

HIV / AIDS

SURVEILLANCE

U.S. AIDS cases reported through June 1991

Issued July 1991

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Acquired immunodeficiency syndrome (AIDS) is a specific group of diseases or conditions which are indicative of severe immunosuppression related to infection with the human immunodeficiency virus (HIV).



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Figure 1. AIDS annual rates per 100,000 population, for cases reported July 1990 through June 1991, United States

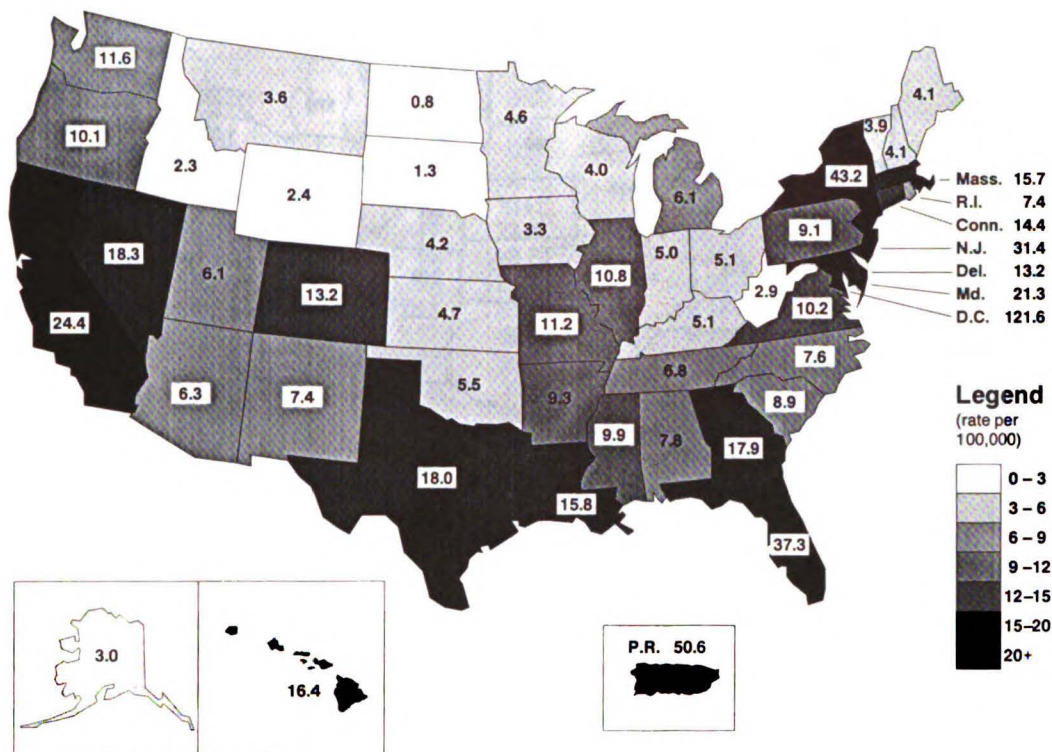


Figure 2. Adult/adolescent and pediatric AIDS cases, reported July 1990 through June 1991, United States

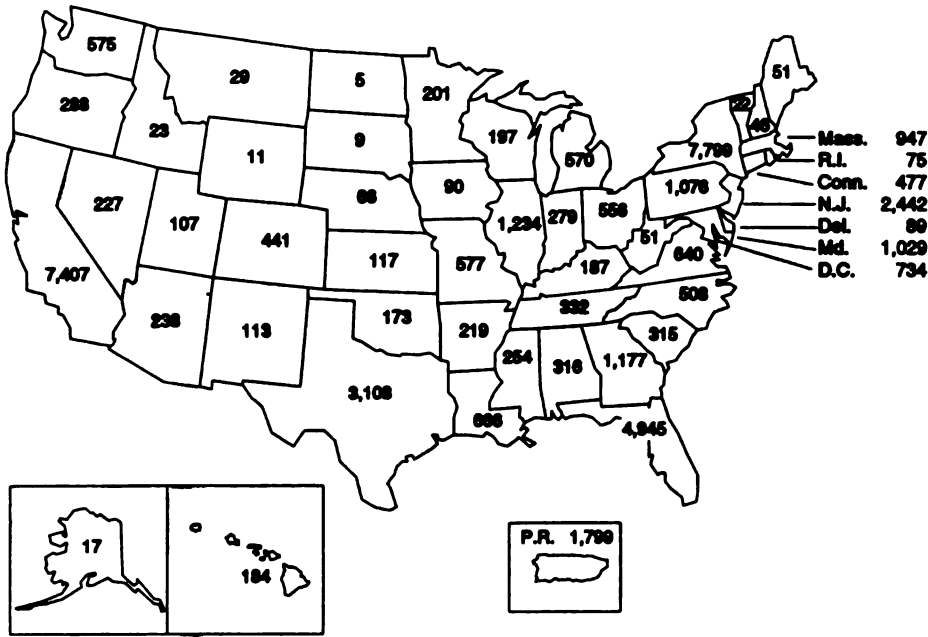


Figure 3. Pediatric AIDS cases, reported July 1990 through June 1991, United States

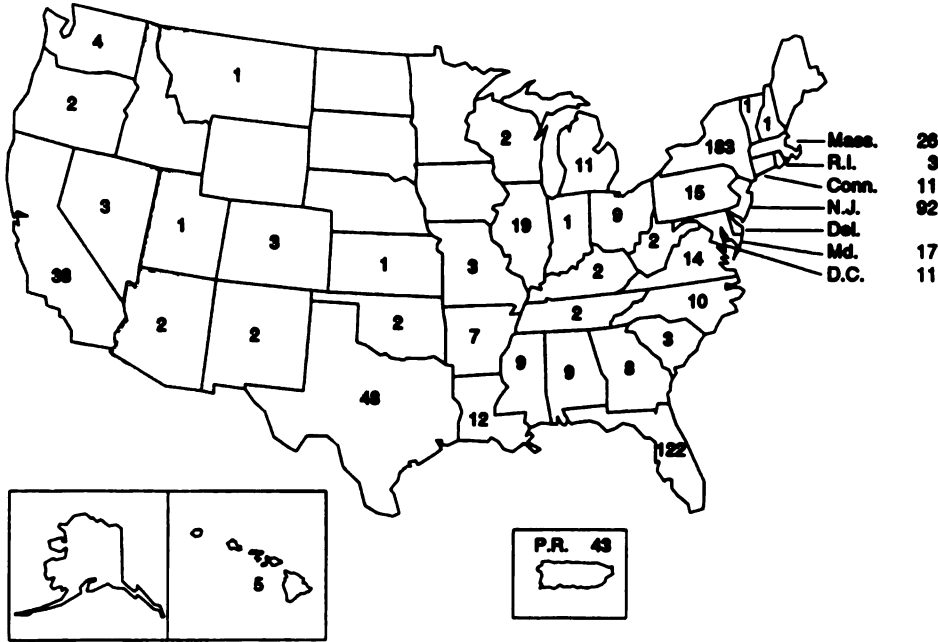


Table 1. AIDS cases and annual rates per 100,000 population, by state, reported July 1989 through June 1990, July 1990 through June 1991; and cumulative totals, by state and age group, through June 1991¹

State of residence	July 1989- June 1990		July 1990- June 1991		Cumulative totals		
	No.	Rate	No.	Rate	Adults/ adolescents	Children < 13 years old	Total
Alabama	204	5.0	316	7.8	1,043	26	1,069
Alaska	30	5.5	17	3.0	108	2	110
Arizona	375	10.2	238	6.3	1,399	10	1,409
Arkansas	116	4.9	219	9.3	537	13	550
California	6,843	23.0	7,407	24.4	34,056	226	34,282
Colorado	376	11.4	441	13.2	1,815	11	1,826
Connecticut	433	13.2	477	14.4	2,083	65	2,148
Delaware	83	12.5	89	13.2	353	4	357
District of Columbia	533	87.8	734	121.6	2,984	42	3,026
Florida	3,995	30.9	4,945	37.3	16,467	447	16,914
Georgia	1,213	18.7	1,177	17.9	4,799	50	4,849
Hawaii	192	17.3	184	16.4	723	7	730
Idaho	23	2.3	23	2.3	86	2	88
Illinois	1,239	10.8	1,234	10.8	5,260	78	5,338
Indiana	328	5.9	279	5.0	1,170	11	1,181
Iowa	49	1.8	90	3.3	274	3	277
Kansas	132	5.3	117	4.7	493	4	497
Kentucky	147	4.0	187	5.1	589	7	596
Louisiana	665	15.8	666	15.8	2,586	46	2,632
Maine	68	5.5	51	4.1	238	2	240
Maryland	874	18.3	1,029	21.3	3,560	78	3,638
Massachusetts	814	13.5	947	15.7	3,791	86	3,877
Michigan	529	5.7	570	6.1	2,230	37	2,267
Minnesota	173	4.0	201	4.6	903	8	911
Mississippi	213	8.3	254	9.9	751	17	768
Missouri	561	11.0	577	11.2	2,109	13	2,122
Montana	16	2.0	29	3.6	74	1	75
Nebraska	42	2.7	66	4.2	216	2	218
Nevada	174	14.5	227	18.3	744	8	752
New Hampshire	52	4.7	46	4.1	210	5	215
New Jersey	2,240	29.0	2,442	31.4	11,246	329	11,575
New Mexico	104	6.9	113	7.4	399	4	403
New York	7,718	42.9	7,799	43.2	37,651	885	38,536
North Carolina	519	7.8	508	7.6	1,888	37	1,925
North Dakota	6	0.9	5	0.8	24	—	24
Ohio	578	5.3	556	5.1	2,502	41	2,543
Oklahoma	213	6.8	173	5.5	790	12	802
Oregon	276	9.7	288	10.1	1,128	7	1,135
Pennsylvania	1,141	9.6	1,076	9.1	4,900	80	4,980
Rhode Island	93	9.3	75	7.4	402	9	411
South Carolina	359	10.3	315	8.9	1,180	22	1,202
South Dakota	1	0.1	9	1.3	26	—	26
Tennessee	307	6.3	332	6.8	1,252	15	1,267
Texas	2,822	16.6	3,108	18.0	12,644	129	12,773
Utah	88	5.1	107	6.1	389	9	398
Vermont	19	3.4	22	3.9	83	2	85
Virginia	600	9.7	640	10.2	2,345	46	2,391
Washington	614	12.6	575	11.6	2,496	15	2,511
West Virginia	63	3.5	51	2.9	196	4	200
Wisconsin	176	3.6	197	4.0	723	5	728
Wyoming	6	1.3	11	2.4	44	—	44
U.S. total	38,435	15.5	41,239	16.4	173,959	2,962	176,921
Guam	1	0.7	3	2.1	9	—	9
Pacific Islands, U.S.	1	0.5	—	—	2	—	2
Puerto Rico	1,491	42.3	1,799	50.6	5,645	174	5,819
Virgin Islands, U.S.	9	7.7	11	9.3	79	4	83
Total	39,937	15.8	43,052	16.9	179,694	3,140	182,834

¹During June 1991, 3,647 cases and 2,523 deaths among adults/adolescents and 51 cases and 35 deaths among children were reported to the CDC.

Table 2. AIDS cases and annual rates per 100,000 population, by metropolitan area with 500,000 or more population, reported July 1989 through June 1990, July 1990 through June 1991; and cumulative totals, by area and age group, through June 1991

Metropolitan area of residence	July 1989- June 1990		July 1990- June 1991		Cumulative totals		
	No.	Rate	No.	Rate	Adults/ adolescents	Children <13 years old	Total
Akron, Ohio	22	3.3	28	4.3	117	—	117
Albany-Schenectady, N.Y.	91	10.4	84	9.6	365	6	371
Allentown, Pa.	54	7.9	38	5.5	173	5	178
Anaheim, Calif.	331	13.7	334	13.6	1,476	10	1,486
Atlanta, Ga.	931	32.9	922	31.8	3,695	30	3,725
Austin, Tex.	222	28.4	200	24.8	797	8	805
Bakersfield, Calif.	43	7.9	39	7.0	136	1	137
Baltimore, Md.	580	24.3	661	27.5	2,172	57	2,229
Baton Rouge, La.	64	12.1	45	8.5	216	4	220
Bergen-Passaic, N.J.	281	22.0	286	22.4	1,451	29	1,480
Birmingham, Ala.	61	6.7	97	10.7	330	7	337
Boston, Mass.	608	16.1	634	16.7	2,894	60	2,954
Bridgeport, Conn.	114	13.8	125	15.1	605	21	626
Buffalo, N.Y.	99	10.2	83	8.6	305	3	308
Charleston, S.C.	79	15.6	56	10.9	256	—	256
Charlotte, N.C.	95	8.2	61	5.2	342	7	349
Chicago, Ill.	1,029	17.0	998	16.4	4,397	60	4,457
Cincinnati, Ohio	112	7.7	103	7.1	401	6	407
Cleveland, Ohio	116	6.3	138	7.6	633	11	644
Columbus, Ohio	125	9.1	118	8.5	548	4	552
Dallas, Tex.	627	24.6	780	29.9	3,110	18	3,128
Dayton, Ohio	55	5.8	56	5.9	246	6	252
Denver, Colo.	304	18.7	372	22.6	1,493	7	1,500
Detroit, Mich.	378	8.6	381	8.7	1,561	25	1,586
El Paso, Tex.	40	6.8	49	8.1	134	1	135
Fort Lauderdale, Fla.	864	68.8	854	66.8	2,973	57	3,030
Fort Worth, Tex.	167	12.5	200	14.6	725	10	735
Fresno, Calif.	57	8.5	62	9.1	226	2	228
Gary, Ind.	36	6.0	29	4.8	110	1	111
Grand Rapids, Mich.	19	2.8	39	5.6	115	1	116
Greensboro, N.C.	83	8.8	86	9.0	300	6	306
Greenville, S.C.	40	6.2	41	6.3	147	—	147
Harrisburg, Pa.	41	7.0	33	5.6	178	4	182
Hartford, Conn.	155	13.8	159	14.1	631	15	646
Honolulu, Hawaii	123	14.7	133	15.8	543	4	547
Houston, Tex.	1,143	34.6	1,196	35.6	5,264	53	5,317
Indianapolis, Ind.	165	13.2	129	10.3	554	3	557
Jacksonville, Fla.	241	26.6	277	29.9	858	28	886
Jersey City, N.J.	283	51.2	420	76.0	1,910	55	1,965
Kansas City, Mo.	321	20.5	237	15.0	1,097	4	1,101
Knoxville, Tenn.	28	4.6	31	5.1	128	1	129
Lake County, Ill.	19	3.7	31	5.9	96	3	99
Las Vegas, Nev.	132	17.8	174	22.6	551	8	559
Little Rock, Ark.	52	10.1	80	15.5	216	7	223
Los Angeles, Calif.	2,154	24.3	2,580	28.7	11,958	96	12,054
Louisville, Ky.	64	6.7	67	7.0	241	4	245
Memphis, Tenn.	109	11.1	93	9.4	397	6	403
Miami, Fla.	1,081	55.8	1,602	81.4	5,123	180	5,303
Middlesex, N.J.	174	17.1	197	19.1	909	25	934
Milwaukee, Wis.	96	6.7	93	6.5	400	2	402
Minneapolis-Saint Paul, Minn.	158	6.4	174	7.0	804	6	810
Monmouth-Ocean City, N.J.	171	17.3	207	20.7	744	27	771
Nashville, Tenn.	86	8.7	122	12.2	417	6	423
Nassau-Suffolk, N.Y.	411	15.8	363	13.9	1,785	44	1,829
New Bedford, Mass.	50	9.9	75	14.7	199	5	204
New Haven, Conn.	130	16.2	164	20.3	680	28	708
New Orleans, La.	388	31.3	400	32.3	1,631	26	1,657
New York, N.Y.	6,502	76.1	6,705	78.2	32,691	799	33,490

Table 2. AIDS cases and annual rates per 100,000 population, by metropolitan area with 500,000 or more population, reported July 1989 through June 1990, July 1990 through June 1991; and cumulative totals, by area and age group, through June 1991 — Continued

Metropolitan area of residence	July 1989- June 1990		July 1990- June 1991		Cumulative totals		
	No.	Rate	No.	Rate	Adults/ adolescents	Children <13 years old	Total
Newark, N.J.	961	52.7	939	51.6	4,659	152	4,811
Norfolk, Va.	153	11.0	144	10.1	521	12	533
Oakland, Calif.	547	26.3	485	22.9	2,232	15	2,247
Oklahoma City, Okla.	114	11.9	84	8.7	403	—	403
Omaha, Neb.	34	5.5	42	6.8	151	1	152
Orlando, Fla.	182	17.0	384	34.6	934	14	948
Oxnard-Ventura, Calif.	39	5.8	37	5.4	166	—	166
Philadelphia, Pa.	823	16.9	834	17.1	3,719	57	3,776
Phoenix, Ariz.	283	13.3	171	7.8	1,026	6	1,032
Pittsburgh, Pa.	141	6.9	103	5.0	592	2	594
Portland, Oreg.	212	17.1	231	18.4	892	4	896
Providence, R.I.	88	9.6	73	7.9	378	8	386
Raleigh-Durham, N.C.	123	16.7	117	15.5	422	10	432
Richmond, Va.	126	14.6	99	11.3	432	9	441
Riverside-San Bernardino, Calif.	255	9.9	318	11.8	1,173	17	1,190
Rochester, N.Y.	88	8.8	74	7.4	388	4	392
Sacramento, Calif.	120	8.1	181	11.9	724	9	733
Saint Louis, Mo.	212	8.7	302	12.3	959	8	967
Salt Lake City, Utah	76	7.1	95	8.7	343	6	349
San Antonio, Tex.	198	15.2	196	14.8	880	12	892
San Diego, Calif.	721	28.9	554	21.6	2,610	19	2,629
San Francisco, Calif.	1,945	121.3	2,115	130.9	10,444	19	10,463
San Jose, Calif.	145	9.7	190	12.5	797	8	805
San Juan, P.R.	937	55.5	1,152	67.5	3,536	114	3,650
Scranton, Pa.	34	4.6	44	6.0	144	3	147
Seattle, Wash.	464	23.5	414	20.6	1,884	10	1,894
Springfield, Mass.	67	11.1	111	18.3	262	13	275
Syracuse, N.Y.	53	8.0	41	6.2	176	6	182
Tacoma, Wash.	45	7.7	46	7.7	169	5	174
Tampa-Saint Petersburg, Fla.	382	18.5	480	22.7	1,792	28	1,820
Toledo, Ohio	40	6.5	36	5.9	132	3	135
Tucson, Ariz.	58	8.7	51	7.5	265	3	268
Tulsa, Okla.	54	7.6	53	7.4	228	4	232
Washington, D.C.	975	24.8	1,297	32.5	5,099	73	5,172
West Palm Beach, Fla.	349	40.4	400	44.8	1,562	62	1,624
Wilmington, Del.	74	12.8	67	11.5	288	3	291
Worcester, Mass.	36	5.1	71	9.9	207	4	211
Metropolitan area subtotal¹	33,158	22.5	35,772	24.0	153,043	2,625	155,668
All other areas	6,779	6.4	7,280	6.9	26,651	515	27,166
Total	39,937	15.8	43,052	16.9	179,694	3,140	182,834

¹ Includes data from metropolitan areas which have populations of 500,000 or more.

Table 3. AIDS cases by age group, exposure category, and sex, reported July 1989 through June 1990, July 1990 through June 1991; and cumulative totals, by age group and exposure category, through June 1991, United States

Adult/adolescent exposure category	Males		Females		Totals		Cumulative total ¹
	July 1989-June 1990	July 1990-June 1991	July 1989-June 1990	July 1990-June 1991	July 1989-June 1990	July 1990-June 1991	
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
Male homosexual/bisexual contact	22,359 (64)	22,972 (62)	—	—	22,359 (57)	22,972 (54)	105,741 (59)
Intravenous (IV) drug use (female and heterosexual male)	7,200 (21)	7,738 (21)	2,162 (50)	2,503 (48)	9,362 (24)	10,241 (24)	39,904 (22)
Male homosexual/bisexual contact and IV drug use	2,358 (7)	2,300 (6)	—	—	2,358 (6)	2,300 (5)	11,823 (7)
Hemophilia/coagulation disorder	288 (1)	296 (1)	7 (0)	9 (0)	295 (1)	305 (1)	1,535 (1)
Heterosexual contact:	936 (3)	1,151 (3)	1,487 (35)	1,806 (35)	2,423 (6)	2,957 (7)	10,011 (6)
<i>Sex with IV drug user</i>	419	503	939	1,107	1,358	1,610	5,305
<i>Sex with bisexual male</i>	—	—	127	140	127	140	567
<i>Sex with person with hemophilia</i>	1	2	26	26	27	28	93
<i>Born in Pattern-I² country</i>	298	305	133	126	431	431	2,258
<i>Sex with person born in Pattern-II country</i>	24	25	19	22	43	47	157
<i>Sex with transfusion recipient with HIV infection</i>	16	33	33	49	49	82	202
<i>Sex with HIV-infected person, risk not specified</i>	178	283	210	336	388	619	1,429
Receipt of blood transfusion, blood components, or tissue ³	501 (1)	463 (1)	330 (8)	298 (6)	831 (2)	761 (2)	4,025 (2)
Other/undetermined ⁴	1,308 (4)	2,170 (6)	300 (7)	586 (11)	1,608 (4)	2,756 (7)	6,655 (4)
Adult/adolescent subtotal	34,950 (100)	37,090 (100)	4,286 (100)	5,202 (100)	39,236 (100)	42,292 (100)	179,694 (100)
Pediatric (<13 years old) exposure category							
Hemophilia/coagulation disorder	26 (7)	27 (7)	—	1 (0)	26 (4)	28 (4)	149 (5)
Mother with/at risk for HIV infection:	301 (84)	344 (85)	312 (91)	324 (92)	613 (87)	668 (88)	2,645 (84)
<i>IV drug use</i>	141	157	139	142	280	299	1,298
<i>Sex with IV drug user</i>	77	68	71	66	148	133	549
<i>Sex with bisexual male</i>	7	3	8	6	15	9	56
<i>Sex with person with hemophilia</i>	—	3	1	—	1	3	11
<i>Born in Pattern-II country</i>	24	22	22	13	46	35	228
<i>Sex with person born in Pattern-II country</i>	2	—	2	2	4	2	13
<i>Sex with transfusion recipient with HIV infection</i>	—	1	3	—	3	1	12
<i>Sex with HIV-infected person, risk not specified</i>	13	20	19	19	32	39	123
<i>Receipt of blood transfusion, blood components, or tissue</i>	7	6	3	8	10	14	54
<i>Has HIV infection, risk not specified</i>	30	64	44	68	74	132	301
Receipt of blood transfusion, blood components, or tissue	24 (7)	23 (6)	15 (4)	16 (5)	39 (6)	39 (5)	271 (9)
Undetermined	9 (3)	12 (3)	14 (4)	13 (4)	23 (3)	25 (3)	75 (2)
Pediatric subtotal	360 (100)	406 (100)	341 (100)	354 (100)	701 (100)	760 (100)	3,140 (100)
Total	35,310	37,496	4,627	5,556	39,937	43,052	182,834

¹ Includes 3 patients known to be infected with human immunodeficiency virus type 2 (HIV-2). See MMWR 1989;38:572-580

² See technical notes.

³ Sixteen adults/adolescents and 2 children developed AIDS after receiving blood screened negative for HIV antibody. One additional adult developed AIDS after receiving tissue from an HIV-infected donor who screened negative for HIV antibody.

⁴ "Other" refers to 4 persons who developed AIDS after exposure to HIV-infected blood within the health care setting, as documented by evidence of seroconversion or other laboratory studies. "Undetermined" refers to patients whose mode of exposure to HIV is unknown. This includes patients under investigation; patients who died, were lost to follow-up, or refused interview; and patients whose mode of exposure to HIV remains undetermined after investigation. See Figure 4.

Table 4. AIDS cases by age group, exposure category, and race/ethnicity, reported through June 1991, United States

Adult/adolescent exposure category	White, not Hispanic No. (%)	Black, not Hispanic No. (%)	Hispanic No. (%)	Asian/Pacific Islander No. (%)	American Indian/ Alaskan Native No. (%)	Total⁴ No. (%)
Male homosexual/bisexual contact	74,866 (76)	18,088 (36)	11,566 (40)	836 (75)	144 (54)	105,741 (59)
Intravenous (IV) drug use (female and heterosexual male)	8,141 (8)	19,978 (39)	11,601 (40)	47 (4)	45 (17)	39,904 (22)
Male homosexual/bisexual contact and IV drug use	6,830 (7)	3,220 (6)	1,700 (6)	24 (2)	37 (14)	11,823 (7)
Hemophilia/coagulation disorder	1,270 (1)	111 (0)	124 (0)	17 (2)	8 (3)	1,535 (1)
Heterosexual contact:	2,115 (2)	5,972 (12)	1,840 (6)	42 (4)	14 (5)	10,011 (6)
<i>Sex with IV drug user</i>	1,127	2,743	1,393	17	10	5,305
<i>Sex with bisexual male</i>	302	181	71	10	1	567
<i>Sex with person with hemophilia</i>	80	7	5	1	—	93
<i>Born in Pattern-II¹ country</i>	7	2,224	18	3	—	2,258
<i>Sex with person born in Pattern-II country</i>	47	98	10	1	—	157
<i>Sex with transfusion recipient with HIV infection</i>	123	42	33	2	—	202
<i>Sex with HIV-infected person, risk not specified</i>	429	677	310	8	3	1,429
Receipt of blood transfusion, blood components, or tissue ²	2,803 (3)	703 (1)	426 (1)	74 (7)	6 (2)	4,025 (2)
Other/undetermined ³	2,377 (2)	2,603 (5)	1,541 (5)	74 (7)	12 (5)	6,655 (4)
Adult/adolescent subtotal	98,402(100)	50,675 (100)	28,798(100)	1,114 (100)	266(100)	179,694(100)
Pediatric (<13 years old) exposure category						
Hemophilia/coagulation disorder	102 (15)	20 (1)	24 (3)	3 (19)	—	149 (5)
Mother with/at risk for HIV infection:	410 (61)	1,530 (93)	683 (87)	8 (50)	7(100)	2,645 (84)
<i>IV drug use</i>	194	750	347	2	2	1,298
<i>Sex with IV drug user</i>	84	242	219	2	1	549
<i>Sex with bisexual male</i>	21	22	12	1	—	56
<i>Sex with person with hemophilia</i>	7	3	1	—	—	11
<i>Born in Pattern-II country</i>	1	225	2	—	—	228
<i>Sex with person born in Pattern-II country</i>	—	12	—	—	—	13
<i>Sex with transfusion recipient with HIV infection</i>	5	3	3	—	—	12
<i>Sex with HIV-infected person, risk not specified</i>	26	60	33	1	2	123
<i>Receipt of blood transfusion, blood components, or tissue</i>	20	21	13	—	—	54
<i>Has HIV infection, risk not specified</i>	52	192	53	2	2	301
Receipt of blood transfusion, blood components, or tissue	146 (22)	59 (4)	61 (8)	5 (31)	—	271 (9)
Undetermined	10 (1)	45 (3)	20 (3)	—	—	75 (2)
Pediatric subtotal	668(100)	1,654 (100)	788(100)	16 (100)	7(100)	3,140(100)
Total	99,070	52,329	29,586	1,130	273	182,834

¹ See technical notes.

² Sixteen adults/adolescents and 2 children developed AIDS after receiving blood screened negative for HIV antibody. One additional adult developed AIDS after receiving tissue from an HIV-infected donor who screened negative for HIV antibody.

³ "Other" refers to 4 persons who developed AIDS after exposure to HIV-infected blood within the health care setting, as documented by evidence of seroconversion or other laboratory studies. "Undetermined" refers to patients whose mode of exposure to HIV is unknown. This includes patients under investigation; patients who died, were lost to follow-up, or refused interview; and patients whose mode of exposure to HIV remains undetermined after investigation. See Figure 4.

⁴ Includes 446 persons whose race/ethnicity is unknown.

Table 5. Adult/adolescent AIDS cases by sex, exposure category, and race/ethnicity, reported through June 1991, United States

Male exposure category	White, not Hispanic	Black, not Hispanic	Hispanic	Asian/Pacific Islander	American Indian/ Alaskan Native	Total⁴
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Male homosexual/bisexual contact	74,866 (80)	18,088 (44)	11,566 (46)	836 (82)	144 (62)	105,741 (65)
Intravenous (IV) drug use (heterosexual)	6,170 (7)	14,637 (36)	9,700 (39)	32 (3)	27 (12)	30,641 (19)
Male homosexual/bisexual contact and IV drug use	6,830 (7)	3,220 (8)	1,700 (7)	24 (2)	37 (16)	11,823 (7)
Hemophilia/coagulation disorder	1,242 (1)	105 (0)	120 (0)	17 (2)	8 (3)	1,497 (1)
Heterosexual contact:	690 (1)	2,838 (7)	428 (2)	9 (1)	5 (2)	3,976 (2)
<i>Sex with IV drug user</i>	410	863	259	5	5	1,542
<i>Sex with person with hemophilia</i>	6	—	1	—	—	7
<i>Born in Pattern-II¹ country</i>	5	1,610	13	2	—	1,635
<i>Sex with person born in Pattern-II country</i>	39	44	8	1	—	92
<i>Sex with transfusion recipient with HIV infection</i>	37	19	11	—	—	68
<i>Sex with HIV-infected person, risk not specified</i>	193	302	136	1	—	632
Receipt of blood transfusion, blood components, or tissue ²	1,806 (2)	379 (1)	229 (1)	46 (5)	2 (1)	2,471 (2)
Other/undetermined ³	2,034 (2)	1,912 (5)	1,289 (5)	57 (6)	9 (4)	5,344 (3)
Male subtotal	93,638 (100)	41,179 (100)	25,032 (100)	1,021 (100)	232 (100)	161,493 (100)
Female						
exposure category						
IV drug use	1,971 (41)	5,341 (56)	1,901 (50)	15 (16)	18 (53)	9,263 (51)
Hemophilia/coagulation disorder	28 (1)	6 (0)	4 (0)	—	—	38 (0)
Heterosexual contact:	1,425 (30)	3,134 (33)	1,412 (37)	33 (35)	9 (26)	6,035 (33)
<i>Sex with IV drug user</i>	717	1,880	1,134	12	5	3,763
<i>Sex with bisexual male</i>	302	181	71	10	1	567
<i>Sex with person with hemophilia</i>	74	7	4	1	—	86
<i>Born in Pattern-II country</i>	2	614	5	1	—	623
<i>Sex with person born in Pattern-II country</i>	8	54	2	—	—	65
<i>Sex with transfusion recipient with HIV infection</i>	86	23	22	2	—	134
<i>Sex with HIV-infected person, risk not specified</i>	236	375	174	7	3	797
Receipt of blood transfusion, blood components, or tissue	997 (21)	324 (3)	197 (5)	28 (30)	4 (12)	1,554 (9)
Other/undetermined	343 (7)	691 (7)	252 (7)	17 (18)	3 (9)	1,311 (7)
Female subtotal	4,764 (100)	9,496 (100)	3,766 (100)	93 (100)	34 (100)	18,201 (100)
Total	98,402	50,675	28,798	1,114	266	179,694

¹ See technical notes.

² Sixteen adults/adolescents and 2 children developed AIDS after receiving blood screened negative for HIV antibody. One additional adult developed AIDS after receiving tissue from an HIV-infected donor who screened negative for HIV antibody.

³ "Other" refers to 4 persons who developed AIDS after exposure to HIV-infected blood within the health care setting, as documented by evidence of seroconversion or other laboratory studies. "Undetermined" refers to patients whose mode of exposure to HIV is unknown. This includes patients under investigation; patients who died, were lost to follow-up, or refused interview; and patients whose mode of exposure to HIV remains undetermined after investigation. See Figure 4.

⁴ Includes 391 males and 48 females whose race/ethnicity is unknown.

Table 6. AIDS cases in adolescents and adults under age 25, by exposure category, reported July 1989 through June 1990, July 1990 through June 1991, and cumulative totals through June 1991, United States

Exposure category	13-19 years old			20-24 years old		
	July 1989- June 1990	July 1990- June 1991	Cumulative total	July 1989- June 1990	July 1990- June 1991	Cumulative total
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Male homosexual/bisexual contact	34 (24)	26 (16)	179 (26)	806 (52)	729 (49)	4,124 (56)
Intravenous (IV) drug use (female and heterosexual male)	19 (13)	17 (11)	83 (12)	304 (19)	284 (19)	1,252 (17)
Male homosexual/bisexual contact and IV drug use	4 (3)	7 (4)	31 (4)	141 (9)	105 (7)	673 (9)
Hemophilia/coagulation disorder	43 (30)	43 (27)	210 (30)	33 (2)	38 (3)	190 (3)
Heterosexual contact:	28 (20)	29 (18)	96 (14)	188 (12)	203 (14)	745 (10)
<i>Sex with IV drug user</i>	17	24	64	110	124	423
<i>Sex with bisexual male</i>	1	—	3	8	8	53
<i>Sex with person with hemophilia</i>	1	2	3	6	2	16
<i>Born in Pattern-II¹ country</i>	2	2	15	27	12	118
<i>Sex with person born in Pattern-II country</i>	—	—	—	3	5	10
<i>Sex with transfusion recipient with HIV infection</i>	1	—	1	5	2	8
<i>Sex with HIV-infected person, risk not specified</i>	6	1	10	29	50	117
Receipt of blood transfusion, blood components, or tissue	5 (4)	9 (6)	50 (7)	14 (1)	21 (1)	108 (1)
Undetermined ²	9 (6)	27 (17)	50 (7)	77 (5)	122 (8)	325 (4)
Total	142 (100)	158 (100)	699 (100)	1,563 (100)	1,502 (100)	7,417 (100)

¹ See technical notes.

² "Undetermined" refers to patients whose mode of exposure to HIV is unknown. This includes patients under investigation; patients who died, were lost to follow-up, or refused interview; and patients whose mode of exposure to HIV remains undetermined after investigation. See Figure 4.

Table 7. AIDS cases by sex, age at diagnosis, and race/ethnicity, reported through June 1991, United States

Males	White, not Hispanic	Black, not Hispanic	Hispanic	Asian/Pacific Islander	American Indian/ Alaskan Native	Total¹
Age at diagnosis (years)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Under 5	225 (0)	735 (2)	342 (1)	5 (0)	3 (1)	1,313 (1)
5-12	175 (0)	113 (0)	81 (0)	5 (0)	—	376 (0)
13-19	243 (0)	158 (0)	103 (0)	7 (1)	5 (2)	516 (0)
20-24	3,121 (3)	1,882 (4)	1,140 (4)	34 (3)	14 (6)	6,204 (4)
25-29	14,195 (15)	6,552 (16)	4,280 (17)	142 (14)	48 (20)	25,266 (15)
30-34	21,892 (23)	10,341 (25)	6,420 (25)	209 (20)	60 (26)	39,006 (24)
35-39	20,713 (22)	9,727 (23)	5,620 (22)	231 (22)	48 (20)	36,432 (22)
40-44	14,295 (15)	5,787 (14)	3,512 (14)	171 (17)	27 (11)	23,851 (15)
45-49	8,492 (9)	3,092 (7)	1,814 (7)	99 (10)	15 (6)	13,553 (8)
50-54	4,613 (5)	1,708 (4)	1,028 (4)	55 (5)	5 (2)	7,433 (5)
55-59	2,913 (3)	1,038 (2)	626 (2)	36 (3)	5 (2)	4,634 (3)
60-64	1,684 (2)	551 (1)	290 (1)	11 (1)	4 (2)	2,547 (2)
65 or older	1,477 (2)	343 (1)	199 (1)	26 (3)	1 (0)	2,051 (1)
Male subtotal	94,038 (100)	42,027 (100)	25,455 (100)	1,031 (100)	235 (100)	163,182 (100)
Females						
Age at diagnosis (years)						
Under 5	215 (4)	709 (7)	306 (7)	1 (1)	4 (11)	1,236 (6)
5-12	53 (1)	97 (1)	59 (1)	5 (5)	—	215 (1)
13-19	51 (1)	103 (1)	27 (1)	1 (1)	1 (3)	183 (1)
20-24	306 (6)	594 (6)	298 (7)	5 (5)	5 (13)	1,213 (6)
25-29	889 (18)	1,805 (18)	867 (21)	8 (8)	4 (11)	3,583 (18)
30-34	1,094 (22)	2,705 (26)	984 (24)	18 (18)	11 (29)	4,824 (25)
35-39	769 (15)	2,153 (21)	744 (18)	14 (14)	5 (13)	3,694 (19)
40-44	439 (9)	1,013 (10)	399 (10)	20 (20)	3 (8)	1,877 (10)
45-49	239 (5)	465 (5)	188 (5)	7 (7)	2 (5)	906 (5)
50-54	178 (4)	275 (3)	113 (3)	5 (5)	1 (3)	572 (3)
55-59	189 (4)	158 (2)	60 (1)	4 (4)	—	413 (2)
60-64	168 (3)	111 (1)	38 (1)	7 (7)	1 (3)	325 (2)
65 or older	442 (9)	114 (1)	48 (1)	4 (4)	1 (3)	611 (3)
Female subtotal	5,032 (100)	10,302 (100)	4,131 (100)	99 (100)	38 (100)	19,652 (100)
Total	99,070	52,329	29,586	1,130	273	182,834

¹ Includes 446 persons whose race/ethnicity is unknown.

Table 8. AIDS cases, case-fatality rates, and deaths by half-year and age group, through June 1991, United States

Half-year	Adults/adolescents			Children <13 years old		
	Cases diagnosed during interval	Case-fatality rate	Deaths occurring during interval	Cases diagnosed during interval	Case-fatality rate	Deaths occurring during interval
Before 1981	79	83.5	30	6	66.7	1
1981 Jan.-June	92	93.5	38	8	62.5	2
July-Dec.	203	91.1	86	6	100.0	6
1982 Jan.-June	392	90.8	153	14	78.6	9
July-Dec.	688	89.0	282	15	80.0	5
1983 Jan.-June	1,276	92.6	519	34	97.1	13
July-Dec.	1,639	92.3	922	42	78.6	16
1984 Jan.-June	2,549	90.3	1,381	49	85.7	25
July-Dec.	3,360	91.2	1,937	62	74.2	24
1985 Jan.-June	4,837	90.1	2,780	94	74.5	44
July-Dec.	6,218	88.6	3,787	127	77.2	68
1986 Jan.-June	8,202	87.2	4,980	136	77.2	65
July-Dec.	9,852	84.3	6,357	182	67.0	86
1987 Jan.-June	12,754	83.8	7,384	218	67.0	114
July-Dec.	14,144	78.7	7,736	250	61.6	159
1988 Jan.-June	16,071	73.6	9,028	239	53.6	130
July-Dec.	16,458	69.1	10,249	322	50.9	158
1989 Jan.-June	18,356	60.0	11,744	326	46.3	162
July-Dec.	18,136	53.0	13,330	303	42.9	170
1990 Jan.-June	18,341	41.9	12,651	302	30.8	155
July-Dec.	16,162	29.1	11,952	271	24.0	154
1991 Jan.-June	9,885	16.0	6,820	134	20.9	75
Total¹	179,694	63.6	114,338	3,140	52.4	1,646

¹ Death totals include 192 adults/adolescents and 5 children known to have died, but whose dates of death are unknown.

Table 9. AIDS cases by year of diagnosis and definition category, diagnosed through June 1991, United States

Definition category ¹	Year of diagnosis					Cumulative total
	Before July 1987	July 1987-June 1988	July 1988-June 1989	July 1989-June 1990	July 1990-June 1991	
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
Pre-1987 definition	48,497 (91)	22,860 (74)	25,018 (71)	24,981 (67)	16,618 (63)	137,974 (75)
1987 definition: ²	4,637 (9)	7,844 (26)	10,444 (29)	12,101 (33)	9,834 (37)	44,860 (25)
<i>Specific disease</i>						
<i>presumptively diagnosed</i>	2,493	4,329	5,963	7,200	6,133	26,118
<i>Specific disease</i>						
<i>definitively diagnosed</i>	655	599	687	818	574	3,333
<i>HIV encephalopathy</i>	502	1,042	1,214	1,353	936	5,047
<i>HIV wasting syndrome</i>	987	1,874	2,580	2,730	2,191	10,362
Total	53,134 (100)	30,704 (100)	35,462 (100)	37,082 (100)	26,452 (100)	182,834 (100)

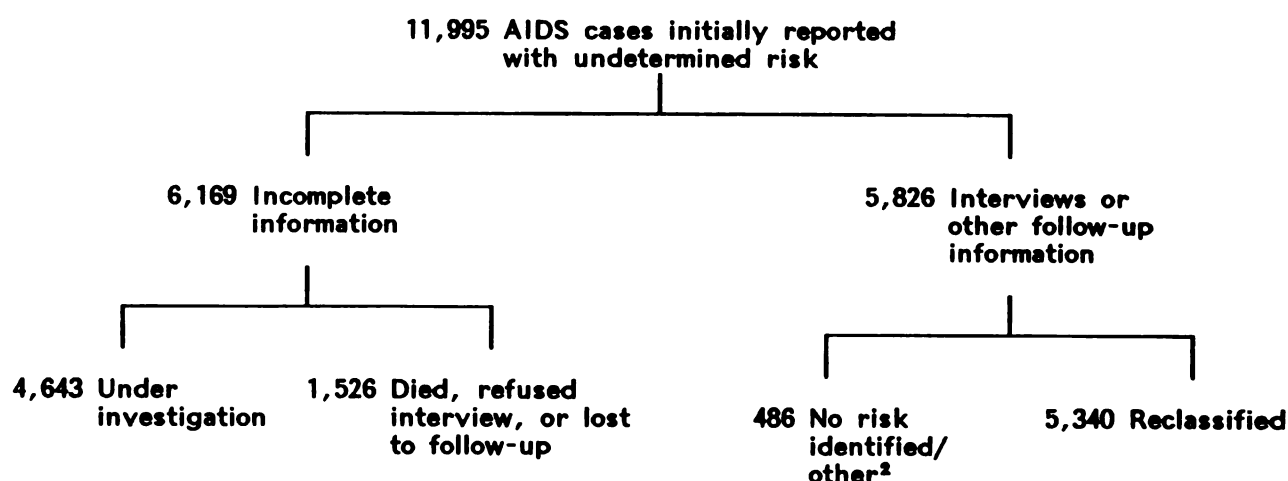
¹ Persons who meet the criteria for more than one definition category are classified in the definition category listed first.

² Persons who meet only the 1987 AIDS case definition and whose date of diagnosis is before September 1987 were diagnosed retrospectively.

Table 10. Adult/adolescent AIDS cases by single and multiple exposure categories, reported through June 1991, United States

Exposure category	AIDS cases	
	No.	(%)
Single mode of exposure		
Male homosexual/bisexual contact	101,597	(57)
Intravenous (IV) drug use (female and heterosexual male)	34,183	(19)
Hemophilia/coagulation disorder	967	(1)
Heterosexual contact	9,570	(5)
Receipt of transfusion of blood, blood component, or tissue	4,025	(2)
Other/undetermined	6,655	(4)
Single mode of exposure subtotal	156,997	(87)
Multiple modes of exposure		
Male homosexual/bisexual contact; IV drug use	10,647	(6)
Male homosexual/bisexual contact; hemophilia	38	(0)
Male homosexual/bisexual contact; heterosexual contact	2,190	(1)
Male homosexual/bisexual contact; receipt of transfusion	1,785	(1)
IV drug use; hemophilia	42	(0)
IV drug use; heterosexual contact	4,656	(3)
IV drug use; receipt of transfusion	766	(0)
Hemophilia; heterosexual contact	9	(0)
Hemophilia; receipt of transfusion	547	(0)
Heterosexual contact; receipt of transfusion	441	(0)
Male homosexual/bisexual contact; IV drug use; hemophilia	8	(0)
Male homosexual/bisexual contact; IV drug use; heterosexual contact	844	(0)
Male homosexual/bisexual contact; IV drug use; receipt of transfusion	279	(0)
Male homosexual/bisexual contact; hemophilia; heterosexual contact	3	(0)
Male homosexual/bisexual contact; hemophilia; receipt of transfusion	19	(0)
Male homosexual/bisexual contact; heterosexual contact; receipt of transfusion	109	(0)
IV drug use; hemophilia; heterosexual contact	5	(0)
IV drug use; hemophilia; receipt of transfusion	19	(0)
IV drug use; heterosexual contact; receipt of transfusion	228	(0)
Hemophilia; heterosexual contact; receipt of transfusion	12	(0)
Male homosexual/bisexual contact; IV drug use; hemophilia; receipt of transfusion	7	(0)
Male homosexual/bisexual contact; IV drug use; heterosexual contact; receipt of transfusion	38	(0)
IV drug use; hemophilia; heterosexual contact; receipt of transfusion	5	(0)
Multiple modes of exposure subtotal	22,697	(13)
Total	179,694	(100)

Figure 4. Results of investigations of adult/adolescent AIDS cases with undetermined risk, reported through June 1991¹



¹ Excludes 75 children under 13 years of age who have an undetermined risk: 65 children are under investigation and 10 have died, refused interview, or were lost to follow-up. An additional 117 children who were initially reported with an undetermined risk have been reclassified after investigation.

² Of the 486 persons classified as "No risk identified/other," 4 are persons who developed AIDS after exposure to HIV-infected blood within the health-care setting, as documented by evidence of seroconversion or other laboratory studies. For the remaining 482, the mode of exposure to HIV remains undetermined after investigation.

Health-care workers. 75 of the 482 patients who had no risk identified after follow-up are health-care workers, 68 of whom responded to a standardized questionnaire. 40 (59%) reported needlesticks and/or mucous membrane exposures to blood and other body fluids of patients. None of the source patients was known to be infected with HIV at the time of exposure and none of the health-care workers was evaluated at the time of the exposure to document seroconversion to HIV antibody. See *MMWR*, "Update: Acquired Immunodeficiency Syndrome and Human Immunodeficiency Virus Infection Among Health-Care Workers," (April 22, 1988)37:229-234,239.

Heterosexual transmission. 421 of the 482 patients who had no risk identified after follow-up responded to a standardized questionnaire; 134 (35%) of 388 persons responding to questions related to sexually transmitted disease gave a history of such disease and 94 (35%) of 268 interviewed men reported sexual contact with a prostitute. Some of these persons may represent unreported or unrecognized heterosexual transmission of HIV. See *MMWR*, "Update: Heterosexual Transmission of AIDS and HIV Infection — U.S.," (June 23, 1989) 38:423-424,429-434.

Technical notes

Surveillance and reporting of AIDS

All 50 states, the District of Columbia, U.S. dependencies and possessions, and independent nations in free association with the U.S.¹ report AIDS cases to CDC using a uniform case definition and case report form. The original definition was modified in 1985 (*MMWR* 1985;34:373-5) and again in 1987 (*MMWR* 1987;36 [suppl. no. 1S]:1S-15S). The revisions incorporated a broader range of AIDS-indicator diseases and conditions and used human immunodeficiency virus (HIV) diagnostic tests to improve the sensitivity and specificity of the definition. For persons with laboratory-confirmed HIV infection, the 1987 revision incorporated HIV encephalopathy, wasting syndrome, and other indicator diseases that are diagnosed presumptively (i.e., without confirmatory laboratory evidence of the opportunistic disease). AIDS cases that meet the criteria of both the pre-1987 and 1987 definitions are classified in the pre-1987 definition category. Compared with patients who meet the pre-1987 case definition, a higher proportion of patients who meet only the 1987 case definition were female, black, or Hispanic, or were intravenous drug users (*MMWR* 1989;38:229-36).

Each issue of this update includes information received and tabulated by CDC through the last day of the previous month. Data are tabulated by date of report to CDC unless otherwise noted. Data for U.S. dependencies and possessions and for associated independent nations are included in the totals.

Age group tabulations are based on the person's age at diagnosis of AIDS: adult/adolescent cases include persons 13 years of age and older; pediatric cases include children under 13 years of age. Age group tabulations in Table 13 (only included in the year-end edition) are based on age at death.

Metropolitan areas are defined as the Metropolitan Statistical Areas (MSA) for all areas except the 6 New England states. For these states, the New England County Metropolitan Areas (NECMA) are used. Metropolitan areas are named for a central city in the MSA or NECMA, may include several cities and counties, and may cross state boundaries.

¹Included among the dependencies, possessions, and independent nations are Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, the Republic of Palau, the Republic of the Marshall Islands, the Commonwealth of the Northern Mariana Islands, and the Federated States of Micronesia. The latter 5 comprise the category "Pacific Islands, U.S." listed in Table 1.

For example, AIDS cases and annual rates presented for the District of Columbia in Table 1 include only persons residing within the geographic boundaries of the District. AIDS cases and annual rates for Washington, D.C., in Table 2 include persons residing within several counties in the metropolitan area. State or metropolitan area data tabulations are based on the person's residence at diagnosis of the first AIDS-indicator disease(s). The cities and counties which comprise each metropolitan area in Table 2 are listed in the Bureau of Census publication, "State and Metropolitan Area Data Book, 1986."

Data in this report are provisional. Reporting delays (time between diagnosis and report to CDC) vary widely by geographic area and have been several years for some cases. The median reporting delay appears to have increased, from 2 months for cases diagnosed before 1987 to 3 months for cases diagnosed from 1987 to 1989.

Completeness of reporting of diagnosed cases to state and local health departments varies by geographic region and patient population; however, mortality studies suggest that 70 to 90 percent of HIV-related deaths in men 25 to 44 years old are identified through national surveillance of AIDS (*MMWR* 1989;38:561-3). In addition, multiple routes of exposure, opportunistic diseases diagnosed after the initial case report was submitted to CDC, and vital status may not be determined or reported for all cases. Caution should be used in interpreting case-fatality rates because reporting of deaths is known to be incomplete.

Exposure categories

For surveillance purposes, AIDS cases are counted only once in a hierarchy of exposure categories. Persons with more than one reported mode of exposure to HIV are classified in the exposure category listed first in the hierarchy, except for persons with a history of both homosexual/bisexual contact and intravenous drug use. They make up a separate exposure category.

"Homosexual/bisexual contact" cases include men who report sexual contact with other men. "Heterosexual contact" cases include persons who report either specific heterosexual contact with a person with, or at increased risk for, HIV infection

(e.g., an intravenous drug user), or persons presumed to have acquired HIV infection through heterosexual contact because they were born in countries with a distinctive pattern of transmission termed "Pattern II" by the World Health Organization (*MMWR* 1988;37:286-8,293-5). Pattern II transmission is observed in areas of sub-Saharan Africa and in some Caribbean countries. In these countries, most of the reported cases occur in heterosexuals and the male-to-female ratio is approximately 1:1. Intravenous drug use and homosexual transmission either do not occur or occur at a low level.

"Undetermined" cases are persons with no reported history of exposure to HIV through any of the routes listed in the hierarchy of exposure categories. Undetermined cases include persons who are currently under investigation by local health department officials; persons whose exposure history is incomplete because of death, refusal to be interviewed, or loss to follow-up; and persons who were interviewed or for whom other follow-up information was available and no exposure mode was identified. Persons who have an exposure mode identified at the time of follow-up are reclassified into the appropriate exposure category.

Rates

Rates are on an annual basis per 100,000 population. The denominators for computing rates in Table 1 and Table 2 are based on U.S. Bureau of Census provisional data from the 1990 census and on extrapolations from the 1980 and 1990 census. Each 12-month rate is the number of cases for a 12-month period divided by the 1990 or 1991 population, multiplied by 100,000.

The denominators for computing race-specific rates (Table 9, included only in the year-end edition) are based on 1990 census projections published in U.S. Bureau of Census publications, "Projections of the Population of the United States, by Age, Sex, and Race, 1988 to 2080," and "Projections of the Hispanic Population, 1983 to 2080." Race-specific rates are the number of cases reported for a particular race/ethnicity during the preceding 12-month period divided by the 1990 census projection for that race/ethnicity, multiplied by 100,000.

Case-fatality rates are on a semiannual basis by date of diagnosis. Each 6-month case-fatality rate is the number of fatal cases reported, divided by the number of total cases diagnosed in that period, multiplied by 100.

Trends in AIDS incidence

Tabulations of AIDS cases by date of report give a general description of AIDS cases, but analyses by date of diagnosis give a more accurate description of trends. Delays in reporting, however, can have a substantial impact on tabulated numbers of cases diagnosed in recent time periods. About half of all cases are reported within 3 months of diagnosis, but about 15% are reported more than 1 year after diagnosis. Delays are substantially longer for pediatric cases and for transfusion-associated cases in adults.

Figure 5 (included only in the year-end report) shows trends in AIDS incidence by month of diagnosis. The points on the plot show the estimated numbers of cases diagnosed, after adjusting for estimated reporting delays. The smooth curve is computed using the Lowess procedure (J.M. Chamber, W.S. Cleveland, B. Kleiner, and P.A. Tukey. *Graphical Methods for Data Analysis*. Duxbury Press, Boston, 1983, Chapter 4).

Reporting delays were estimated by a maximum likelihood statistical procedure for each HIV exposure category (J.M. Karon, O.J. Devine, and W.M. Morgan "Predicting AIDS incidence by extrapolating from recent trends." In: C. Castillo-Chavex, ed. *Mathematical and Statistical Approaches to AIDS Epidemiology. Lecture Notes in Biomathematics*, vol. 83, Springer Verlag, Berlin, 1989). The adjusted incidence used in Figure 5 is the sum of the adjusted incidences for each HIV exposure group.

The Lowess procedure makes no assumption about the overall trends in the data. A fitted value is computed for each month by weighted least squares regression using only the adjusted number of cases diagnosed during an interval about the month (in Figure 5, the 30% of months closest to the chosen month); the weights decrease for times further from the chosen month. The procedure assumes that incidence during the interval about each month is approximately a linear function of time. Lowess tends to produce a curve that is linear at each end, as observed in the figure; predictions of future numbers of cases should not be made by extrapolating the Lowess curve.

The Lowess curve should be considered a description of the overall trend in AIDS cases. This curve emphasizes that the rate of increase in incidence slowed during the middle of 1987. See *MMWR* 1990;39:81-86.

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