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Update: Trends in AIDS Among Men Who Have Sex with Men — United States, 1989–1994

During 1994, local, state, and territorial health departments reported to CDC 34,974 cases of acquired immunodeficiency syndrome (AIDS) among men whose only reported HIV exposure was sexual contact with other men. Although previous reports indicated progressively smaller annual increases in cases of AIDS among men who have sex with men (MSM) (*1*), male-to-male sexual contact continues to represent the most frequently reported mode of HIV transmission among persons with AIDS. This report summarizes trends during January 1989–June 1994 in the occurrence of AIDS among MSM aged ≥13 years.*

For this analysis, AIDS surveillance data were reported from the 50 states, the District of Columbia, and Puerto Rico for 6-month reporting periods (i.e., January–June and July–December). Because the AIDS surveillance case definition was expanded in 1993, trends in AIDS incidence are evaluated using the estimated incidence of AIDS-defining opportunistic illnesses (AIDS-OIs) (*2*). Estimated AIDS-OI incidence is the sum of the observed AIDS-OI incidence and the incidence based on estimated dates of AIDS-OI diagnosis for persons reported with AIDS based only on severe immunosuppression†; both incidences are adjusted for reporting delays and anticipated redistribution of cases initially reported with no identified risk. Because the estimated dates of AIDS-OI diagnosis are based on data from a longitudinal record review project of persons in care, these rates account for changes in AIDS-OI incidence reflecting the effects of antiretroviral therapy or prophylactic therapy for *Pneumocystis carinii* pneumonia (*2*). To calculate rates for 1989–1990, the denominators were derived from 1990 U.S. census population estimates; rates for 1991, from 1991 intercensal estimates; and rates for 1992–1994, from 1992 intercensal estimates. For analysis of data by metropolitan statistical area (MSA), denominators were derived from 1990 census data for the United States and Puerto Rico.

From January–June 1989 through January–June 1994, rates of AIDS-OI for MSM increased 31%, from 12.1 to 15.9 cases per 100,000 males aged ≥13 years (Figure 1).

*Single copies of this and the following report in this issue will be available free until June 1, 1996, from the CDC National AIDS Clearinghouse, P.O. Box 6003, Rockville, MD 20849-6003; telephone (800) 458-5231 or (301) 217-0023.

† CD4+ count <200 T-lymphocytes/μL or a CD4+ T-lymphocyte percentage of total lymphocytes of <14.

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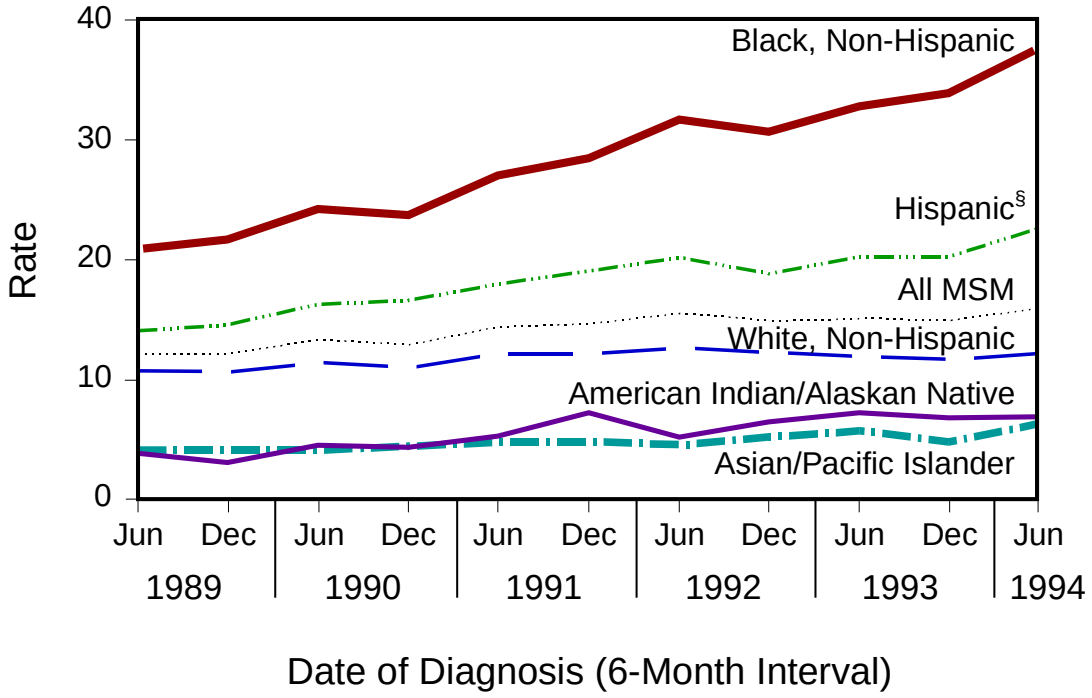
Rates varied subtantially by geographic region[§]: in the Midwest and South, rates increased 51% (from 5.7 to 8.6) and 49% (from 11.6 to 17.3), respectively. Increases were smaller in the West (21%; mid-1994 rate: 21.7) and the Northeast (13%; mid-1994 rate: 15.0).

Increases also varied by race/ethnicity (Figure 1), and during January–June 1989 and January–June 1994, rates were highest among black men (20.8 and 37.3, respectively); the largest proportionate increase in rate (79%) during January 1989–June 1994 also occurred among black men. Rates also increased among Hispanic men (61%, from 14.0 in mid-1989 to 22.6 in mid-1994), American Indian/Alaskan Native men (77%, from 3.9 to 6.9), Asian/Pacific Islander men (55%, from 4.0 to 6.2), and white men (14%, from 10.7 to 12.2). Among males in the youngest age group (13–24 years), rates increased for blacks (31%, from 5.2 to 6.8) and Hispanics (39%, from 2.3 to 3.2) but decreased (31%, from 1.6 to 1.1) for whites.

By region, the largest race/ethnicity-specific increase in rate occurred among black men in the South (109%, from 16.0 to 33.4). The only decrease occurred among white

[§]Northeast=Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont; Midwest=Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin; South=Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia; and West=Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

FIGURE 1. Estimated rate* of AIDS-defining opportunistic illnesses among men who have sex with men (MSM), by race/ethnicity and date of diagnosis — United States, 1989–1994[†]



*Per 100,000 males aged ≥13 years.
[†]Data were reported in 6-month intervals.
[§]May be of any race.

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men in the Northeast (7%, from 10.0 to 9.3). Differences in rates between white men and black and Hispanic men increased in all regions during the 5-year period.

The increase in rates also varied substantially by size of MSA. Although rates during mid-1989 were lowest (2.6) in rural areas (i.e., population <50,000), the percentage increase in rate was highest in these areas (69%; mid-1994 rate: 4.4) and in MSAs with populations of 50,000–1 million (55%; mid-1994 rate: 10.2). In comparison, although rates during mid-1989 were highest (20.8) in the largest MSAs (i.e., population >2.5 million), these MSAs were characterized by the smallest 5-year percentage increase (19%; mid-1994 rate: 24.8).

Since June 1981, three MSAs (New York, Los Angeles, and San Francisco) have reported 27% of all AIDS cases among MSM. During the 5-year surveillance period, rates of AIDS-OI in these three MSAs increased 8%, 12%, and 7%, respectively, (mid-1994 rates: 44.4, 34.9, and 127.7, respectively). In all three MSAs, the rate for white men decreased (20%, 16%, and 3%, respectively), and the rate for black men increased (49%, 48%, and 53%, respectively).

Reported by: Local, state, and territorial health departments. Div of HIV/AIDS Prevention, National Center for Prevention Svcs, CDC.

Editorial Note: The findings in this report indicate a continuing increase in the occurrence of AIDS-OI diagnosed among MSM during January 1989–June 1994, although increases during this period were smaller than earlier in the epidemic. This decline in the level of increase in AIDS cases among MSM began during the late 1980s (*1*) and may reflect, in part, decreases in high-risk sexual behaviors and HIV incidence among MSM during the mid- to late 1980s (*3*). However, the occurrence of AIDS among MSM is high (151,994 new AIDS cases were reported among MSM during the 5-year period), and cases of new infections continue to occur, especially among young MSM. For example, during 1992–1993, HIV seroprevalence was 4.8% among MSM aged 18–23 years in San Francisco (*4*) and, during 1990–1991, 9% among MSM aged 18–24 years in New York City (*5*). During the same periods, the overall rates of new HIV infections among MSM in San Francisco and New York City were 1.2% and 2%, respectively (*4,5*).

Regardless of mode of transmission, the incidence of AIDS has been higher among black and Hispanic men than among white men (*6*). Factors potentially associated with the increased risk among racial/ethnic minorities include decreased access to HIV-prevention services, higher rates of sexually transmitted diseases (*7*), and culturally inappropriate HIV-prevention activities (*8*). This report documents the disproportionate occurrence of AIDS among black and Hispanic MSM compared with white MSM during January 1989–June 1994. This finding underscores the need for community planning groups to consider culturally appropriate prevention services when addressing the HIV-prevention needs of racial/ethnic minorities.

The use of rates to evaluate trends in estimated AIDS-OI incidence allows comparison of the impact of the epidemic among persons in different racial/ethnic groups, geographic regions, and age groups. However, rates calculated with denominators comprised of all men underestimate the impact of the epidemic among MSM because the true denominator of MSM at risk is substantially smaller than census counts of all men aged ≥13 years. Geographic differences in rates of AIDS attributed to male-to-male sexual contact may reflect variations in the prevalence of homosexual behavior and in the prevalence of HIV infection in different communities. For example, when

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compared with men living in rural areas, the prevalence of men who self-identified as homosexual was seven times greater among men in the 12 largest central cities (*9*).

The AIDS epidemic among MSM should be viewed as a composite of multiple epidemics with different times of onset and patterns of spread. AIDS surveillance data collected by health departments should be used to characterize and track local epidemics and to assist community planning groups and providers in designing and implementing HIV-prevention programs at the community level (*10*).

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HIV Transmission in a Dialysis Center — Colombia, 1991–1993

Although never reported in the United States, previous reports of possible patient-to-patient transmission of human immunodeficiency virus (HIV) associated with hemodialysis (*1,2*) indicate the potential for this problem and the importance of infection-control measures in dialysis centers. In May 1994, CDC received a report of a cluster of HIV seroconversions among patients undergoing treatment at a dialysis center in Colombia. This report summarizes the findings of the epidemiologic and laboratory investigations of this cluster by the National Institute of Health in Colombia and CDC (*3*), which underscore the need for strict adherence to infection-control practices during dialysis (*4,5*).

In May 1993, blood specimens from three patients of the dialysis center in Colombia were HIV-antibody–positive. This finding prompted the subsequent testing of blood specimens from all dialysis center patients that had been stored during January 1988–December 1993 (study period) as part of an affiliated kidney transplant program. An epidemiologic investigation was initiated after these specimens were tested for HIV antibody by enzyme immunosorbent assay and confirmatory Western blot.

A retrospective cohort study was conducted among all patients who were dialyzed in the dialysis center from January 1992 (approximately 6 months before the first

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seroconversion) through December 1993 (epidemic period). An HIV seroconverter was defined as any patient with a documented seroconversion from HIV-antibody-negative to positive during the epidemic period. An HIV seronegative patient was a patient whose most recent serum sample was HIV negative. To determine potential risk factors for HIV seroconversion, HIV seroconverters were compared with HIV seronegative patients. Medical, blood bank, and dialysis center records were reviewed, and confidential interviews were conducted with available patients or family members. Any potential exposures to HIV (e.g., surgical or dental procedures or behavioral risk factors) were included in the analysis if they had occurred ≤1 year before HIV seroconversion for seroconverters or ≤1 year before the epidemic period for HIV seronegative patients. In addition to the dialysis center, the endoscopy suite and dental clinic located within the hospital containing the dialysis center were inspected; infection-control practices in these settings were observed. Three isolates of HIV were analyzed from four seroconverters and four controls (controls included two HIV-infected persons from the same city but who had not been dialyzed at the dialysis center and two from a different city). Polymerase chain reaction was used to amplify a 480 nucleotide sequence of the HIV-1 *gag* gene, which encodes for p24 and p7; in addition, three isolates were analyzed for each HIV-infected person.

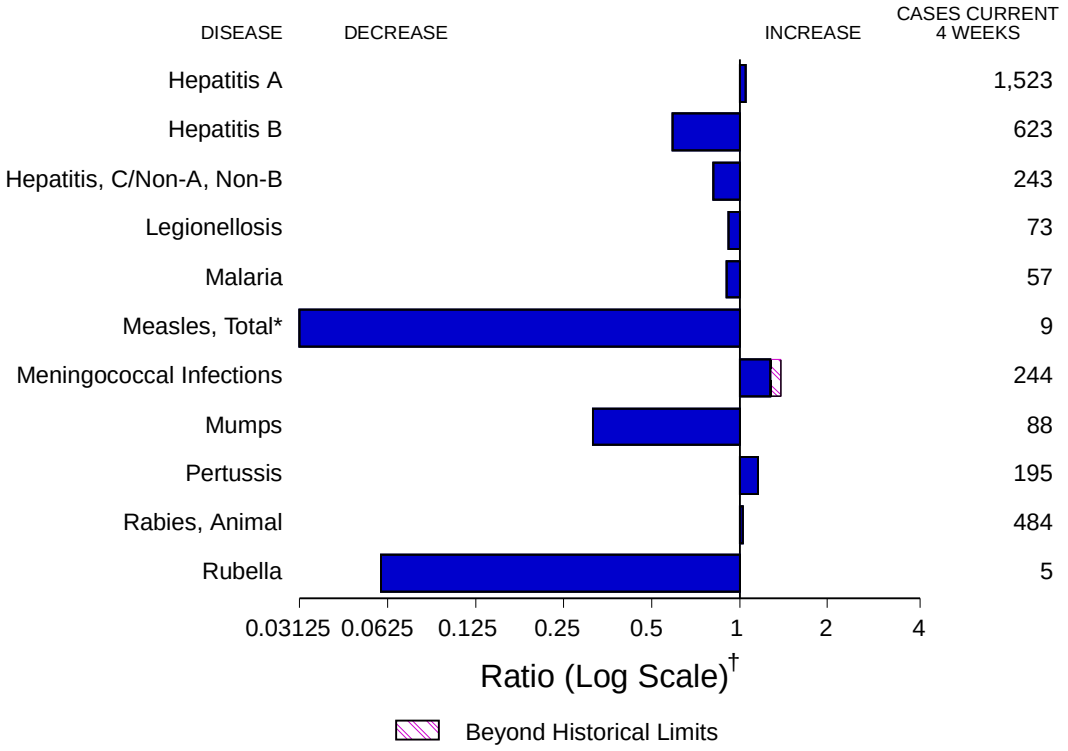
Of the 84 dialysis center patients dialyzed during the study period (January 1988–December 1993), blood specimens were available for 59 patients. Of these, 13 (22%) were HIV seropositive, including 10 who were HIV seroconverters (nine of whom seroconverted during the epidemic period [January 1992–December 1993]). All HIV seroconverters had undergone ≥10 dialysis sessions. Of the nine who seroconverted during the epidemic period, seven were male, two had a history of paying for sex, and five had received blood products (screened for HIV) ≤6 months before seroconversion; none reported intravenous or illicit drug use or receiving unscreened blood products, and none of the males reported having had sex with other men. None met clinical criteria for acquired immunodeficiency syndrome; four died following seroconversion, but none died because of HIV-related illness.

The first HIV seropositive patient dialyzed during the epidemic period (patient A) tested positive 20 days after beginning care at the dialysis center in May 1992. The risk for seroconversion among patients who received dialysis during the 4-month period (May–August 1992) when patient A was dialyzed was significantly higher than for those who were dialyzed only during other months (i.e., nine of 10 versus none of nine; relative risk=infinity; exact 95% confidence interval=3.0–infinity). The only patient who received dialysis during the same period as patient A but who did not seroconvert was recorded to have always used separate patient-care equipment designated for patients known to be infected with hepatitis B virus (HBV); all other patients dialyzed during this period were recorded to have used common equipment. Risk for HIV seroconversion was not associated with other factors, including history of transfusions ≤6 months before seroconversion, a kidney transplant, or dental or endoscopic procedures.

Nucleotide sequence comparison of HIV deoxyribonucleic acid indicated that isolates obtained from the four dialysis center seroconverters were genetically closer to each other (0.02%–0.05% variation) than to the four controls (0.06%–0.08% variation), suggesting a common source for infection in patients in the dialysis center (*6*). An HIV isolate from patient A, who died 4 months after beginning dialysis at the dialysis cen-

(Continued on page 411)

FIGURE I. Notifiable disease reports, comparison of 4-week totals ending May 27, 1995, with historical data — United States



*The large apparent decrease in the number of reported cases of measles (total) reflects dramatic fluctuations in the historical baseline.

†Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending May 27, 1995 (21st Week)

	Cum. 1995		Cum. 1995
Anthrax	-	Psittacosis	23
Brucellosis	26	Rabies, human	1
Cholera	7	Rocky Mountain Spotted Fever	56
Congenital rubella syndrome	3	Syphilis, congenital, age < 1 year†	-
Diphtheria	1	Tetanus	9
*Haemophilus influenzae**	539	Toxic shock syndrome	84
Hansen Disease	52	Trichinosis	18
Plague	2	Typhoid fever	119
Poliomyelitis, Paralytic	-		

*Of 525 cases of known age, 127 (24%) were reported among children less than 5 years of age.
†Updated quarterly from reports to the Division of Sexually Transmitted Diseases and HIV Prevention, National Center for Prevention Services. First quarter data not yet available.
-: no reported cases

TABLE II. Cases of selected notifiable diseases, United States, weeks ending May 27, 1995, and May 28, 1994 (21st Week)

Reporting Area	AIDS*	Gonorrhea		Hepatitis (Viral), by type						Legionellosis	
				A		B		C/NA,NB			
	Cum. 1995	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994
UNITED STATES	24,401	140,480	148,661	9,785	8,824	3,639	4,756	1,585	1,714	517	578
NEW ENGLAND	1,275	1,725	3,259	75	131	66	172	46	62	5	9
Maine	23	30	38	13	12	2	7	-	-	1	-
N.H.	44	43	30	4	5	9	14	4	5	-	-
Vt.	13	18	11	3	1	1	5	-	6	-	-
Mass.	593	1,054	1,194	33	60	27	110	42	40	4	5
R.I.	91	21	184	2	12	1	3	-	11	-	4
Conn.	511	559	1,802	20	41	26	33	-	-	N	N
MID. ATLANTIC	6,054	13,793	16,543	567	620	469	600	142	208	59	67
Upstate N.Y.	690	2,612	3,699	145	207	146	149	68	92	17	18
N.Y. City	3,084	4,571	6,289	260	217	124	136	1	1	-	-
N.J.	1,423	1,310	2,291	90	132	127	159	62	97	14	13
Pa.	857	5,300	4,264	72	64	72	156	11	18	28	36
E.N. CENTRAL	2,091	30,580	31,986	1,303	822	392	486	106	154	147	204
Ohio	481	10,259	9,622	826	266	48	80	5	9	76	74
Ind.	168	2,714	3,225	58	136	89	86	-	4	33	68
Ill.	891	8,202	9,453	193	242	76	136	22	42	11	15
Mich.	426	7,372	6,854	154	104	163	147	79	99	14	29
Wis.	125	2,033	2,832	72	74	16	37	-	-	13	18
W.N. CENTRAL	565	7,621	8,314	571	422	209	265	40	30	47	39
Minn.	120	1,198	1,298	64	81	20	28	2	6	-	-
Iowa	33	577	553	35	14	16	14	3	7	11	21
Mo.	222	4,608	4,388	392	188	143	194	23	6	28	9
N. Dak.	1	10	17	13	1	2	-	3	-	3	4
S. Dak.	7	72	80	12	15	1	-	1	-	-	-
Nebr.	51	-	485	9	68	9	14	3	5	3	3
Kans.	131	1,156	1,493	46	55	18	15	5	6	2	2
S. ATLANTIC	6,573	41,899	40,444	445	439	516	953	128	248	80	150
Del.	131	809	729	7	13	2	7	1	1	-	-
Md.	1,008	4,741	7,650	77	70	88	156	4	13	16	35
D.C.	441	1,913	2,592	3	10	10	16	-	-	3	4
Va.	453	4,411	5,070	80	54	37	47	4	17	5	3
W. Va.	31	224	285	10	4	29	10	21	15	3	1
N.C.	311	9,973	10,045	52	47	116	123	26	27	14	10
S.C.	321	4,748	4,836	14	12	21	17	7	3	16	6
Ga.	785	7,030	U	43	22	49	411	11	148	9	69
Fla.	3,092	8,050	9,237	159	207	164	166	54	24	14	22
E.S. CENTRAL	820	17,682	13,495	484	173	292	478	424	326	12	24
Ky.	80	1,844	1,778	22	88	32	46	8	12	2	4
Tenn.	349	5,080	5,301	387	59	208	399	414	307	6	13
Ala.	233	7,414	6,416	51	26	52	33	2	7	3	7
Miss.	158	3,344	U	24	U	-	U	-	U	1	U
W.S. CENTRAL	2,233	13,217	17,241	1,114	1,139	525	495	230	160	5	13
Ark.	88	1,591	2,698	102	22	20	9	2	3	-	4
La.	352	4,776	4,905	35	66	71	75	54	43	2	-
Okla.	101	950	1,453	211	103	155	124	162	87	2	8
Tex.	1,692	5,900	8,185	766	948	279	287	12	27	1	1
MOUNTAIN	793	3,116	3,917	1,736	1,723	315	242	189	178	98	40
Mont.	8	32	38	26	11	9	9	8	2	2	13
Idaho	22	52	33	174	144	39	37	24	44	1	-
Wyo.	4	19	35	64	8	7	7	70	50	2	2
Colo.	268	1,198	1,334	222	199	53	42	29	29	28	6
N. Mex.	71	345	423	332	440	108	79	26	31	3	1
Ariz.	201	1,175	1,230	497	653	53	26	20	7	44	1
Utah	52	83	141	367	166	33	18	5	9	5	3
Nev.	167	212	683	54	102	13	24	7	6	13	14
PACIFIC	3,997	10,847	13,462	3,490	3,355	855	1,065	280	348	64	32
Wash.	420	995	1,198	228	467	62	101	80	111	5	7
Oreg.	158	202	354	639	332	37	62	21	16	-	-
Calif.	3,279	9,095	11,267	2,544	2,449	744	875	169	217	54	23
Alaska	38	318	342	16	89	5	7	1	-	-	-
Hawaii	102	237	301	63	18	7	20	9	4	5	2
Guam	-	23	58	1	10	-	-	-	-	-	2
P.R.	865	216	220	41	27	307	131	189	52	-	-
V.I.	19	4	10	-	-	2	1	-	-	-	-
Amer. Samoa	-	8	14	5	4	-	-	-	-	-	-
C.N.M.I.	-	12	21	14	3	6	-	-	-	-	-

N: Not notifiable U: Unavailable -: no reported cases C.N.M.I.: Commonwealth of Northern Mariana Islands

*Updated monthly to the Division of HIV/AIDS Prevention, National Center for Prevention Services, last update April 27, 1995.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending May 27, 1995, and May 28, 1994 (21st Week)

Reporting Area	Lyme Disease		Malaria		Measles (Rubeola)						Meningococcal Infections		Mumps	
					Indigenous		Imported*		Total					
	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	1995	Cum. 1995	1995	Cum. 1995	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994
UNITED STATES	1,631	1,999	350	380	4	156	2	8	164	644	1,413	1,367	351	643
NEW ENGLAND	171	188	14	25	-	4	-	-	4	20	71	59	3	11
Maine	2	-	1	1	-	-	-	-	-	4	5	12	2	3
N.H.	10	6	1	3	-	-	-	-	-	1	15	5	-	4
Vt.	2	1	-	1	-	-	-	-	-	1	6	2	-	-
Mass.	43	27	4	10	-	2	-	-	2	5	23	24	-	-
R.I.	28	23	-	4	-	2	-	-	2	6	-	-	-	1
Conn.	86	131	8	6	-	-	-	-	-	3	22	16	1	3
MID. ATLANTIC	1,205	1,348	85	57	-	1	2	2	3	177	164	137	52	58
Upstate N.Y.	722	1,099	19	16	-	-	-	-	-	14	56	42	14	14
N.Y. City	20	2	34	15	-	1	2	2	3	4	18	21	5	-
N.J.	136	138	22	16	-	-	-	-	-	152	42	33	5	11
Pa.	327	109	10	10	-	-	-	-	-	7	48	41	28	33
E.N. CENTRAL	20	160	35	45	1	5	-	1	6	75	181	200	60	164
Ohio	15	7	2	6	1	1	-	-	1	11	59	51	20	27
Ind.	3	3	2	10	-	-	-	-	-	1	27	38	1	6
Ill.	1	8	23	17	-	-	-	-	-	45	52	66	19	102
Mich.	1	1	6	11	-	2	-	1	3	15	38	23	20	25
Wis.	-	141	2	1	-	2	-	-	2	3	5	22	-	4
W.N. CENTRAL	20	28	8	19	-	1	-	-	1	161	85	91	21	29
Minn.	-	-	3	5	-	-	-	-	-	-	16	9	2	3
Iowa	1	1	1	4	-	-	-	-	-	-	16	12	6	7
Mo.	4	24	3	7	-	1	-	-	1	159	31	41	10	17
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	1	-	1
S. Dak.	-	-	-	-	-	-	-	-	-	-	4	6	-	-
Nebr.	-	-	1	2	U	-	U	-	-	1	7	8	3	1
Kans.	15	3	-	1	-	-	-	-	-	1	11	14	-	-
S. ATLANTIC	148	195	82	77	-	1	-	-	1	11	241	210	43	97
Del.	7	22	1	3	-	-	-	-	-	-	2	2	-	-
Md.	97	58	20	34	-	-	-	-	-	2	14	12	-	22
D.C.	-	1	8	7	-	-	-	-	-	-	1	2	-	-
Va.	11	22	15	9	-	-	-	-	-	2	30	35	13	24
W. Va.	12	5	1	-	-	-	-	-	-	-	4	9	-	3
N.C.	11	26	6	2	-	-	-	-	-	-	41	35	16	24
S.C.	5	2	-	2	-	-	-	-	-	-	31	9	6	6
Ga.	4	55	11	10	-	-	-	-	-	2	55	49	-	7
Fla.	1	4	20	10	-	1	-	-	1	5	63	57	8	11
E.S. CENTRAL	9	15	7	10	-	-	-	-	-	28	75	86	14	3
Ky.	1	10	-	4	-	-	-	-	-	-	25	22	-	-
Tenn.	5	4	2	4	-	-	-	-	-	28	12	22	4	3
Ala.	1	1	5	2	-	-	-	-	-	-	23	42	4	-
Miss.	2	U	-	U	-	-	-	-	-	U	15	U	6	U
W.S. CENTRAL	32	30	6	13	-	2	-	-	2	12	185	152	22	138
Ark.	2	-	2	-	-	2	-	-	2	1	19	24	2	4
La.	-	-	1	1	-	-	-	-	-	1	26	20	6	13
Okla.	13	19	-	2	-	-	-	-	-	-	18	12	-	21
Tex.	17	11	3	10	-	-	-	-	-	10	122	96	14	100
MOUNTAIN	2	1	25	16	3	42	-	1	43	125	114	102	19	23
Mont.	-	-	2	-	-	-	-	-	-	-	2	2	1	-
Idaho	-	1	1	2	-	-	-	-	-	-	5	13	2	4
Wyo.	-	-	-	-	-	-	-	-	-	-	5	5	-	1
Colo.	1	-	14	6	3	3	-	-	3	18	25	15	1	1
N. Mex.	-	-	3	2	-	28	-	-	28	-	25	10	N	N
Ariz.	-	-	2	1	-	10	-	-	10	-	41	39	5	4
Utah	-	-	2	4	-	-	-	1	1	107	4	14	3	7
Nev.	1	-	1	1	-	1	-	-	1	-	7	4	6	5
PACIFIC	24	34	88	118	-	100	-	4	104	35	297	330	117	120
Wash.	1	-	8	11	-	13	-	2	15	-	49	48	10	7
Oreg.	1	2	4	10	-	1	-	-	1	-	50	74	N	N
Calif.	22	32	68	89	-	86	-	1	87	33	190	202	97	103
Alaska	-	-	1	-	-	-	-	-	-	-	6	2	8	2
Hawaii	-	-	7	8	-	-	-	1	1	2	2	4	2	8
Guam	-	-	-	-	U	-	U	-	-	211	1	-	2	3
P.R.	-	-	-	-	-	7	-	-	7	11	12	5	-	2
V.I.	-	-	-	-	-	-	-	-	-	-	-	-	2	-
Amer. Samoa	-	-	-	-	U	-	U	-	-	-	-	-	-	1
C.N.M.I.	-	-	-	1	U	-	U	-	-	26	-	-	-	-

*For imported measles, cases include only those resulting from importation from other countries.
N: Not notifiable U: Unavailable -: no reported cases

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending May 27, 1995, and May 28, 1994 (21st Week)

Reporting Area	Pertussis			Rubella			Syphilis (Primary & Secondary)		Tuberculosis		Rabies, Animal	
	1995	Cum. 1995	Cum. 1994	1995	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994
UNITED STATES	60	1,203	1,422	1	35	152	6,236	8,121	6,687	7,634	2,463	2,908
NEW ENGLAND	8	149	150	-	5	102	81	86	112	148	618	773
Maine	-	18	2	-	-	-	2	4	-	-	-	-
N.H.	1	13	37	-	1	-	1	1	5	6	83	89
Vt.	-	2	21	-	-	-	-	-	1	2	97	68
Mass.	7	109	76	-	1	101	32	32	71	68	254	293
R.I.	-	-	3	-	-	1	-	6	2	16	26	5
Conn.	-	7	11	-	3	-	46	43	33	56	158	318
MID. ATLANTIC	12	102	271	1	3	5	354	551	1,439	1,509	594	695
Upstate N.Y.	8	59	98	-	1	5	24	72	153	207	224	475
N.Y. City	2	22	54	1	2	-	187	288	788	913	-	-
N.J.	-	2	9	-	-	-	73	96	270	267	150	133
Pa.	2	19	110	-	-	-	70	95	228	122	220	87
E.N. CENTRAL	1	117	235	-	-	11	1,075	1,277	715	421	6	14
Ohio	-	38	64	-	-	-	382	471	108	109	1	-
Ind.	-	6	33	-	-	-	91	103	21	78	-	2
Ill.	-	23	50	-	-	6	415	431	411	23	2	3
Mich.	1	38	22	-	-	5	120	141	153	188	2	5
Wis.	-	12	66	-	-	-	67	131	22	23	1	4
W.N. CENTRAL	1	60	49	-	-	1	311	529	243	207	123	75
Minn.	-	28	20	-	-	-	18	22	53	41	4	8
Iowa	-	1	4	-	-	-	26	21	33	15	43	29
Mo.	-	5	13	-	-	1	258	450	91	105	14	8
N. Dak.	-	5	3	-	-	-	-	1	1	2	14	3
S. Dak.	-	7	-	-	-	-	-	-	18	9	22	11
Nebr.	U	3	3	U	-	-	-	5	6	7	-	-
Kans.	1	11	6	-	-	-	9	30	41	28	26	16
S. ATLANTIC	2	106	158	-	5	8	1,481	2,273	1,180	1,581	852	764
Del.	-	5	-	-	-	-	7	12	-	12	33	16
Md.	-	10	52	-	-	-	24	96	175	132	166	235
D.C.	-	2	3	-	-	-	51	105	42	41	7	2
Va.	-	7	15	-	-	-	282	299	61	141	159	166
W. Va.	-	-	2	-	-	-	1	8	42	38	41	33
N.C.	1	50	44	-	-	-	486	752	117	196	167	82
S.C.	-	11	8	-	-	-	276	297	124	174	53	73
Ga.	-	1	11	-	-	-	191	357	235	295	123	154
Fla.	1	20	23	-	5	8	163	347	384	552	103	3
E.S. CENTRAL	-	22	76	-	-	-	1,728	783	440	447	75	85
Ky.	-	-	52	-	-	-	89	92	53	130	8	5
Tenn.	-	2	13	-	-	-	316	402	162	148	11	34
Ala.	-	20	11	-	-	-	261	289	160	169	56	46
Miss.	-	-	U	-	-	U	1,062	U	65	U	-	U
W.S. CENTRAL	9	58	38	-	2	7	903	2,079	768	871	37	329
Ark.	-	-	6	-	-	-	181	213	75	83	11	14
La.	2	3	5	-	-	-	440	780	-	-	9	41
Okla.	4	13	20	-	-	4	31	57	1	97	17	16
Tex.	3	42	7	-	2	3	251	1,029	692	691	-	258
MOUNTAIN	17	414	154	-	4	2	101	137	240	208	44	49
Mont.	-	3	3	-	-	-	3	1	3	9	17	7
Idaho	-	72	23	-	-	-	-	1	6	6	-	-
Wyo.	-	-	-	-	-	-	2	-	1	1	13	10
Colo.	2	3	84	-	-	-	63	69	4	19	-	-
N. Mex.	5	24	7	-	-	-	7	6	40	27	2	1
Ariz.	9	298	27	-	3	-	16	32	115	94	10	30
Utah	1	10	10	-	1	2	3	7	10	-	1	-
Nev.	-	4	-	-	-	-	7	21	61	52	1	1
PACIFIC	10	175	291	-	16	16	202	406	1,550	2,242	114	124
Wash.	-	30	36	-	1	-	7	20	103	92	-	-
Oreg.	-	7	41	-	1	-	6	16	23	45	-	-
Calif.	8	122	210	-	13	15	188	367	1,327	1,974	110	93
Alaska	-	-	-	-	-	-	1	2	29	29	4	31
Hawaii	2	16	4	-	1	1	-	1	68	102	-	-
Guam	U	-	-	U	-	1	1	3	4	18	-	-
P.R.	-	6	2	-	-	-	117	132	56	62	18	40
V.I.	-	-	-	-	-	-	1	21	-	-	-	-
Amer. Samoa	U	-	1	U	-	-	-	-	2	2	-	-
C.N.M.I.	U	-	-	U	-	-	2	1	13	15	-	-

U: Unavailable -: no reported cases

TABLE III. Deaths in 121 U.S. cities,* week ending May 27, 1995 (21st Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	530	349	106	51	10	14	30
Boston, Mass.	122	73	28	14	3	4	5
Bridgeport, Conn.	31	16	7	6	1	1	2
Cambridge, Mass.	19	10	7	2	-	-	-
Fall River, Mass.	27	20	4	3	-	-	-
Hartford, Conn.	33	16	13	2	1	1	-
Lowell, Mass.	21	13	4	4	-	-	3
Lynn, Mass.	11	8	1	1	1	-	-
New Bedford, Mass.	30	25	5	-	-	-	-
New Haven, Conn.	44	32	5	3	-	4	4
Providence, R.I.	51	41	2	6	-	2	5
Somerville, Mass.	7	6	-	1	-	-	-
Springfield, Mass.	47	29	10	6	1	1	5
Waterbury, Conn.	24	18	5	1	-	-	1
Worcester, Mass.	63	42	15	2	3	1	5
MID. ATLANTIC	2,395	1,572	466	259	46	52	109
Albany, N.Y.	50	35	12	1	1	1	2
Allentown, Pa.	23	17	5	1	-	-	-
Buffalo, N.Y.	114	82	17	13	2	-	-
Camden, N.J.	32	16	10	-	2	4	2
Elizabeth, N.J.	24	17	5	-	2	-	-
Erie, Pa.§	51	40	8	3	-	-	1
Jersey City, N.J.	55	34	10	8	-	3	-
New York City, N.Y.	1,276	803	252	164	28	29	42
Newark, N.J.	61	18	23	15	3	2	-
Paterson, N.J.	24	13	3	4	1	3	4
Philadelphia, Pa.	294	203	67	19	4	1	35
Pittsburgh, Pa.§	57	45	5	6	-	1	4
Reading, Pa.	12	8	3	1	-	-	-
Rochester, N.Y.	106	85	17	1	1	2	5
Schenectady, N.Y.	24	17	2	4	1	-	-
Scranton, Pa.§	20	17	3	-	-	-	-
Syracuse, N.Y.	113	82	14	13	-	4	6
Trenton, N.J.	41	26	7	5	1	2	8
Utica, N.Y.	18	14	3	1	-	-	-
Yonkers, N.Y.	U	U	U	U	U	U	U
E.N. CENTRAL	2,235	1,365	399	270	130	71	132
Akron, Ohio	70	40	23	6	-	1	-
Canton, Ohio	23	19	2	1	1	-	2
Chicago, Ill.	498	200	82	111	90	15	31
Cincinnati, Ohio	170	120	24	16	6	4	15
Cleveland, Ohio	165	94	40	17	3	11	3
Columbus, Ohio	161	110	25	17	5	4	7
Dayton, Ohio	102	74	16	9	1	2	8
Detroit, Mich.	197	106	40	35	7	9	7
Evansville, Ind.	43	30	10	3	-	-	1
Fort Wayne, Ind.	52	41	11	-	-	-	4
Gary, Ind.	22	8	7	5	1	1	-
Grand Rapids, Mich.	52	36	8	4	2	2	5
Indianapolis, Ind.	169	109	28	17	8	7	12
Madison, Wis.	49	35	6	5	2	1	3
Milwaukee, Wis.	130	99	23	1	2	5	9
Peoria, Ill.	38	32	4	1	-	1	2
Rockford, Ill.	50	32	10	5	1	2	2
South Bend, Ind.	57	39	5	10	-	3	5
Toledo, Ohio	124	91	26	5	1	1	11
Youngstown, Ohio	63	50	9	2	-	2	5
W.N. CENTRAL	663	478	93	50	16	17	54
Des Moines, Iowa	46	32	6	4	-	4	5
Duluth, Minn.	20	17	1	2	-	-	3
Kansas City, Kans.	U	U	U	U	U	U	U
Kansas City, Mo.	112	80	10	7	3	3	3
Lincoln, Nebr.	52	41	5	5	1	-	7
Minneapolis, Minn.	174	122	25	18	3	6	18
Omaha, Nebr.	99	71	22	3	3	-	10
St. Louis, Mo.	115	76	19	11	6	3	3
St. Paul, Minn.	45	39	5	-	-	1	5
Wichita, Kans.	U	U	U	U	U	U	U

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,069	676	207	127	43	14	44
Atlanta, Ga.	153	92	34	20	5	2	5
Baltimore, Md.	147	99	21	18	6	3	6
Charlotte, N.C.	U	U	U	U	U	U	U
Jacksonville, Fla.	101	68	19	8	5	-	10
Miami, Fla.	128	71	33	19	4	1	1
Norfolk, Va.	59	39	10	5	2	3	1
Richmond, Va.	86	54	18	9	5	-	1
Savannah, Ga.	41	19	12	6	3	1	6
St. Petersburg, Fla.	58	45	5	6	2	-	-
Tampa, Fla.	147	97	23	15	7	4	7
Washington, D.C.	145	90	31	20	4	-	7
Wilmington, Del.	4	2	1	1	-	-	-
E.S. CENTRAL	738	459	160	78	21	19	73
Birmingham, Ala.	162	99	40	14	3	5	6
Chattanooga, Tenn.	77	50	18	8	1	-	9
Knoxville, Tenn.	92	61	22	4	3	2	15
Lexington, Ky.	71	43	22	5	-	1	5
Memphis, Tenn.	190	103	37	30	11	9	19
Mobile, Ala.	93	59	18	13	3	-	5
Montgomery, Ala.	44	37	2	3	-	2	5
Nashville, Tenn.	9	7	1	1	-	-	9
W.S. CENTRAL	1,594	989	332	172	49	51	99
Austin, Tex.	74	46	13	9	1	5	1
Baton Rouge, La.	50	35	10	2	1	2	5
Corpus Christi, Tex.	39	23	10	3	2	1	2
Dallas, Tex.	214	120	48	31	11	4	6
El Paso, Tex.	55	38	11	4	1	1	4
Ft. Worth, Tex.	101	67	15	10	6	2	11
Houston, Tex.	443	273	93	56	10	11	30
Little Rock, Ark.	69	44	15	2	5	3	3
New Orleans, La.	140	77	26	20	2	15	-
San Antonio, Tex.	233	150	50	17	9	7	22
Shreveport, La.	69	44	19	5	1	-	9
Tulsa, Okla.	107	72	22	13	-	-	6
MOUNTAIN	810	548	151	70	28	13	50
Albuquerque, N.M.	100	72	16	10	1	1	5
Colo. Springs, Colo.	50	38	7	4	1	-	5
Denver, Colo.	100	63	23	9	2	3	8
Las Vegas, Nev.	141	90	34	12	4	1	7
Ogden, Utah	19	19	-	-	-	-	2
Phoenix, Ariz.	146	96	27	16	6	1	9
Pueblo, Colo.	31	21	5	2	3	-	1
Salt Lake City, Utah	83	53	16	6	5	3	4
Tucson, Ariz.	140	96	23	11	6	4	9
PACIFIC	1,870	1,256	317	201	51	25	157
Berkeley, Calif.	14	6	3	5	-	-	1
Fresno, Calif.	95	68	15	4	5	3	10
Glendale, Calif.	24	22	1	1	-	-	3
Honolulu, Hawaii	42	30	7	4	1	-	4
Long Beach, Calif.	73	53	14	5	1	-	12
Los Angeles, Calif.	649	421	104	92	22	6	32
Pasadena, Calif.	20	18	2	-	-	-	3
Portland, Oreg.	147	103	25	9	6	4	8
Sacramento, Calif.	U	U	U	U	U	U	U
San Diego, Calif.	152	95	32	15	6	4	22
San Francisco, Calif.	147	86	22	21	1	1	17
San Jose, Calif.	173	126	29	15	3	-	17
Santa Cruz, Calif.	37	32	2	1	1	1	7
Seattle, Wash.	146	90	35	16	3	2	7
Spokane, Wash.	49	31	10	6	2	-	2
Tacoma, Wash.	102	75	16	7	-	4	12
TOTAL	11,904¶	7,692	2,231	1,278	394	276	748

*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.
U: Unavailable -: no reported cases

HIV Transmission — Continued

ter, was not available for testing. Isolates from three of the four dialysis center seroconverters were 100% homologous at the amino acid level. This amino acid homology was not found for isolates from seroconverters compared with controls.

The dialysis center had no written policies about reprocessing patient access needles, dialyzers, or blood lines. Interviews with staff nurses indicated that all dialyzers and blood lines were labeled appropriately and individually reprocessed with 5% formaldehyde while still attached to the machine, placed in separate labeled containers, and stored for reuse only on the same patient. In contrast, patient access needles were reprocessed through the use of a 0.16% solution of benzalkonium chloride; in this procedure, the pairs of access needles for two to four patients were placed unlabeled in a common soaking pan for disinfection, and the disinfectant was changed every 7 days.

As a result of the investigation, changes in procedures implemented at the dialysis center included cessation of reprocessing patient-care equipment and providing HIV counseling to all infected patients. National surveillance was initiated for HIV infection among patients undergoing dialysis, and the Ministry of Health has banned the use of quaternary ammonium compounds for disinfecting intravascular devices.

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Editorial Note: The epidemiologic and laboratory findings from the investigation described in this report indicate that transmission of HIV in the dialysis center was associated with a common exposure or patient-to-patient transmission. In particular, the investigation implicated receipt of dialysis after an HIV-seropositive patient began dialysis as the most likely risk exposure for infection and suggested that cross-contaminated, inadequately disinfected patient access needles may have been inadvertently shared among HIV-infected and noninfected patients. Benzalkonium chloride, the disinfectant used for reprocessing the needles, is a chemical germicide with low-level activity and is not recommended in the United States for disinfection of intravascular devices (e.g., dialysis access needles) (*7*).

Previous reports of possible patient-to-patient transmission indicate that potential routes for transmission of HIV in other health-care settings include inadequate reprocessing or inadvertent reuse of hypodermic needles and breaks in universal precautions (*8,9*). The outbreak in Colombia suggests that, in dialysis centers worldwide, reprocessing of patient-care equipment must conform to established infection-control practices (*4,5,7*).

The global implementation of dialysis and other advanced medical technologies must be accompanied by rigorous adherence to infection-control practices. Standards and recommendations outlined by the Association for the Advancement of Medical Instrumentation (*10*) and CDC (*4,5,7*), including sterilization before reuse of all intravascular patient-care items (i.e., intravascular access devices), are essential for preventing transmission of bloodborne pathogens such as HBV and HIV.

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HIV Transmission — Continued

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Update: Progress Toward Poliomyelitis Eradication — Socialist Republic of Vietnam, 1993–1994

In 1988, the Western Pacific Region (WPR) of the World Health Organization (WHO) adopted a resolution to eradicate poliomyelitis from the region by the end of 1995. In 1993, the Socialist Republic of Vietnam (1993 population: 70.9 million) accounted for 452 (40%) of the 1147 cases of confirmed polio reported to WPR-WHO. Efforts to eradicate polio in Vietnam were initiated in 1991 using supplementary vaccination activities with oral poliovirus vaccine (OPV). National Immunization Days (NIDs)* were first conducted during November–December 1993. This report updates these efforts and describes the impact of the first NIDs in 1993 (*1*).

National Immunization Days

The first NIDs were conducted during November 13–15 and December 18–20, 1993, targeting children aged <5 years. Two doses of OPV were administered to each of 9.7 million children. An estimated 10%–15% of vaccinated children were aged ≥5 years; coverage of children aged <5 years with two doses of OPV was 83%–88%. NIDs were repeated during November 12–14 and December 17–19, 1994; two doses of OPV were administered to each of 10.0 million children. An estimated 5%–10% of vaccinated children were aged ≥5 years; coverage of children aged <5 years with two doses of OPV was 89%–94%. The third NIDs in Vietnam are scheduled for November 11–13 and December 16–18, 1995.

Surveillance for Polio

A surveillance system implemented in Vietnam in 1991 defines a suspected case of polio as acute flaccid paralysis (AFP) in a person aged <15 years. Two stool specimens are collected from each person suspected to have polio at an interval of 24–48 hours to detect the presence of wild poliovirus. Each suspected case is investigated after 60 days to assess for residual paralysis.

*Mass campaigns over a short period (days to weeks) in which two doses of OPV are administered to all children in the target group regardless of prior vaccination history, with an interval of 4–6 weeks between doses.

Poliomyelitis Eradication — Continued

Of 607 persons with AFP reported in 1993, at least one stool specimen was collected for 381 (63%), and polio was confirmed† in 452 (74%); wild polioviruses were isolated from 152 persons in 74 (13%) of 560 districts, including 21 in the northern region (Red River Delta), five in the central region, two in the Highlands region, and 46 in the southern region (Mekong Delta). The last person with wild poliovirus isolated in the northern region had onset on November 8, 1993. Of 152 persons with wild poliovirus isolated, 50 (33%) were children aged 0–23 months, and 127 (84%) were children aged <5 years. Of 97 persons aged 1–4 years from whom wild poliovirus was isolated and for whom vaccination status was known, 63 (65%) had received no previous dose or one dose of OPV.

Of 353 persons with AFP reported in 1994, at least one stool specimen was collected for 262 (74%), two stool specimens were collected for 207 (59%), and one stool specimen was collected within 0–14 days of onset of paralysis for 228 (65%); polio was confirmed in 124 (35%) (Figure 1). Wild polioviruses were isolated from 31 persons in 25 districts, including one in the Highlands region and 24 in the southern region (Mekong Delta). The last person with wild poliovirus isolated in the southern region had onset on December 14, 1994. No wild poliovirus was isolated from 164 AFP patients in the northern region and from 22 AFP patients in the central region, of which 132 (80%) and 11 (50%), respectively, had at least one stool specimen collected. A total of 229 AFP cases were determined not to be polio, or 0.8 AFP cases per 100,000 children aged <15 years (a reference rate of ≥1.0 per 100,000 children aged <15 years is used to define a sensitive AFP surveillance system).

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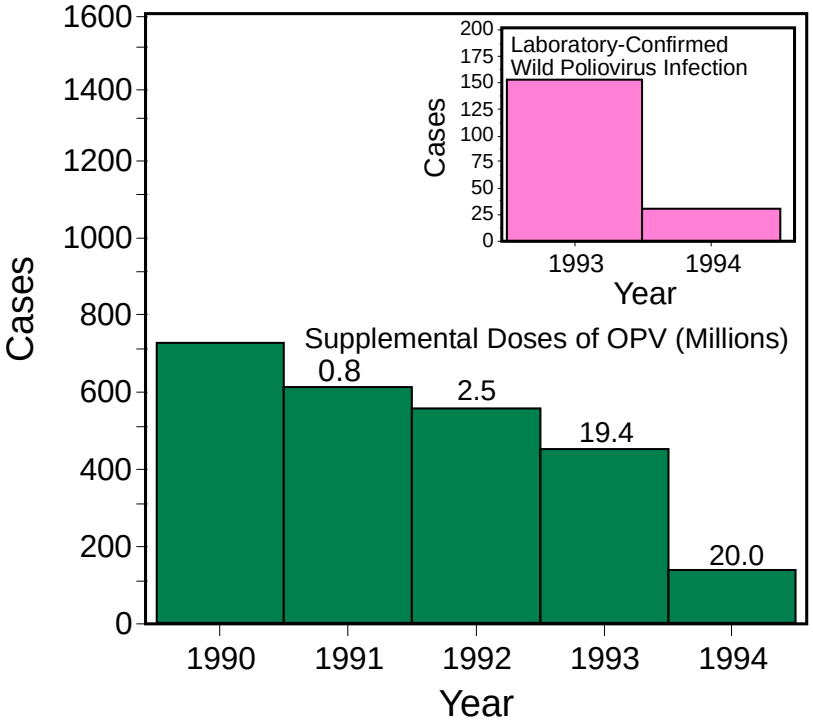
Editorial Note: The findings in this report suggest that the first NIDs in Vietnam in 1993 were highly effective in reducing circulating wild poliovirus to low levels, particularly in the northern and central regions of Vietnam. Before the NIDs, wild poliovirus was documented in 74 (13%) of 560 districts. Since implementation of the first NIDs, wild poliovirus has been detected in 25 (4%) districts, including 24 in the southern Mekong Delta region in which the incidence has been the highest. Confirmed cases declined dramatically in all age groups, including among children aged ≥5 years not targeted during NIDs, indicating that supplemental vaccination with OPV in children aged <5 years may be sufficient to interrupt wild poliovirus circulation in older age groups.

†A confirmed case of polio is defined as AFP and at least one of the following: 1) laboratory-confirmed wild poliovirus infection, 2) residual paralysis at 60 days, 3) death, or 4) lost to follow-up investigation at 60 days. Cases in 1990–1991 were reported by clinicians as confirmed polio before the standard WHO criteria were in use.

Poliomyelitis Eradication — Continued

FIGURE 1. Confirmed cases of poliomyelitis* and supplemental doses of oral poliovirus vaccine (OPV) administered, 1990–1994 and cases of laboratory-confirmed wild poliovirus infection, 1993–1994 — Socialist Republic of Vietnam



*Confirmed cases met the standard World Health Organization (WHO) definition (first applied in Vietnam in 1992) of acute flaccid paralysis and at least one of the following: 1) laboratory-confirmed wild poliovirus infection, 2) residual paralysis at 60 days, 3) death, or 4) lost to follow-up investigation at 60 days. Cases in 1990–1991 were reported by clinicians as confirmed polio before the standard WHO criteria were in use.

Reported cases of polio and the number of cases of wild poliovirus have declined despite improvement in the sensitivity of surveillance.

The progress toward eradication of polio in Vietnam reflects the collaborative efforts of many organizations, including WHO, Rotary International, United Nations Children's Fund (UNICEF), and government agencies including Japan International Cooperation Agency (JICA), Japan National Institutes of Health, the Australia Agency for International Development (AusAID), CDC, and the government of Luxembourg. Continued progress toward the goal will require successful implementation of at least five strategies: 1) improving the reporting of AFP patients to achieve a rate of ≥1.0 per 100,000 children aged <15 years in every province (*2*); 2) increasing to 80% in every province the percentage of AFP patients for whom two stool specimens are obtained within 0–14 days of onset of paralysis; 3) intensifying surveillance and supplemental vaccination in areas with documented or suspected circulation of wild poliovirus (i.e., the Mekong Delta region); 4) using a more specific surveillance case definition based on virologic confirmation of AFP cases; and 5) preventing reimportation of wild poliovirus into Vietnam from neighboring polio-endemic countries (the first NIDs in Cambodia were conducted during February–March 1995). The effectiveness of these strategies to rapidly reduce the circulation of wild poliovirus is indicated by the suc-

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cessful eradication of wild poliovirus in the Americas (*3*), the experience in China (*4*), and the current progress in Vietnam.

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Monthly Immunization Table

To track progress toward achieving the goals of the Childhood Immunization Initiative (CII), CDC publishes monthly a tabular summary of the number of cases of all diseases preventable by routine childhood vaccination reported during the previous month and year-to-date (provisional data). In addition, the table compares provisional data with final data for the previous year and highlights the number of reported cases among children aged <5 years, who are the primary focus of CII. Data in the table are derived from CDC's National Notifiable Diseases Surveillance System.

Number of reported cases of diseases preventable by routine childhood vaccination — United States, April 1995 and 1994–1995*

Disease	No. cases, April 1995	Total cases January–April		No. cases among children aged <5 years† January–April	
		1994	1995	1994	1995
Congenital rubella syndrome	1	**2**	**3**	2	3
Diphtheria	0	**1**	**1**§	1	0
Haemophilus influenzae¶	125	**380**	**453**	104	105
Hepatitis B**	973	**3842**	**2905**	48	25
Measles	22	**347**	**150**	61	54
Mumps	78	**503**	**257**	56	53
Pertussis	274	**1185**	**1001**	600	509
Poliomyelitis, paralytic††	0	**0**	**0**	0	0
Rubella	10	**140**	**25**	10	4
Tetanus	3	**12**	**8**	0	0

* Data for 1994 and 1995 are provisional.
† For 1994 and 1995, age data were available for ≥90% or more cases, except for 1995 age data for measles, which were available for 88% of cases.
§ This person had onset during October 1994.
¶ Invasive disease; *H. influenzae* serotype is not routinely reported to the National Notifiable Diseases Surveillance System. Of 105 cases among children aged <5 years, serotype was reported for 24 cases, and of those, 15 were type b, the only serotype of *H. influenzae* preventable by vaccination.
** Because most hepatitis B virus infections among infants and children aged <5 years are asymptomatic (although likely to become chronic), acute disease surveillance does not reflect the incidence of this problem in this age group or the effectiveness of hepatitis B vaccination in infants.
†† One case with onset in July 1994 has been confirmed; this case was vaccine-associated. An additional six suspected cases are under investigation. In 1993, three of 10 suspected cases were confirmed; two of the confirmed cases of 1993 were vaccine-associated, and one was imported. The imported case occurred in a 2-year-old Nigerian child brought to the United States for care of his paralytic illness; no poliovirus was isolated from the child.

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