CENTER FOR DISEASE CONTROL

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MORBIDITY AND MORTALITY WEEKLY REPORT

Epidemiologic Notes and Reports

Kawasaki Disease — New York

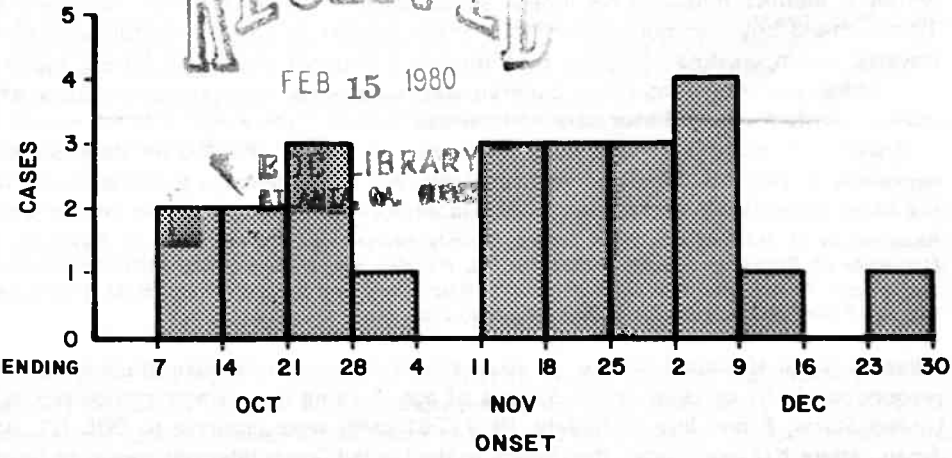
A cluster of 23 cases of Kawasaki disease (KD, formerly known as mucocutaneous lymph node syndrome) occurred in Rochester, New York, and vicinity during the period October 1-December 30, 1979 (Figure 1).

Possible cases were identified by telephoning all local pediatric practices, health clinics, hospitals, and family practitioners known to see children, and by screening reports, solicited in an extensive news media campaign, from parents of ill children. Cases were considered confirmed if they had been observed by a physician to satisfy published diagnostic criteria (*1*) (Table 1).

Medical records of confirmed cases were reviewed. A standard epidemiologic questionnaire was administered to parents of KD patients and to parents of 2 groups of controls, matched for age, sex, and race, chosen from 1) the same or a nearby pediatric practice and 2) the same neighborhood where the KD patient resided. Also reviewed were records of virus isolation and physician visits—both derived from a pre-existing, active community-virus-watch program.

Throat and rectal swab specimens were collected for virus isolation from 5 acutely ill cases and their household contacts. Acute and convalescent serum specimens were also obtained from these individuals and from their matched controls. Single serum

FIGURE 1. Kawasaki disease, Rochester, New York, and vicinity, October 1-December 30, 1979



Kawasaki Disease — Continued

TABLE 1. Diagnostic criteria for Kawasaki disease (*1*).

A. Fever of 5 or more days

B. Presence of 4 of the following 5 conditions

1. Bilateral conjunctival injection
2. Change(s)* in the mucous membranes of the upper respiratory tract, such as:
   injected pharynx
   injected lips
   dry, fissured lips
   "strawberry" tongue
3. Change(s)* of the peripheral extremities, such as:
   peripheral edema
   peripheral erythema
   desquamation
   periungual desquamation
4. Rash, primarily truncal; polymorphous but nonvesicular
5. Cervical lymphadenopathy

C. Illness cannot be explained by other known disease process

*1 is sufficient to establish criterion.

samples were obtained from convalescent patients, their controls, and household members. Serum specimens are being screened for the presence of viral, streptococcal, and leptospiral antibodies.

Cases were distributed throughout the Rochester area, except in 1 suburb and in 1 inner-city community, which had 5 cases each. The attack rate for children under 5 years of age in Monroe County (which includes Rochester) was 157.0/100,000 per year for the 3-month period October-December 1979, as compared with a rate of 7.5/100,000/year for the preceding 9-month period ($p<.001$).

The mean age of the KD patients was 2 years, 8 months (range 4 months-14 years), and the male-to-female ratio was 0.9:1.0. Eighteen of the cases were white, 3 black, 1 Hispanic, and 1 Asian. Nine of the 23 (39%) were hospitalized. Evidence of cardiac involvement was detected in 4/14 (29%) children who had electrocardiograms and/or echocardiograms performed. One 2-year-old boy developed a coronary artery aneurysm within 2 months following his illness, as documented by serial echocardiograms. One 12-month-old boy had non-specific ST-T wave changes on an electrocardiogram and an elevated serum creatine phosphokinase (myocardial band) during his illness, indicating myocardial damage. Two other children developed small pericardial effusions which spontaneously resolved. There were no fatalities.

Preliminary analysis of data from interviews of parents revealed no common-source exposures in patients compared with controls. No viral agent has been recovered from the cases. Surveillance and epidemiologic, laboratory, and clinical studies are continuing.

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Editorial Note: Kawasaki disease, an acute febrile illness of unknown etiology occurring predominantly in children under 5 years of age, is being increasingly recognized in the United States. From July 1976-July 1978, 261 cases were reported to CDC (*2*). As in Japan, where KD is endemic, the disease in the United States does not appear to be associated with geographic area, season of the year, socioeconomic status, or environmental

Kawasaki Disease – Continued

factors. Most cases reported to CDC have occurred sporadically, but clusters have been reported in the United States, Japan, and Greece. The diagnosis of KD can only be made on the basis of clinical findings (Table 1), which are usually quite distinctive. However, occasionally KD can be difficult to diagnose because a variety of other illnesses such as scarlet fever, staphylococcal scalded skin syndrome, leptospirosis, various viral exanthems, drug reactions, juvenile rheumatoid arthritis, Stevens-Johnson syndrome, and infantile polyarteritis nodosa can cause similar signs and symptoms.

Japanese studies using contrast angiography have shown that as may as 30% of KD patients may develop coronary artery aneurysms (*3*). Recently, the less-invasive technique of 2-dimensional echocardiography has been used to demonstrate these aneurysms (*4*). Studies from Japan indicate that 1%-2% of all reported KD patients die of complications of coronary aneurysms, including myocardial infarction, arrhythmias, and, rarely, aneurysm rupture. Of these fatal cases, 50%, 75%, and 95% die within 1, 2, and 6 months, respectively, of their acute illness.

Treatment of KD, aside from being supportive in nature, is primarily intended to minimize the incidence of cardiac complications. One study has suggested that aspirin, 30 mg/kg/day, may be effective in reducing the incidence of coronary aneurysm formation (*5*). Other clinicians have used doses up to 100 mg/kg/day, following blood levels to avoid toxicity. However, no drug or combination of drugs has been conclusively proven effective in reducing the incidence or severity of cardiac complications of KD.

To date, there is no evidence for person-to-person transmission of KD, although this issue has not been extensively studied. Nor has an infectious agent been shown to cause the disease, even though the clinical illness is strongly suggestive of a microbial etiology. Therefore, it is uncertain whether isolation precautions are necessary for hospitalized KD patients once other infectious diseases in the differential diagnosis have been ruled out. Analysis of data collected in this investigation may permit testing of the hypothesis that KD may be an unusual sequel of a common viral illness.

Physicians are encouraged to report suspected cases of KD to CDC through their state and local health departments. CDC can provide epidemiologic consultation and certain laboratory assistance, as needed.

References

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International Notes

Diarrhea in Travelers – Puerto Vallarta, Mexico

During the last week of December and first 10 days of January, 2 groups of American travelers to Puerto Vallarta, Mexico, experienced diarrhea; preliminary results of an ongoing investigation revealed attack rates of 83% and 94%. Several travelers in the group with the 94% attack rate had stool cultures positive for *Shigella sonnei*. No common

Diarrhea – Continued

location or vehicles were associated with illness. Preliminary information suggests that travelers who took doxycycline prophylactically had an attack rate similar to those who did not.

Several residents of Washington, Oregon, Idaho, and California who traveled individually or in other groups to Puerto Vallarta since November have had positive stool cultures for *S. sonnei* following their return. Four persons with *Shigella* also had *Salmonella* organisms, and 1 had *Shigella* and *Campylobacter fetus* subspecies *jejuni*. A few cases of giardiasis and suspected hepatitis A have also been identified.

A questionnaire survey of passengers returning from Mexico aboard 3 aircraft arriving in San Francisco on February 3-5 showed that 18%-46% of passengers who boarded the planes in Puerto Vallarta had experienced a diarrheal illness before their departure. Attack rates were lower for passengers who boarded in Mexico City or Mazatlan. A telephone survey of 45 additional travelers who returned from Puerto Vallarta near the end of January revealed an attack rate of 69%.

Health authorities in Puerto Vallarta are testing bottled water and the city water supply and have found no evidence, to date, of contamination. They are examining food-handling practices and assessing the rate of diarrheal illness in Puerto Vallarta residents and in Mexican visitors to the city by examining outpatient and hospital records. There has been no increase in such disease noted in these 2 groups.

(Continued on page 69)

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

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

DISEASE	6th WEEK ENDING		MEDIAN 1975-1979	CUMULATIVE, FIRST 6 WEEKS		
	February 9, 1980	February 10, 1979*		February 9, 1980	February 10, 1979*	MEDIAN 1975-1979
Aseptic meningitis	47	44	38	351	306	226
Brucellosis	1	2	4	16	9	13
Chickenpox	4,534	7,453	5,481	25,033	31,501	29,059
Diphtheria	–	6	1	–	19	19
Encephalitis: Primary (arthropod-borne & unspec.)	8	12	12	61	57	60
Post-infectious	4	5	4	12	13	18
Hepatitis, Viral: Type B	264	279	279	1,590	1,426	1,522
Type A	514	543	618	2,754	3,148	3,835
Type unspecified	187	182	170	1,102	1,060	982
Malaria	11	8	7	119	43	34
Measles (rubeola)	136	296	490	661	1,167	1,679
Meningococcal infections: Total	62	91	43	331	356	226
Civilian	62	91	42	329	356	225
Military	–	–	–	2	–	1
Mumps	224	319	597	1,314	1,746	3,391
Pertussis	15	34	34	110	176	160
Rubella (German measles)	53	255	255	312	760	1,163
Tetanus	–	1	1	4	2	5
Tuberculosis	391	577	596	2,357	2,919	2,957
Tularemia	3	1	2	10	15	11
Typhoid fever	4	8	8	20	34	34
Typhus fever, tick-borne (Rky. Mt. spotted)	4	3	1	6	9	6
Venereal diseases:						
Gonorrhea: Civilian	14,049	19,165	18,419	104,882	111,477	111,477
Military	514	443	568	2,783	3,205	3,433
Syphilis, primary & secondary: Civilian	386	477	477	2,854	2,775	2,775
Military	12	4	8	55	31	40
Rabies in animals	72	51	34	440	296	243

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1980		CUM. 1980
Anthrax	–	Poliomyelitis: Total	–
Botulism	3	Paralytic	–
Congenital rubella syndrome † (Ups. NY 1)	7	Psittacosis (Mass. 1)	9
Leprosy (Texas 1)	15	Rabies in man	–
Leptospirosis † (Hawaii 2)	5	Trichinosis † (R.I. 1, Pa. 2)	7
Plague	–	Typhus fever, flea-borne (endemic, murine) †	1

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

†Delayed reports: Cong. rubella syn.: Idaho +2 (1979); Leptospirosis: La. +2 (1979); Trichinosis: La. +1 (1979); Typhus, murine: Puerto Rico –1 (1979).

TABLE III. Cases of specified notifiable diseases, United States, weeks ending February 9, 1980, and February 10, 1979, (6th 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	47	1	4,534	–	–	8	12	4	264	514	187	11	119
NEW ENGLAND	1	–	588	–	–	1	–	1	11	13	18	2	10
Maine	1	–	133	–	–	–	–	–	1	–	–	–	–
N.H.†	–	–	47	–	–	–	–	–	–	4	–	–	1
Vt.	–	–	72	–	–	–	–	–	–	–	–	–	–
Mass.	–	–	91	–	–	1	–	–	3	4	17	1	7
R.I.	–	–	41	–	–	–	–	–	3	2	–	–	1
Conn.	–	–	204	–	–	–	–	1	4	3	1	1	1
MID. ATLANTIC	11	–	246	–	–	–	–	–	29	40	14	4	16
Upstate N.Y.	5	–	157	–	–	–	–	–	7	13	8	1	1
N.Y. City	5	–	86	–	–	–	–	–	11	12	4	2	7
N.J.	NA	NA	NN	NA	–	NA	–	–	NA	NA	NA	NA	3
Pa.	1	–	3	–	–	–	–	–	11	15	2	1	5
E.N. CENTRAL	9	–	2,070	–	–	–	2	–	49	67	21	1	2
Ohio	–	–	193	–	–	–	1	–	9	23	4	–	1
Ind.	–	–	195	–	–	–	–	–	18	18	2	–	–
Ill.	–	–	463	–	–	–	–	–	5	9	4	–	–
Mich.	9	–	721	–	–	–	1	–	14	12	9	–	–
Wis.	–	–	498	–	–	–	–	–	3	5	2	1	1
W.N. CENTRAL	1	1	736	–	–	1	–	1	8	35	3	–	5
Minn.	–	–	–	–	–	–	–	1	1	4	–	–	4
Iowa	–	–	415	–	–	1	–	–	–	3	2	–	1
Mo.	–	–	95	–	–	–	–	–	5	7	–	–	–
N. Dak.	–	–	5	–	–	–	–	–	–	–	–	–	–
S. Dak.	–	1	48	–	–	–	–	–	1	14	–	–	–
Nebr.	–	–	1	–	–	–	–	–	1	1	1	–	–
Kans.	1	–	172	–	–	–	–	–	–	6	–	–	–
S. ATLANTIC	9	–	408	–	–	3	2	2	83	93	26	2	15
Del.	–	–	20	–	–	–	–	–	–	2	–	–	–
Md.	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	2
D.C.	–	–	5	–	–	–	–	–	1	–	–	–	–
Va.†	–	–	9	–	–	–	1	–	19	9	1	1	6
W. Va.	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	1
N.C.	1	–	NN	–	–	2	1	–	13	6	7	1	2
S.C.	–	–	43	–	–	1	–	–	15	4	6	–	–
Ga.	–	–	–	–	–	–	–	–	21	32	–	–	–
Fla.†	8	–	331	–	–	–	–	2	14	40	12	–	4
E.S. CENTRAL	5	–	88	–	–	–	2	–	18	28	2	–	–
Ky.	3	–	63	–	–	–	–	–	1	2	–	–	–
Tenn.	1	–	NN	–	–	–	1	–	13	14	–	–	–
Ala.	–	–	24	–	–	–	–	–	3	6	2	–	–
Miss.	1	–	1	–	–	–	1	–	1	6	–	–	–
W.S. CENTRAL	7	–	159	–	–	3	–	–	34	107	73	1	3
Ark.	–	–	–	–	–	–	–	–	7	7	3	–	1
La.†	–	–	NN	–	–	2	–	–	5	15	10	–	–
Okla.†	–	–	–	–	–	–	–	–	6	7	5	–	1
Tex.	7	–	159	–	–	1	–	–	16	78	55	1	1
MOUNTAIN	–	–	201	–	–	–	1	–	14	79	22	–	8
Mont.†	–	–	140	–	–	–	–	–	–	5	–	–	–
Idaho	–	–	–	–	–	–	–	–	–	–	–	–	–
Wyo.	–	–	–	–	–	–	–	–	–	–	–	–	1
Colo.	–	–	40	–	–	–	–	–	2	25	3	–	3
N. Mex.	–	–	–	–	–	–	1	–	–	1	–	–	–
Ariz.†	–	–	NN	–	–	–	–	–	4	30	12	–	3
Utah	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	–
Nev.	–	–	21	–	–	–	–	–	8	18	7	–	1
PACIFIC	4	–	38	–	–	–	5	–	18	52	8	1	60
Wash.	–	–	11	–	–	–	–	–	2	17	3	–	9
Oreg.	1	–	1	–	–	–	2	–	15	34	3	1	2
Calif.	NA	NA	NA	NA	–	NA	3	–	NA	NA	NA	NA	48
Alaska	–	–	9	–	–	–	–	–	1	1	2	–	1
Hawaii	3	–	17	–	–	–	–	–	–	–	–	–	–
Guam	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	–
P.R.	3	–	15	–	–	–	–	–	1	1	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.: Fla. +2; Chickenpox: Fla. +16; Hep. B: N.H. +1, Fla. +1, Okla. +1, Mont. +1, Ariz. −1; Hep. A: Fla. +4, Mont. −1, Ariz. −1; Hep. unsp.: Va. −1, Okla. −1, Ariz. −2; Malaria: La. +13.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending February 9, 1980, and February 10, 1979, (6th 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	136	661	1,167	62	331	356	224	1,314	15	53	312	4
NEW ENGLAND	4	29	84	4	11	10	37	219	–	9	32	–
Maine	–	–	–	1	1	–	11	61	–	1	4	–
N.H.†	1	7	1	–	–	2	1	1	–	3	13	–
Vt.	3	20	3	1	1	–	–	–	–	–	–	–
Mass.	–	–	–	2	6	5	22	82	–	5	8	–
R.I.	–	1	80	–	–	–	1	8	–	–	–	–
Conn.	–	1	–	–	3	3	2	67	–	–	7	–
MID. ATLANTIC	24	132	38	13	53	51	9	126	4	6	21	1
Upstate N.Y.	11	42	18	7	25	19	3	13	3	2	11	–
N.Y. City	13	42	15	4	13	13	2	18	1	4	7	–
N.J.	NA	14	–	–	8	17	NA	27	NA	NA	2	–
Pa.†	–	34	5	2	7	2	4	68	–	–	1	1
E.N. CENTRAL	22	78	327	3	28	25	85	438	–	10	92	–
Ohio†	–	8	2	–	12	4	30	156	–	–	1	–
Ind.	4	5	24	–	3	8	4	19	–	9	45	–
Ill.	4	12	160	–	2	–	7	55	–	–	3	–
Mich.	–	22	109	3	11	12	35	136	–	–	31	–
Wis.	14	31	32	–	–	1	9	72	–	1	12	–
W.N. CENTRAL	23	72	120	4	8	8	5	71	–	8	26	1
Minn.	23	53	11	3	4	1	–	3	–	1	3	1
Iowa	–	–	1	–	–	3	2	11	–	–	–	–
Mo.	–	17	103	1	3	3	1	37	–	2	6	–
N. Dak.	–	–	1	–	1	–	–	1	–	–	1	–
S. Dak.†	–	–	–	–	–	–	–	–	–	–	–	–
Nebr.	–	2	–	–	–	–	–	7	–	–	–	–
Kans.	–	–	4	–	–	1	2	12	–	5	16	–
S. ATLANTIC	44	203	97	21	81	104	27	163	6	12	34	1
Del.	–	–	–	–	–	2	1	13	1	–	–	–
Md.	NA	1	1	–	9	4	NA	56	NA	NA	–	–
D.C.	–	–	–	–	–	–	–	–	–	–	–	–
Va.†	1	23	6	1	8	12	3	13	–	–	2	–
W. Va.	NA	2	21	–	2	3	NA	12	NA	NA	4	–
N.C.	–	1	1	3	14	14	10	36	–	–	1	–
S.C.	–	1	9	5	10	11	5	7	1	12	21	1
Ga.	30	133	1	8	16	18	–	–	4	–	–	–
Fla.	13	42	58	4	22	40	8	26	–	–	6	–
E.S. CENTRAL	6	34	15	4	30	26	44	117	1	4	18	–
Ky.	6	25	5	1	6	8	39	97	1	2	7	–
Tenn.	–	2	1	1	11	8	2	5	–	2	10	–
Ala.	–	6	8	–	10	5	1	4	–	–	1	–
Miss.	–	1	1	2	3	5	2	11	–	–	–	–
W.S. CENTRAL	8	19	113	11	34	58	6	45	3	1	6	–
Ark.	1	1	5	–	2	5	–	3	1	–	1	–
La.	–	–	6	5	9	21	1	2	–	–	–	–
Okla.	–	1	–	1	3	9	–	–	1	–	–	–
Tex.	7	17	102	5	20	23	5	40	1	1	5	–
MOUNTAIN	1	25	41	1	17	19	3	56	–	1	5	–
Mont.	–	–	13	–	1	2	–	16	–	–	–	–
Idaho	–	–	–	–	1	1	–	4	–	–	–	–
Wyo.	–	–	–	–	1	–	–	–	–	–	–	–
Colo.	–	1	2	–	7	–	1	9	–	–	–	–
N. Mex.	–	–	9	–	–	2	–	–	–	–	–	–
Ariz.	1	10	2	–	4	11	–	9	–	1	1	–
Utah	NA	12	13	–	1	2	NA	15	NA	NA	2	–
Nev.	–	2	2	1	2	1	2	3	–	–	2	–
PACIFIC	4	69	332	1	69	55	8	79	1	2	78	1
Wash.	4	15	240	1	29	5	–	16	–	1	7	–
Oreg.	–	–	2	–	5	3	6	23	1	–	9	–
Calif.	NA	52	83	–	35	45	NA	36	NA	NA	61	1
Alaska	–	–	–	–	–	–	1	3	–	1	1	–
Hawaii	–	2	7	–	–	2	1	1	–	–	–	–
Guam	NA	–	–	–	–	–	NA	–	NA	NA	–	–
P.R.	2	3	7	1	3	–	3	8	–	2	2	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: N.H. +3, Va. −1; Men. inf.: Pa. −1, Ohio +3, S.Dak. +1.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending February 9, 1980, and February 10, 1979, (6th 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	391	2,357	10	4	20	4	6	14,049	104,882	111,477	386	2,854	2,775	440
NEW ENGLAND	10	70	–	–	3	–	–	505	3,212	2,955	8	102	51	5
Maine	–	1	–	–	–	–	–	40	216	216	–	–	–	5
N.H.	–	2	–	–	–	–	–	13	115	90	–	–	2	–
Vt.	–	3	–	–	–	–	–	18	100	47	–	–	–	–
Mass.	5	29	–	–	2	–	–	202	1,199	1,226	4	59	37	–
R.I.	1	9	–	–	1	–	–	51	174	245	–	2	–	–
Conn.	4	26	–	–	–	–	–	181	1,408	1,131	4	41	12	–
MID. ATLANTIC	65	430	–	–	–	1	1	1,919	11,483	10,975	62	434	424	–
Upstate N.Y.	11	59	–	–	–	–	–	479	1,694	1,136	8	27	24	–
N.Y. City	44	188	–	–	–	–	–	950	5,237	4,520	49	317	303	–
N.J.	NA	69	–	NA	–	NA	–	NA	1,514	2,360	NA	36	61	–
Pa.	10	114	–	–	–	1	1	490	3,038	2,959	5	54	36	–
E.N. CENTRAL	70	327	1	–	2	–	–	1,933	16,943	17,472	35	199	395	48
Ohio	7	62	–	–	–	–	–	361	5,107	4,764	24	53	73	–
Ind.	7	40	–	–	–	–	–	207	1,853	1,253	2	30	18	6
Ill.	18	133	–	–	–	–	–	306	3,851	5,913	2	54	248	25
Mich.	34	70	1	–	2	–	–	691	4,041	4,012	6	54	43	–
Wis.	4	22	–	–	–	–	–	368	2,091	1,530	1	8	13	17
W.N. CENTRAL	19	92	3	–	–	2	2	811	4,887	5,227	7	29	30	108
Minn.	3	15	–	–	–	–	–	225	908	888	1	8	12	20
Iowa	5	10	–	–	–	–	–	114	594	691	2	3	4	31
Mo.	7	40	2	–	–	2	2	309	1,990	2,190	3	16	9	36
N. Dak.	–	2	–	–	–	–	–	8	60	88	–	–	–	11
S. Dak.†	–	4	–	–	–	–	–	25	152	203	–	–	–	3
Nebr.	3	6	1	–	–	–	–	77	436	308	1	2	–	–
Kans.	1	15	–	–	–	–	–	53	747	859	–	–	5	7
S. ATLANTIC	99	534	3	2	6	1	3	3,881	26,429	26,882	105	680	700	43
Del.	3	8	–	–	–	–	–	68	410	420	–	2	4	–
Md.	NA	60	1	NA	–	NA	–	NA	2,047	3,314	NA	55	45	–
D.C.†	5	21	–	2	2	–	–	405	1,955	1,625	7	49	59	–
Va.	7	64	–	–	1	–	–	324	2,334	2,559	19	66	73	–
W. Va.	NA	34	–	NA	–	NA	–	NA	302	391	NA	2	16	1
N.C.†	14	94	–	–	–	–	2	708	4,164	3,962	6	56	71	–
S.C.†	10	46	–	–	–	–	–	491	2,818	2,323	4	24	40	11
Ga.†	10	45	2	–	–	1	1	877	5,011	4,977	28	185	179	20
Fla.	50	162	–	–	3	–	–	1,008	7,388	7,311	41	241	213	11
E.S. CENTRAL	50	222	1	1	1	–	–	1,547	8,716	9,896	32	246	194	26
Ky.	7	46	–	1	1	–	–	312	1,360	1,385	1	15	18	15
Tenn.	17	74	1	–	–	–	–	638	3,159	3,431	9	103	88	10
Ala.†	26	69	–	–	–	–	–	341	2,312	2,988	7	42	33	1
Miss.	–	33	–	–	–	–	–	256	1,885	2,092	15	86	55	–
W.S. CENTRAL	60	190	–	–	–	–	–	2,414	13,982	15,191	123	586	432	154
Ark.	1	1	–	–	–	–	–	192	976	1,248	4	18	15	21
La.	17	58	–	–	–	–	–	436	1,993	2,590	31	131	80	1
Okla.	9	23	–	–	–	–	–	247	1,508	1,335	–	5	7	21
Tex.	33	108	–	–	–	–	–	1,539	9,505	10,018	88	432	330	111
MOUNTAIN	12	94	–	1	1	–	–	436	4,058	4,414	11	72	44	12
Mont.†	1	3	–	1	1	–	–	31	139	259	–	–	3	1
Idaho	–	3	–	–	–	–	–	35	227	182	1	3	3	–
Wyo.†	4	7	–	–	–	–	–	30	132	111	–	3	3	–
Colo.	–	31	–	–	–	–	–	141	1,080	1,158	5	24	18	–
N. Mex.	–	16	–	–	–	–	–	90	660	624	–	9	6	1
Ariz.	6	28	–	–	–	–	–	NA	889	1,226	NA	20	6	10
Utah	NA	3	–	NA	–	NA	–	NA	191	195	NA	4	–	–
Nev.	1	3	–	–	–	–	–	109	740	659	5	9	5	–
PACIFIC	6	398	2	–	7	–	–	603	15,172	18,465	3	506	505	44
Wash.	4	37	–	–	–	–	–	266	1,572	1,553	–	47	26	–
Oreg.	2	35	–	–	–	–	–	253	1,187	1,360	3	12	25	–
Calif.	NA	318	2	NA	7	NA	–	NA	11,761	14,717	NA	437	447	44
Alaska †	–	–	–	–	–	–	–	59	444	565	–	1	2	–
Hawaii	–	8	–	–	–	–	–	25	208	270	–	9	5	–
Guam	NA	–	–	NA	–	NA	–	NA	–	15	NA	–	–	–
P.R.†	1	12	–	–	–	–	–	43	146	199	12	43	63	3
V.I.	–	–	–	–	–	–	–	2	13	15	1	4	–	–
Pac. Trust Terr.	NA	–	–	NA	–	NA	–	NA	–	52	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: D.C. +5, N.C. −1, Ala. +9, Alaska +1; GC: S.C. +120 mil., Ga. +83 mil., Mont. +15 civ., Wyo. +6 mil., P.R. +23 civ.; An. rabies: S.Dak. +27.

TABLE IV. Deaths in 121 U.S. cities,* week ending February 9, 1980 (6th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P&I** TOTAL
	ALL AGES	>65	45-64	25-44	<1	
NEW ENGLAND	751	526	157	34	16	52
Boston, Mass.	208	126	57	12	6	9
Bridgeport, Conn.	51	34	8	6	–	3
Cambridge, Mass.	25	17	7	1	–	1
Fall River, Mass.	31	22	8	1	–	1
Hartford, Conn.	48	34	12	1	–	3
Lowell, Mass.	36	28	7	–	1	–
Lynn, Mass.	23	14	6	–	2	–
New Bedford, Mass.	27	22	2	2	–	1
New Haven, Conn.	64	46	11	1	2	4
Providence, R.I.	78	58	14	3	3	5
Somerville, Mass.	10	8	1	–	–	–
Springfield, Mass.	53	45	6	2	–	4
Waterbury, Conn.	31	24	4	2	1	3
Worcester, Mass.	66	48	14	3	1	18
MID. ATLANTIC	3,230	2,141	712	193	110	194
Albany, N.Y.	61	42	14	–	3	1
Allentown, Pa.	22	18	4	–	–	2
Buffalo, N.Y.	123	79	29	5	4	8
Camden, N.J.	44	26	12	3	1	2
Elizabeth, N.J.	27	20	5	1	–	4
Erie, Pa.†	29	17	9	–	3	2
Jersey City, N.J.	51	30	15	3	1	2
Newark, N.J.	85	46	27	9	2	5
N.Y. City, N.Y.	1,720	1,166	365	118	36	116
Paterson, N.J.	47	26	8	3	8	2
Philadelphia, Pa.†	498	287	119	35	41	20
Pittsburgh, Pa.†	117	86	24	6	1	4
Reading, Pa.	44	37	6	–	–	2
Rochester, N.Y.	122	96	21	1	3	14
Schenectady, N.Y.	31	22	7	2	–	–
Scranton, Pa.†	35	27	3	2	2	1
Syracuse, N.Y.	84	49	25	3	4	3
Trenton, N.J.	36	24	10	–	1	2
Utica, N.Y.	23	18	4	1	–	2
Yonkers, N.Y.	31	25	5	1	–	2
E.N. CENTRAL	2,547	1,578	632	164	91	95
Akron, Ohio	59	42	10	4	2	–
Canton, Ohio	45	29	14	–	–	2
Chicago, Ill.	635	368	175	44	21	19
Cincinnati, Ohio	175	125	38	6	4	18
Cleveland, Ohio	182	108	45	13	12	4
Columbus, Ohio	174	111	40	11	7	8
Dayton, Ohio	124	71	39	7	5	3
Detroit, Mich.	239	125	64	31	9	9
Evansville, Ind.	53	34	9	3	4	3
Fort Wayne, Ind.	66	44	15	4	1	4
Gary, Ind.	20	12	3	1	2	–
Grand Rapids, Mich.	91	56	20	5	8	8
Indianapolis, Ind.	180	115	39	11	11	2
Madison, Wis.	37	26	8	2	–	3
Milwaukee, Wis.	155	111	32	5	–	1
Peoria, Ill.	50	29	12	6	1	2
Rockford, Ill.	37	27	7	2	1	2
South Bend, Ind.	55	37	14	2	1	3
Toledo, Ohio	101	66	27	4	1	3
Youngstown, Ohio	69	42	21	3	1	1
W.N. CENTRAL	798	510	190	42	41	33
Des Moines, Iowa	58	36	10	3	6	5
Duluth, Minn.	32	27	4	–	1	3
Kansas City, Kans.	45	23	15	4	2	3
Kansas City, Mo.	139	87	36	5	7	4
Lincoln, Nebr.	31	19	8	2	1	1
Minneapolis, Minn.	98	62	21	7	7	5
Omaha, Nebr.	96	61	22	5	7	3
St. Louis, Mo.	157	102	36	10	5	1
St. Paul, Minn.	64	41	18	4	1	–
Wichita, Kans.	78	52	20	2	4	8
S. ATLANTIC	1,293	788	327	76	58	58
Atlanta, Ga.	150	82	38	10	16	5
Baltimore, Md.	266	157	79	13	7	2
Charlotte, N.C.	61	30	20	7	1	4
Jacksonville, Fla.	122	84	24	4	6	5
Miami, Fla.	105	61	26	5	8	4
Norfolk, Va.	52	32	11	4	3	8
Richmond, Va.	94	56	28	5	4	10
Savannah, Ga.	33	21	9	3	–	1
St. Petersburg, Fla.	97	78	11	5	1	5
Tampa, Fla.	88	53	18	6	7	8
Washington, D.C.	166	101	44	10	4	4
Wilmington, Del.	59	33	19	4	1	2
E.S. CENTRAL	741	461	176	43	31	40
Birmingham, Ala.	128	71	36	7	11	2
Chattanooga, Tenn.	51	33	12	2	2	4
Knoxville, Tenn.	43	38	4	–	–	1
Louisville, Ky.	117	78	24	4	4	9
Memphis, Tenn.	170	104	40	12	8	7
Mobile, Ala.	82	44	21	9	2	8
Montgomery, Ala.	48	32	11	4	1	6
Nashville, Tenn.	102	61	28	5	3	3
W.S. CENTRAL	1,364	777	369	96	59	39
Austin, Tex.	36	24	9	1	2	3
Baton Rouge, La.	45	30	6	5	1	1
Corpus Christi, Tex.	40	22	12	4	1	1
Dallas, Tex.	180	95	62	8	9	2
El Paso, Tex.	59	40	10	2	1	4
Fort Worth, Tex.	85	55	16	4	7	5
Houston, Tex.	390	193	125	38	15	5
Little Rock, Ark.	69	44	13	4	4	3
New Orleans, La.	160	93	45	9	3	–
San Antonio, Tex.	157	97	35	11	7	8
Shreveport, La.	70	40	20	3	5	2
Tulsa, Okla.	73	44	16	7	4	5
MOUNTAIN	621	383	147	45	22	21
Albuquerque, N. Mex.	43	18	16	6	1	6
Colo. Springs, Colo.	38	28	5	4	–	3
Denver, Colo.	127	79	28	6	8	2
Las Vegas, Nev.	65	30	21	8	1	2
Ogden, Utah	23	15	5	2	–	1
Phoenix, Ariz.	170	114	37	10	6	1
Pueblo, Colo.	11	9	2	–	–	4
Salt Lake City, Utah	57	31	16	3	4	1
Tucson, Ariz.	87	59	17	6	2	1
PACIFIC	1,940	1,299	416	99	72	104
Berkeley, Calif.	27	19	4	4	–	3
Fresno, Calif.	80	53	17	4	2	6
Glendale, Calif.	31	26	2	3	–	3
Honolulu, Hawaii	78	40	25	5	4	2
Long Beach, Calif.	101	75	18	1	3	3
Los Angeles, Calif.	543	356	123	31	14	28
Oakland, Calif.	69	44	13	5	5	3
Pasadena, Calif.	25	18	5	2	–	4
Portland, Oreg.	151	96	40	6	8	2
Sacramento, Calif.	70	47	13	6	4	4
San Diego, Calif.	126	89	27	5	2	–
San Francisco, Calif.	177	125	34	8	7	9
San Jose, Calif.	166	102	41	9	5	5
Seattle, Wash.	173	117	29	7	15	13
Spokane, Wash.	60	46	12	2	–	12
Tacoma, Wash.	63	46	13	1	3	7
TOTAL	13,285	8,463	3,126	792	500	636

*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.

Diarrhea – Continued

Epidemiologic studies to identify the vehicle(s) of transmission, proportion of cases due to *S. sonnei*, and the magnitude of the current problem are in progress.

Reported by DE Hoyt, PHN, HW Anderson, RS, HH Handsfield, MD, Seattle-King County Dept of Public Health; J Taylor, MD, MPH, State Epidemiologist, Washington Dept of Social and Health Services; FR Dixon, MD, State Epidemiologist, RH Schultz, Idaho State Dept of Health and Welfare; LP Williams, Jr, DVM, Oregon Dept of Human Resources; SB Werner, MD, California Dept of Health Services; Direccion General de Epidemiologia y de Servicios Coordinados en los Estados, Mexico; Quarantine Div, Field Services Div, Enteric Diseases Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: Travelers to Puerto Vallarta should be advised to eat only cooked food that is still hot and fruit that they peel themselves and to drink only the following: water that has been boiled or adequately disinfected with iodine or chlorine compounds, bottled carbonated water, soft drinks, beer, or wine. Unpasteurized milk and milk products and beverages containing ice should be avoided. Doxycycline, which has been reported to be effective in the prevention of travelers' diarrhea caused by susceptible strains of enterotoxigenic *Escherichia coli*, apparently was not effective in travelers to Puerto Vallarta.

Epidemiologic Notes and Reports

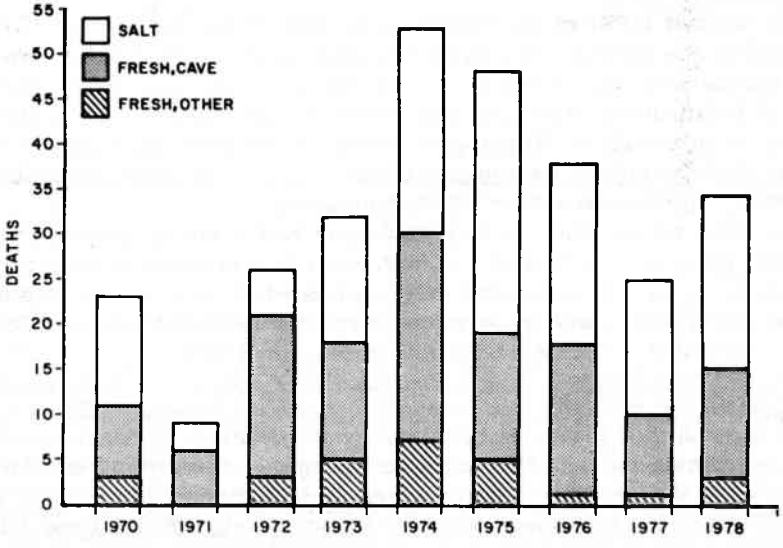
Underwater Diving Deaths – Florida

There were 34 underwater diving deaths* in Florida during 1978. This represents a 31% increase from the 26 deaths reported during 1977, but an increase of only 2 deaths over the annual average of 32 since 1970.

Despite Florida's fame as a salt-water recreation area, fresh water has usually claimed more diving victims (approximately 55%) (Figure 2). In fact, of the 440 deaths reported

*An underwater diving death is one in which the death certificate reports that the cause was connected with underwater diving and/or intentionally swimming underwater for a period of time. The underlying cause of death is usually drowning but may also be air embolism, nitrogen narcosis, suffocation, injury by boat/propeller, shark bite, heart attack, stroke, drugs, alcohol, or the like. The intent, usually accidental, may be suicidal, homicidal, or undetermined.

FIGURE 2. Underwater diving deaths, by type of water, Florida, 1970-1978



Diving Deaths — Continued

TABLE 2. Florida underwater diving deaths, 1960-1978

Year	Total	Race and sex				Age groups								Breathing method			Type of water			At work
		White		All other races		0 - 9	10 - 19	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	≥70	Scuba	Air hose	Snorkel, other, not stated	Salt	Fresh		
		Male	Female	Male	Female													Cave	Other not stated	
1960	10	10					2	3	4	1				8		2	4	4	2	
1961	14	14					3	9	2					12		2	4	9	1	
1962	17	17					3	8	2	2	2			11		6	7	9	1	
1963	7	7					2	2	3					5		2	3	3	1	
1964	9	9					3	4	1	1				6		3	4	4	1	2
1965	16	16					5	8		3				11	1	4	7	6	3	1
1966	15	14		1			6	6	2	1				11		4	9	4	2	1
1967	21	21					7	8	3	1		1	1	17	1	3	8	11	2	2
1968	15	15					2	8	4	1				13		2	5	9	1	1
1969	25	22	2	1			4	14	3	2	2			22		3	9	10	6	2
1970	23	22	1				6	10	4	2	1			21		2	12	8	3	3
1971	9	7	2				1	6	1		1			8		1	3	6		
1972	27	26	1				11	13	2		1			26		1	6	18	3	
1973	32	28		4			5	18	6	2	1			27		5	13	14	5	2
1974	53	49	3	1			12	24	9	6	2			44	4	5	22	24	7	4
1975	49	45	4			1	8	26	10	2	1	1		43		6	29	15	5	6
1976	38	35	3				5	18	7	4	2	2		32		6	19	18	1	
1977	26	25	1				2	13	7	2	2			24		2	16	9	1	
1978	34	29	5				7	17	5	3	1	1		26		8	19	13	2	
Total	440	411	22	7		1	94	215	75	33	16	5	1	367	6	67	197	194	49	24
Percent		93	5	2	0	<1	21	49	17	8	4	1	<1	83	1	15	45	44	11	6

since 1960, when close monitoring of such mortality began, the number that occurred in salt water has only exceeded the number that occurred in fresh water in 4 individual years.

In 1978, the typical underwater diving victim was a white male in his 20s who was using scuba gear. White males have represented 93% of the deaths since 1960; scuba divers have accounted for 83% of such deaths. Since 1960, divers between 20 and 29 years of age have accounted for 49% of deaths; the median age was 24 years (Table 2).

The vast majority of underwater diving deaths are the result of inexperience and/or carelessness on the part of the diver, although, occasionally, strong currents, rough water, or equipment failure are contributing factors. Only 24 (6%) of the Florida deaths have been job-related.

Cave diving is especially dangerous and requires a great deal of special training and equipment, as well as extreme caution. Over 44% of Florida's underwater diving deaths have involved cave divers.

Nearly one-half (48%) of the Florida underwater diving deaths from 1974 through 1978 involved non-residents. Among Florida residents, only 27% of the victims were cave divers, whereas over half (53%) of the non-residents were cave divers. There was an average of 6 cave-diving deaths per year among Florida residents during these 5 years compared to an average of 10 per year among non-residents. Non-residents were more heavily represented only in the category of cave divers; in all other categories of underwater deaths, Floridians were more heavily represented.

Deaths that resulted from diving in salt water have occurred in those areas that are most noted for ocean sports; deaths in fresh water have occurred in the areas where the most popular springs and underwater caves are located. Monroe County leads the state in salt-water diving deaths, with 66 deaths reported since 1960, and Suwannee County leads in fresh-water diving deaths, with 62 deaths reported since 1960.

Reported by RA Gunn, MD, MPH, State Epidemiologist, GA Purcell, Florida State Dept of Health and Rehabilitative Services, in Monthly Vital Statistics Report, January-February, 1979.

Editorial Note: Although the number of underwater deaths in Florida does not appear to be changing greatly, the reduction in deaths among cave divers from Florida is encouraging. Apparently the statewide publicity in recent years concerning the dangers of underwater cave diving has had some impact on Florida divers, although these data must be

Diving Deaths — Continued

interpreted cautiously because the actual number of divers at risk is unknown. Publicity now present on site (i.e., warning signs at high-risk sites and the fencing-off of dangerous caves) may reduce the number of deaths among non-Florida residents, with significant impact on the overall problem of underwater mortality.

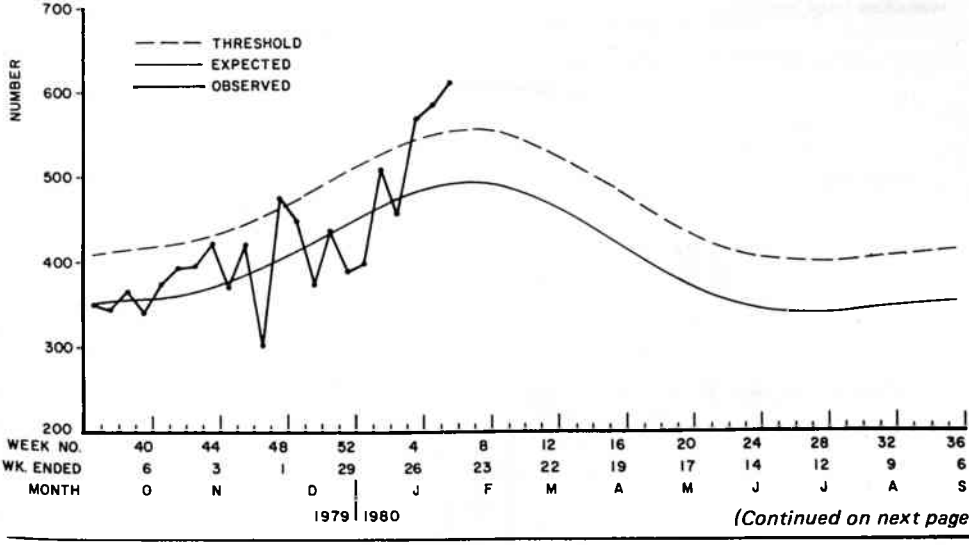
Current Trends

Influenza — United States

For the week ending February 2, 1980, widespread influenza activity was reported from 13 states and territories. Results of influenza virus surveillance document an increase in the number of influenza B viruses isolated in January. In addition to previously reported states, influenza B viruses were isolated in Connecticut, Florida, Idaho, Kansas, Minnesota, Nebraska, New Mexico, Oklahoma, Pennsylvania, Rhode Island, Vermont, West Virginia, and the District of Columbia, bringing to 31 the number of states with influenza B isolates this season. Sixty-seven percent of the specimens and 95% of the isolates were reported in the Middle Atlantic, East North Central, and Pacific regions.

Death certificate data, collected weekly from 117 U.S. cities and used to detect the impact of influenza on mortality, indicate that for the last 3 weeks (January 26-February 9) pneumonia and influenza (P&I) deaths have exceeded the epidemic threshold (see MMWR, volume 27, for an explanation of the P&I surveillance system [*1*]) (Figure 3). This in-

FIGURE 3. Observed and expected number of deaths attributed to pneumonia and influenza in 117 U.S. cities



(Continued on next page)

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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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Influenza — Continued

crease was noted in most regions of the country, primarily among persons over 65 years of age, and was concurrent with influenza B activity, as detected by independent morbidity systems.

Reported by Immunization Div, Bur of State Services, Virology Div, Bur of Laboratories, and Consolidated Surveillance and Communications Activity, Bur of Epidemiology, CDC.

Editorial Note: Influenza B in past years has been only occasionally associated with excess mortality, and usually not to the degree that is seen with epidemics associated with influenza A.

Reference

1. MMWR 1978;27:472-4.

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