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MORBIDITY AND MORTALITY WEEKLY REPORT

Current Trends

Immunization Practices in Colleges — United States

Outbreaks of vaccine-preventable diseases continue to occur in colleges. In 1985, 354 measles cases were reported on 26 college campuses. In 1986, the United States had a provisional total of 6,273 measles cases; 174 (2.8%) of these occurred on 21 campuses. Despite longstanding primary school immunization requirements, 5%-20% of college students still do not have documented immunity to measles and/or rubella (*1,2*).

In May 1983, the American College Health Association (ACHA) adopted a Preadmission Immunization Policy, recommending that, by September 1985, colleges and universities require all students to present documentation of immunity to measles, rubella, and other vaccine-preventable diseases as a prerequisite to matriculation or registration (*3,4*). Likewise, since 1980, the Immunization Practices Advisory Committee has recommended that college and university administrations strongly consider establishing such requirements (*5*). To evaluate implementation of these recommendations, a survey of 3,606 colleges and universities was conducted jointly by the CDC and ACHA in the fall of 1984 (*6*). The 1984 survey was conducted by state and local immunization program personnel in the 10 Public Health Service regions. In eight of these regions, data were obtained from more than 50% of colleges. In order to assess further progress, ACHA conducted a follow-up survey in the spring of 1986. For this survey, a questionnaire was mailed to the 3,210 U.S. colleges and universities registered with ACHA or the American Council of Education.

Comparative data from the 1984 and 1986 surveys are presented in Table 1. In 1984, 16% of 1,861 responding institutions required measles and rubella immunizations as a condition for attendance. Of the 3,210 colleges surveyed in 1986, 1,085 (34%) responded. Of those responding, 601 (55%) reported having a preadmission immunization requirement (PIR); 499 (45%) included both measles and rubella. In both surveys, there was considerable variation by region.

The 1984 survey did not collect information regarding enforcement of existing requirements; however, the 1986 survey did. Of the 601 colleges reporting a PIR, 305 (51%) placed a hold on first or second semester registration for noncompliers. Another 21% reported other sanctions including fines, withholding grades, suspension, and letters to the students or their parents from the Student Health Office or Dean's Office. Some prohibited dormitory residence, use of student health services, or participation in clinical work by students training in health professions.

Immunization — Continued

Colleges without a PIR were asked whether they considered such a program important and why they did not have one. Of 403 schools responding, 253 (63%) felt that a PIR was important. The majority (62%) cited their general policy of not instituting special entrance requirements as their reason for not having a PIR. Twenty-six percent replied that they did not have adequate personnel to administer a program. Lack of access to a computerized data storage system was mentioned by 27%. The major barriers to implementation seemed to involve procedures rather than disagreement concerning the importance of the recommendation.

In the 1986 survey, colleges and universities were also asked about their policy regarding education and vaccination against hepatitis B infection. Twenty-four percent of respondents had a policy recommending hepatitis B vaccine for certain high-risk groups. These high-risk groups included male homosexuals, nursing students, medical students, dental students, other health care students, and foreign students from endemic areas. The survey did not assess the overall representation of these groups in the responding colleges. In general, in the majority (>90%) of responding institutions, all categories of students had to bear the cost of the vaccine.

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Editorial Note: During the past decade there has been a shift in focus at colleges and universities regarding the necessary content of a PIR. At first, the emphasis was on tetanus and diphtheria prophylaxis (*7*) as well as tuberculosis skin testing. As campuses continued to experience measles and rubella outbreaks with their potential for significant morbidity and even mortality (*8*), colleges began requiring documentation of immunity to measles and rubella, as well as to mumps, diphtheria, tetanus, and poliomyelitis (*4*). The recent emphasis on hepatitis B infection and acquired immunodeficiency syndrome (AIDS) has led many health care professionals to recommend that colleges require hepatitis B vaccination for those at risk and provide students with information on AIDS. On May 30, 1986, the ACHA Council of Delegates passed a resolution recommending that colleges educate their students at high risk for hepatitis B concerning their need to be vaccinated.

TABLE 1. Percentage of colleges and universities requiring measles and rubella immunity, by Public Health Service region — United States, 1984 and 1986

PHS region	1984		1986	
	No.*	M/R(%)†	No.*	M/R(%)†
I	159	(18)	115	(73)
II	177	(37)	128	(55)
III	177	(19)	135	(58)
IV	258	(23)	173	(47)
V	526	(18)	206	(39)
VI	251	(5)	72	(33)
VII	125	§	78	(37)
VIII	93	§	41	(46)
IX	24	§	99	(23)
X	71	(2)	38	(16)
Totals	**1,861**	**(16)**	**1,085**	**(45)**

*Number of responders in the sample. In 1984, 3,606 schools were surveyed, and 52% responded. In 1986, 3,210 schools were surveyed, and 34% responded.

†Percentage of schools requiring proof of both measles and rubella immunity.

§Data collected separately for measles and rubella; M/R total not available.

Immunization — Continued

Since 5%-20% of young adults remain susceptible to measles and/or rubella, colleges have provided a receptive setting for the occurrence of outbreaks of these diseases. Of the more than 12.8 million persons attending American institutions (*9*), between 640,000 and 2.6 million susceptible persons could potentially be affected by PIRs. Despite nearly 2 decades of intensive public health efforts to immunize all schoolchildren, many students reach college age still susceptible to these diseases. Several factors have contributed to this situation. First, many in the current cohort of college students may have entered primary school before the adoption of state laws requiring proof of prior immunization and may not have been immunized (*2*). Many may have missed natural infection because naturally-occurring measles and rubella transmission have declined markedly (*3*). In addition, individuals vaccinated between 1963 and 1967 may have been immunized with killed measles virus vaccine, given further attenuated live measles vaccine in conjunction with immune globulin, or immunized before 1 year of age—all practices which have subsequently been found to produce inadequate long-term immunity in some individuals (*10*). Furthermore, the high rates of contact among college students in dormitories, lecture halls, and other college facilities increase the chances of transmission to susceptible students. Finally, introduction of disease by students returning from travel to endemic areas in foreign countries has played an important part in recent outbreaks (*11*).

Outbreaks of measles and rubella at colleges have been costly and have had a tremendous negative impact on student health and campus activities (*12,13*). An outbreak of measles at Principia College resulted in three deaths (*8*). A Boston University outbreak spread to Massachusetts Institute of Technology, Boston College, and Northeastern University in Boston (*8*) and was probably responsible for initiating an outbreak at Villanova University outside of Philadelphia (*13*). Containment of an outbreak at Indiana University cost $225,000 (*13*).

Current efforts to deal with this problem have varied. Many schools resort to de facto outbreak control as their first strategy. Other schools have adopted their own internal PIR, with or without enforcement measures. A few states and other jurisdictions, notably the District of Columbia, Maine, Massachusetts, North Carolina, Puerto Rico, Rhode Island, and Virginia have extended their school immunization requirements to colleges and universities. The governing boards of state institutions in California, Florida, Mississippi, North Dakota, and South Dakota have adopted policies requiring proof of immunity for students registering in state-supported institutions. In the 1986 survey, about 85% of responding schools in states with a law in effect at the time of the survey (North Carolina, Massachusetts, Rhode Island*, and Mississippi) reported having PIRs. In contrast, 51% of schools in states and jurisdictions without a law had PIRs.

Data from recent rubella outbreaks suggest that review and enforcement of immunization requirements are important (*12,14*). In 1983-1985, there were 132 rubella cases in seven college outbreaks. Seventy-four percent of the patients had inadequate previous documentation of immunity to rubella. Three of the colleges had immunization requirements, but none had a mechanism for review or enforcement. In 1985, nearly two-thirds of measles cases on college campuses were reported among persons without adequate evidence of immunity.

Despite questions regarding comparability of the 1984 and 1986 surveys and the low response rates, the data suggest that there has been progress toward implementing comprehensive immunization review processes in colleges. Since voluntary vaccination programs are less effective than mandatory programs, further efforts to implement and enforce matriculation requirements for immunization are essential. Uniform state legislation mandating extending school immunization requirements to colleges would have significant impact on eliminating vaccine-preventable diseases from college campuses. In addition, future efforts should include other vaccine-preventable diseases, such as hepatitis B, and pragmatic issues, such as developing methods to facilitate tracking immunization status (*11*).

*All Rhode Island colleges reported having PIRs.

Immunization — Continued

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Topics in Minority Health

Tuberculosis in Blacks — United States

In 1985, 22,201 tuberculosis cases were reported to CDC, for a crude morbidity rate of 9.3/100,000 population. Of the 22,170 tuberculosis cases among persons of known race, 11,524 (52.0%) occurred among whites, and 7,719 (34.8%) occurred among blacks, for morbidity rates of 5.7 and 26.7 cases per 100,000 population, respectively. In 1984, the National Center for Health Statistics received reports of 1,729 deaths from tuberculosis, for a crude mortality rate of 0.73/100,000 population. Of these, 1,047 (60.6%) occurred among whites, and 619 (35.8%) occurred among blacks, for mortality rates of 0.52 and 2.17 deaths per 100,000 population, respectively.

Using a methodology similar to that employed by the Secretary's Task Force on Black and Minority Health (*1*), age- and sex-specific relative risks and excess morbidity and mortality were determined for the black population, as compared with the white population. Relative risk was defined as the ratio of age- and sex-specific tuberculosis morbidity and mortality rates in the black population compared with the white population. Excess cases and excess deaths were defined as the difference between the number of cases or deaths observed in the black population and the number that would have been expected if the black population had had the same age- and sex-specific morbidity or mortality rates as the white population. This method quantifies the number of cases and deaths that would not have occurred had morbidity or mortality rates for blacks equalled those for whites.

In 1985, the overall age-adjusted relative risk of tuberculosis among persons of known age, race, and sex was 6.2 for black males and 5.1 for black females (Table 2, Table 3). The largest relative risks were among 25- to 44-year-old blacks and were 9.1 for males and 7.3

Tuberculosis — Continued

for females. This was also the age group with the largest number of excess cases. Overall, 82.7% (6,382) of the 7,714 reported tuberculosis cases among blacks of known age and sex were excess cases.

In 1984, the overall age-adjusted relative risk of death from tuberculosis among persons of known age, race, and sex was 6.3 for black males and 5.4 for black females (Table 4, Table 5). The largest relative risks occurred among 25- to 44-year-old blacks and were 16.2 for males and 14.2 for females. The largest number of excess deaths occurred in the 45- to 64-year-old age group. Overall, 83.0% (513) of the 618 tuberculosis deaths among blacks of known age and sex were excess deaths.

In an analysis by 5-year age groups, the largest number of cases occurred in the 30- to 34-year-old age group for blacks, in the 60- to 64-year-old age group for all whites, and in the 70- to 74-year-old age group for non-Hispanic whites. The median age for blacks was 44 years, compared with 57 years for all whites and 62 years for non-Hispanic whites. Of the total 7,714 tuberculosis cases among blacks of known age, 33.1% (2,553) were <35 years of age, as compared with 23.2% (2,675) among the 11,515 whites and 14.3% (1,209) among the 8,446 non-Hispanic whites.

The majority of U.S. counties reporting tuberculosis in blacks were in the southeastern and eastern seaboard states and in California (Figure 1). The 10 states with the largest number of tuberculosis cases among blacks were: New York, 1,215; Florida, 714; Georgia, 509; Illinois,

TABLE 2. Number of reported tuberculosis cases and morbidity rates* among whites and blacks — United States, 1985

	Tuberculosis Cases							
	White				Black			
	Male		Female		Male		Female	
Age	No.	(Rate)	No.	(Rate)	No.	(Rate)	No.	(Rate)
0-4	215	(2.9)	185	(2.6)	152	(11.1)	133	(10.0)
5-14	105	(0.7)	93	(0.7)	86	(3.2)	85	(3.3)
15-24	429	(2.6)	296	(1.8)	298	(10.8)	288	(10.1)
25-44	1,827	(5.8)	819	(2.6)	2,082	(52.9)	861	(18.9)
45-64	2,437	(12.9)	891	(4.4)	1,643	(81.5)	509	(20.6)
≥65	2,595	(25.0)	1,622	(10.6)	1,010	(107.4)	567	(40.4)
Total	**7,608**	**(7.7)**	**3,906**	**(3.8)**	**5,271**	**(38.5)**	**2,443**	**(16.1)**

*Per 100,000 population.

TABLE 3. Relative risks and excess morbidity from tuberculosis among blacks — United States, 1985

	Morbidity Differentials				
	RR*		Excess Cases		
Age	Male	Female	Male	Female	Total
0-4	3.8	3.8	113	98	211
5-14	4.6	4.7	66	67	133
15-24	4.2	5.6	227	236	463
25-44	9.1	7.3	1,854	742	2,596
45-64	6.3	4.7	1,384	401	1,785
≥65	4.3	3.8	775	419	1,194
Total	**6.2†**	**5.1†**	**4,419**	**1,963**	**6,382**

*Relative risk = black rate : white rate.

†Adjusted for age by indirect standardization.

Tuberculosis — Continued

509; Texas, 468; South Carolina, 435; North Carolina, 401; California, 399; New Jersey, 283; and Alabama, 276. These states reported 67.5% (5,209) of the 7,719 cases in blacks.

Reported by: Div of Tuberculosis Control, Center for Prevention Svcs, CDC.

Editorial Note: 1985 was the first year in which all states reported detailed information on individual cases of tuberculosis, thus allowing for more precise identification of groups at risk for tuberculosis. Two indices were used to summarize tuberculosis morbidity and mortality differentials among blacks as compared with whites. They were 1) relative risk and 2) excess tuberculosis cases and deaths. The relative risks for both morbidity and mortality are disturbingly high among blacks. Age-specific rates of tuberculosis were four- to ninefold higher among blacks than among whites, while mortality rates were 4- to 16-fold higher. Eighty-three percent of all reported tuberculosis cases among blacks in 1985 represented excess morbidity. Similarly, 83% of all deaths from tuberculosis occurring among blacks in 1984, represented excess mortality.

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

Disease	14th Week Ending			Cumulative, 14th Week Ending		
	Apr. 11, 1987	Apr. 5, 1986	Median 1982-1986	Apr. 11, 1987	Apr. 5, 1986	Median 1982-1986
Acquired Immunodeficiency Syndrome (AIDS)	276	295	N	4,949	3,202	N
Aseptic meningitis	94	81	75	1,177	1,149	1,120
Encephalitis: Primary (arthropod-borne & unspec)	12	15	17	199	234	235
Post-infectious	1	3	3	10	28	24
Gonorrhea: Civilian	12,987	15,778	15,778	211,809	223,410	223,410
Military	264	222	431	4,504	4,253	5,861
Hepatitis: Type A	503	420	407	6,630	6,085	6,085
Type B	550	538	517	6,591	6,615	6,516
Non A, Non B	85	93	N	791	905	N
Unspecified	82	79	109	893	1,335	1,354
Legionellosis	17	11	N	171	163	N
Leprosy	8	7	6	60	72	68
Malaria	12	23	16	178	192	180
Measles: Total*	153	132	69	838	1,608	619
Indigenous	140	129	N	725	1,559	N
Imported	13	3	N	113	45	N
Meningococcal infections: Total	65	64	77	1,011	910	948
Civilian	65	64	77	1,010	908	937
Military	-	-	-	1	2	2
Mumps	438	104	87	4,854	872	1,142
Pertussis	29	55	44	486	609	488
Rubella (German measles)	10	15	20	83	133	145
Syphilis (Primary & Secondary): Civilian	527	433	460	8,826	6,887	7,667
Military	3	4	4	57	62	89
Toxic Shock syndrome	6	8	N	80	84	N
Tuberculosis	509	438	438	5,205	5,055	5,308
Tularemia	4	-	3	21	17	25
Typhoid Fever	4	9	7	59	60	85
Typhus fever, tick-borne (RMSF)	-	3	3	10	17	17
Rabies, animal	116	144	141	1,151	1,363	1,363

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1987		Cum. 1987
Anthrax	-	Leptospirosis	7
Botulism: Foodborne	1	Plague	2
Infant (Utah 1)	16	Poliomyelitis, Paralytic	-
Other	-	Psittacosis (W. Va. 1, Ariz. 1)	18
Brucellosis (S.C. 1, Tex. 1)	20	Rabies, human	-
Cholera	-	Tetanus	7
Congenital rubella syndrome	2	Trichinosis	11
Congenital syphilis, ages < 1 year	-	Typhus fever, flea-borne (endemic, murine)	5
Diphtheria	2		

*Eleven of the 153 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 April 11, 1987 and April 5, 1986 (14th Week)

Reporting Area	AIDS	Aseptic Meningitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	Cum 1987	1987	Cum 1987	Cum 1987	Cum 1987	Cum 1986	1987	1987	1987	1987	1987	Cum 1987
UNITED STATES	4,949	94	199	10	211,809	223,410	503	550	85	82	17	60
NEW ENGLAND	215	1	9	1	7,447	4,885	14	50	9	2	2	4
Maine	10	-	1	-	242	243	-	1	1	-	-	-
N H	5	-	-	-	122	141	-	1	1	-	-	2
Vt	3	1	2	-	58	78	-	-	-	-	-	-
Mass	131	-	2	-	2,716	2,074	9	27	3	-	1	2
R I	18	-	3	1	596	455	1	1	1	-	1	-
Conn	48	-	1	-	3,713	1,894	4	20	3	2	-	-
MID ATLANTIC	1,496	7	24	-	35,402	37,373	24	42	3	17	-	5
Upstate N Y	174	3	14	-	4,503	4,089	18	16	2	2	-	-
N Y City	882	4	4	-	19,397	22,495	2	19	-	15	-	5
N J	334	-	1	-	4,275	4,270	4	7	1	-	-	-
Pa	106	-	5	-	7,227	6,519	-	-	-	-	-	-
E N CENTRAL	259	19	52	-	24,289	31,597	37	61	9	4	4	1
Ohio	23	6	22	-	6,618	7,421	6	14	4	1	3	1
Ind	23	1	2	-	2,634	3,655	13	18	2	-	-	-
Ill	137	-	7	-	3,225	7,735	1	1	-	2	-	-
Mich	46	12	19	-	9,658	9,161	17	28	3	1	1	-
Wis	30	-	2	-	2,154	3,625	-	-	-	-	-	-
W N CENTRAL	118	2	12	-	8,931	9,782	9	12	-	2	1	-
Minn	31	-	7	-	1,495	1,420	2	-	-	-	-	-
Iowa	5	1	1	-	897	963	7	2	-	-	-	-
Mo	59	1	-	-	4,431	4,793	-	10	-	2	1	-
N Dak	1	-	-	-	86	91	-	-	-	-	-	-
S Dak	1	-	-	-	175	195	-	-	-	-	-	-
Nebr	6	-	3	-	533	696	-	-	-	-	-	-
Kans	15	-	1	-	1,314	1,624	-	-	-	-	-	-
S ATLANTIC	870	18	32	4	57,108	56,325	44	86	12	4	8	4
Del	9	-	1	-	835	902	1	1	-	-	-	-
Md	110	3	2	-	6,782	6,780	11	10	2	1	2	2
D C	108	-	-	-	3,750	4,222	3	2	1	-	2	-
Va	55	-	14	1	4,537	4,742	11	6	1	1	-	-
W Va	3	-	5	-	464	651	-	1	-	-	-	-
N C	34	3	8	-	8,534	9,368	1	12	3	-	1	-
S C	17	1	-	-	5,039	4,978	2	6	-	-	-	1
Ga	128	4	-	-	9,734	9,359	1	14	-	-	2	-
Fla	406	7	2	3	17,433	15,323	14	34	5	2	1	1
E S CENTRAL	52	1	11	3	15,951	18,328	3	45	3	-	-	-
Ky	14	-	4	1	1,638	2,197	-	8	2	-	-	-
Tenn	-	-	3	-	5,501	7,224	-	17	-	-	-	-
Ala	31	1	4	-	5,166	5,038	2	14	-	-	-	-
Miss	7	-	-	2	3,646	3,869	1	6	1	-	-	-
W S CENTRAL	465	17	19	1	23,517	26,878	69	68	10	16	-	4
Ark	12	1	-	1	2,343	2,522	8	4	-	-	-	-
La	74	2	3	-	4,944	4,725	8	13	3	1	-	-
Okla	22	1	8	-	2,658	3,087	6	11	2	-	-	-
Tex	357	13	8	-	13,572	16,544	47	40	5	15	-	4
MOUNTAIN	118	2	7	-	5,848	6,720	65	45	6	6	-	-
Mont	2	-	-	-	144	175	-	-	-	-	-	-
Idaho	2	-	-	-	210	230	1	4	-	-	-	-
Wyo	2	-	-	-	90	159	2	-	-	-	-	-
Colo	56	1	1	-	1,192	1,845	7	8	1	6	-	-
N Mex	12	-	1	-	640	718	13	10	-	-	-	-
Ariz	17	1	5	-	2,083	2,187	36	11	4	-	-	-
Utah	8	-	-	-	209	290	3	8	-	-	-	-
Nev	19	-	-	-	1,280	1,116	3	4	1	-	-	-
PACIFIC	1,356	27	33	1	33,316	31,522	238	141	33	31	2	42
Wash	52	-	5	-	2,243	2,503	16	9	-	-	-	2
Oreg	20	-	-	-	1,197	1,229	28	14	2	-	-	-
Calif	1,257	27	28	1	29,024	26,561	194	117	31	31	1	37
Alaska	3	-	-	-	555	874	-	1	-	-	-	-
Hawaii	24	-	-	-	297	355	-	-	-	-	1	3
Guam	-	-	-	-	55	22	-	-	-	2	-	-
P R	16	-	-	1	618	615	1	6	-	1	-	-
V I	-	U	-	-	61	61	U	U	U	U	U	-
Pac Trust Terr	-	-	-	-	128	26	1	-	-	-	-	17
Amer Samoa	-	-	-	-	30	8	-	-	-	-	-	-

N Not notifiable U Unavailable

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending April 11, 1987 and April 5, 1986 (14th Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported *		Total									
	Cum. 1987	1987	Cum. 1987	1987	Cum. 1987	Cum. 1986	Cum. 1987	1987	Cum. 1987	1987	Cum. 1987	Cum. 1986	1987	Cum. 1987	Cum. 1986
UNITED STATES	178	140	725	13	113	1,608	1,011	438	4,854	29	486	609	10	83	133
NEW ENGLAND	13	34	35	9	18	9	97	1	12	2	13	35	-	-	1
Maine	-	-	-	-	-	-	6	-	-	-	-	2	-	-	-
N.H.	-	30	30	9†	11	-	11	-	6	-	1	14	-	-	1
Vt.	-	-	1	-	5	-	6	-	2	-	3	1	-	-	-
Mass.	7	-	-	-	2	9	49	-	1	-	3	9	-	-	-
R.I.	4	-	-	-	-	-	9	-	-	-	-	1	-	-	-
Conn.	2	4	4	-	-	-	16	1	3	2	6	8	-	-	-
MID. ATLANTIC	9	11	119	2	35	502	65	7	73	6	67	73	-	3	23
Upstate N.Y.	4	-	8	-	8	3	43	3	25	5	50	47	-	1	15
N.Y. City	2	9	103	-	8	75	6	-	-	-	-	3	-	1	5
N.J.	1	2	5	-	2	424	-	2	24	-	4	5	-	1	3
Pa.	2	-	3	2§	17	-	16	2	24	1	13	18	-	-	-
E.N. CENTRAL	4	5	63	2	13	319	127	141	2,790	1	58	144	1	16	5
Ohio	3	-	-	-	5	-	45	-	32	-	19	61	-	-	-
Ind.	-	-	-	-	-	-	15	38	346	-	-	14	-	-	-
Ill.	1	5	40	2†	8	175	21	53	1,518	-	3	19	1	15	2
Mich.	-	-	23	-	-	-	40	50	430	1	19	13	-	1	2
Wis.	-	-	-	-	-	140	6	-	464	-	17	37	-	-	1
W.N. CENTRAL	4	7	15	-	1	70	50	64	498	6	33	31	-	-	4
Minn.	3	-	-	-	-	-	16	41	300	4	7	15	-	-	-
Iowa	-	-	-	-	-	-	3	19	153	-	3	4	-	-	-
Mo.	1	7	15	-	1	-	13	1	7	2	13	3	-	-	1
N. Dak.	-	-	-	-	-	-	1	-	-	-	1	2	-	-	-
S. Dak.	-	-	-	-	-	-	1	2	15	-	2	-	-	-	-
Nebr.	-	-	-	-	-	-	1	-	1	-	-	1	-	-	-
Kans.	-	-	-	-	-	70	15	1	22	-	7	6	-	-	3
S. ATLANTIC	31	-	22	-	-	226	184	10	57	5	118	169	1	8	1
Del.	1	-	-	-	-	-	4	-	-	-	-	61	-	-	-
Md.	7	-	-	-	-	8	16	-	8	1	1	30	-	1	-
D.C.	5	-	-	-	-	-	4	-	-	-	-	-	-	-	-
Va.	5	-	-	-	-	-	34	3	7	1	31	9	-	1	-
W. Va.	-	-	-	-	-	-	-	-	12	-	23	1	-	-	-
N.C.	3	-	-	-	-	-	22	-	2	2	49	14	-	-	-
S.C.	1	-	-	-	-	205	16	1	4	-	-	2	-	-	-
Ga.	2	-	-	-	-	1	34	5	6	1	11	39	1	1	-
Fla.	7	-	22	-	-	12	54	1	18	-	3	13	-	5	1
E.S. CENTRAL	1	-	-	-	-	-	56	99	753	1	7	15	-	2	1
Ky.	-	-	-	-	-	-	9	74	184	-	1	1	-	2	1
Tenn.	-	-	-	-	-	-	21	25	560	1	1	5	-	-	-
Ala.	-	-	-	-	-	-	22	-	9	-	3	9	-	-	-
Miss.	1	-	-	-	-	-	4	-	-	-	2	-	-	-	-
W.S. CENTRAL	9	-	5	-	1	297	74	99	447	2	36	24	-	-	27
Ark.	1	-	-	-	-	265	4	2	201	-	2	1	-	-	-
La.	-	-	-	-	-	-	9	86	152	1	6	3	-	-	-
Okla.	3	-	-	-	1	2	12	N	N	1	28	20	-	-	-
Tex.	5	-	5	-	-	30	49	11	94	-	-	-	-	-	27
MOUNTAIN	6	28	119	-	11	52	35	2	95	2	41	67	1	6	-
Mont.	-	-	-	-	1	1	-	-	-	-	1	1	-	-	-
Idaho	1	-	-	-	-	-	3	-	2	-	11	15	1	1	-
Wyo.	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-
Colo.	1	-	-	-	-	3	13	-	8	2	17	14	-	-	-
N. Mex.	-	28	118	-	9	15	3	N	N	-	1	8	-	-	-
Ariz.	2	-	1	-	1	33	14	2	79	-	8	21	-	-	-
Utah	-	-	-	-	-	-	-	-	5	-	1	8	-	4	-
Nev.	2	-	-	-	-	-	2	-	1	-	-	-	-	-	-
PACIFIC	101	55	347	-	34	133	323	15	129	4	113	51	7	48	71
Wash.	5	-	-	-	-	29	43	2	20	-	20	23	-	-	1
Oreg.	2	-	1	-	26	2	14	N	N	1	13	2	-	1	-
Calif.	92	55	346	-	6	86	262	13	98	3	52	24	7	45	70
Alaska	2	-	-	-	-	-	2	-	3	-	2	1	-	-	-
Hawaii	-	-	-	-	2	16	2	-	8	-	26	1	-	2	-
Guam	-	-	2	-	-	2	3	-	4	-	-	-	-	-	2
P.R.	-	-	242	-	-	4	2	-	1	2	11	2	-	1	-
V.I.	-	U	-	U	-	-	-	U	3	U	-	-	U	-	-
Pac. Trust Terr.	-	-	-	-	-	-	-	-	2	-	-	-	1	1	-
Amer. Samoa	-	-	-	-	-	-	-	2	3	-	-	-	-	-	-

*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 April 11, 1987 and April 5, 1986 (14th Week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum 1987	Cum 1986	1987	Cum 1987	Cum 1986	Cum 1987	Cum 1987	Cum 1987	Cum 1987
UNITED STATES	8,826	6,887	6	5,205	5,055	21	59	10	1,151
NEW ENGLAND	129	136	-	118	161	-	4	-	-
Maine	1	9	-	10	17	-	-	-	-
N H	1	6	-	5	9	-	-	-	-
Vt	1	5	-	3	7	-	-	-	-
Mass	69	67	-	36	77	-	3	-	-
R I	2	8	-	16	5	-	-	-	-
Conn	55	41	-	48	46	-	1	-	-
MID ATLANTIC	1,506	932	-	958	1,020	-	5	-	105
Upstate N Y	56	47	-	162	167	-	2	-	9
N Y City	1,070	522	-	465	492	-	-	-	-
N J	164	188	-	147	171	-	3	-	1
Pa	216	175	-	184	190	-	-	-	95
E N CENTRAL	152	268	2	635	634	1	9	-	28
Ohio	29	34	-	123	93	1	4	-	-
Ind	15	38	-	52	77	-	1	-	3
Ill	52	138	-	268	286	-	1	-	14
Mich	43	42	2	173	141	-	2	-	-
Wis	13	16	-	19	37	-	1	-	11
W N CENTRAL	37	65	1	141	138	5	3	-	243
Minn	4	8	-	38	30	-	1	-	64
Iowa	6	5	-	8	11	2	-	-	70
Mo	20	37	1	69	77	3	2	-	13
N Dak	-	2	-	1	2	-	-	-	29
S Dak	3	-	-	6	2	-	-	-	47
Nebr	3	8	-	11	4	-	-	-	7
Kans	1	5	-	8	12	-	-	-	13
S ATLANTIC	2,968	2,040	-	1,046	1,003	3	5	2	295
Del	25	10	-	11	14	1	-	-	-
Md	167	131	-	96	76	-	-	-	70
D C	89	104	-	31	42	-	-	-	17
Va	72	132	-	101	94	1	-	-	112
W Va	4	3	-	31	38	-	1	-	17
N C	174	149	-	103	121	1	1	-	-
S C	210	178	-	98	128	-	-	2	12
Ga	452	383	-	141	118	-	-	-	55
Fla	1,775	950	-	434	372	-	3	-	12
E S CENTRAL	535	456	-	436	445	2	1	3	98
Ky	3	25	-	114	122	1	-	-	52
Tenn	270	181	-	113	126	-	1	2	30
Ala	148	154	-	150	147	-	-	-	16
Miss	114	96	-	59	50	1	-	1	-
W S CENTRAL	1,185	1,476	-	550	619	6	3	4	168
Ark	55	77	-	49	65	1	-	-	50
La	206	237	-	80	125	-	-	-	3
Okla	42	45	-	64	52	5	1	4	4
Tex	882	1,117	-	357	377	-	2	-	111
MOUNTAIN	214	185	-	128	103	4	2	-	86
Mont	7	2	-	8	5	-	-	-	46
Idaho	1	1	-	14	4	1	-	-	-
Wyo	22	-	-	-	-	-	-	-	26
Colo	28	59	-	-	4	-	-	-	-
N Mex	15	22	-	25	25	-	2	-	-
Ariz	98	78	-	72	50	2	-	-	14
Utah	5	3	-	1	4	1	-	-	-
Nev	38	20	-	8	11	-	-	-	-
PACIFIC	2,100	1,329	3	1,193	932	-	27	1	128
Wash	20	33	-	51	51	-	-	-	-
Oreg	59	27	-	28	35	-	-	-	-
Calif	2,016	1,255	3	1,037	783	-	26	1	127
Alaska	2	-	-	18	17	-	-	-	1
Hawaii	3	14	-	59	46	-	1	-	-
Guam	1	1	-	4	-	-	-	-	-
P R	277	222	-	70	71	-	-	-	21
V I	3	-	U	1	1	-	-	-	-
Pac Trust Terr	75	12	-	37	7	-	8	-	-
Amer Samoa	2	-	-	-	-	-	-	-	-

U Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending April 11, 1987 (14th Week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	561	379	119	41	12	10	36
Boston, Mass.	160	97	40	14	5	4	17
Bridgeport, Conn.	26	20	5	1	-	-	-
Cambridge, Mass.	23	19	3	1	-	-	-
Fall River, Mass.	35	23	6	4	2	-	1
Hartford, Conn.	53	34	12	5	1	1	-
Lowell, Mass.	21	17	3	1	-	-	1
Lynn, Mass.	25	17	6	2	-	-	1
New Bedford, Mass.	25	20	3	1	1	-	3
New Haven, Conn.	39	23	13	2	-	1	4
Providence, R.I.	23	17	5	-	-	1	-
Somerville, Mass.	11	7	3	1	-	-	2
Springfield, Mass.	39	27	7	4	1	-	5
Waterbury, Conn.	26	18	5	3	-	-	-
Worcester, Mass.	55	40	8	2	2	3	2
MID ATLANTIC	2,840	1,872	576	256	59	77	148
Albany, N.Y.	53	38	9	1	1	4	-
Allentown, Pa.	32	25	5	2	-	-	4
Buffalo, N.Y.	111	74	29	3	2	3	8
Camden, N.J.	31	18	10	2	-	1	1
Elizabeth, N.J.	26	18	3	5	-	-	-
Erie, Pa.†	37	26	7	2	2	-	3
Jersey City, N.J.	43	33	6	2	1	1	1
N.Y. City, N.Y.	1,518	979	305	163	32	39	64
Newark, N.J.	100	39	23	22	5	11	5
Paterson, N.J.	22	12	6	3	-	1	1
Philadelphia, Pa.	394	272	79	26	10	7	19
Pittsburgh, Pa.†	77	53	18	4	-	2	4
Reading, Pa.	39	34	5	-	-	-	5
Rochester, N.Y.	123	85	21	11	2	4	12
Schenectady, N.Y.	30	21	7	-	-	2	3
Scranton, Pa.†	30	25	3	-	1	1	3
Syracuse, N.Y.	84	62	14	4	3	1	7
Trenton, N.J.	39	19	15	5	-	-	1
Utica, N.Y.	17	13	4	-	-	-	3
Yonkers, N.Y.	34	26	7	1	-	-	4
E.N. CENTRAL	2,339	1,550	480	176	54	79	88
Akron, Ohio	64	50	10	1	1	2	-
Canton, Ohio	24	20	4	-	-	-	7
Chicago, Ill §	564	362	125	45	10	22	16
Cincinnati, Ohio	125	89	24	5	4	3	13
Cleveland, Ohio	157	107	26	15	7	2	1
Columbus, Ohio	179	105	36	20	9	9	-
Dayton, Ohio	121	78	27	3	3	10	2
Detroit, Mich.	278	161	67	42	3	5	5
Evansville, Ind.	47	32	7	5	1	2	1
Fort Wayne, Ind.	65	44	16	3	2	-	1
Gary, Ind. §	22	16	4	1	1	-	-
Grand Rapids, Mich.	49	41	4	2	1	1	3
Indianapolis, Ind.	171	109	43	11	2	6	8
Madison, Wis.	35	25	4	3	3	-	3
Milwaukee, Wis.	137	87	32	9	2	7	5
Peoria, Ill.	44	34	5	1	1	3	4
Rockford, Ill.	42	31	7	3	1	-	4
South Bend, Ind.	58	40	10	3	-	5	6
Toledo, Ohio	101	78	16	3	2	2	6
Youngstown, Ohio	56	41	13	1	1	-	3
W.N. CENTRAL	856	606	152	58	13	27	56
Des Moines, Iowa	86	59	22	1	1	3	3
Duluth, Minn.	24	23	1	-	-	-	-
Kansas City, Kans.	38	26	7	3	-	2	-
Kansas City, Mo.	127	98	13	9	-	7	7
Lincoln, Nebr.	30	22	5	1	2	-	3
Minneapolis, Minn.	167	115	30	15	4	3	19
Omaha, Nebr.	82	57	16	6	-	3	5
St. Louis, Mo.	171	105	39	16	3	8	8
St. Paul, Minn.	64	50	9	3	1	1	4
Wichita, Kans.	67	51	10	4	2	-	7
S. ATLANTIC	1,353	818	319	128	38	44	68
Atlanta, Ga.	157	84	44	18	9	2	4
Baltimore, Md.	279	173	62	26	8	10	17
Charlotte, N.C.	94	56	27	8	1	2	10
Jacksonville, Fla.	119	82	23	8	2	4	7
Miami, Fla.	98	52	30	10	1	5	2
Norfolk, Va.	64	44	19	-	-	1	5
Richmond, Va.	94	50	25	5	8	1	6
Savannah, Ga.	53	40	10	1	-	2	6
St. Petersburg, Fla.	92	80	9	-	2	1	3
Tampa, Fla.	75	54	12	5	-	4	4
Washington, D.C.	206	86	54	46	7	12	4
Wilmington, Del.	22	17	4	1	-	-	-
E.S. CENTRAL	764	518	146	55	23	22	33
Birmingham, Ala.	117	78	18	13	6	2	2
Chattanooga, Tenn.	59	41	14	2	-	2	3
Knoxville, Tenn.	99	73	17	7	2	-	5
Louisville, Ky.	101	73	21	5	1	1	5
Memphis, Tenn.	174	114	30	12	9	9	12
Mobile, Ala.	58	38	14	4	1	1	2
Montgomery, Ala.	41	31	6	2	-	2	1
Nashville, Tenn.	115	70	26	10	4	5	3
W.S. CENTRAL	1,350	863	273	118	54	41	62
Austin, Tex.	47	30	7	7	2	1	6
Baton Rouge, La.	38	23	7	4	3	1	2
Corpus Christi, Tex.	37	26	5	4	1	1	4
Dallas, Tex.	222	131	46	26	7	12	9
El Paso, Tex.	70	38	18	6	3	4	1
Fort Worth, Tex.	99	71	17	3	5	3	7
Houston, Tex §	308	176	74	34	13	11	7
Little Rock, Ark.	69	48	14	4	2	1	3
New Orleans, La.	125	76	30	15	3	1	1
San Antonio, Tex.	184	122	35	11	11	5	13
Shreveport, La.	53	47	5	1	-	-	1
Tulsa, Okla.	98	75	15	3	4	1	8
MOUNTAIN	733	507	128	64	20	14	38
Albuquerque, N.Mex.	105	67	19	14	4	1	4
Colo. Springs, Colo.	47	31	9	2	4	1	5
Denver, Colo.	118	80	23	9	3	3	5
Las Vegas, Nev.	106	70	23	10	2	1	4
Ogden, Utah	19	13	3	2	-	1	2
Phoenix, Ariz.	152	108	25	9	5	5	4
Pueblo, Colo.	20	16	1	2	-	1	-
Salt Lake City, Utah	50	30	9	9	1	1	1
Tucson, Ariz.	116	92	16	7	1	-	13
PACIFIC	2,023	1,358	400	160	41	52	129
Berkeley, Calif.	14	12	1	1	-	-	2
Fresno, Calif.	64	44	11	4	2	3	4
Glendale, Calif. §	26	20	6	-	-	-	2
Honolulu, Hawaii	68	37	15	12	-	4	5
Long Beach, Calif.	84	47	26	10	-	1	14
Los Angeles, Calif. §	593	377	121	59	20	7	21
Oakland, Calif.	87	58	15	5	2	7	7
Pasadena, Calif.	42	31	8	3	-	-	4
Portland, Oreg.	129	97	19	8	-	3	10
Sacramento, Calif.	160	98	40	7	8	6	18
San Diego, Calif.	159	105	32	10	4	8	10
San Francisco, Calif.	169	112	30	21	4	2	6
San Jose, Calif.	187	138	36	9	-	4	14
Seattle, Wash.	146	107	23	10	1	5	7
Spokane, Wash.	54	42	11	1	-	-	4
Tacoma, Wash.	41	33	6	-	-	2	1
TOTAL	12,819††	8,471	2,593	1,056	314	366	658

* 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 3 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.

Tuberculosis — Continued

The Secretary's Task Force on Black and Minority Health examined more than 40 specific causes of death among blacks <45 years of age; tuberculosis had the highest relative risk (*1*). While tuberculosis is becoming more and more a disease of the elderly among whites, particularly non-Hispanic whites (*2*), it is still a threat to black adults at much younger ages. The finding that 33% of black tuberculosis patients were <35 years of age suggests that many of these cases were potentially preventable (*3*). The finding that 10 states reported two-thirds of all tuberculosis cases among blacks indicates that the geographic distribution of tuberculosis cases among blacks is largely focal.

Morbidity rates of tuberculosis have progressively declined among both whites and non-whites over the past three decades; however, it is noteworthy that the ratio of morbidity rates for non-whites compared with those for whites has steadily increased—from 2.9 in 1953 to 5.2 in 1985. This disparity in the burden of tuberculosis experienced by blacks as well as other minority Americans calls for an intensified effort to close this gap and thereby prevent unnecessary disease and death.

In several areas of the nation where both tuberculosis and acquired immunodeficiency syndrome (TB/AIDS) have been investigated, the majority of TB/AIDS patients have been black (Newark, 93%; Florida, 79%; Connecticut, 61%; and New York City, 56%), while, in San Francisco, blacks comprised a smaller proportion (16%) (*4-8*). The degree to which AIDS or human immunodeficiency virus (HIV) infection contributes to tuberculosis morbidity in blacks and other racial/ethnic groups in the nation is currently unknown. It will thus be important for

TABLE 4. Number of reported tuberculosis deaths and mortality rates* among whites and blacks — United States, 1984

	Tuberculosis Deaths							
	White				Black			
	Male		Female		Male		Female	
Age	No.	(Rate)	No.	(Rate)	No.	(Rate)	No.	(Rate)
0-4	1	(0.013)	0	(0.000)	0	(0.000)	2	(0.151)
5-14	1	(0.007)	0	(0.000)	1	(0.038)	0	(0.000)
15-24	4	(0.024)	5	(0.030)	9	(0.324)	10	(0.347)
25-44	55	(0.179)	18	(0.059)	110	(2.894)	37	(0.840)
45-64	192	(1.015)	63	(0.308)	155	(7.789)	53	(2.174)
≥65	436	(4.284)	272	(1.803)	149	(16.161)	92	(6.696)
Total	**689**	**(0.701)**	**358**	**(0.347)**	**424**	**(3.145)**	**194**	**(1.294)**

*Per 100,000 population.

TABLE 5. Relative risks and excess mortality from tuberculosis among blacks — United States, 1984

	Mortality Differentials				
	RR*		Excess Deaths		
Age	Male	Female	Male	Female	Total
0-4	—	—	0	2	2
5-14	5.4	—	1	0	1
15-24	13.5	11.6	8	9	17
25-44	16.2	14.2	103	34	137
45-64	7.7	7.1	135	45	180
≥65	3.8	3.7	109	67	176
Total	**6.3†**	**5.4†**	**356**	**157**	**513**

*Relative risk = black rate : white rate.

†Adjusted for age by indirect standardization.

Tuberculosis — Continued

health departments to determine the proportion of tuberculosis patients who are seropositive for HIV, as recommended in recently published guidelines (*9,10*). Furthermore, the identification of the specific demographic characteristics and geographic distribution of TB/AIDS patients should result in program activities to prevent tuberculosis in persons at increased risk for AIDS (*9,10*).

While an earlier *MMWR* article provided an overview of the health impact of tuberculosis in minorities in the United States (*2*), this is the first in a subsequent series of articles that will provide more detailed information on tuberculosis in blacks, Asians/Pacific Islanders, American Indians/Alaskan Natives, and Hispanics. Such information indicates that tuberculosis patients in each minority group have specific age/sex characteristics and are located in particular areas within the nation. Such detailed information will allow the development of more precisely targeted programs to prevent and treat tuberculosis in minorities.

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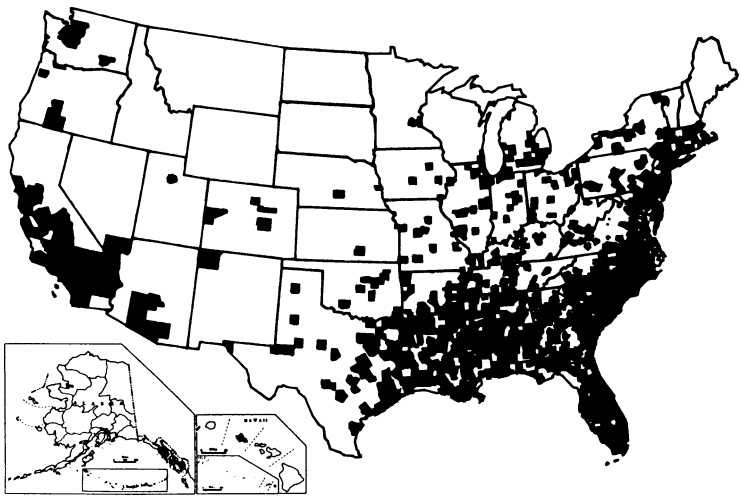
FIGURE 1. Counties reporting tuberculosis cases in blacks — United States, 1985



Epidemiologic Notes and Reports

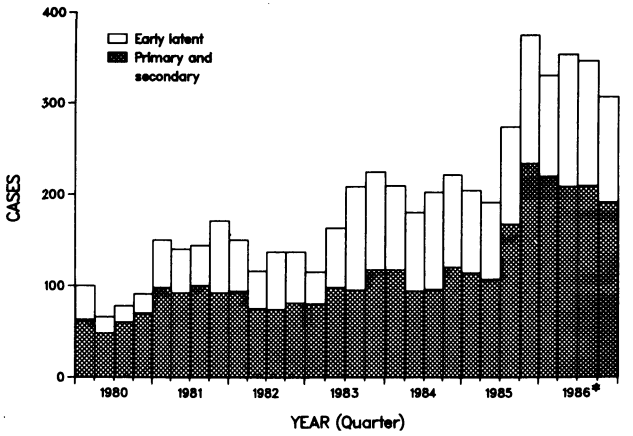
Early Syphilis — Broward County, Florida

During the 1980s, the number of early syphilis (primary, secondary, and early latent) cases in Broward County, Florida, has increased—from 328 in 1980 to over 1,150 in 1986 (Figure 2), with a peak in the last half of 1985. From 1984 to 1985, primary and secondary (P&S) syphilis accounted for most of the increase in Broward County.

This upward trend in P&S syphilis in Broward County contrasts with the general downward trend observed from 1982 to 1985 in both Florida and the rest of the United States (Figure 3). However, Florida, with 37.6 cases per 100,000 population in 1986, still has the highest rate of P&S syphilis in the country.

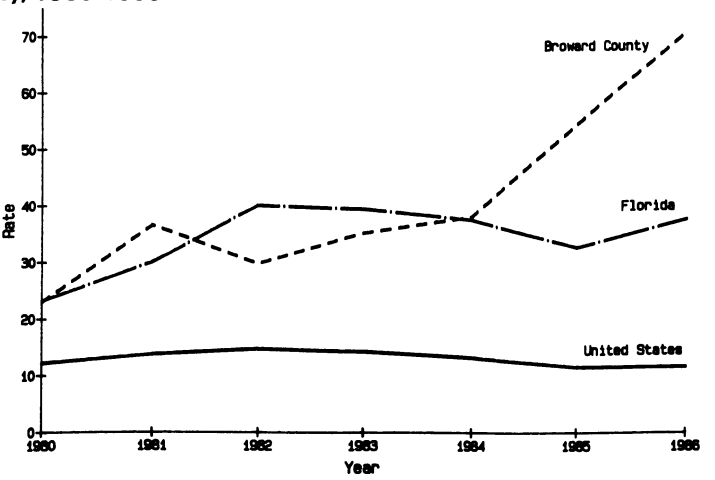
In 1985, rates of early syphilis in Broward County were highest in the 20- to 24-year-old age group and were 446/100,000 for men and 290/100,000 for women in this group. Rates

FIGURE 2. Early syphilis cases, by quarter and stage — Broward County, Florida, 1980-1986



*Control measures began in 1986.

FIGURE 3. Rates of primary and secondary syphilis — United States, Florida, and Broward County, 1980-1986



Syphilis – Continued

of early syphilis adjusted for race were 730/100,000 for blacks, 21/100,000 for whites, and 50/100,000 for Hispanics. Ninety-six percent of cases among women occurred among those of childbearing age (15-44 years of age). As a result, the number of cases of congenital syphilis increased to 25 in 1986; 10 had been reported in 1985, and six, in 1984.

Two studies were performed to identify characteristics of patients reported during the months of greatest increase. First, surveillance data routinely gathered on all patients with early syphilis from 1980 through 1985 were reviewed. Second, detailed clinical and behavioral data were collected from interview records of a systematic 25% sample of patients diagnosed with syphilis in 1985. These data included reason for seeking medical attention, address of residence, sexual preference for males, and history of prostitution for females. These two data sets were compared with surveillance data from previous years.

In 1985, early syphilis cases occurred primarily among heterosexual blacks in Broward County. Eighty percent (836) of reported cases occurred among blacks; 18% (187), among whites; and 2% (20), among Hispanics. In contrast, the percentage of syphilis cases among blacks had ranged from 48% to 64% during the 4 previous years. Heterosexual males, who represented 39% of reported male patients in 1982, constituted 80% of male patients by 1985. Over 70% of early syphilis patients reported in 1985 lived in 11 census tracts that together contained less than 15% of the 1,162,031 residents of Broward County. The median income in these census tracts is $<$\$15,000 per year. The concentration of cases clustered in these census tracts was greater in the latter part of 1985 than in the earlier part of that year.

These results prompted further investigation. The systematic 25% sample collected for 1985 was extended to include a similar sample of cases reported in the last 6 months of 1984 and the first 3 months of 1986. The sample was then divided into two periods: July 1, 1984, through June 30, 1985, the interval immediately preceding the rapid increase in reporting of cases (endemic cases), and July 1, 1985, through March 31, 1986, the interval of greatest increase (epidemic cases). Female patients diagnosed during the epidemic months were significantly more likely to be prostitutes than those reported during the prior 12 months (odds ratio [OR] = 2.5, 95% confidence interval [CI] = 1.1-6.1). Male patients were significantly more likely to be exclusively heterosexual than those reported in prior months (OR = 2.07, 95% CI = 1.1-3.9). During the 9 epidemic months as compared with the previous endemic months, more patients were examined for lesions and symptoms, and fewer patients were identified either during screening or as sexual partners of infected persons (OR = 1.87, 95% CI = 1.2-2.8). Thus, the ratio of symptomatic (P&S) to asymptomatic (early latent) patients increased from 0.9 : 1 in the endemic period to 1.3 : 1 in the epidemic period.

The Broward County Department of Health responded to these increases in early syphilis by intensifying surveillance efforts, including active surveillance of laboratories that perform serologic tests for syphilis. Moreover, serologic screening was increased in the high-prevalence census tracts and in high-risk populations, including jail inmates of both sexes. County facilities providing prenatal care intensified their rescreening program for asymptomatic women during the third trimester. The ratio of symptomatic to asymptomatic patients decreased, from 1.9 : 1 in the first quarter to 1.4 : 1 in the second quarter of 1986. In the last quarter of 1986, a decrease in early syphilis was observed.

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Editorial Note: The increase in early syphilis in Broward County, as in another outbreak in the 1980s (*1*), was largely due to heterosexual transmission. In addition, female prostitution,

Syphilis – Continued

which has contributed to syphilis transmission in other outbreaks (*1,2*), appears to have played an increasing role in early syphilis occurring in Broward County. Moreover, early syphilis cases are concentrated largely in low-income areas of the county.

Along with national trends (*3*), early syphilis cases among male homosexuals in Broward County are decreasing both in absolute numbers and in the percentage of total cases. This may be partially explained by changes in lifestyle among male homosexuals in response to the threat of acquired immunodeficiency syndrome. Such changes may reduce their acquisition of syphilis, as it may have reduced their rate of infection with other sexually transmitted pathogens (*4,5*).

The high rate of early syphilis in women of childbearing age has contributed to increases cases of congenital syphilis. Prenatal serologic testing for syphilis at the initial visit and in the third trimester (*6*) has been widely implemented and should increase the identification of asymptomatic infected women and prevent congenital syphilis infections. High priority is being given to identifying and treating sexual partners of heterosexual male patients to interrupt transmission to women within the community and to detect infections in women before they become pregnant.

The syphilis problem in Florida is not restricted to Broward County. However, serologic screening of sexually active residents of high-incidence areas and in high-risk populations is increasing the number of diagnoses of asymptomatic cases in Broward County. Throughout Florida, contact tracing (*7*) and serologic screening (*8*) of populations at risk are being used to identify asymptomatic infected persons and thereby to control the spread of syphilis.

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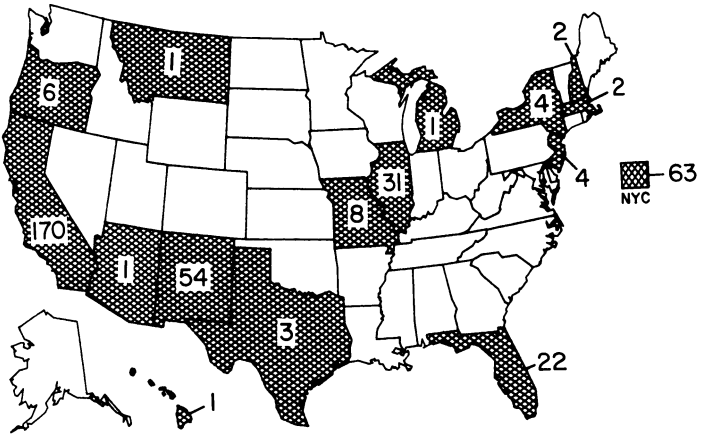
FIGURE I. Reported measles cases — United States, weeks 10-13, 1987



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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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