza A virus hemagglutinin and neuraminidase subtypes has been amended (1). These changes take into account new information obtained since the previous revision of nomenclature in 1971 (2).

First, continuing comparisons of previously isolated viruses indicate that several subtypes that had been considered distinctive enough to have individual designations are sufficiently related, judged by both antigenic analysis of proteins and ribonucleic acid (RNA) sequence homology of their genes, to be combined into single subtypes. Second, continuing surveillance of influenza in animals has detected a small number of hemagglutinin and neuraminidase antigens that represent new subtypes. Previously these had only provisional designations suggested by individual researchers. Tables 1 and 2 summarize the proposed new subtype designations and compare them with the former system.

Influenza — Continued

TABLE 1. Proposed subtypes of hemagglutinin antigens of influenza A viruses

Proposed subtypes	Previous subtypes (1971 system)
H1	H0, H1, Hsw1
H2	H2
H3	H3, Heq2, Hav7
H4	Hav4
H5	Hav5
H6	Hav6
H7	Heq1, Hav1
H8	Hav8
H9	Hav9
H10	Hav2
H11	Hav3
H12	Hav10

TABLE 2. Proposed subtypes of neuraminidase antigens of influenza A viruses

Proposed subtypes	Previous subtypes (1971 system)
N1	N1
N2	N2
N3	Nav2, Nav3
N4	Nav4
N5	Nav5
N6	Nav1
N7	Neq1
N8	Neq2
N9	Nav6

The modifications in the nomenclature will be adopted by WHO in October 1980. They will affect only the designation of hemagglutinin and neuraminidase subtypes of influenza A viruses. The nomenclature of virus type, location, serial number, and year of isolation will be unchanged. The nomenclature of many strains (including current human epidemic strains) remains as before; isolates from humans or animals that were previously designated as having Hsw1 or H0 hemagglutinins, however, will now be referred to as H1, in accordance with the evidence of shared determinants among these viruses, and the Heq2 and Hav7 subtypes previously used with animal isolates will be incorporated into the H3 group. Considerable antigenic variance exists between cross-reactive strains within a subtype, so that the strain specificity of isolates will be indicated by relation to reference strains, as in the past.

Reported by WHO in the *Weekly Epidemiological Record* (2).

References

1. World Health Organization. A revised system of nomenclature for influenza viruses. *Bull WHO* 1971;45:119-24.
2. World Health Organization. Influenza nomenclature. *Weekly Epidemiological Record* 1980;54:294-5.

Erratum, Vol. 29, No. 41

p 493 The issue of the MMWR dated October 17, 1980, was incorrectly labeled as No. 40. It should be No. 41.

The Morbidity and Mortality Weekly Report, circulation 91,840, is published by the Centers 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: Centers for Disease Control, Attn: Editor, Morbidity and Mortality Weekly Report, Atlanta, Georgia 30333.

Send mailing list additions, deletions, and address changes to: Centers for Disease Control, Attn: Distribution Services, GSO 1-SB-419, Atlanta, Georgia 30333. Or call 404-329-3219. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE / CENTERS FOR DISEASE CONTROL
ATLANTA, GEORGIA 30333 OFFICIAL BUSINESS



Postage and Fees Paid
 U.S. Department of HHS
 HHS 396

Director, Centers for Disease Control
 William H. Foege, M.D.
 Director, Bureau of Epidemiology
 Philip S. Brachman, M.D.
 Editor
 Michael B. Gregg, M.D.
 Managing Editor
 Anne D. Mather, M.A.
 Mathematical Statistician
 Keewhan Chol, Ph.D.

HCA5 MILLSMA0007517921SXXX
 MRS MARY ALICE MILLS
 DIRECTOR, LIBRARY
 BLDG 1-4007

ATLANTA, GA. 30333
 CDC LIBRARY

OCT 24 1980

RECEIVED