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Current Trends

Rubella and Congenital Rubella — United States, 1983

RUBELLA

A provisional total of 954 cases of rubella was reported in 1983—the lowest since rubella became a notifiable disease in 1966. The greatest number of cases ever reported was 57,686 in 1969. 1983 cases decreased by 59% from 1982 (2,325 cases) and by 66% from the 3-year average annual total for 1980-1982. Fourteen states and the District of Columbia reported no cases in 1983; seven were free of rubella in 1982. California (292 cases), Texas (116), New York City (87), and Florida (71) accounted for 59% of all 1983 cases. California alone accounted for 31% of the 1983 cases but experienced a 79% decrease from 1982, when it accounted for 62% of all U.S. cases. Age-specific data are not yet available.

CONGENITAL RUBELLA SYNDROME

While data on rubella are available only through CDC's surveillance system (reported weekly in *MMWR*'s Tables I and III), data on congenital rubella syndrome (CRS) cases for 1983 are available from reports submitted weekly to *MMWR* and from the National Congenital Rubella Syndrome Registry (NCRSR) maintained at CDC's Division of Immunization.* The *MMWR* CRS reports are case counts with no accompanying data and are tabulated by year of report. The NCRSR monitors reports by year of birth that contain information allowing classification into six categories, the most specific for clinical CRS cases being "confirmed" and "compatible" (C&C) (Table 1). Since the NCRSR cases are classified by year of birth, data are considered provisional for any given year and are subject to frequent updating because of delayed reporting.

In contrast to the reported 59% decrease in rubella from 1982 to 1983, reported CRS increased almost threefold—from seven cases in 1982 to 20 cases in 1983 (Table 2). However, only seven (35%) of these 20 infants were born in 1983 (Table 3). Seventeen of these have been classified by NCRSR criteria (the other three were born in 1982). Fourteen (82%) of the 17 cases were either confirmed or compatible, including four of the seven infants born in 1983.

The NCRSR includes two additional confirmed cases in infants born in 1982 but not yet reported in *MMWR*. Thus, in contrast to the *MMWR* data, the updated NCRSR C&C totals currently demonstrate a 64% decrease between 1982 (11 cases) and 1983 (*4*) (Table 2).

*Data from a third surveillance system, the Birth Defects Monitoring Program (BDMP), derived from the Commission on Professional and Hospital Activities' survey of hospital discharges of newborns, are not yet available for 1983.

Rubella and Congenital Rubella — Continued

The 20 infants with CRS reported in *MMWR* in 1983 were from California (12 cases), New York (2), Arkansas (1), Illinois (1), Kansas (1), Oregon (1), South Dakota (1), and Wisconsin (1). Three of the California infants (all C&C) were born in 1983; eight (six C&C), in 1982; and one (C&C), in 1981. California now accounts for 64% (7/11) of C&C cases for 1982 and 75% (3/4) of C&C cases for 1983. These data are consistent with the observed increase in reported rubella activity in childbearing-age populations that occurred in California in 1982 (*1*).

Since the 1983 data reported in *MMWR* indicate that one-half the infants were born in the previous year, the increase in CRS reporting occurred among 1982 births and parallels the twofold increase in the rubella rate among persons 15 years of age and older reported between 1981 (0.4 cases/100,000 population) and 1982 (0.8 cases/100,000 population). Reports of CRS to both *MMWR* and NCRSR have declined markedly as overall rubella and rubella in postpubertal populations have reached all-time lows (Table 2). After some initial decreases in the years following the licensure of rubella vaccine, CRS rates stabilized, with only minimal differences between *MMWR* and NCRSR reports. The increase in incidence in 1979 in both systems reflects the outcome of outbreaks of rubella in 1977-1978. Since 1981, the reported rates in both systems have been lower than 0.6 cases/100,000 live births and have reached record low levels.

The recent declines in CRS rates recorded by the NCRSR parallel the decline in the overall rubella rate and, more specifically, in the rate for persons 15 years of age or older (Figure 1). Between 1979 and 1982, the reported rate of rubella among persons in this group declined from 4.8 cases/100,000 population to 0.8/100,000 (an 83% decline). Similarly, 57 C&C

TABLE 1. Criteria for classifying congenital rubella syndrome (CRS) cases

I. CRS CONFIRMED—Defects present and one or more of the following:
   - A. Rubella virus isolated.
   - B. Rubella-specific immunoglobulin M (IgM) present.
   - C. Rubella hemagglutination-inhibition (HI) titer in the infant persisting above and beyond that expected from passive transfer of maternal antibody (i.e., rubella HI titer in the infant that does not fall off at the expected rate of one twofold dilution per month).

II. CRS COMPATIBLE—Laboratory data insufficient for confirmation and any two complications listed in A or one from A and one from B:
   - A. Cataracts/congenital glaucoma (either or both count as one), congenital heart disease, loss of hearing, pigmentary retinopathy.
   - B. Purpura, splenomegaly, jaundice, microcephaly, mental retardation, meningoencephalitis, radiolucent bone disease.

III. CRS POSSIBLE—Some compatible clinical findings that do not fulfill the criteria for a compatible case.

IV. CONGENITAL RUBELLA INFECTION ONLY—No defects present but laboratory evidence of infection.

V. STILLBIRTHS—Stillbirths, which are thought to be secondary to maternal rubella infection.

VI. NOT CRS—One or more of any of the following inconsistent laboratory findings in child without evidence of an immunodeficiency disease:
   - A. Rubella HI titer absent in a child $\leq$ 24 months.
   - B. Rubella HI titer absent in mother.
   - C. Rubella HI titer decline in an infant consistent with the normal decline of passively transferred maternal antibody after birth (the expected rate of decline of maternal antibodies is one twofold dilution per month).

Rubella and Congenital Rubella — Continued

cases were reported in 1979, but only 11 in 1982 (an 83% decline) (Table 2). Based on 1983 C&C data, cases have declined by 93% since 1979.

Reported by Div of Immunization, Center for Prevention Svcs, CDC.

Editorial Note: Although reported rubella rates are at an all-time low, the potential for increased rubella activity in older individuals, particularly women of childbearing age, still exists. The rubella susceptibility rate for adolescents and young adults remains at levels of 10%-20% (2). This potential for an increase in rubella was demonstrated when outbreaks in postpubertal populations in universities, hospitals, and other places of employment resulted in a 12% increase in reporting of rubella between 1981 (which had been a previous record low year) and 1982 (*1*).

TABLE 2. Incidence of congenital rubella syndrome (CRS) reported to the National Congenital Rubella Syndrome Registry (NCRSR)* and *MMWR*† — United States, 1969-1983

	CDC		NCRSR	
Year	No.	Rate§	No.	Rate§
1969	31	0.9	62	1.7
1970	77	2.1	68	1.8
1971	68	1.9	44	1.2
1972	42	1.3	32	1.0
1973	35	1.1	30	1.0
1974	45	1.4	22	0.7
1975	30	1.0	32	1.0
1976	30	1.0	23	0.7
1977	23	0.7	29	0.9
1978	30	0.9	30	0.9
1979	62	1.8	57	1.6
1980	50	1.4	14	0.4
1981	19	0.6	10	0.3
1982	7	0.2	11	0.3
1983	20	0.5	4	0.1

*Confirmed and compatible cases only, reported by year of birth. Data are provisional because of delayed reporting.

†Reported by year of report. 1983 data are provisional.

§Cases per 100,000 live births.

TABLE 3. *MMWR* congenital rubella syndrome (CRS) cases, by year of birth and NCRSR classification* — United States, 1983

	1983 cases	
Year	Year of birth	C&C cases
1978	1	1
1979	—	-
1980	—	-
1981	2	2
1982	10†	7
1983	7	4
Total	**20**	**14**

*Confirmed and compatible (C&C) cases only.

†NCRSR classification of three cases pending.

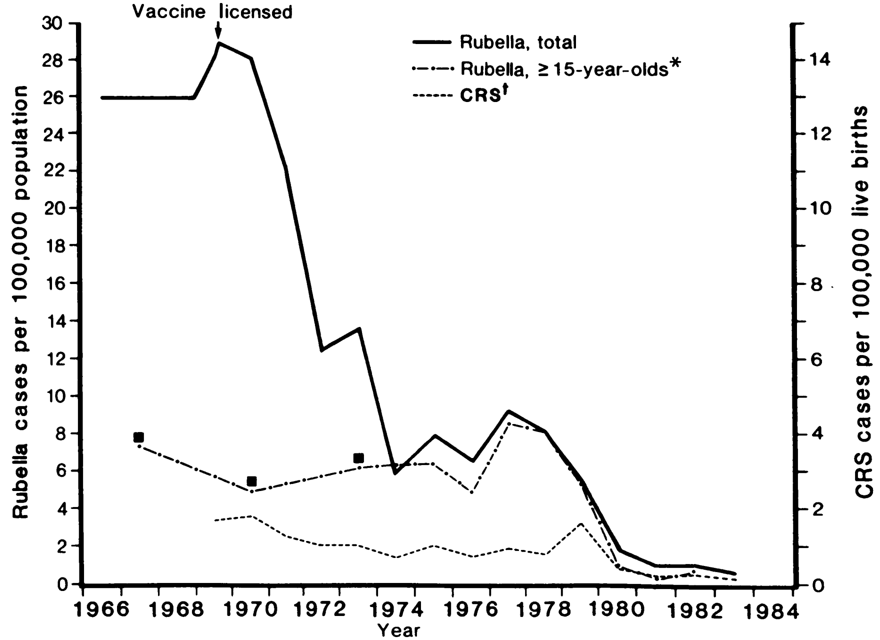
Rubella and Congenital Rubella — Continued

The large number of rubella and CRS cases in California may be related to the high rubella susceptibility rate among its postpubertal population (*3,4*) and potentially to better disease surveillance. Recent serosurveys of California's adolescent and adult populations have documented a decline in the susceptibility from the prevaccine period, although the susceptibility rate is still higher than that in other states (*2,5*). One response to this situation was the revision of the state's immunization law in 1982 to ensure that all students from kindergarten to 10th grade, especially postpubertal girls, provide proof of rubella vaccination. Rubella and CRS rates are declining in California as well as in the rest of the country. The increased focus on vaccinating postpubertal school-aged children in California and other states should speed that decline.

The most important indicator of the success of rubella immunization programs is the decrease in reported occurrence of congenital rubella infection.† CRS represents the most serious outcome in terms of health burden. Costs for the lifetime care of an infant with CRS have recently been estimated to be in excess of $200,000 (*6*).

†Intrauterine infection can result in miscarriages, stillbirths, and infants born with a variety of defects collectively termed the congenital rubella syndrome (CRS). Data are not available, however, for abortions related to rubella in pregnancy or exposure to rubella.

FIGURE 1. Rates of reported rubella and congenital rubella syndrome (CRS) cases — United States, 1966-1983



*Includes proration of rubella patients ≥ 15 years of age whose ages are unknown. 1983 data are not available.

†Rate per 100,000 births of confirmed and compatible cases of CRS, by year of birth. Reporting for recent years is provisional, as CRS may not be diagnosed until later in childhood.

■Average annual U.S. estimate based on data from Illinois, Massachusetts, and New York City for the 3-year periods 1966-1968, 1969-1971, and 1972-1974. Age specific data were not available for U.S. totals until 1975.

Rubella and Congenital Rubella — Continued

CDC estimates of CRS rates are derived primarily from the *MMWR* and NCRSR reporting systems, both of which are passive. Passive surveillance results in underreporting of actual disease incidence. One indication of underreporting is the early age at which CRS infants reported to CDC are diagnosed. Of all the 379 NCRSR C&C infants for whom the age at diagnosis is known, 65% (247/379) were diagnosed within the first month of life, and only 6% (24/379) after 1 year of age. Infants with severe and obvious CRS (e.g., cardiac or eye defects) are recognized and reported early in life and are most likely to be classified C&C, while those with mild CRS (e.g., mental or auditory defects) are often reported later in life or not at all. An average of 79% of all cases reported to the NCRSR are C&C (Table 4). In contrast, the mild cases, which probably total more than one-half of all CRS cases, are not reported regularly to *MMWR* (*7-9*). Also, an analysis of the NCRSR C&C cases and the Birth Defects Monitoring Program C&C cases, using a capture-recapture statistical model, suggests that only one-fifth of all C&C cases are reported to NCRSR (*10*). Thus, approximately one-tenth (1/2 x 1/5) of all CRS cases are probably reported through the NCRSR (*10*).

In spite of underreporting, the CDC data are useful for monitoring trends. The fact that the reported CRS rate has paralleled reported rubella in postpubertal populations based on data for the 15-year-or-older age group suggests that the decline in CRS between 1979 and 1983 is real.

The differences between *MMWR* and NCRSR reports for 1983 are explained by the differences in classifying CRS infants by year of report versus year of birth. Data are not available to compare the two systems for previous years; however, the trends appear to be similar, considering the 1-year lag for *MMWR* cases.

An infant with CRS is only one outcome of infection in a pregnant woman. Therapeutic abortion is another serious consequence. Outbreak investigations in the United States suggest that therapeutic abortion is considerably more common than CRS (*11*). Data from the United Kingdom indicate that the number of abortions in England and Wales from 1976-1978 was more than 10 times the number of CRS cases reported for all of the United Kingdom (*12,13*).

TABLE 4. National Congenital Rubella Syndrome Registry (NCRSR) classification of cases, 1969-1983*

Year	Confirmed	Compatible	Infection	Possible	Stillbirth	Not CRS	Total
1969	23	39	3	14	0	3	**82**
1970	21	47	1	20	0	4	**93**
1971	21	23	1	5	0	3	**53**
1972	15	17	0	9	1	5	**47**
1973	11	19	1	7	1	2	**41**
1974	10	12	0	3	1	1	**27**
1975	19	13	1	7	0	2	**42**
1976	13	10	1	4	1	2	**31**
1977	18	11	1	2	0	2	**34**
1978	19	11	0	2	0	1	**33**
1979	43	14	4	1	0	0	**62**
1980	10	4	1	2	0	1	**18**
1981	6	4	0	2	0	0	**12**
1982	10	1	0	0	0	1	**12**†
1983	4	0	1	1	0	1	**7**
Total	**243(41%)**	**225(38%)**	**15(3%)**	**79(13%)**	**4(1%)**	**28(5%)**	**594**

*Data are provisional due to delayed reporting.

†NCRSR classification of three additional cases pending.

Rubella and Congenital Rubella — Continued

To further assess the impact of congenital rubella infection in the United States, it will be important to follow infected pregnant females to determine the outcomes of pregnancy.

The available data indicate that CRS is now at or close to record low levels. However, given the underreporting, there is still a substantial health burden in the United States that can be avoided (*14*). In the absence of intensified efforts, it will take 10-30 years before the immune cohort of vaccinated schoolchildren will comprise the childbearing-age group. At that time, CRS may disappear from this country. The elimination of CRS can be hastened but requires intensified efforts to vaccinate older, susceptible school-aged children and females of childbearing age. To accomplish this in a cost-efficient manner, cooperation between the private and public sectors will be needed to delineate risk factors that would allow identification of childbearing-aged women most likely not to be vaccinated. Detailed information regarding the mothers of infants with CRS would be helpful in identifying some of these risk factors. More complete ascertainment of CRS cases through more active surveillance is necessary, not only to monitor program impact accurately but to allow proper allocation of attention and resources.

(Continued on page 247)

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

Disease	18th Week Ending			Cumulative, 18th Week Ending		
	May 5, 1984 1984	May 7, 1983 1983	Median 1979-1983	May 5, 1984 1984	May 7, 1983 1983	Median 1979-1983
Acquired Immunodeficiency Syndrome (AIDS)	95	N	N	1,293	N	N
Aseptic meningitis	61	74	74	1,320	1,424	1,185
Encephalitis: Primary (arthropod-borne & unspec.)	17	13	13	281	315	265
Post-infectious	2	2	3	22	33	33
Gonorrhea: Civilian	12,976	18,227	19,100	273,743	307,425	324,066
Military	166	442	527	6,759	8,295	9,260
Hepatitis: Type A	362	347	455	7,492	8,106	8,747
Type B	424	442	388	7,964	7,687	6,638
Non A, Non B	79	71	N	1,189	1,151	N
Unspecified	133	147	200	2,032	2,517	3,483
Legionellosis	12	13	N	172	230	N
Leprosy	4	7	4	72	96	71
Malaria	14	9	19	217	235	280
Measles: Total*	104	44	176	1,074	706	1,208
Indigenous	95	29	N	1,000	593	N
Imported	9	15	N	74	113	N
Meningococcal infections: Total	66	58	58	1,194	1,199	1,199
Civilian	66	58	58	1,192	1,187	1,187
Military	-	-	-	2	12	9
Mumps	95	112	240	1,305	1,518	2,754
Pertussis	25	45	24	616	594	378
Rubella (German measles)	29	22	141	257	416	1,080
Syphilis (Primary & Secondary): Civilian	499	653	528	9,687	11,422	10,366
Military	4	7	6	117	170	125
Toxic Shock syndrome	5	3	N	135	155	N
Tuberculosis	380	442	515	7,076	7,590	8,734
Tularemia	1	8	4	28	59	39
Typhoid fever	11	5	5	108	124	133
Typhus fever, tick-borne (RMSF)	7	17	17	29	53	53
Rabies, animal	74	144	155	1,633	2,309	2,104

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1984		Cum. 1984
Anthrax	-	Plague	3
Botulism: Foodborne	6	Poliomyelitis: Total	1
Infant (Calif. 3)	40	Paralytic	1
Other	2	Psittacosis (Mass. 1, Minn. 1)	26
Brucellosis (Calif. 1)	35	Rabies, human	-
Cholera	-	Tetanus (Calif. 1)	10
Congenital rubella syndrome (Calif. 2)	3	Trichinosis (Conn. 5)	16
Diphtheria	-	Typhus fever, flea-borne (endemic, murine)	6
Leptospirosis	8		

*Six of the 104 reported cases for this week were imported from a foreign country or can be directly traceable to a known internationally imported case within two generations.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending May 5, 1984 and May 7, 1983 (18th Week)

Reporting Area	AIDS	Aseptic Menin-gitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionel-losis	Leprosy
			Primary	Post-in-fectious			A	B	NA,NB	Unspeci-fied		
	Cum. 1984	1984	Cum. 1984	Cum. 1984	Cum. 1984	Cum. 1983	1984	1984	1984	1984	1984	Cum. 1984
UNITED STATES	1,293	61	281	22	273,743	307,425	362	424	79	133	12	72
NEW ENGLAND	49	1	16	-	8,197	7,539	5	22	1	15	-	4
Maine	-	-	-	-	298	419	-	-	-	-	-	-
N.H.	1	-	4	-	209	206	2	1	-	-	-	-
Vt.	-	-	2	-	131	127	-	-	-	-	-	-
Mass.	30	1	6	-	3,213	3,352	3	13	1	15	-	4
R.I.	3	-	-	-	500	420	-	-	-	-	-	-
Conn.	15	-	4	-	3,846	3,015	-	8	-	-	-	-
MID ATLANTIC	593	15	36	1	37,868	39,702	69	57	5	10	1	7
Upstate N.Y.	49	2	11	1	5,928	5,986	9	23	3	-	1	2
N.Y. City	433	2	-	-	16,117	16,606	42	20	-	4	-	5
N.J.	84	5	14	-	5,985	7,619	18	14	2	6	-	-
Pa.	27	6	11	-	9,838	9,491	U	U	U	U	-	-
E.N. CENTRAL	60	3	61	6	34,238	43,245	24	58	10	6	5	4
Ohio	8	1	23	2	9,683	10,985	7	14	1	4	3	1
Ind.	8	1	12	-	4,490	4,929	2	13	-	1	-	-
Ill.	34	-	8	3	5,080	11,984	5	1	-	-	-	1
Mich.	8	1	16	-	10,713	11,602	10	29	9	1	2	2
Wis.	2	-	2	1	4,272	3,745	-	1	-	-	-	-
W.N. CENTRAL	7	-	7	-	13,155	14,568	7	10	3	-	-	-
Minn.	1	-	1	-	1,909	2,122	2	2	2	-	-	-
Iowa	-	-	4	-	1,561	1,607	-	-	-	-	-	-
Mo.	4	-	1	-	6,152	7,077	3	7	1	-	-	-
N. Dak.	-	-	-	-	138	138	-	-	-	-	-	-
S. Dak.	-	-	-	-	344	413	-	-	-	-	-	-
Nebr.	1	-	-	-	969	860	2	1	-	-	-	-
Kans.	1	-	1	-	2,082	2,351	-	-	-	-	-	-
S. ATLANTIC	162	10	61	8	69,648	77,977	19	90	18	8	4	4
Del.	3	-	1	-	1,206	1,430	-	-	-	-	-	-
Md.	16	-	13	-	8,112	9,844	-	17	2	1	-	-
D.C.	21	1	-	-	5,122	5,358	-	2	1	1	-	1
Va.	13	1	14	4	6,631	6,358	3	12	3	-	-	2
W. Va.	3	-	4	-	838	804	1	-	-	-	-	-
N.C.	3	3	13	3	11,150	11,228	3	4	2	1	1	-
S.C.	3	-	2	-	6,725	7,572	-	8	-	-	1	-
Ga.	17	1	2	-	13,255	17,142	2	21	2	2	-	-
Fla.	83	4	12	1	16,609	18,241	10	26	8	3	2	1
E.S. CENTRAL	11	3	14	-	23,660	26,443	17	30	5	2	-	-
Ky.	6	2	2	-	2,770	3,141	15	8	2	-	-	-
Tenn.	2	-	2	-	9,564	10,593	-	10	1	2	-	-
Ala.	2	1	9	-	7,749	8,475	1	11	2	-	-	-
Miss.	1	-	1	-	3,577	4,234	1	1	-	-	-	-
W.S. CENTRAL	57	9	18	2	38,527	42,754	56	37	5	56	-	3
Ark.	-	-	-	1	3,352	3,309	2	1	-	10	-	-
La.	8	1	2	-	8,524	6,853	2	4	-	1	-	-
Okla.	3	-	5	1	4,131	5,178	13	8	4	5	-	-
Tex.	46	8	11	-	22,520	27,414	39	24	1	40	-	3
MOUNTAIN	16	2	7	1	8,668	9,555	37	19	8	6	-	6
Mont.	-	-	-	-	405	441	8	-	-	-	-	-
Idaho	-	-	-	-	405	452	-	4	-	-	-	-
Wyo.	1	1	-	-	268	252	-	-	-	-	-	-
Colo.	7	-	4	-	2,508	2,707	6	2	-	-	-	-
N. Mex.	-	-	-	-	988	1,213	7	1	1	-	-	-
Ariz.	6	-	1	-	2,214	2,544	6	6	4	3	-	4
Utah	1	-	2	1	471	449	7	2	3	-	-	1
Nev.	1	1	-	-	1,409	1,497	3	4	-	3	-	1
PACIFIC	338	18	61	4	39,782	45,642	128	101	24	30	2	44
Wash.	13	-	2	-	2,733	3,373	4	9	2	1	1	2
Oreg.	1	-	-	-	2,454	2,319	7	6	1	-	-	1
Calif.	321	18	57	4	32,940	38,003	117	85	21	29	1	31
Alaska	-	-	-	-	987	1,052	-	1	-	-	-	-
Hawaii	3	-	2	-	668	895	-	-	-	-	-	10
Guam	-	U	-	-	59	73	U	U	U	U	U	-
P.R.	14	-	-	1	1,188	1,111	7	30	-	10	-	-
V.I.	-	U	-	-	145	95	U	U	U	U	U	-
Pac. Trust Terr.	-	U	-	-	-	-	U	U	U	U	U	-

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending May 5, 1984 and May 7, 1983 (18th Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported *		Total									
	Cum. 1984	1984	Cum. 1984	1984	Cum. 1984	Cum. 1983	Cum. 1984	1984	Cum. 1984	1984	Cum. 1984	Cum. 1983	1984	Cum. 1984	Cum. 1983
UNITED STATES	217	95	1,000	9	74	706	1,194	95	1,305	25	616	594	29	257	416
NEW ENGLAND	16	5	54	-	2	4	77	5	46	-	9	22	4	23	6
Maine	-	-	-	-	-	-	1	-	13	-	-	-	-	1	-
N.H.	-	-	11	-	1	-	4	-	5	-	2	4	-	-	2
Vt.	1	-	1	-	1	-	20	-	3	-	5	3	-	-	2
Mass.	9	5	40	-	-	2	26	1	14	-	1	12	4	22	2
R.I.	1	-	-	-	-	-	6	1	4	-	1	3	-	-	-
Conn.	5	-	2	-	-	2	20	3	7	-	-	-	-	-	-
MID ATLANTIC	33	-	31	-	9	22	193	16	176	4	46	177	15	64	23
Upstate N.Y.	10	-	3	-	2	2	69	-	36	4	28	47	14	54	14
N.Y. City	7	-	26	-	-	16	22	-	7	-	1	15	1	8	2
N.J.	11	-	2	-	3	1	42	4	107	-	3	10	-	2	2
Pa.	5	-	-	-	4	3	60	12	26	-	14	105	-	-	5
E.N. CENTRAL	19	8	368	-	3	403	184	38	486	1	216	149	3	32	71
Ohio	4	-	1	-	2	18	72	30	180	1	35	44	-	2	1
Ind.	-	-	2	-	1	271	25	-	27	-	150	9	-	1	12
Ill.	5	-	96	-	-	109	31	3	116	-	11	81	-	13	27
Mich.	4	8	266	-	-	5	32	5	126	-	11	6	3	11	11
Wis.	6	-	3	-	-	-	24	-	37	-	9	9	-	5	20
W.N. CENTRAL	6	-	-	-	1	-	70	-	67	1	65	41	-	16	28
Minn.	-	-	-	-	1	-	13	-	1	-	4	17	-	1	5
Iowa	1	-	-	-	-	-	15	-	14	-	3	4	-	-	-
Mo.	4	-	-	-	-	-	20	-	6	-	10	5	-	-	-
N. Dak.	-	-	-	-	-	-	1	-	1	-	-	1	-	3	-
S. Dak.	-	-	-	-	-	-	3	-	-	-	1	2	-	-	-
Nebr.	-	-	-	-	-	-	6	-	1	-	2	-	-	-	-
Kans.	1	-	-	-	-	-	12	-	44	1	45	12	-	12	23
S. ATLANTIC	40	-	3	9	14	145	276	2	98	1	51	72	-	16	47
Del.	2	-	-	-	-	-	2	-	2	-	-	-	-	-	-
Md.	11	-	-	7†§	7	2	21	-	19	-	3	13	-	1	-
D.C.	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
Va.	7	-	1	-	1	12	31	1	8	-	7	22	-	-	1
W. Va.	-	-	-	-	-	-	4	-	19	-	6	2	-	-	-
N.C.	4	-	-	-	-	-	33	-	10	-	17	5	-	-	6
S.C.	1	-	-	-	-	3	23	-	1	-	1	5	-	-	-
Ga.	2	-	1	-	-	6	63	-	16	1	2	18	-	2	6
Fla.	13	-	1	2†	6	122	97	1	23	-	15	7	-	13	34
E.S. CENTRAL	1	-	1	-	2	1	45	-	24	-	3	5	-	5	5
Ky.	-	-	1	-	-	1	4	-	6	-	1	2	-	1	5
Tenn.	-	-	-	-	2	-	18	-	8	-	2	2	-	-	-
Ala.	1	-	-	-	-	-	17	-	4	-	-	-	-	1	-
Miss.	-	-	-	-	-	-	6	-	6	-	-	1	-	3	-
W.S. CENTRAL	7	53	209	-	14	44	133	9	70	-	56	43	-	12	64
Ark.	-	-	-	-	-	10	19	-	4	-	10	2	-	2	-
La.	2	-	-	-	-	-	29	-	-	-	3	2	-	-	9
Okla.	2	-	5	-	-	-	16	N	N	-	34	23	-	-	-
Tex.	3	53	204	-	14	34	69	9	66	-	9	16	-	10	55
MOUNTAIN	9	-	71	-	10	2	45	18	141	2	58	67	1	7	14
Mont.	-	-	-	-	-	-	1	-	3	-	19	1	-	-	3
Idaho	2	-	-	-	-	-	5	1	7	-	1	2	-	1	4
Wyo.	-	-	-	-	-	-	2	-	1	-	3	4	1	1	1
Colo.	1	-	-	-	-	2	16	1	9	1	18	41	-	-	-
N. Mex.	-	-	48	-	8	-	7	N	N	-	5	5	-	-	-
Ariz.	4	-	-	-	-	-	11	16	116	-	8	9	-	-	4
Utah	2	-	23	-	2	-	3	-	4	1	2	5	-	5	1
Nev.	-	-	-	-	-	-	-	-	1	-	2	-	-	-	1
PACIFIC	86	29	263	-	19	85	171	7	197	16	112	18	6	82	158
Wash.	3	16	80	-	-	2	22	3	19	3	14	1	-	1	6
Oreg.	1	-	-	-	-	5	25	N	N	2	9	3	-	-	9
Calif.	79	13	183	-	17	77	118	4	167	5	33	14	6	79	143
Alaska	-	-	-	-	-	-	5	-	4	-	-	-	-	-	-
Hawaii	3	-	-	-	2	1	1	-	7	6	56	-	-	2	-
Guam	-	U	49	U	1	2	1	U	3	U	-	-	U	1	-
P.R.	2	-	-	-	-	69	4	13	64	-	-	3	-	3	2
V.I.	-	U	-	U	-	5	-	U	3	U	-	-	U	-	1
Pac. Trust Terr.	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-

*For measles only, imported cases includes both out-of-state and international importations.

N: Not notifiable U: Unavailable †International §Out-of-state

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending May 5, 1984 and May 7, 1983 (18th Week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1984	Cum. 1983	1984	Cum. 1984	Cum. 1983	Cum. 1984	Cum. 1984	Cum. 1984	Cum. 1984
UNITED STATES	9,687	11,422	5	7,076	7,590	28	108	29 +5	1,633
NEW ENGLAND	215	272	-	190	194	1	3	-	7
Maine	1	7	-	9	13	-	-	-	6
N.H.	3	10	-	13	16	-	-	-	-
Vt.	1	1	-	2	1	-	-	-	-
Mass.	129	177	-	103	99	1	2	-	1
R.I.	8	6	-	17	16	-	-	-	-
Conn.	73	71	-	46	49	-	1	-	-
MID ATLANTIC	1,321	1,439	-	1,326	1,417	-	17	1	100
Upstate N.Y.	94	123	-	217	224	-	7	1	4
N.Y. City	801	825	-	531	567	-	3	-	-
N.J.	249	282	-	275	308	-	3	-	1
Pa.	177	209	-	303	318	-	4	-	95
E.N. CENTRAL	394	643	1	975	966	-	15	1	61
Ohio	85	166	-	197	156	-	3	1	4
Ind.	57	60	-	99	90	-	1	-	6
Ill.	60	297	-	393	415	-	6	-	35
Mich.	160	91	1	226	256	-	2	-	3
Wis.	32	29	-	60	49	-	3	-	13
W.N. CENTRAL	166	132	1	189	256	7	3	2	251
Minn.	44	52	1	29	45	-	2	-	27
Iowa	10	4	-	30	31	-	-	-	51
Mo.	84	52	-	89	135	7	-	2	24
N. Dak.	1	1	-	5	-	-	-	-	40
S. Dak.	2	2	-	4	19	-	-	-	67
Nebr.	9	7	-	8	7	-	-	-	16
Kans.	16	14	-	24	19	-	1	-	26
S. ATLANTIC	2,960	2,901	1	1,492	1,454	3	12	7	508
Del.	9	15	-	16	10	-	-	-	-
Md.	190	180	-	184	102	-	-	-	288
D.C.	109	121	-	43	63	-	5	-	-
Va.	154	205	1	144	135	-	3	2	99
W. Va.	8	12	-	54	58	-	-	-	14
N.C.	307	263	-	236	179	1	1	1	2
S.C.	288	189	-	159	135	-	1	4	16
Ga.	486	531	-	207	284	2	-	-	52
Fla.	1,409	1,385	-	449	488	-	2	-	37
E.S. CENTRAL	601	786	-	637	725	-	3	3	91
Ky.	31	44	-	141	190	-	1	-	22
Tenn.	157	219	-	208	218	-	2	1	43
Ala.	201	327	-	212	177	-	-	2	26
Miss.	212	196	-	76	140	-	-	-	-
W.S. CENTRAL	2,300	3,006	-	735	883	8	5	13	362
Ark.	74	80	-	80	75	5	-	4	46
La.	423	630	-	98	154	2	1	1	13
Okla.	66	91	-	74	103	1	1	6	44
Tex.	1,737	2,205	-	483	551	-	3	2	259
MOUNTAIN	231	266	-	166	213	6	5	1	57
Mont.	-	4	-	8	22	-	1	1	36
Idaho	9	3	-	9	14	2	-	-	-
Wyo.	2	4	-	-	4	-	-	-	-
Colo.	51	61	-	13	16	1	1	-	-
N. Mex.	30	86	-	36	40	-	2	-	7
Ariz.	96	62	-	73	87	1	-	-	14
Utah	7	9	-	15	18	2	-	-	-
Nev.	36	37	-	12	12	-	1	-	-
PACIFIC	1,499	1,977	2	1,366	1,482	3	45	1	196
Wash.	48	63	-	68	77	-	1	-	1
Oreg.	44	33	-	57	67	1	1	1	-
Calif.	1,378	1,846	2	1,147	1,225	2	39	-	189
Alaska	3	7	-	22	15	-	1	-	6
Hawaii	26	28	-	72	98	-	3	-	-
Guam	-	-	U	4	2	-	-	-	-
P.R.	295	311	-	131	186	-	3	-	16
V.I.	6	8	U	2	1	-	-	-	-
Pac. Trust Terr.	-	-	U	-	-	-	-	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending May 5, 1984 (18th Week Ending)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	646	449	142	32	14	9	65
Boston, Mass.	175	110	47	10	6	2	33
Bridgeport, Conn.	47	35	8	-	3	1	2
Cambridge, Mass.	24	20	3	1	-	-	2
Fall River, Mass.	37	26	8	3	-	-	-
Hartford, Conn.	52	41	6	1	1	3	-
Lowell, Mass.	11	10	1	-	-	-	-
Lynn, Mass.	30	24	4	2	-	-	-
New Bedford, Mass.	20	15	4	1	-	-	-
New Haven, Conn.	46	30	11	5	-	-	5
Providence, R.I.	60	38	16	2	3	1	10
Somerville, Mass.	9	6	3	-	-	-	1
Springfield, Mass.	54	37	13	1	1	2	6
Waterbury, Conn.	28	19	7	2	-	-	3
Worcester, Mass.	53	38	11	4	-	-	3
MID. ATLANTIC	2,452	1,674	497	160	62	59	115
Albany, N.Y.	49	31	12	1	3	2	-
Allentown, Pa.	20	16	4	-	-	-	-
Buffalo, N.Y.	112	69	34	5	2	2	9
Camden, N.J.	40	25	6	5	2	2	2
Elizabeth, N.J.	38	29	6	1	1	1	7
Erie, Pa.†	33	25	5	2	-	1	-
Jersey City, N.J.	34	22	7	4	-	1	2
N.Y. City, N.Y.	1,296	872	261	99	39	25	47
Newark, N.J.	48	26	11	6	3	2	-
Paterson, N.J.	24	19	2	-	1	2	3
Philadelphia, Pa.†	257	169	64	14	2	8	15
Pittsburgh, Pa.†	80	52	20	3	-	5	2
Reading, Pa.	34	31	1	1	-	1	4
Rochester, N.Y.	153	116	27	5	3	2	12
Schenectady, N.Y.	25	18	5	1	1	-	2
Scranton, Pa.†	34	26	5	1	1	1	1
Syracuse, N.Y.	87	65	15	3	1	3	4
Trenton, N.J.	35	23	6	5	1	-	1
Utica, N.Y.	25	20	2	1	2	-	3
Yonkers, N.Y.	28	20	4	3	-	1	1
E.N. CENTRAL	2,293	1,482	507	146	68	89	90
Akron, Ohio	61	42	12	2	3	2	-
Canton, Ohio	43	32	7	4	-	-	3
Chicago, Ill	511	298	116	49	18	30	16
Cincinnati, Ohio	116	78	25	8	2	3	19
Cleveland, Ohio	183	110	41	17	7	8	1
Columbus, Ohio	173	111	43	11	4	4	8
Dayton, Ohio	114	79	25	6	2	2	-
Detroit, Mich.	250	155	56	19	14	6	9
Evansville, Ind.	59	43	10	3	-	3	1
Fort Wayne, Ind.	39	31	6	1	-	1	3
Gary, Ind.	18	12	6	-	-	-	-
Grand Rapids, Mich.	65	48	13	3	-	1	4
Indianapolis, Ind.	166	91	47	7	7	13	2
Madison, Wis.	34	25	4	2	2	1	4
Milwaukee, Wis.	133	91	33	4	1	4	1
Peoria, Ill.	51	40	7	2	2	-	6
Rockford, Ill.	45	30	10	-	4	1	3
South Bend, Ind.	40	32	7	1	-	-	2
Toledo, Ohio	125	81	30	7	2	5	8
Youngstown, Ohio	67	53	9	-	-	5	-
W.N. CENTRAL	713	487	146	37	22	21	37
Des Moines, Iowa	38	29	4	3	1	1	7
Duluth, Minn.	28	20	4	2	1	1	1
Kansas City, Kans.	39	19	12	5	1	2	-
Kansas City, Mo.	119	80	31	5	1	2	11
Lincoln, Nebr.	42	34	8	-	-	-	2
Minneapolis, Minn.	85	61	5	7	4	8	7
Omaha, Nebr.	82	55	23	2	1	1	2
St. Louis, Mo.	149	96	30	9	10	4	6
St. Paul, Minn.	57	45	9	-	2	1	1
Wichita, Kans.	74	48	20	4	1	1	-

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,363	835	304	105	42	61	63
Atlanta, Ga.	138	84	35	8	4	7	5
Baltimore, Md.	167	98	38	12	9	10	3
Charlotte, N.C.	94	57	18	9	7	2	6
Jacksonville, Fla.	106	64	31	6	3	2	9
Miami, Fla.	156	101	33	11	4	7	3
Norfolk, Va.	63	38	14	5	2	4	1
Richmond, Va.	80	48	20	7	2	3	3
Savannah, Ga.	63	47	11	3	2	-	7
St. Petersburg, Fla.	116	96	13	5	-	2	6
Tampa, Fla.	68	42	11	6	3	6	2
Washington, D.C.	256	128	62	28	5	18	11
Wilmington, Del.	56	32	18	5	1	-	7
E.S. CENTRAL	770	476	186	51	30	27	42
Birmingham, Ala.	129	83	25	11	4	6	1
Chattanooga, Tenn.	57	36	15	1	4	1	5
Knoxville, Tenn.	65	41	18	1	4	1	2
Louisville, Ky.	105	63	28	7	6	1	12
Memphis, Tenn.	229	136	54	21	5	13	15
Mobile, Ala.	56	40	11	1	2	2	2
Montgomery, Ala.	33	27	5	1	-	-	1
Nashville, Tenn.	96	50	30	8	5	3	4
W.S. CENTRAL	1,323	802	320	102	47	52	58
Austin, Tex.	43	30	9	3	-	1	4
Baton Rouge, La.	34	18	8	3	1	4	1
Corpus Christi, Tex.	34	22	9	1	-	2	1
Dallas, Tex.	195	108	56	15	11	5	6
El Paso, Tex.	53	30	16	4	3	-	9
Fort Worth, Tex.	97	56	26	5	1	9	7
Houston, Tex.	304	175	74	32	15	8	4
Little Rock, Ark.	63	43	10	1	2	7	4
New Orleans, La.	160	91	39	20	6	4	-
San Antonio, Tex.	202	136	39	11	4	12	9
Shreveport, La.	46	31	14	-	1	-	2
Tulsa, Okla.	92	62	20	7	3	-	11
MOUNTAIN	665	433	137	51	32	12	33
Albuquerque, N.Mex.	78	55	13	6	4	-	3
Colo. Springs, Colo.	28	17	8	1	2	-	5
Denver, Colo.	145	92	30	11	6	6	4
Las Vegas, Nev.	91	54	27	5	4	1	6
Ogden, Utah	21	16	-	2	3	-	1
Phoenix, Ariz.	169	108	31	21	6	3	6
Pueblo, Colo.	20	14	3	2	1	-	2
Salt Lake City, Utah	41	30	7	2	2	-	1
Tucson, Ariz.	72	47	18	1	4	2	5
PACIFIC	1,836	1,387	246	77	45	67	89
Berkeley, Calif.	14	12	2	-	-	-	-
Fresno, Calif.	84	66	8	2	1	7	2
Glendale, Calif. §	26	26	-	-	-	-	-
Honolulu, Hawaii	67	39	19	2	2	5	3
Long Beach, Calif.	100	69	21	6	1	3	5
Los Angeles, Calif. §	567	507	4	10	18	14	-
Oakland, Calif.	85	52	26	7	-	-	8
Pasadena, Calif.	34	28	5	-	1	-	2
Portland, Oreg.	94	66	17	5	1	5	2
Sacramento, Calif.	73	46	13	4	7	3	13
San Diego, Calif.	140	102	21	7	2	8	16
San Francisco, Calif.	141	95	27	13	1	5	7
San Jose, Calif.	166	105	39	9	6	7	13
Seattle, Wash.	141	99	29	7	4	2	6
Spokane, Wash.	51	36	9	2	-	4	5
Tacoma, Wash.	53	39	6	3	1	4	7
TOTAL	12,061††	8,025	2,485	761	362	397	592

* 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.

†† Total includes unknown ages.

§ Data not available. Figures are estimates based on average of past 4 weeks.

Rubella and Congenital Rubella — Continued

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Behavioral Risk-Factor Prevalence Survey — United States, Fourth Quarter 1982

During the fourth quarter of 1982, five states (Alaska, California, Illinois, Pennsylvania, and Wyoming) conducted prevalence surveys of major behavioral risk factors among their adult populations through random-digit-dialing telephone surveys, and a sixth (South Carolina) conducted a similar survey through person-to-person/household interviewing (Table 5). Four of these states used a questionnaire with standard data items. Because Illinois and South Carolina used different questionnaires, some of the data items are not comparable to data items for other states. These self-reported data were adjusted for the demographic characteristics of their respective states and weighted according to the respondent's probability of selection (Illinois data were not weighted or adjusted because of differences in data tabulation procedures).

Behavioral Risk-Factor Survey — Continued

The data presented here are consistent with findings from similar state-based behavioral risk-factor surveys conducted in the first three quarters of 1982 (*1-3*). These surveys represent 26 states and the District of Columbia; their demographic and regional distinctions are confirmed by the present data (Table 5).

From 1980 through 1982, 36 states and the District of Columbia completed behavioral risk-factor surveys, which are useful in monitoring the health status of residents of these states. Because the behaviors reported here are so closely linked with the 10 leading causes of premature death in the United States, these behavioral factors are useful indicators of chronic disease and injury morbidity and mortality. From these surveys, CDC has expanded the concept of behavioral risk-factor assessment into a state-based "surveillance system" in which 19 states and the District of Columbia collect these kinds of data on a monthly basis. This system is expected to expand and become a surveillance data resource for the public health community. Results from this system will be reported in future *MMWR* articles.

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TABLE 5. Behavioral risk-factor rates* in six states, by age group and sex—fourth quarter 1982

Risk factor, by state	Age group (years), by sex: 18-34 M	18-34 F	35-54 M	35-54 F	≥55 M	≥55 F	All ages M	All ages F	Total respondents: Number	Total respondents: Rate
1. Obesity†										
Alaska	11.3	10.3	27.9	26.1	33.2	36.1	19.3	18.5	845	18.9
California	14.1	4.7	25.6	18.6	18.6	21.2	18.7	13.6	1516	16.1
Illinois	10.1	15.3	30.7	25.8	34.3	36.4	23.4	26.0	2,227	24.9
Pennsylvania	15.8	12.8	28.8	34.0	23.4	46.9	21.7	26.8	904	24.3
So. Carolina	16.7	17.4	29.2	29.1	21.0	33.3	21.4	25.4	5,480	23.5
Wyoming	15.6	10.6	22.6	23.4	17.0	18.0	17.9	16.2	501	17.1
2. Sedentary lifestyle§										
Alaska	2.9	10.4	21.0	11.2	12.2	20.4	10.0	11.9	845	10.9
California	6.1	10.5	20.9	9.6	19.9	15.4	14.0	11.6	1,516	12.8
Illinois¶	15.0	20.6	27.4	26.6	36.3	35.6	25.0	28.8	2,227	27.3
Pennsylvania	4.0	7.5	12.7	10.5	25.0	19.8	11.0	10.8	904	10.9
So. Carolina¶	11.7	23.1	14.1	15.1	16.6	20.1	13.6	19.9	5,480	16.9
Wyoming	8.3	4.7	12.2	13.5	12.8	15.0	10.4	9.7	501	10.0
3. Uncontrolled hypertension**										
Alaska	0.9	0.8	1.2	3.2	11.1	7.6	2.2	2.4	845	2.3
California	1.7	1.5	2.2	2.7	4.3	11.0	2.5	4.6	1,516	3.6
Illinois††	3.0	5.6	11.8	12.3	28.6	35.1	13.0	18.1	2,227	16.0
Pennsylvania	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
So. Carolina	1.5	0.6	8.2	4.6	10.4	7.8	5.6	3.9	5,480	4.7
Wyoming	2.2	1.7	2.0	4.0	5.7	3.0	2.8	2.7	501	2.8

Behavioral Risk-Factor Survey – Continued

TABLE 5. Behavioral risk-factor rates* in six states, by age group and sex—fourth quarter 1982 (Continued)

Risk factor, by state	Age group (years), by sex: 18-34 M	18-34 F	35-54 M	35-54 F	≥55 M	≥55 F	All ages M	All ages F	Total respondents: Number	Rate
4. Cigarette smoking§§										
Alaska	34.0	37.1	44.7	32.1	32.7	28.3	37.4	34.4	845	36.0
California	33.0	28.5	31.7	31.6	26.0	17.0	30.9	26.1	1,516	28.4
Illinois	35.2	37.0	40.5	41.6	28.6	22.2	35.0	31.9	2,227	33.2
Pennsylvania	32.4	39.4	32.3	35.2	33.9	24.5	32.7	35.2	904	34.0
So. Carolina	43.8	32.9	49.2	35.1	34.7	16.6	43.3	28.8	5,480	35.7
Wyoming	32.8	22.4	51.8	34.9	27.8	18.0	37.4	25.4	501	31.5
5. Acute heavy drinking¶¶										
Alaska	39.5	14.4	25.2	9.4	13.0	12.7	31.7	12.6	845	22.9
California	48.6	19.3	31.4	13.3	13.9	3.1	35.0	12.8	1,516	23.6
Illinois***	29.8	6.7	21.7	5.2	11.4	1.1	21.7	4.1	2,227	11.4
Pennsylvania	45.0	29.4	30.5	8.5	18.5	7.8	35.0	17.7	904	26.1
So. Carolina	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Wyoming	53.4	25.5	35.2	14.7	17.5	2.0	40.8	17.0	501	29.2
6. Chronic heavy drinking†††										
Alaska	14.6	4.6	21.8	0.8	26.0	9.6	18.3	4.0	845	11.7
California	14.4	4.0	18.7	5.8	14.2	8.2	15.6	5.7	1,516	10.6
Illinois	22.7	4.4	17.2	5.2	14.3	3.3	18.6	4.3	2,227	10.3
Pennsylvania	16.9	7.5	11.5	3.5	21.8	1.2	16.0	4.9	904	10.2
So. Carolina	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Wyoming	16.5	5.4	8.4	6.8	12.7	2.0	13.3	5.1	501	9.3
7. Drinking & driving§§§										
Alaska	10.0	3.3	4.1	1.3	0.0	0.0	6.9	2.2	845	4.7
California	15.6	6.1	8.6	3.4	1.3	0.0	10.0	3.5	1,516	6.7
Illinois	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pennsylvania	15.8	2.2	5.4	0.0	5.6	0.0	10.3	1.0	904	5.5
So. Carolina	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Wyoming	19.0	8.6	5.7	4.7	2.8	0.0	11.8	5.5	501	8.7
8. Lack of seatbelt use¶¶¶										
Alaska	48.2	43.2	62.6	54.2	61.4	53.8	54.5	48.0	845	51.5
California	53.3	47.6	52.8	49.3	45.5	42.2	51.2	46.5	1,516	48.8
Illinois	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pennsylvania	65.6	67.9	65.5	63.3	43.5	57.2	61.3	64.3	904	62.8
So. Carolina	85.5	86.1	85.2	87.3	83.1	84.3	84.9	85.9	5,480	85.4
Wyoming	60.1	50.2	60.8	50.9	40.1	54.0	56.2	51.3	501	53.8

*Percentages.

†120% or more of ideal weight (ideal weight defined as the mid-value of the medium-frame person on the 1959 Metropolitan Life Insurance Company height/weight tables).

§Combined low level of activity from exercise, work, and recreation.

¶Person who did nothing in past month to exercise or improve physical fitness.

**Person who states having been told by medical professional he/she is hypertensive and who still has high blood pressure.

††Person who states currently having high blood pressure.

§§Current cigarette smoker.

¶¶Person who has drunk five or more drinks on an occasion, one or more times in past month.

***Person who ever has five or more drinks on one occasion.

†††Person whose average total alcoholic beverage intake exceeds 56 drinks per month.

§§§Person who has driven after having too much to drink one or more times in past month.

¶¶¶Person who states seldom or never using a seatbelt while riding in or driving a car.

Epidemiologic Notes and Reports

Shigellosis in Day-Care Centers — Washington, 1983

In late September 1983, two clusters of *Shigella sonnei* infection associated with high rates of diarrheal illness occurred among children and staff in two Seattle, Washington, day-care centers. No link was discovered between the two centers, and the antimicrobial resistance patterns associated with the isolates from the two centers differed. Circumstances dictated that the smaller center be closed. The larger one remained open, and in a departure from a previous strict exclusionary policy, convalescent children and staff under antimicrobial treatment were encouraged to return to the center, where they used a separate room, bathroom, and playground until they had two consecutive negative cultures off treatment. The parallel occurence of these two outbreaks at a time of low *Shigella* activity in the community permitted the measurement of the efficacy of the control strategies, using community surveillance.

Diarrheal illness attack rates were similar at the two centers from September 5 to October 17 among the children (23/80 and 11/23), staff (6/12 and 3/3), and family members of ill children (14/35 and 9/21) surveyed at the centers. Eighty-three other day-care centers surveyed in the same or adjacent ZIP-code areas as the affected centers showed a background diarrheal illness prevalence rate during September of 47/1313 (3.6%) of attending children, and 12/261 (4.6%) of staff.

The two different intervention strategies produced differences in the requirements for alternate care at the two day-care centers. The first day-care center was closed for 24 working days, during which alternate care arrangements had to be made for the 23 children who had attended it. At the second day-care center, alternate care arrangements were necessary for the duration of diarrhea only for the estimated nine children who were ill at the time the isolation room was created. A single case of culture-negative diarrheal illness occurred among the children at each of the centers in the 2 weeks following public-health intervention; no shigellosis was documented among the children at either center in the next 2 months.

From September 1 to December 31, 11 *S. sonnei* isolates were reported to the Seattle-King County Department of Public Health, which were not epidemiologically linked to either center. Plasmid analysis of these isolates is pending. Public-health management of these two simultaneous outbreaks may have limited the further spread of illness within both centers. The strategy of bringing convalescent children under treatment back into the center before they had negative cultures was not associated with further spread of *Shigella* in that center.

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Editorial Note: It has been estimated that 11,000,000 children in the United States are in full- or part-time day care (*1*). The growing need for day care has brought a growing need for controlling infectious diseases that frequently affect children in day care. First reported to CDC in 1972, shigellosis in day-care centers has become a common and often frustrating problem. Day-care centers play an important role in the transmission of shigellosis in the community (*2,3*). Difficulties in controlling this infection in the day-care setting include the low infectious dose, the unpredictable acquisition of antimicrobial resistance, the frequency of mild and inapparent infections, and the frequency with which young children are transferred from one day-care center to another. Although a rigorous handwashing policy has been shown to reduce the incidence of nonspecific diarrheal illness in day-care centers, satisfactory control

Shigellosis — Continued

measures for shigellosis have not been documented (*4*). On one occasion, the policy of rigid exclusion of convalescent children until they became culture-negative was associated with spread of the infection to an adjacent county (*5*).

The Seattle outbreak suggests that shigellosis in day-care centers may be a controllable problem under certain circumstances. Control strategies incorporating the early return of convalescent children to isolation settings in the day-care center are worthy of further evaluation. Further evaluation of surveillance and control strategies is necessary before general recommendations can be made. A symposium entitled, "Infectious Diseases in Day Care: Management and Prevention," will be held in Minneapolis, Minnesota, June 21-23, 1984. For further information, contact Donna Dacus, Department of Conferences, University of Minnesota; telephone (612) 376-2578.

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Notice to Readers

Evaluation of Standard Certificates and Reports

The National Center for Health Statistics (NCHS), U.S. Department of Health and Human Services, will be evaluating the U.S. Standard Certificates and Reports of Live Birth, Death, Fetal Death, Marriage, Divorce, and Induced Termination of Pregnancy.

The standard certificates and reports are developed by federal and state vital statistics officials in a joint effort and serve as models for the states in developing the forms they use to report these events. In addition to serving a variety of legal uses, the state forms are the sources of local, state, and national vital-statistics data critical for program planning and evaluation in both the public and private sectors.

NCHS evaluates the U.S. standard forms periodically to ensure that the information they include meets current needs. Questionnaires soliciting suggestions for items to be retained, deleted, added, or modified in the standard forms will be mailed by NCHS in the final quarter of 1984 to those persons and organizations that have expressed a desire to comment. To receive a questionnaire, write to the following address, indicating which certificates or reports are of interest: George A. Gay, Chief, Registration Methods Branch/DVS, National Center for Health Statistics, 3700 East-West Highway, Room 1-44K, Hyattsville, Maryland 20782.

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The data in this report are provisional, based on weekly reports 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. Such reports and any other matters pertaining to editorial or other textual considerations should be addressed to: ATTN: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333.

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