

# MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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## Current Trends

### Teenage Childbearing and Abortion Patterns — United States, 1977

In 1977, females aged 12-19 continued to have fewer births, more abortions, and a decreasing percentage of all births when compared to previous years. However, when combined, live births and abortions continued to rise. Moreover, because of the shifting age structure of the population (7), the number of females 12-19 declined, and the fertility rate for teenagers increased for the first time since 1970.

The increase in fertility rate for all teenagers was due to an increase in the age-specific fertility rate for teenagers age 18-19. This increase in the age-specific fertility rates was a result of an increase in the total births to a stable population of 18- to 19-year-old women (7).

For females aged 12-14, the fertility rate in 1977 stabilized at 2.0 births per 1,000 women. Total births to females less than 15 decreased to 11,455 (from 11,928 in 1976), and abortions were down to 12,964 compared to 13,291 in 1976 (Table 1); thus, when combined, reported abortions and live births for this age group declined slightly. Although the population in this age group also decreased, combined abortions and live births declined at a faster pace, resulting in a small decrease in the conception rate (Table 2). However, when compared to 1976, the abortion ratio increased 2%, to 1,132 abortions per 1,000 live births in the less than 15 age group.

Births among 15- to 19-year-old women increased slightly in 1977, to 559,154 (from 558,744 in 1976), representing 16.8% of all births. The fertility rate also increased slightly, to 53.7 births per 1,000 women in that age group (from 53.5 in 1976). Total abortions among 15- to 19-year-old women continued to increase, indicating that abortions and live births combined also increased, as did the conception rate. The abortion ratio increased 8%, to 581 abortions per 1,000 live births, from 539 in 1976.

The specific age of the teenagers was associated with different childbearing and abortion patterns (Table 2). Females 14 years old and younger had a decrease in total abortions, in total births, and in abortion rate, but they had a stable fertility rate. For teenagers 15-17 years old, the total number of births decreased, while the total number of abortions increased. For this age group, the slight decline in fertility rate was primarily achieved by increased use of induced abortion. Finally, for females aged 18-19, the total number of births, total number of abortions, fertility rate, and abortion rate all increased, indicating that total conceptions also increased.

Twenty-eight states and the District of Columbia showed an increase in births from 1976 to 1977 for 15- to 19-year-old women. Six of these 28 and the District of Columbia reported an increase in births but a decrease in abortions. Differences in births from 1976 to 1977 ranged from a 12.3% increase in Wyoming to a 5.0% decrease in Vermont.

*Reported by the Abortion Surveillance Br and the Statistical Services Br, Family Planning Evaluation Div, Bur of Epidemiology, CDC.*

## Teenage Childbearing — Continued

TABLE 1. Births\* to teenage females in 1977, with percent change from 1976, and abortion† to teenage females in 1977, United States, by state and HEW Region

	Females aged 14 and younger			Females aged 15-19		
	Births‡ 1977	% Change in births 1976-1977	Abortions§ 1977	Births‡ 1977	% Change in births 1976-1977	Abortions§ 1977
<b>REGION I TOTAL</b>	256	-5.2	564	18,736	+0.8	18,086
Connecticut	104	+40.5	156	4,293	+0.9	4,593
Maine ‡	34	+54.5	22	2,657	+2.6	705
Massachusetts ‡	86	-35.3	326	7,755	+0.9	10,454
New Hampshire	7	-30.0	18	1,490	-1.1	649
Rhode Island	17	-19.0	30	1,606	+2.6	1,111
Vermont	8	-20.0	12	935	-5.0	574
<b>REGION II TOTAL</b>	853	-14.2	1,770	42,162	+0.6	42,491
New Jersey ‡	268	-13.5	305	11,948	-0.5	7,315
New York	585	-14.5	1,465	30,214	+1.1	35,176
<b>REGION III TOTAL</b>	1,146	-4.3	2,191	55,310	-0.4	44,570
Delaware ‡	60	+7.1	36	1,557	-3.7	727
District of Columbia	96	+12.9	453	2,202	+0.1	7,185
Maryland	229	-5.0	401	9,105	+0.1	8,061
Pennsylvania	395	-9.0	791	23,492	-0.7	18,814
Virginia	285	+6.3	477	12,535	+0.2	9,104
West Virginia ‡	81	-28.3	33	6,419	-0.8	679
<b>REGION IV TOTAL</b>	3,526	+1.0	2,351	121,148	+0.3	47,817
Alabama ‡	405	-0.5	178	13,963	+1.2	3,625
Florida ‡	740	+2.4	671	22,234	+0.6	13,649
Georgia	574	+5.1	466	18,184	+1.4	9,117
Kentucky	243	-9.7	188	12,765	-0.7	3,537
Mississippi	440	+22.9	63	11,390	+1.6	821
North Carolina	432	-4.8	406	17,786	-0.8	8,375
South Carolina	312	-10.3	120	10,629	-0.5	3,097
Tennessee	380	-1.6	259	14,197	-0.5	5,596
<b>REGION V TOTAL</b>	1,923	-8.9	1,474	111,557	-0.3	55,127
Illinois	603	-14.1	455	29,362	+0.9	17,429
Indiana	275	-11.9	125	16,051	+0.5	3,208
Michigan ‡	428	+6.7	302	22,628	0	11,282
Minnesota	59	-13.2	137	7,048	+2.1	5,860
Ohio	455	-9.5	341	27,446	-2.8	13,068
Wisconsin ‡	103	-16.9	114	9,022	-0.5	4,280
<b>REGION VI TOTAL</b>	1,956	-3.0	1,130	83,623	-0.1	24,973
Arkansas	263	+8.2	60	8,440	-0.9	1,071
Louisiana	431	-1.8	129	16,537	+3.0	2,558
New Mexico	54	-29.9	40	4,438	+1.1	1,430
Oklahoma ‡	147	-16.9	118	9,594	-2.0	2,609
Texas ‡	1,061	-1.8	783	44,614	-0.7	17,305
<b>REGION VII TOTAL</b>	411	-7.0	474	28,798	+0.5	10,583
Iowa ‡	63	+14.5	79	6,241	+1.2	1,764
Kansas	66	-33.3	135	6,145	-0.9	2,893
Missouri	247	-5.7	206	13,162	+0.9	4,086
Nebraska	35	+34.6	54	3,260	+0.3	1,840
<b>REGION VIII TOTAL</b>	161	+7.3	225	17,279	+2.9	7,217
Colorado	62	-6.1	138	6,324	-1.6	4,082
Montana	21	+31.3	19	1,988	+2.5	862
North Dakota ‡	9	-35.7	20	1,514	+2.4	647
South Dakota	22	+29.4	14	1,798	+6.0	572
Utah	40	+53.8	29	4,285	+6.2	884
Wyoming	7	-36.4	5	1,370	+12.3	170
<b>REGION IX TOTAL</b>	1,010	-3.2	2,311	63,814	-0.8	59,417
Arizona	100	-26.5	64	7,114	-3.2	1,904
California ‡	861	-0.5	2,158	52,856	-0.3	55,052
Hawaii	20	+42.9	48	2,122	-4.9	1,165
Nevada	29	+3.6	41	1,722	+0.6	1,296
<b>REGION X TOTAL</b>	213	-0.9	474	16,727	+1.0	14,601
Alaska	18	+125.0	8	1,117	+9.1	316
Idaho	32	+10.3	18	2,706	+1.4	356
Oregon	69	+3.0	146	5,318	-1.0	4,501
Washington	94	-15.3	302	7,586	+1.1	9,428
<b>UNITED STATES TOTAL</b>	11,455	-4.0	12,964	559,154	+0.1	324,882

\*By state of residence.

†By state of occurrence.

‡Preliminary tabulations provided by the National Center for Health Statistics.

§Data from states as reported in the 1977 Abortion Surveillance Report (2), except as noted for individual states.

|| This state did not report abortions by age in 1977. The estimate was derived by assuming that the percentage of abortions that occurred to females of each age group was the same as the average for known states in the region.

¶ The 1976 distribution by age for California was applied to the 1977 total abortions reported by California.

*Teenage Childbearing — Continued***TABLE 2. Births, fertility rates, abortions, and abortion rates for teenage females in 1977 with percent change from 1976, United States**

	Age 14 and under	Age 15-17	Age 18-19
Total births, 1977*	11,455	213,788	345,366
Percent change from 1976	-4.0	-0.8	+0.6
Total abortions, 1977†	12,964	135,801	189,081
Percent change from 1976	-2.5	+7.2	+8.5
Total abortions and live births, 1977	24,419	349,589	534,447
Percent change from 1976	-3.2	+2.2	+3.3
Fertility rate, 1977‡	2.0	34.5	82.2
Percent change from 1976	-1.5	-0.4	+0.6
Abortion rate, 1977‡	2.2	21.9	45.0
Percent change from 1976	0	+7.6	+8.5
Resultant conception rate, 1977 (Fertility rate + abortion rate)	4.2	56.4	127.1
Percent change from 1976	-0.7	+2.5	+3.2

\*National Center for Health Statistics. Monthly vital statistics report; final natality statistics, 1977. (Vol. 27, no. 11). Hyattsville, Maryland: National Center for Health Statistics, Feb. 5, 1979. (DHEW publication no. (PHS)79-1120).

†Age distribution of abortions for 15- to 19-year-old teenagers (from: CDC. Abortion surveillance report, 1977. Atlanta: CDC, Issued September 1979) was applied to total abortions for 15- to 19-year-old teenagers in Table 1.

‡Births and abortions per 1,000 females in each age group. Denominators for ages 12-14, 15-17, and 18-19 were taken from U.S. Bureau of the Census. Current population reports. Washington, DC: Department of Commerce, January 1980. (Series P-25: no. 870).

**Editorial Note:** In 1977, the teenage birth rate increased for the first time since 1970, in spite of the increasing availability and use of contraception by teenagers (3), increasing federal expenditures for family-planning services (4), and an increasing abortion rate. The childbearing and abortion patterns in the ≤14-year-olds indicate that increased national efforts may have had some impact, however.

An estimated 46% of teenage births are unintended (5); when the teenage conceptions in 1977 that terminated in abortion are taken into account, an estimated 70% of such teenage conceptions in that year appear to have been unintended. Although 1.3 million teenagers have access to federally funded family-planning services (4), these teenagers represent only 31% of the estimated 4.2 million sexually-active 15- to 19-year-old women who might wish contraception.

More teenagers used contraceptives in 1976 than in 1971; however, the number of pregnancies in 1976 increased, presumably because there were more sexually active teenagers that year. The actual risk of pregnancy in teenagers having premarital sex (estimated to be 28%) stayed the same (3). There was a continuing increase in the out-of-wedlock birth rate for teenagers, apparently due to a decreasing tendency to marry because of pregnancy (3).

**References**

1. U.S. Bureau of the Census. Current population reports. Washington, DC: Department of Commerce, 1980. (Series P-25, 870).
2. CDC. Abortion surveillance report, 1977, Atlanta: CDC, 1979.
3. Zelnick M, Kantner JF. First pregnancies to women aged 15-19: 1976 and 1977. *Fam Plann Perspect* 1978;10:11.
4. Torres A. Organized family planning services in the United States, 1976-1977. *Fam Plann Perspect* 1979;11:342.
5. CDC: Teenage fertility in the United States: summary 1960, 1970, 1974. Atlanta: CDC, February 1978.

## Current Trends

## Survey of Measles Surveillance Activities in State and Local Health Departments

In July 1979, CDC's Consolidated Surveillance and Communications Activity (CSCA) conducted a sample survey of health jurisdictions (generally county health departments) to describe national measles surveillance and control activities. A total of 123 health agencies were surveyed, including 109 local health departments (34 small, 35 medium, and 40 large),\* 4 regional health districts, and 10 state health departments.

The most widely accepted criterion of a reportable case of measles is a report that is submitted by a physician, public health nurse, or school nurse and is supported by clinical or laboratory data. In 65% of the health jurisdictions, a physician report without clinical or laboratory data is acceptable evidence of a measles case. Private physicians and public health or school nurses are the most important sources of measles reports. Nearly a third of the respondents require reports even when no cases have been detected.

Estimates of the percentage of total measles cases that are actually reported to the health department vary widely. About one-fourth of the local health departments were

\*Jurisdictions in each state were divided into 3 categories according to population size, and 1 jurisdiction was sampled from each category.

(Continued on page 165)

TABLE I. Summary — cases of specified notifiable diseases, United States  
[Cumulative totals include revised and delayed reports through previous weeks.]

DISEASE	14th WEEK ENDING		MEDIAN 1975-1979	CUMULATIVE, FIRST 14 WEEKS		
	April 5, 1980	April 7, 1979*		April 5, 1980	April 7, 1979*	MEDIAN 1975-1979
Aseptic meningitis	44	29	29	843	677	500
Brucellosis	1	—	1	45	20	39
Chickenpox	7,014	8,121	6,593	75,920	90,141	81,056
Diphtheria	—	—	3	1	2	25
Encephalitis: Primary (arthropod-borne & unsp.)	8	4	15	157	122	170
Post-infectious	4	4	4	41	53	53
Hepatitis, Viral: Type B	302	263	274	4,256	3,646	3,953
Type A	539	598	620	7,138	7,994	8,962
Type unspecified	273	203	155	3,092	2,780	2,251
Malaria	18	5	6	354	103	82
Measles (rubeola)	578	477	862	3,897	4,479	7,751
Meningococcal infections: Total	73	54	35	910	947	616
Civilian	73	54	35	905	941	612
Military	—	—	—	5	6	4
Mumps	242	504	739	3,868	5,493	8,531
Pertussis	12	18	18	268	375	310
Rubella (German measles)	129	394	478	1,336	3,881	4,937
Tetanus	—	1	1	10	8	10
Tuberculosis	494	509	607	6,713	7,121	7,734
Tularemia	—	1	1	22	27	19
Typhoid fever	1	5	5	77	108	94
Typhus fever, tick-borne (Rky. Mt. spotted)	2	2	2	9	18	14
Veneral diseases:						
Gonorrhea: Civilian	15,214	19,512	18,791	252,135	256,304	248,704
Military	490	547	547	7,286	7,612	7,612
Syphilis, primary & secondary: Civilian	430	501	423	7,213	6,601	6,601
Military	4	4	4	102	85	85
Rabies in animals	125	117	70	1,355	962	668

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1980		CUM. 1980
Anthrax	—	Poliomyelitis: Total	2
Botulism †	10	Paralytic	1
Congenital rubella syndrome	23	Psittacosis † (Mass. 1)	19
Leprosy † (N.J. 1, Tex. 1, Hawaii 1)	40	Rabies in man	—
Leptospirosis †	13	Trichinosis	10
Plague †	—	Typhus fever, flea-borne (endemic, murine) (Tex. 4)	9

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

†Delayed reports: Botulism: Mass. +2 (1979); Leprosy: Mass. +1 (1979); Leptospirosis: Miss. +2 (1979), Ore. +1 (1979); Plague: Ore. +3 (1979); Psittacosis: Ark. —1 (1979), Ore. +16 (1979).

TABLE III. Cases of specified notifiable diseases, United States, weeks ending  
April 5, 1980, and April 7, 1979 (14th week)

REPORTING AREA	ASEPTIC MENIN- GITIS	BRU- CEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS (VIRAL), BY TYPE			MALARIA	
						Primary		Post-in- fectious	B	A	Unspecified		
						1980	1979*	1980	1980	1980	1980		
1980	1980	1980	1980	1980	CUM. 1980	1980	1979*	1980	1980	1980	1980	1980	CUM. 1980
UNITED STATES	44	1	7,014	-	1	8	4	4	302	539	273	18	354
NEW ENGLAND	2	-	610	-	-	-	1	-	5	6	5	3	26
Maine †	1	-	105	-	-	-	-	-	-	-	-	2	5
N.H. †	-	-	21	-	-	-	-	-	-	1	-	-	2
Vt.	-	-	5	-	-	-	-	-	-	1	-	-	-
Mass.	-	-	255	-	-	-	1	-	1	2	4	-	14
R.I.	-	-	47	-	-	-	-	-	-	2	-	-	1
Conn.	1	-	177	-	-	-	-	-	4	-	1	1	4
MID. ATLANTIC	5	-	421	-	1	4	-	-	49	40	11	1	57
Upstate N.Y.	3	-	157	-	-	2	-	-	5	8	1	-	7
N.Y. City	-	-	51	-	1	-	-	-	4	2	1	-	23
N.J.	1	-	NN	-	-	1	-	-	9	11	6	-	17
Pa.	1	-	213	-	-	1	-	-	31	19	3	1	10
E.N. CENTRAL	1	-	3,650	-	-	1	3	1	45	85	24	-	12
Ohio †	-	-	270	-	-	-	1	-	5	13	9	-	3
Ind. †	-	-	158	-	-	-	1	-	3	3	2	-	-
Ill.	-	-	1,033	-	-	-	-	-	14	43	3	-	3
Mich.	1	-	1,529	-	-	1	1	-	19	20	9	-	3
Wis.	-	-	660	-	-	-	-	1	4	6	1	-	3
W.N. CENTRAL	4	-	718	-	-	-	-	-	6	25	5	3	12
Minn. †	-	-	1	-	-	-	-	-	1	13	-	-	5
Iowa	1	-	254	-	-	-	-	-	-	1	1	-	2
Mo.	1	-	89	-	-	-	-	-	2	4	2	2	2
N. Dak.	-	-	4	-	-	-	-	-	-	-	-	-	-
S. Dak.	2	-	2	-	-	-	-	-	-	-	-	-	-
Nebr.	-	-	2	-	-	-	-	-	-	-	-	1	1
Kans.	-	-	366	-	-	-	-	-	3	7	2	-	2
S. ATLANTIC	15	-	529	-	-	-	-	1	84	86	35	2	35
Del.	-	-	7	-	-	-	-	-	-	-	-	-	-
Md.	3	-	24	-	-	-	-	-	6	8	5	-	5
D.C.	-	-	3	-	-	-	-	-	1	2	-	-	1
Va. †	-	-	20	-	-	-	-	-	15	4	4	-	12
W. Va.	-	-	82	-	-	-	-	-	-	4	-	-	2
N.C.	1	-	NN	-	-	-	-	-	4	4	4	1	4
S.C.	1	-	33	-	-	-	-	-	25	1	3	-	2
Ga.	-	-	5	-	-	-	-	-	13	5	-	1	3
Fla.	10	-	355	-	-	-	-	1	20	58	19	-	6
E.S. CENTRAL	2	-	163	-	-	1	-	-	17	27	8	-	4
Ky.	2	-	119	-	-	-	-	-	1	3	-	-	2
Tenn.	-	-	NN	-	-	-	-	-	8	12	1	-	-
Ala.	-	-	22	-	-	1	-	-	4	5	7	-	2
Miss.	-	-	22	-	-	-	-	-	4	7	-	-	-
W.S. CENTRAL	3	1	437	-	-	-	-	-	25	88	90	1	32
Ark.	1	-	8	-	-	-	-	-	1	8	2	1	2
La.	-	-	NN	-	-	-	-	-	-	-	-	-	14
Okla.	-	-	-	-	-	-	-	-	3	9	11	-	7
Tex.	2	1	429	-	-	-	-	-	21	71	77	-	9
MOUNTAIN	2	-	67	-	-	-	-	-	8	58	46	2	18
Mont. †	-	-	8	-	-	-	-	-	-	2	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	2	-	-	-
Wyo. †	-	-	-	-	-	-	-	-	-	-	-	-	1
Colo. †	1	-	55	-	-	-	-	-	3	12	3	-	8
N. Mex.	-	-	2	-	-	-	-	-	-	-	-	-	1
Ariz.	-	-	NN	-	-	-	-	-	3	25	31	2	7
Utah	-	-	1	-	-	-	-	-	-	8	6	-	-
Nev.	1	-	1	-	-	-	-	-	2	9	6	-	1
PACIFIC	10	-	419	-	-	2	-	2	63	124	49	6	158
Wash.	1	-	396	-	-	-	-	2	7	19	4	1	13
Oreg.	-	-	5	-	-	1	-	-	2	30	2	-	11
Calif. †	8	-	-	-	-	1	-	-	52	74	43	4	132
Alaska	-	-	7	-	-	-	-	-	-	-	-	-	1
Hawaii	1	-	11	-	-	-	-	-	2	1	-	1	1
Guam †	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-
P.R. †	3	-	26	-	-	-	-	-	2	4	1	1	1
V.I.	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-
Pac. Trust Terr.	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-

NA: 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.: Ind. +1; Chickenpox: Maine +8, N.H. +33, Ohio -1, Calif. +74, Guam +4, P.R. +27; Hep.B: N.H. +1, Minn. -1, Colo. +1; Hep.A: N.H. +1, Mont. +1, Colo. +1, Guam +3; Hep. unsp.: Ohio -1, Va. -1, Mont. -1, Colo. +1, Guam +3; Malaria: Ind. +1, Wyo. +1.

TABLE 111 (Cont'd). Cases of specified notifiable diseases, United States, weeks ending April 5, 1980, and April 7, 1979 (14th 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	578	3,897	4,475	73	910	947	242	3,868	12	129	1,336	10
NEW ENGLAND	49	320	126	4	52	29	6	353	-	2	77	-
Maine†	15	19	4	-	2	1	-	149	-	2	31	-
N.H.†	14	154	5	-	4	4	1	9	-	-	18	-
Vt.	16	131	17	-	5	2	-	-	-	-	-	-
Mass.	3	11	-	-	19	10	3	104	-	-	17	-
R.I.	-	2	100	2	5	-	1	12	-	-	2	-
Conn.	1	3	-	2	17	12	1	79	-	-	9	-
MID. ATLANTIC	134	923	330	17	151	130	15	475	-	24	117	2
Upstate N.Y.	39	243	162	4	55	46	3	40	-	13	64	1
N.Y. City	60	287	134	4	47	33	2	26	-	2	26	-
N.J.	20	171	24	2	27	35	5	58	-	9	23	-
Pa.	15	222	10	7	22	16	5	351	-	-	4	1
E.N. CENTRAL	141	558	997	10	98	91	174	1,488	-	28	331	-
Ohio†	1	53	4	-	31	32	22	597	-	-	2	-
Ind.†	10	31	78	-	14	22	4	49	-	2	122	-
Ill.	34	129	361	3	17	3	18	181	-	9	68	-
Mich.	36	152	356	6	28	25	111	499	-	12	89	-
Wis.†	60	193	198	1	8	9	19	162	-	5	50	-
W.N. CENTRAL	58	484	448	3	37	36	8	129	1	14	123	2
Minn.	47	329	201	-	11	6	1	5	-	10	18	1
Iowa	-	-	3	2	5	4	2	17	-	-	3	-
Mo.	11	58	228	-	12	20	2	51	-	4	29	-
N. Dak.	-	-	6	-	1	1	-	3	1	-	3	-
S. Dak.	-	-	1	-	3	2	-	1	-	-	-	-
Nebr.†	-	45	-	-	-	-	-	8	-	-	-	-
Kans.	-	52	9	1	5	3	3	44	-	-	70	1
S. ATLANTIC	103	850	676	26	235	248	15	393	4	8	130	2
Del.	-	1	-	-	2	2	-	30	-	-	-	-
Md.	2	21	5	5	23	16	7	131	-	-	-	-
D.C.	-	-	-	-	-	-	-	2	-	-	-	-
Va.†	7	158	66	-	17	37	2	36	-	2	9	1
W. Va.†	1	9	34	-	6	3	-	46	-	1	9	-
N.C.	-	37	75	4	44	36	2	61	-	3	34	-
S.C.	15	106	78	5	31	33	1	14	-	2	44	1
Ga.	49	344	63	5	52	37	-	-	3	-	-	-
Fla.	29	174	355	7	60	84	3	73	1	-	34	-
E.S. CENTRAL	-	106	57	6	88	75	7	567	2	5	53	-
Ky.	-	31	14	-	24	13	4	522	-	2	24	-
Tenn.	-	9	8	2	21	24	-	17	-	2	26	-
Ala.	-	15	28	3	26	18	-	8	1	1	3	-
Miss.	-	51	7	1	17	20	3	20	1	-	-	-
W.S. CENTRAL	44	289	533	5	94	162	6	115	-	6	43	-
Ark.	-	1	6	1	5	13	-	13	-	-	1	-
La.	-	9	143	-	26	74	-	22	-	-	3	-
Okla.	35	194	3	-	9	16	-	-	-	-	1	-
Tex.	9	85	381	4	54	59	6	80	-	6	38	-
MOUNTAIN	16	81	86	-	28	40	2	102	3	1	38	-
Mont.	-	1	25	-	1	2	1	33	-	-	1	-
Idaho	-	-	3	-	3	3	-	10	-	-	7	-
Wyo.	-	-	-	-	1	-	-	-	-	-	-	-
Colo.†	1	4	9	-	8	1	1	20	3	-	1	-
N. Mex.†	-	1	13	-	5	2	-	-	-	-	3	-
Ariz.	12	41	20	-	4	25	-	13	-	-	9	-
Utah	3	32	13	-	1	3	-	22	-	1	14	-
Nev.	-	2	3	-	5	4	-	4	-	-	3	-
PACIFIC	33	286	1,226	2	127	136	9	246	2	41	424	4
Wash.	8	107	671	-	18	20	6	79	-	7	29	-
Oreg.	-	-	16	1	27	10	-	38	-	-	28	-
Calif.	25	173	479	1	80	100	3	123	2	34	366	4
Alaska	-	3	14	-	2	2	-	4	-	-	1	-
Hawaii	-	3	46	-	-	4	-	2	-	-	-	-
Guam	NA	1	1	-	-	-	NA	3	NA	NA	-	-
P.R.	9	37	132	-	5	-	6	41	-	2	5	3
V.I.	NA	4	2	-	1	2	NA	1	NA	NA	-	-
Pac. Trust Terr.	NA	3	5	-	-	1	NA	1	NA	NA	1	-

NA: Not available.

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

†The following delayed reports will be reflected in next week's cumulative totals: Measles: N.H. +4, Ind. -1, Wis. -3, Nebr. +5, Va. -1, W.Va. -1, Colo. -1; Men. inf.: Ohio -1, Ind. +1, N.Mex. +1; Mumps: Maine +1, N.H. +1; Rubella: N.H. -1, N. Mex. +1.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending April 5, 1980, and April 7, 1979 (14th 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. 1980	CUM. 1979*	CUM. 1980	
UNITED STATES	494	6,713	22	1	77	2	1,111	15,214	252,135	256,304	430	7,213	6,601	1,355	
NEW ENGLAND	11	199	-	-	5	1	1	418	6,591	6,790	1	212	117	12	
Maine	-	13	-	-	-	-	-	18	409	447	-	1	1	11	
N.H.	-	3	-	-	-	-	-	13	238	220	-	-	6	-	
Vt.	-	7	-	-	-	-	-	10	183	119	-	1	-	-	
Mass.	8	96	-	-	3	1	1	153	2,649	2,691	-	138	77	1	
R.I.	-	25	-	-	1	-	-	28	390	556	1	8	3	-	
Conn.	3	55	-	-	1	-	-	196	2,722	2,757	-	64	30	-	
MID. ATLANTIC	76	1,225	1	-	19	-	1	1,297	27,131	27,324	42	969	1,037	2	
Upstate N.Y.	21	242	-	-	4	-	-	332	4,819	4,035	5	79	80	-	
N.Y. City	26	428	1	-	8	-	-	500	10,937	10,417	21	624	701	-	
N.J.	18	270	-	-	3	-	-	40	4,484	5,582	8	126	136	2	
Pa.	11	285	-	-	4	-	1	425	6,891	7,290	8	140	120	-	
E.N. CENTRAL	72	918	1	-	7	-	-	2,696	40,872	39,754	74	796	889	178	
Ohio	7	150	-	-	1	-	-	591	10,573	11,109	12	109	179	7	
Ind.	5	107	-	-	-	-	-	210	4,029	3,254	4	66	48	19	
Ill.	20	349	-	-	3	-	-	1,071	13,220	12,660	38	370	528	110	
Mich.	36	251	1	-	3	-	-	633	8,893	9,159	19	219	103	-	
Wis.	4	61	-	-	-	-	-	191	4,157	3,572	1	32	31	42	
W.N. CENTRAL	25	223	8	-	1	-	2	631	11,179	12,278	5	75	88	357	
Minn.	4	35	1	-	-	-	-	210	1,988	2,131	4	29	29	40	
Iowa	5	19	4	-	-	-	-	79	1,209	1,637	-	3	10	81	
Mo.	10	105	2	-	-	-	2	210	4,697	5,089	1	40	33	98	
N. Dak.	-	7	-	-	-	-	-	1	149	211	-	-	-	35	
S. Dak.	6	14	-	-	1	-	-	18	348	411	-	-	-	66	
Nebr.	-	12	1	-	-	-	-	29	921	841	-	2	1	10	
Kans.	-	31	-	-	-	-	-	84	1,867	1,958	-	1	15	27	
S. ATLANTIC	100	1,525	7	1	17	-	2	4,518	61,749	61,201	128	1,717	1,634	102	
Del.	1	22	-	-	1	-	-	24	862	990	-	5	10	-	
Md.	12	182	1	-	2	-	-	474	6,414	7,471	19	131	114	-	
D.C.	1	79	-	-	3	-	-	346	4,600	3,821	14	125	120	-	
Va.	7	175	-	-	3	-	-	357	5,128	5,793	15	149	165	-	
W. Va.	-	61	-	-	2	-	-	70	798	903	-	4	22	2	
N.C.	24	278	2	-	1	-	2	516	9,567	9,348	6	129	147	-	
S.C.	4	123	-	-	1	-	-	340	5,786	5,215	1	83	86	17	
Ga.	13	196	4	-	-	-	-	877	11,106	11,684	39	499	434	58	
Fla.	38	409	-	1	4	-	-	1,514	17,488	15,976	34	592	536	25	
E.S. CENTRAL	53	617	1	-	2	1	1	888	19,965	22,043	20	562	454	79	
Ky.	12	130	-	-	1	-	-	124	2,945	2,925	-	33	46	38	
Tenn.	9	188	1	-	-	1	1	387	7,188	7,863	10	226	184	37	
Ala.	24	188	-	-	1	-	-	117	5,557	6,447	6	113	94	4	
Miss.	8	111	-	-	-	-	-	260	4,275	4,808	4	190	130	-	
W.S. CENTRAL	74	630	-	-	2	-	2	2,371	32,919	33,802	99	1,350	1,123	434	
Ark.	13	55	-	-	-	-	-	144	2,434	2,611	4	51	37	58	
La.	16	139	-	-	-	-	-	660	5,525	5,938	16	311	239	4	
Okla.	5	63	-	-	-	-	1	133	3,201	3,037	-	18	21	70	
Tex.	40	373	-	-	2	-	1	1,434	21,759	22,216	79	970	826	302	
MOUNTAIN	9	187	2	-	5	-	-	747	9,723	9,823	8	177	94	34	
Mont.	-	9	-	-	1	-	-	43	369	551	-	-	6	3	
Idaho	2	9	1	-	-	-	-	14	472	430	-	12	7	-	
Wyo.	-	13	-	-	-	-	-	11	272	262	-	7	3	-	
Colo.	-	20	-	-	1	-	-	202	2,482	2,666	5	46	32	-	
N. Mex.	1	34	-	-	1	-	-	118	1,298	1,287	1	26	13	7	
Ariz.	6	86	1	-	1	-	-	210	2,679	2,643	-	62	19	24	
Utah	-	5	-	-	1	-	-	35	478	479	-	5	2	-	
Nev.	-	11	-	-	-	-	-	114	1,673	1,505	2	19	12	-	
PACIFIC	74	1,189	2	-	19	-	-	1,648	42,006	43,289	53	1,355	1,165	157	
Wash.	9	99	-	-	-	-	-	203	3,252	3,835	-	92	70	-	
Oreg.	2	55	-	-	-	-	-	177	3,080	2,851	3	32	59	-	
Calif.	63	1,014	2	-	19	-	-	1,156	34,133	34,551	35	1,181	1,007	120	
Alaska	-	7	-	-	-	-	-	78	1,001	1,370	-	2	5	37	
Hawaii	-	14	-	-	-	-	-	34	540	682	15	48	24	-	
Guam	NA	4	-	NA	-	NA	-	NA	16	27	NA	-	-	-	
P.R.	2	32	-	-	-	NA	-	51	710	520	11	156	145	15	
V.I.	NA	-	-	NA	-	NA	-	NA	40	45	NA	7	-	-	
Pac. Trust Terr.	NA	7	-	NA	-	NA	-	NA	94	122	NA	-	-	-	

NA: Not available.

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

†The following delayed reports will be reflected in next week's cumulative totals: TB: Mich. -1, S.C. -1, Guam +4; RMSF: Ark. +1; GC: Wyo. +3 mil., Guam +9 civ. +9 mil.; An. rabies: Ohio +1, S.Dak. +34, Nebr. +2, Tenn. +1, N.Mex. +3, Ariz. +1, Alaska +2.

TABLE IV. Deaths in 121 U.S. cities,\* week ending  
April 5, 1980 (14th 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	
<b>NEW ENGLAND</b>	583	393	123	33	18	49	<b>S. ATLANTIC</b>	1,449	881	364	95	74	75
Boston, Mass.	151	90	37	12	6	15	Atlanta, Ga.	162	94	39	23	5	5
Bridgeport, Conn.	43	27	12	3	1	3	Baltimore, Md.	324	204	73	20	15	8
Cambridge, Mass.	21	16	5	—	—	1	Charlotte, N.C.	80	35	30	9	4	5
Fall River, Mass.	26	20	4	1	—	1	Jacksonville, Fla.	88	53	23	5	6	3
Hartford, Conn.	43	31	9	1	2	—	Miami, Fla.	125	69	37	10	7	3
Lowell, Mass.	22	15	4	2	—	1	Norfolk, Va.	59	33	17	3	3	4
Lynn, Mass.	21	17	3	—	—	—	Richmond, Va.	100	65	28	3	2	12
New Bedford, Mass.	16	13	3	—	—	1	Savannah, Ga.	55	32	16	2	3	14
New Haven, Conn.	42	21	14	3	2	1	St. Petersburg, Fla.	112	95	10	2	5	5
Providence, R.I.	77	54	14	5	2	8	Tampa, Fla.	73	50	15	2	—	4
Somerville, Mass.	13	10	2	—	—	1	Washington, D.C.	218	119	54	13	24	4
Springfield, Mass.	37	27	4	4	2	2	Wilmington, Del.	53	32	17	3	—	8
Waterbury, Conn.	26	20	5	1	—	6							
Worcester, Mass.	45	32	7	1	3	9							
							<b>E.S. CENTRAL</b>	727	484	165	36	15	48
<b>MID. ATLANTIC</b>	2,201	1,392	533	160	60	89	Birmingham, Ala.	126	82	32	4	5	2
Albany, N.Y.	60	48	10	2	—	1	Chattanooga, Tenn.	63	39	13	4	2	3
Allentown, Pa.	28	18	8	2	—	—	Knoxville, Tenn.	46	35	9	—	—	5
Buffalo, N.Y.	88	50	29	1	5	4	Louisville, Ky.	107	67	25	5	3	13
Camden, N.J.	24	12	7	4	—	1	Memphis, Tenn.	154	106	33	9	3	8
Elizabeth, N.J.	17	13	4	—	—	1	Mobile, Ala.	64	41	13	6	—	2
Erie, Pa.	30	21	8	1	—	—	Montgomery, Ala.	46	34	10	1	1	6
Jersey City, N.J.	43	24	12	2	1	—	Nashville, Tenn.	121	80	30	7	1	9
Newark, N.J.	46	24	12	6	1	6							
N.Y. City, N.Y.	1,167	747	258	99	32	38	<b>W.S. CENTRAL</b>	1,353	744	405	99	40	57
Parkerson, N.J.	21	15	1	1	4	1	Austin, Tex.	43	28	10	5	—	2
Philadelphia, Pa.	206	116	51	26	5	8	Baton Rouge, La.	42	24	15	1	1	—
Pittsburgh, Pa.	94	61	29	2	1	5	Corpus Christi, Tex.	38	25	11	1	1	2
Reading, Pa.	36	26	9	1	—	1	Dallas, Tex.	184	104	54	11	10	5
Rochester, N.Y.	120	72	37	5	3	8	El Paso, Tex.	51	33	12	2	3	2
Schenectady, N.Y.	25	20	5	—	—	—	Fort Worth, Tex.	100	63	26	8	1	12
Scranton, Pa.	33	20	12	—	1	2	Houston, Tex.	504	235	170	46	14	13
Syracuse, N.Y.	70	45	15	6	3	2	Little Rock, Ark.	47	29	14	3	—	6
Trenton, N.J.	41	22	14	1	4	2	New Orleans, La.	171	93	48	13	5	6
Utica, N.Y.	27	22	4	—	—	6	San Antonio, Tex.	45	26	13	3	2	3
Yonkers, N.Y.	25	16	8	1	—	3	Shreveport, La.	45	26	13	3	2	3
							Tulsa, Okla.	81	54	17	5	3	6
<b>E.N. CENTRAL</b>	2,167	1,348	546	110	90	62	<b>MOUNTAIN</b>	563	341	134	38	29	20
Akron, Ohio	83	57	18	2	1	—	Albuquerque, N. Mex.	68	37	17	6	3	5
Canton, Ohio	42	31	9	1	1	—	Colorado Springs, Colo.	26	17	4	3	2	3
Chicago, Ill.	587	339	155	36	29	13	Denver, Colo.	142	90	34	11	4	2
Cincinnati, Ohio	138	89	38	3	3	7	Las Vegas, Nev.	43	22	10	6	2	2
Cleveland, Ohio	145	80	50	7	3	4	Ogden, Utah	18	10	6	1	—	3
Columbus, Ohio	93	56	23	5	5	6	Phoenix, Ariz.	124	73	35	6	7	2
Dayton, Ohio	87	60	19	2	3	2	Pueblo, Colo.	10	6	4	—	—	1
Detroit, Mich.	282	175	66	19	18	8	Salt Lake City, Utah	45	24	7	2	9	2
Evansville, Ind.	42	36	5	1	—	4	Tucson, Ariz.	87	62	17	3	2	—
Fort Wayne, Ind.	34	22	8	1	2	1							
Gary, Ind.	24	12	7	1	3	1							
Grand Rapids, Mich.	70	46	19	1	3	4	<b>PACIFIC</b>	1,876	1,256	391	105	69	58
Indianapolis, Ind.	146	89	41	10	3	5	Berkeley, Calif.	28	19	6	3	—	—
Madison, Wis.	27	19	3	—	1	1	Fresno, Calif.	74	55	12	6	1	5
Milwaukee, Wis.	103	61	30	5	4	3	Glendale, Calif.	25	23	2	—	—	—
Peoria, Ill.	47	34	8	2	3	2	Honolulu, Hawaii	53	36	13	3	1	7
Rockford, Ill.	33	19	6	4	3	—	Long Beach, Calif.	90	63	19	3	4	1
South Bend, Ind.	30	21	5	2	—	—	Los Angeles, Calif.	601	374	144	42	22	15
Toledo, Ohio	95	62	23	6	2	1	Oakland, Calif.	80	49	16	8	6	3
Youngstown, Ohio	59	40	13	2	3	—	Pasadena, Calif.	18	16	2	—	—	1
							Portland, Ore.	129	92	18	1	10	2
<b>W.N. CENTRAL</b>	756	487	170	39	37	28	Sacramento, Calif.	54	38	11	5	—	3
Des Moines, Iowa	71	49	12	4	3	5	San Diego, Calif.	136	89	25	9	3	—
Duluth, Minn.	27	20	4	—	3	4	San Francisco, Calif.	177	116	41	11	7	4
Kansas City, Kans.	32	21	8	—	—	—	San Jose, Calif.	170	117	39	5	3	8
Kansas City, Mo.	130	83	33	4	5	5	Seattle, Wash.	145	103	25	5	7	2
Lincoln, Nebr.	31	16	9	4	2	1	Spokane, Wash.	47	35	6	—	3	3
Minneapolis, Minn.	79	54	12	3	7	2	Tacoma, Wash.	49	31	12	4	2	4
Omaha, Nebr.	96	62	20	8	3	3							
St. Louis, Mo.	158	100	35	11	10	4							
St. Paul, Minn.	73	56	14	3	—	4							
Wichita, Kans.	59	26	23	2	4	—							
<b>TOTAL</b>	<b>11,675</b>	<b>7,326</b>	<b>2,831</b>	<b>715</b>	<b>432</b>	<b>486</b>							

\*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.



*Measles Surveillance — Continued*

unable to estimate the percentage of reported cases. Another 25% estimated that less than half of the total measles cases are reported. On the other hand, a fourth of the local health departments indicated that at least 90% of the total cases are reported to them.

The person assigned the task of collecting and reporting the measles surveillance data to the state health department is a nurse in 42% of the local health departments. Non-physician epidemiologists (16%) and clerical staff (16%) are also assigned the task. Very rarely, physicians have the responsibility (4%).

Approximately 83% of the local health jurisdictions routinely investigate every case report of measles. In about 10% of the jurisdictions, only clusters of cases or cases of particular interest are investigated. In 65% of the health departments a nurse is the person responsible for following up a case report of measles. Occasionally, a non-physician epidemiologist (10%) or physician (6%) shares this responsibility with a nurse.

In over 80% of the health departments, the physician is contacted to confirm the diagnosis. Some contact is made with the patient in 85% of the jurisdictions. Most (76%) phone the patient to offer counsel and/or to identify contacts at risk. Less commonly (62%), a personal visit is made to patients. Nearly 70% of the jurisdictions provide contacts at risk with immunization or gamma globulin. In only 5% of the health departments is gamma globulin provided to contacts at risk without confirmation of the diagnosis by the physician.

Two-thirds of the health departments reported that at least 75% of reported cases in non-epidemic settings receive complete investigations. In contrast, one-fourth of the local jurisdictions felt that less than 25% of their measles case reports receive complete investigation. Eighty-five percent of local jurisdictions notify the state health department of the cases under investigation. About 75% estimate that less than half of the suspected cases are confirmed as true cases, and in only 6% of the jurisdictions are virtually all reported cases verified as measles. Three-fourths of the agencies have available a county, city, or state laboratory with the capacity to measure measles antibody titers to aid in confirming cases.

Measles case reports are analyzed in about 60% of the health jurisdictions. Fifteen percent make a simple case count of measles reports, whereas in about 20% a more detailed analysis is done. Nearly 70% of the respondents compare their local measles data with information from other sources, most commonly national and regional statistics and previous rates in the same area. About 40% of the health departments compare their data with case reports from other areas.

About half of the agencies in the study routinely distribute their analyses of measles surveillance data to health department staff and health-care providers. In about 40% of the jurisdictions, the information is distributed to interested groups in the community, to schools, and to the news media. About 40% publish a newsletter regularly, usually monthly. Such newsletters are more common in the large health jurisdictions (52%) than in small (21%) and medium-sized (26%) ones.

The reported number of measles cases in each local area has a varied impact on the measles programs and policies of the health department. The greatest impact is in disease control, but reporting is also important in stimulating surveillance efforts, determining staff assignments, and developing and assessing programs. Measles surveillance data have little impact on the program budget or laboratory activity. The national measles surveillance data have had a similar but slightly smaller impact on the local programs and policy.

Various surveillance publications are available to the local health departments. Two publications<sup>1</sup> considered to be most important for their impact on the measles programs are the state health department guidelines and the MMWR. Only 3 of the 123 respondents

### *Measles Surveillance — Continued*

stated that they could work effectively without state health department guidelines. The MMWR, including ACIP recommendations, was ranked as the most important publication in 29% of the jurisdictions and was considered second most important by another 39%. Less than 7% of the respondents stated that they could work effectively without the MMWR.

Almost all (97%) of the respondents agreed that measles should be a reportable condition in their districts. About 80% of those in favor of measles surveillance suggested that these data should be analyzed completely, with detailed epidemiologic information on such factors as age, sex, and race. More than 95% indicated that measles data should continue to be analyzed at the national level.

*Reported by the Conference of State and Territorial Epidemiologists; Immunization Div, Bur of State Services, Consolidated Surveillance and Communications Activity, Bur of Epidemiology, CDC.*

**Editorial Note:** Many public health resources at the state and local level are used in the surveillance and control of measles. Since the time of this survey, surveillance and investigation of suspected measles cases have intensified as part of the program to eliminate indigenous measles by October 1982. Nearly every suspected case of measles that is reported is now being investigated promptly. A telephone survey of 52 reporting areas (the 50 states, Washington, D.C., and New York City) in January 1980, revealed that 47 thought that at least 50% of all measles cases that occurred were reported; 31 estimated that 80% or more of cases were reported.

### *Epidemiologic Notes and Reports*

#### **Measles Associated with Fort Dix**

Between January 4 and March 22, 1980, Fort Dix, New Jersey, reported 87 measles cases, many of which were laboratory confirmed.

Two recruits who left Fort Dix during this outbreak developed measles at their new stations—Aberdeen Proving Grounds, Maryland, and Fort Eustis, Virginia. Both sites subsequently had measles outbreaks, which totaled 10 confirmed and 16 suspected cases. Measles was also reported in recruits on leave from Fort Dix in New Hampshire and in California, and in 4 Fort Dix recruits recently stationed at Fort Belvoir, Virginia.

This series of outbreaks illustrates the problem of measles transmission in the highly mobile military population. In January, the Armed Forces Epidemiological Board met to discuss this problem and subsequently issued the following recommendations:

- " (a) The Armed Forces establish a routine program for immunizing recruits against measles combined with the established program against rubella.
- (b) To obtain maximum benefit from these vaccines, they should be given by the eighth day after induction.
- (c) Where laboratory facilities are available, screening for susceptibility and selectively immunizing the identified susceptibles is preferable.
- (d) These vaccines should be given to all recruits except those women found to be pregnant by appropriate testing. Immunized women will be admonished to avoid pregnancy for a period of at least 3 months following receipt of vaccine."

Since these recommendations were issued on February 20, immunization of recruits has begun at many Army bases. Because of measles transmission in Army personnel who have completed basic training and are in advanced training programs, these personnel are also being immunized at many bases. As of March 31, Fort Dix had given

*Measles — Continued*

5,845 immunizations; Aberdeen Proving Grounds, 1,792; Fort Belvoir, 1,680; and Fort Eustis, 2,897.

*Reported by Col WA Smith, MC, Chief, Preventive Medicine Activity, Fort Dix, New Jersey; Col DC Warren, MC, Commander, Kirk Army Clinic, Aberdeen Proving Grounds, Maryland; Lt Col KE Zahn, ANC, Chief, Preventive Medicine Activity, Fort Belvoir, Virginia; Maj DE Hammack, MSC, Chief, Preventive Medicine Activity, Fort Eustis, Virginia; Col DM Rosenberg, MC, Chief, Preventive Medicine Div, Health Services Command, Fort Sam Houston, Texas; Col T Nowosiwsky, MC, Chief, Lt Col FJ Erdtmann, MC, Disease Control Consultants, Preventive Medicine Consultants Div, Office of the Surgeon General, Dept of the Army; R Altman, MD, State Epidemiologist, New Jersey State Dept of Health; DA Sorley, MD, State Epidemiologist, Maryland State Dept of Health and Mental Hygiene; GB Miller, Jr, MD, State Epidemiologist, Virginia State Dept of Health; and Immunization Div, Bur of State Services, CDC.*

### Scombroid Fish Poisoning — Illinois, Michigan

Six outbreaks of scombroid fish poisoning affecting 60 persons have occurred since March 19 in Illinois and Michigan. In each outbreak mahimahi has been incriminated as the vehicle of transmission.

**Illinois:** On March 19, 30 of 240 persons (13%) attending a luncheon in Chicago became ill after eating mahimahi. Symptoms in the persons interviewed were typical of scombroid fish poisoning (7) and included headaches, facial flushing, conjunctival injection, diarrhea, and nausea. Illness began from 5 to 120 minutes after eating (mean 60 minutes). Histamine levels in excess of 90 mg/dl were subsequently found in fish from the luncheon.

On April 2, 3 other persons who ate mahimahi in a Chicago restaurant became ill with symptoms compatible with scombroid fish poisoning. On April 3, 2 more persons in Chicago, both unrelated to the earlier patients, developed symptoms compatible with scombroid fish poisoning after eating mahimahi. The fish implicated in both of these outbreaks had been purchased from the same dealer.

**Michigan:** On April 2, 21 of 26 persons (81%) who attended a dinner in Ann Arbor became ill with diarrhea, urticarial rash, and flushing within ½ hour to 3 hours of eating mahimahi. The fish had been purchased through a distributor in Detroit. Samples of meat taken from the party and frozen samples from the Detroit distributor revealed histamine levels in excess of 130 mg/dl.

On March 24, 2 persons eating mahimahi at a restaurant in suburban Detroit also developed signs and symptoms compatible with scombroid fish poisoning. On April 3, 2 persons eating at a different suburban Detroit restaurant became ill after eating this type of fish. The fish at these 2 restaurants had also been distributed by the Detroit supplier.

*Reported by KT Reddi, MD, A Harris, MD, Chicago Dept of Health; L Strohm, PhD, Oakland County (Michigan) Health Dept; D Nolan, MD, Detroit City Health Dept; J Kowalczyk, University of Michigan Dept of Occupational Safety and Environmental Health, Ann Arbor; NS Hayner, MD, State Epi-*

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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.

Send mailing list additions, deletions, and address changes to: Center for Disease Control, Attn: Distribution Services, GSO, 1-SB-36, Atlanta, Georgia 30333. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

## Scombroid Poisoning — Continued

dermiologist, Michigan State Dept of Public Health; Food and Drug Administration; Enteric Diseases Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

**Editorial Note:** Although the clinical illness of scombroid fish poisoning takes its name from the association with fish of the family Scombridae, these outbreaks were associated with eating a fish in a different family. Mahimahi (*Coryphaena hippurus*), also called blue dolphin or dolphin fish, has been described in outbreaks of scombroid fish poisoning since 1973 (2) and in the period 1975-1979 was associated with 13 of the 31 scombroid outbreaks reported to CDC. Of these 13, 7 were in Hawaii, 2 in California, 2 in Washington, and 1 each in Colorado and Minnesota. The histamine levels reported were typical of those found in scombroid fish poisoning (3). The Food and Drug Administration is conducting investigations of the source and distribution of mahimahi associated with these outbreaks.

### References

1. Kim R. Flushing syndrome due to mahimahi (scombroid fish) poisoning. Arch Dermatol 1979; 115:963-5.
2. California State Department of Health. "Scombroid" poisoning from mahi-mahi. California Morbidity Weekly Report. no. 23, June 15, 1973.
3. Halstead BW. Class osteichthyes: poisonous scombrotoxic fishes. In: Halstead BW. Poisonous and venomous marine animals of the world. Princeton: Darwin Press, Inc., 1978:417-35.

## Current Trends

### Influenza — United States

For the week ending March 29, 1 state (Michigan) reported widespread outbreaks of influenza, and 1 state (Virginia) reported regional outbreaks. Nineteen states reported sporadic cases, and 17 states reported no activity.

For the week ending April 5, the number of pneumonia and influenza (P&I) deaths reported from 117 U.S. cities dropped below the epidemic threshold for the first time in 11 weeks.

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

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PUBLIC HEALTH SERVICE / CENTER FOR DISEASE CONTROL  
ATLANTA, GEORGIA 30333 OFFICIAL BUSINESS

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William H. Foege, M.D.

Director, Bureau of Epidemiology

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Managing Editor

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