

HIV / AIDS

SURVEILLANCE

U.S. AIDS cases reported through November 1991

Issued December 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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Centers for Disease Control.....William L. Roper, M.D., M.P.H.
Director
Gary R. Noble, M.D., M.P.H.
Deputy Director (HIV)

National Center for Infectious Diseases.....James M. Hughes, M.D.
Acting Director

Division of HIV/AIDS.....James W. Curran, M.D., M.P.H.
Director

Surveillance Branch.....Ruth L. Berkelman, M.D.
Chief

Reporting and Analysis Section.....John W. Ward, M.D.
Chief

Statistics and Data Management Branch.....W. Meade Morgan, Ph.D.
Chief
Xenophon M. Santas
Computer Specialist

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

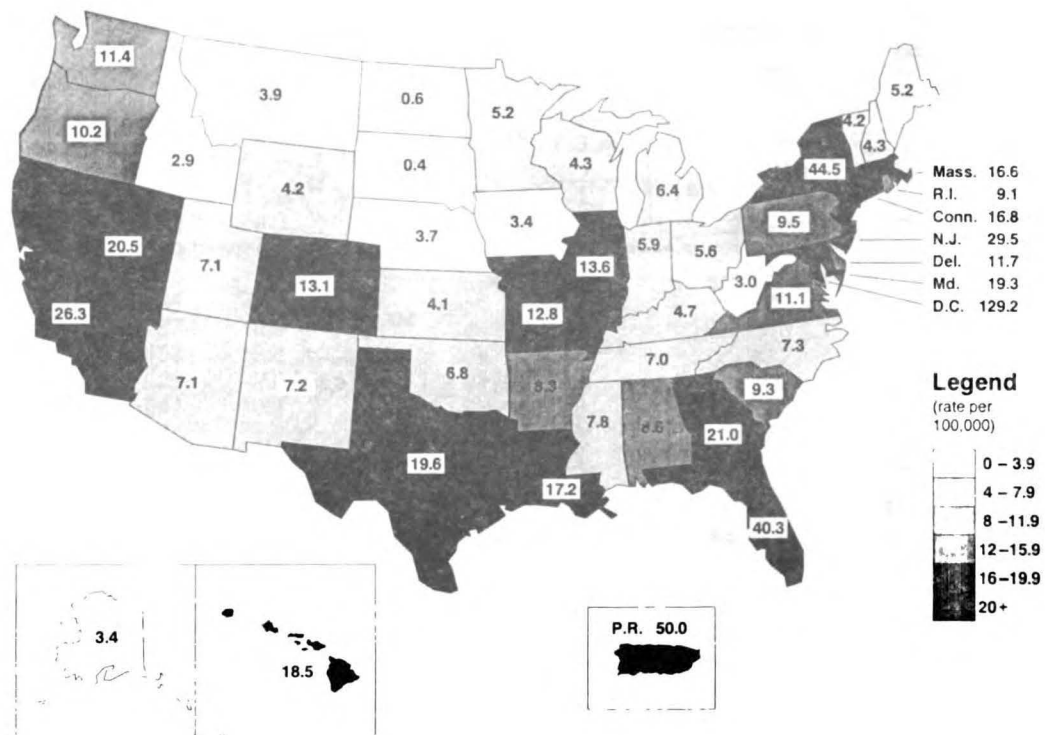


Figure 2. Adult/adolescent and pediatric AIDS cases, reported December 1990 through November 1991, United States

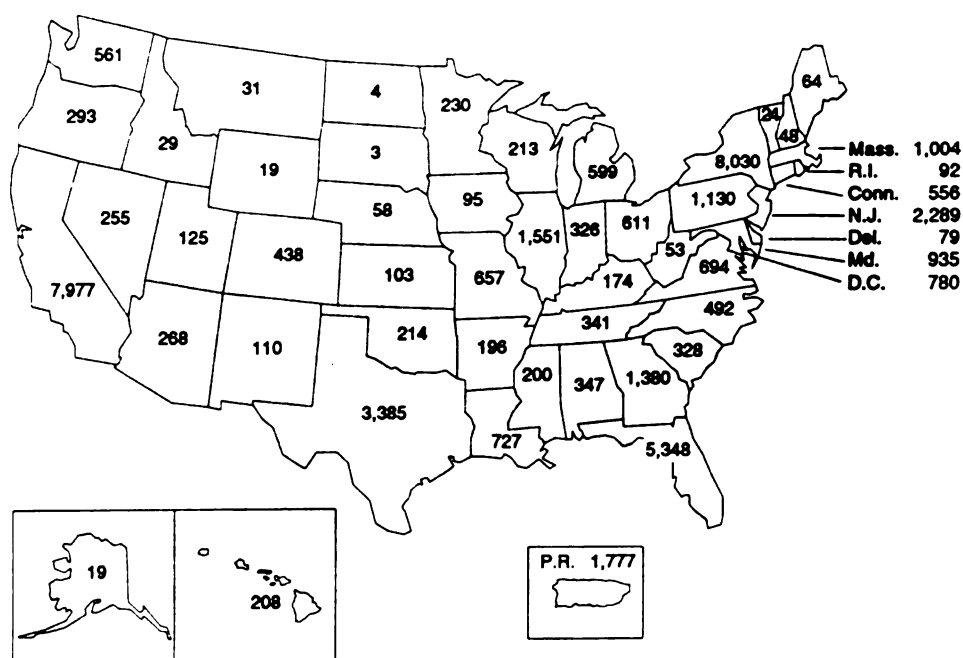


Figure 3. Pediatric AIDS cases, reported December 1990 through November 1991, United States

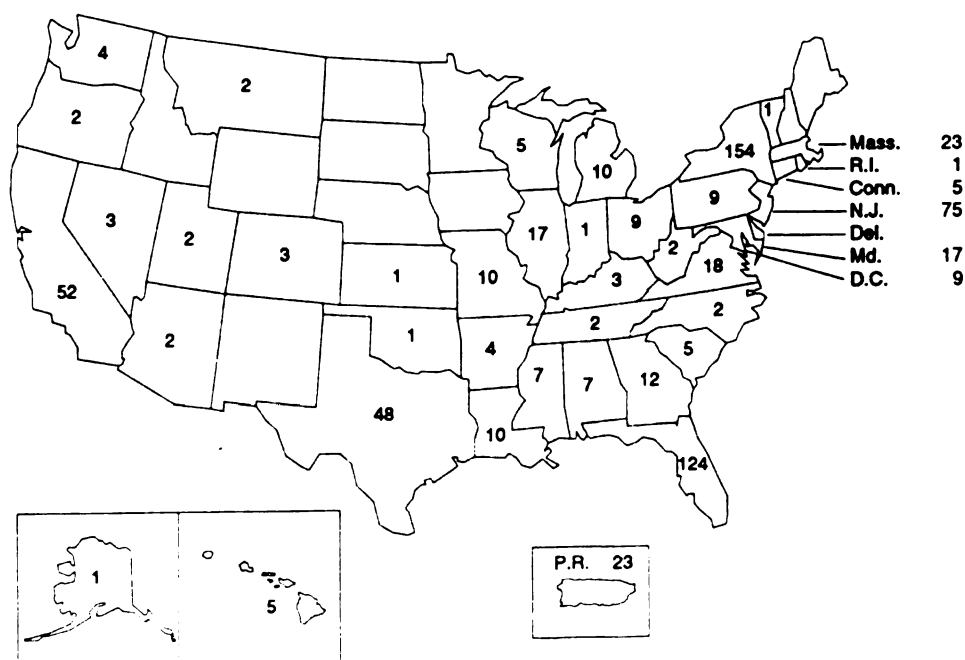


Table 1. AIDS cases and annual rates per 100,000 population, by state, reported December 1989 through November 1990, December 1990 through November 1991; and cumulative totals, by state and age group, through November 1991¹

State of residence	Dec. 1989- Nov. 1990		Dec. 1990- Nov. 1991		Cumulative totals		
	No.	Rate	No.	Rate	Adults/ adolescents	Children < 13 years old	Total
Alabama	227	5.6	347	8.6	1,190	28	1,218
Alaska	24	4.4	19	3.4	114	3	117
Arizona	338	9.2	268	7.1	1,523	10	1,533
Arkansas	208	8.8	196	8.3	624	14	638
California	6,975	23.4	7,977	26.3	37,464	253	37,717
Colorado	359	10.9	438	13.1	1,982	11	1,993
Connecticut	426	13.0	556	16.8	2,325	68	2,393
Delaware	95	14.3	79	11.7	384	4	388
District of Columbia	685	112.9	780	129.2	3,334	44	3,378
Florida	4,234	32.7	5,348	40.3	18,591	505	19,096
Georgia	1,287	19.9	1,380	21.0	5,543	56	5,599
Hawaii	153	13.8	208	18.5	811	7	818
Idaho	28	2.8	29	2.9	104	2	106
Illinois	1,247	10.9	1,551	13.6	6,087	83	6,170
Indiana	344	6.2	326	5.9	1,330	11	1,341
Iowa	56	2.0	95	3.4	309	3	312
Kansas	139	5.6	103	4.1	533	4	537
Kentucky	176	4.8	174	4.7	657	8	665
Louisiana	713	16.9	727	17.2	2,923	48	2,971
Maine	51	4.2	64	5.2	267	2	269
Maryland	1,028	21.5	935	19.3	3,928	85	4,013
Massachusetts	804	13.4	1,004	16.6	4,151	91	4,242
Michigan	549	5.9	599	6.4	2,507	40	2,547
Minnesota	186	4.3	230	5.2	1,023	8	1,031
Mississippi	289	11.2	200	7.8	827	18	845
Missouri	562	11.0	657	12.8	2,419	22	2,441
Montana	15	1.9	31	3.9	83	2	85
Nebraska	55	3.5	58	3.7	238	2	240
Nevada	194	16.1	255	20.5	862	10	872
New Hampshire	63	5.7	48	4.3	234	5	239
New Jersey	2,355	30.5	2,289	29.5	12,126	353	12,479
New Mexico	110	7.3	110	7.2	449	3	452
New York	8,150	45.3	8,030	44.5	41,115	946	42,061
North Carolina	548	8.3	492	7.3	2,103	37	2,140
North Dakota	2	0.3	4	0.6	24	—	24
Ohio	619	5.7	611	5.6	2,804	46	2,850
Oklahoma	181	5.8	214	6.8	892	12	904
Oregon	301	10.6	293	10.2	1,263	7	1,270
Pennsylvania	1,199	10.1	1,130	9.5	5,429	84	5,513
Rhode Island	91	9.1	92	9.1	456	9	465
South Carolina	341	9.8	328	9.3	1,332	26	1,358
South Dakota	9	1.3	3	0.4	28	—	28
Tennessee	337	6.9	341	7.0	1,411	17	1,428
Texas	3,245	19.1	3,385	19.6	14,100	154	14,254
Utah	105	6.1	125	7.1	451	10	461
Vermont	22	3.9	24	4.2	93	2	95
Virginia	705	11.4	694	11.1	2,662	54	2,716
Washington	654	13.4	561	11.4	2,717	16	2,733
West Virginia	68	3.8	53	3.0	227	4	231
Wisconsin	206	4.2	213	4.3	823	9	832
Wyoming	3	0.7	19	4.2	53	—	53
U.S. total	40,761	16.4	43,693	17.4	192,925	3,236	196,161
Guam	2	1.5	3	2.2	11	—	11
Pacific Islands, U.S.	1	0.4	—	—	2	—	2
Puerto Rico	1,679	47.7	1,777	50.0	6,391	186	6,577
Virgin Islands, U.S.	11	10.8	13	12.7	88	4	92
Total	42,454	16.8	45,486	17.8	199,417	3,426	202,843

¹ During November 1991, 3,383 cases and 2,366 deaths among adults/adolescents and 54 cases and 32 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 December 1989 through November 1990, December 1990 through November 1991; and cumulative totals, by area and age group, through November 1991

Metropolitan area of residence	Dec. 1989- Nov. 1990		Dec. 1990- Nov. 1991		Cumulative totals		
	No.	Rate	No.	Rate	Adults/ adolescents	Children <13 years old	Total
Akron, Ohio	26	4.0	32	4.9	135	—	135
Albany-Schenectady, N.Y.	93	10.6	80	9.1	398	6	404
Allentown, Pa.	59	8.6	36	5.2	189	5	194
Anaheim, Calif.	370	15.3	349	14.2	1,624	10	1,634
Atlanta, Ga.	1,000	35.3	1,046	36.0	4,245	33	4,278
Austin, Tex.	231	29.6	226	28.0	901	11	912
Bakersfield, Calif.	28	5.2	54	9.7	160	2	162
Baltimore, Md.	673	28.3	559	23.3	2,362	63	2,425
Baton Rouge, La.	59	11.2	78	14.7	264	4	268
Bergen-Passaic, N.J.	326	25.5	255	20.0	1,540	39	1,579
Birmingham, Ala.	73	8.0	102	11.2	377	7	384
Boston, Mass.	582	15.4	702	18.5	3,168	65	3,233
Bridgeport, Conn.	116	14.0	156	18.8	685	23	708
Buffalo, N.Y.	96	9.9	81	8.4	336	3	339
Charleston, S.C.	75	14.8	66	12.8	292	3	295
Charlotte, N.C.	95	8.2	63	5.3	382	7	389
Chicago, Ill.	1,050	17.3	1,260	20.8	5,093	65	5,158
Cincinnati, Ohio	137	9.4	96	6.6	440	6	446
Cleveland, Ohio	118	6.4	190	10.4	734	14	748
Columbus, Ohio	132	9.6	113	8.1	599	4	603
Dallas, Tex.	814	31.9	758	29.0	3,418	21	3,439
Dayton, Ohio	63	6.6	57	6.0	279	7	286
Denver, Colo.	299	18.4	370	22.5	1,633	7	1,640
Detroit, Mich.	375	8.6	417	9.5	1,751	28	1,779
El Paso, Tex.	32	5.4	55	9.1	155	1	156
Fort Lauderdale, Fla.	894	71.2	898	70.2	3,300	69	3,369
Fort Worth, Tex.	186	14.0	208	15.2	804	12	816
Fresno, Calif.	61	9.1	73	10.7	259	2	261
Gary, Ind.	30	5.0	36	6.0	127	1	128
Grand Rapids, Mich.	35	5.1	37	5.3	139	1	140
Greensboro, N.C.	92	9.8	89	9.4	337	7	344
Greenville, S.C.	41	6.4	42	6.5	166	—	166
Harrisburg, Pa.	33	5.6	40	6.8	195	4	199
Hartford, Conn.	145	12.9	174	15.4	702	15	717
Honolulu, Hawaii	109	13.0	145	17.2	607	4	611
Houston, Tex.	1,261	38.2	1,361	40.5	5,843	59	5,902
Indianapolis, Ind.	172	13.8	150	11.9	622	3	625
Jacksonville, Fla.	306	33.7	223	24.1	967	28	995
Jersey City, N.J.	338	61.1	406	73.5	2,074	58	2,132
Kansas City, Mo.	283	18.1	245	15.5	1,203	5	1,208
Knoxville, Tenn.	30	5.0	31	5.1	140	1	141
Lake County, Ill.	14	2.7	40	7.6	111	3	114
Las Vegas, Nev.	157	21.2	188	24.4	640	10	650
Little Rock, Ark.	82	16.0	71	13.7	244	7	251
Los Angeles, Calif.	2,088	23.6	2,978	33.1	13,284	110	13,394
Louisville, Ky.	69	7.2	77	8.1	275	5	280
Memphis, Tenn.	109	11.1	103	10.4	448	6	454
Miami, Fla.	1,075	55.5	2,044	103.8	5,974	198	6,172
Middlesex, N.J.	160	15.7	203	19.6	983	27	1,010
Milwaukee, Wis.	117	8.2	103	7.2	453	5	458
Minneapolis-Saint Paul, Minn.	168	6.8	196	7.8	908	6	914
Monmouth-Ocean City, N.J.	193	19.6	166	16.6	799	29	828
Nashville, Tenn.	109	11.1	123	12.3	474	8	482
Nassau-Suffolk, N.Y.	413	15.8	333	12.8	1,906	48	1,954
New Bedford, Mass.	44	8.7	73	14.3	216	5	221
New Haven, Conn.	136	16.9	193	23.9	758	28	786
New Orleans, La.	409	33.0	425	34.4	1,823	26	1,849
New York, N.Y.	6,988	81.8	6,896	80.4	35,693	852	36,545

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

Metropolitan area of residence	Dec. 1989- Nov. 1990		Dec. 1990- Nov. 1991		Cumulative totals		
	No.	Rate	No.	Rate	Adults/ adolescents	Children 13 years old	Total
Newark, N.J.	946	51.9	906	49.8	5,024	159	5,183
Norfolk, Va.	182	13.0	146	10.3	585	15	600
Oakland, Calif.	606	29.1	360	17.0	2,358	17	2,375
Oklahoma City, Okla.	93	9.7	107	11.0	455	—	455
Omaha, Neb.	38	6.1	42	6.8	167	1	168
Orlando, Fla.	272	25.4	359	32.3	1,080	15	1,095
Oxnard-Ventura, Calif.	43	6.4	34	5.0	177	—	177
Philadelphia, Pa.	892	18.4	869	17.8	4,115	58	4,173
Phoenix, Ariz.	238	11.2	208	9.5	1,124	6	1,130
Pittsburgh, Pa.	139	6.8	107	5.2	650	4	654
Portland, Oreg.	241	19.4	226	18.0	990	4	994
Providence, R.I.	89	9.7	87	9.4	430	8	438
Raleigh-Durham, N.C.	116	15.8	105	13.9	459	10	469
Richmond, Va.	131	15.1	133	15.2	511	10	521
Riverside-San Bernardino, Calif.	248	9.6	375	13.9	1,327	18	1,345
Rochester, N.Y.	78	7.8	94	9.3	428	6	434
Sacramento, Calif.	136	9.2	229	15.1	837	11	848
Saint Louis, Mo.	288	11.8	350	14.3	1,147	15	1,162
Salt Lake City, Utah	96	9.0	110	10.1	398	7	405
San Antonio, Tex.	227	17.4	227	17.1	989	12	1,001
San Diego, Calif.	692	27.7	595	23.2	2,873	20	2,893
San Francisco, Calif.	2,081	129.8	2,088	129.3	11,265	18	11,283
San Jose, Calif.	196	13.1	174	11.5	869	8	877
San Juan, P.R.	1,102	65.2	1,090	63.9	3,972	119	4,091
Scranton, Pa.	47	6.4	38	5.2	161	3	164
Seattle, Wash.	486	24.6	400	19.9	2,032	10	2,042
Springfield, Mass.	90	14.9	100	16.5	290	13	303
Syracuse, N.Y.	45	6.8	34	5.1	188	6	194
Tacoma, Wash.	42	7.2	45	7.5	184	6	190
Tampa-Saint Petersburg, Fla.	435	21.0	495	23.4	1,997	38	2,035
Toledo, Ohio	41	6.7	36	5.9	149	3	152
Tucson, Ariz.	68	10.2	43	6.3	281	3	284
Tulsa, Okla.	48	6.8	69	9.7	259	4	263
Washington, D.C.	1,229	31.3	1,373	34.4	5,735	77	5,812
West Palm Beach, Fla.	370	42.8	399	44.7	1,724	68	1,792
Wilmington, Del.	85	14.7	58	9.9	314	3	317
Worcester, Mass.	39	5.5	74	10.3	228	4	232
Metropolitan areas with 500,000 or more population	35,464	24.1	37,756	25.4	169,406	2,855	172,261
Metropolitan areas with 50,000 to 500,000 population	4,359	9.0	4,868	9.9	18,684	344	19,028
Non-metropolitan areas	2,463	4.3	2,695	4.7	10,752	207	10,959
Total¹	42,454	16.8	45,486	17.8	199,417	3,426	202,843

¹ Totals include 595 patients whose area of residence is unknown.

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

Adult/adolescent exposure category	Males		Females		Totals		
	Dec. 1989- Nov. 1990	Dec. 1990- Nov. 1991	Dec. 1989- Nov. 1990	Dec. 1990- Nov. 1991	Dec. 1989- Nov. 1990	Dec. 1990- Nov. 1991	Cumulative total ¹
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Men who have sex with men	23,547 (64)	24,268 (62)	—	—	23,547 (57)	24,268 (54)	116,609 (58)
Injecting drug use	7,618 (21)	8,223 (21)	2,334 (49)	2,695 (48)	9,952 (24)	10,918 (24)	44,791 (22)
Men who have sex with men and inject drugs	2,427 (7)	2,390 (6)	—	—	2,427 (6)	2,390 (5)	12,953 (6)
Hemophilia/coagulation disorder	317 (1)	314 (1)	9 (0)	7 (0)	326 (1)	321 (1)	1,680 (1)
Heterosexual contact:	1,043 (3)	1,266 (3)	1,697 (36)	2,023 (36)	2,740 (7)	3,289 (7)	11,609 (6)
<i>Sex with injecting drug user</i>	465	569	1,096	1,193	1,561	1,762	6,189
<i>Sex with bisexual male</i>	—	—	138	149	138	149	643
<i>Sex with person with hemophilia</i>	2	3	28	21	30	24	102
<i>Born in Pattern-II² country</i>	297	333	114	166	411	499	2,483
<i>Sex with person born in Pattern-II country</i>	24	22	19	27	43	49	175
<i>Sex with transfusion recipient with HIV infection</i>	26	26	40	58	66	84	236
<i>Sex with HIV-infected person, risk not specified</i>	229	313	262	409	491	722	1,781
Receipt of blood transfusion, blood components, or tissue ³	497 (1)	456 (1)	350 (7)	264 (5)	847 (2)	720 (2)	4,306 (2)
Other/undetermined ⁴	1,441 (4)	2,282 (6)	390 (8)	607 (11)	1,831 (4)	2,889 (6)	7,469 (4)
Adult/adolescent subtotal	36,890 (100)	39,199 (100)	4,780 (100)	5,596 (100)	41,670 (100)	44,795 (100)	199,417 (100)
Pediatric (<13 years old)							
exposure category							
Hemophilia/coagulation disorder	32 (8)	23 (6)	—	1 (0)	32 (4)	24 (3)	163 (5)
Mother with/at risk for HIV infection:	335 (82)	326 (86)	352 (94)	275 (88)	687 (88)	601 (87)	2,892 (84)
<i>Injecting drug use</i>	164	142	160	117	324	259	1,410
<i>Sex with injecting drug user</i>	72	58	77	51	149	109	592
<i>Sex with bisexual male</i>	6	4	7	6	13	10	60
<i>Sex with person with hemophilia</i>	1	3	1	—	2	3	12
<i>Born in Pattern-II country</i>	24	24	19	11	43	35	243
<i>Sex with person born in Pattern-II country</i>	2	—	3	1	5	1	13
<i>Sex with transfusion recipient with HIV infection</i>	1	—	1	1	2	1	13
<i>Sex with HIV-infected person, risk not specified</i>	15	28	22	15	37	43	143
<i>Receipt of blood transfusion, blood components, or tissue</i>	5	8	6	7	11	15	61
<i>Has HIV infection, risk not specified</i>	45	59	56	66	101	1	345
Receipt of blood transfusion, blood components, or tissue	28 (7)	21 (6)	12 (3)	20 (6)	40 (5)	41 (6)	288 (8)
Undetermined	13 (3)	9 (2)	12 (3)	16 (5)	25 (3)	25 (4)	83 (2)
Pediatric subtotal	408 (100)	379 (100)	376 (100)	312 (100)	784 (100)	691 (100)	3,426 (100)
Total	37,298	39,578	5,156	5,908	42,454	45,486	202,843

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 Eighteen adults/adolescents and 2 children developed AIDS after receiving blood screened negative for HIV antibody. Four additional adults developed AIDS after receiving tissue or organs from HIV-infected donors, one of whom was negative for HIV antibody at the time of donation.

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 November 1991, United States

Adult/adolescent exposure category	White, not Hispanic	Black, not Hispanic	Hispanic	Asian/Pacific Islander	American Indian/ Alaska Native	Total ⁴
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Men who have sex with men	82,065 (76)	20,149 (35)	13,032 (40)	924 (75)	172 (55)	116,609 (58)
Injecting drug use	9,103 (8)	22,493 (39)	12,986 (40)	56 (5)	57 (18)	44,791 (22)
Men who have sex with men and inject drugs	7,463 (7)	3,521 (6)	1,887 (6)	27 (2)	41 (13)	12,953 (6)
Hemophilia/coagulation disorder	1,381 (1)	131 (0)	136 (0)	18 (1)	8 (3)	1,680 (1)
Heterosexual contact:	2,455 (2)	6,904 (12)	2,162 (7)	44 (4)	13 (4)	11,609 (6)
<i>Sex with injecting drug user</i>	1,311	3,222	1,609	19	10	6,189
<i>Sex with bisexual male</i>	339	214	77	10	1	643
<i>Sex with person with hemophilia</i>	84	10	6	2	—	102
<i>Born in Pattern-II¹ country</i>	12	2,449	13	2	—	2,483
<i>Sex with person born in Pattern-II country</i>	50	112	11	1	—	175
<i>Sex with transfusion recipient with HIV infection</i>	142	46	44	2	—	236
<i>Sex with HIV-infected person, risk not specified</i>	517	851	402	8	2	1,781
Receipt of blood transfusion, blood components, or tissue ²	2,975 (3)	758 (1)	471 (1)	85 (7)	6 (2)	4,306 (2)
Other/undetermined ³	2,616 (2)	3,021 (5)	1,682 (5)	82 (7)	16 (5)	7,469 (4)
Adult/adolescent subtotal	108,058(100)	56,977 (100)	32,356(100)	1,236 (100)	313(100)	199,417(100)
Pediatric (<13 years old) exposure category						
Hemophilia/coagulation disorder	112 (15)	22 (1)	26 (3)	3 (18)	—	163 (5)
Mother with/at risk for HIV infection:	456 (62)	1,674 (92)	737 (87)	8 (47)	8(100)	2,892 (84)
<i>Injecting drug use</i>	221	820	361	2	2	1,410
<i>Sex with injecting drug user</i>	88	263	236	2	1	592
<i>Sex with bisexual male</i>	22	23	14	1	—	60
<i>Sex with person with hemophilia</i>	8	3	1	—	—	12
<i>Born in Pattern-II country</i>	1	240	2	—	—	243
<i>Sex with person born in Pattern-II country</i>	—	12	—	—	—	13
<i>Sex with transfusion recipient with HIV infection</i>	4	4	4	—	—	13
<i>Sex with HIV-infected person, risk not specified</i>	30	69	40	1	2	143
<i>Receipt of blood transfusion, blood components, or tissue</i>	22	25	14	—	—	61
<i>Has HIV infection, risk not specified</i>	60	215	65	2	3	345
Receipt of blood transfusion, blood components, or tissue	151 (21)	66 (4)	65 (8)	6 (35)	—	288 (8)
Undetermined	11 (2)	52 (3)	20 (2)	—	—	83 (2)
Pediatric subtotal	730(100)	1,814 (100)	848(100)	17 (100)	8(100)	3,426(100)
Total	108,788	58,791	33,204	1,253	321	202,843

¹ See technical notes.

² Eighteen adults/adolescents and 2 children developed AIDS after receiving blood screened negative for HIV antibody. Four additional adults developed AIDS after receiving tissue or organs from HIV-infected donors, one of whom was negative for HIV antibody at the time of donation.

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 486 persons whose race/ethnicity is unknown.

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

Male exposure category	White, not Hispanic	Black, not Hispanic	Hispanic	Asian/Pacific Islander	American Indian/ Alaska Native	Total ⁴
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Men who have sex with men	82,065 (80)	20,149 (44)	13,032 (46)	924 (81)	172 (64)	116,609 (65)
Injecting drug use	6,881 (7)	16,443 (36)	10,836 (39)	40 (4)	33 (12)	34,309 (19)
Men who have sex with men and inject drugs	7,463 (7)	3,521 (8)	1,887 (7)	27 (2)	41 (15)	12,953 (7)
Hemophilia/coagulation disorder	1,353 (1)	122 (0)	134 (0)	18 (2)	8 (3)	1,641 (1)
Heterosexual contact:	790 (1)	3,220 (7)	528 (2)	9 (1)	3 (1)	4,558 (3)
<i>Sex with injecting drug user</i>	473	1,037	309	5	3	1,828
<i>Sex with person with hemophilia</i>	6	1	2	—	—	9
<i>Born in Pattern-II¹ country</i>	7	1,754	10	2	—	1,779
<i>Sex with person born in Pattern-II country</i>	40	49	9	1	—	99
<i>Sex with transfusion recipient with HIV infection</i>	40	19	16	—	—	76
<i>Sex with HIV-infected person, risk not specified</i>	224	360	182	1	—	767
Receipt of blood transfusion, blood components, or tissue ²	1,924 (2)	411 (1)	254 (1)	53 (5)	1 (0)	2,650 (1)
Other/undetermined ³	2,224 (2)	2,212 (5)	1,400 (5)	64 (6)	11 (4)	5,958 (3)
Male subtotal	102,700 (100)	46,078 (100)	28,071 (100)	1,135 (100)	269 (100)	178,678 (100)
Female						
exposure category						
Injecting drug use	2,222 (41)	6,050 (56)	2,150 (50)	16 (16)	24 (55)	10,482 (51)
Hemophilia/coagulation disorder	28 (1)	9 (0)	2 (0)	—	—	39 (0)
Heterosexual contact:	1,665 (31)	3,684 (34)	1,634 (38)	35 (35)	10 (23)	7,051 (34)
<i>Sex with injecting drug user</i>	838	2,185	1,300	14	7	4,361
<i>Sex with bisexual male</i>	339	214	77	10	1	643
<i>Sex with person with hemophilia</i>	78	9	4	2	—	93
<i>Born in Pattern-II country</i>	5	695	3	—	—	704
<i>Sex with person born in Pattern-II country</i>	10	63	2	—	—	76
<i>Sex with transfusion recipient with HIV infection</i>	102	27	28	2	—	160
<i>Sex with HIV-infected person, risk not specified</i>	293	491	220	7	2	1,014
Receipt of blood transfusion, blood components, or tissue	1,051 (20)	347 (3)	217 (5)	32 (32)	5 (11)	1,656 (8)
Other/undetermined	392 (7)	809 (7)	282 (7)	18 (18)	5 (11)	1,511 (7)
Female subtotal	5,358 (100)	10,899 (100)	4,285 (100)	101 (100)	44 (100)	20,739 (100)
Total	108,058	56,977	32,356	1,236	313	199,417

¹ See technical notes.

² Eighteen adults/adolescents and 2 children developed AIDS after receiving blood screened negative for HIV antibody. Four additional adults developed AIDS after receiving tissue or organs from HIV-infected donors, one of whom was negative for HIV antibody at the time of donation.

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 425 males and 52 females whose race/ethnicity is unknown.

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

Exposure category	13-19 years old			20-24 years old		
	Dec. 1989- Nov. 1990	Dec. 1990- Nov. 1991	Cumulative total	Dec. 1989- Nov. 1990	Dec. 1990- Nov. 1991	Cumulative total
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Men who have sex with men	29 (17)	30 (20)	193 (25)	823 (51)	701 (46)	4,420 (55)
Injecting drug use	20 (12)	22 (14)	96 (13)	301 (19)	297 (20)	1,384 (17)
Men who have sex with men and inject drugs	5 (3)	6 (4)	33 (4)	143 (9)	107 (7)	723 (9)
Hemophilia/coagulation disorder	50 (30)	46 (30)	233 (30)	32 (2)	36 (2)	201 (2)
Heterosexual contact:	40 (24)	19 (12)	105 (14)	205 (13)	207 (14)	838 (10)
<i>Sex with injecting drug user</i>	32	11	71	131	126	486
<i>Sex with bisexual male</i>	—	—	3	9	10	60
<i>Sex with person with hemophilia</i>	1	3	4	4	2	17
<i>Born in Pattern-II¹ country</i>	2	2	14	20	14	122
<i>Sex with person born in Pattern-II country</i>	—	1	1	5	2	10
<i>Sex with transfusion recipient with HIV infection</i>	1	—	1	5	2	9
<i>Sex with HIV-infected person, risk not specified</i>	4	2	11	31	51	134
Receipt of blood transfusion, blood components, or tissue	9 (5)	8 (5)	53 (7)	23 (1)	22 (1)	117 (1)
Undetermined ²	16 (9)	22 (14)	55 (7)	90 (6)	138 (9)	371 (5)
Total	169 (100)	153 (100)	768 (100)	1,617 (100)	1,508 (100)	8,054 (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 November 1991, United States

Males	White, not Hispanic	Black, not Hispanic	Hispanic	Asian/Pacific Islander	American Indian/ Alaska Native	Total¹
Age at diagnosis (years)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Under 5	245 (0)	808 (2)	366 (1)	6 (1)	5 (2)	1,433 (1)
5-12	193 (0)	127 (0)	93 (0)	5 (0)	—	420 (0)
13-19	267 (0)	171 (0)	115 (0)	7 (1)	5 (2)	565 (0)
20-24	3,337 (3)	2,040 (4)	1,244 (4)	40 (3)	13 (5)	6,689 (4)
25-29	15,428 (15)	7,236 (15)	4,744 (17)	158 (14)	58 (21)	27,684 (15)
30-34	24,021 (23)	11,448 (24)	7,193 (25)	228 (20)	71 (26)	43,045 (24)
35-39	22,709 (22)	10,925 (23)	6,319 (22)	257 (22)	55 (20)	40,369 (22)
40-44	15,865 (15)	6,567 (14)	3,942 (14)	189 (16)	35 (13)	26,667 (15)
45-49	9,383 (9)	3,517 (7)	2,066 (7)	114 (10)	17 (6)	15,143 (8)
50-54	5,090 (5)	1,982 (4)	1,161 (4)	62 (5)	5 (2)	8,321 (5)
55-59	3,180 (3)	1,167 (2)	710 (2)	39 (3)	5 (2)	5,118 (3)
60-64	1,834 (2)	620 (1)	352 (1)	12 (1)	4 (1)	2,827 (2)
65 or older	1,586 (2)	405 (1)	225 (1)	29 (3)	1 (0)	2,250 (1)
Male subtotal	103,138 (100)	47,013 (100)	28,530 (100)	1,146(100)	274 (100)	180,531 (100)
Females						
Age at diagnosis (years)						
Under 5	236 (4)	768 (7)	322 (7)	1 (1)	3 (6)	1,333 (6)
5-12	56 (1)	111 (1)	67 (1)	5 (5)	—	240 (1)
13-19	57 (1)	114 (1)	30 (1)	1 (1)	1 (2)	203 (1)
20-24	336 (6)	675 (6)	336 (7)	6 (6)	5 (11)	1,365 (6)
25-29	990 (18)	2,048 (17)	967 (21)	8 (7)	6 (13)	4,030 (18)
30-34	1,235 (22)	3,082 (26)	1,118 (24)	20 (19)	15 (32)	5,481 (25)
35-39	880 (16)	2,451 (21)	862 (18)	14 (13)	5 (11)	4,223 (19)
40-44	512 (9)	1,203 (10)	454 (10)	20 (19)	5 (11)	2,196 (10)
45-49	272 (5)	554 (5)	219 (5)	9 (8)	3 (6)	1,062 (5)
50-54	201 (4)	329 (3)	130 (3)	7 (7)	1 (2)	669 (3)
55-59	215 (4)	188 (2)	74 (2)	4 (4)	—	483 (2)
60-64	181 (3)	119 (1)	45 (1)	7 (7)	2 (4)	354 (2)
65 or older	479 (8)	136 (1)	50 (1)	5 (5)	1 (2)	673 (3)
Female subtotal	5,650 (100)	11,778 (100)	4,674 (100)	107(100)	47 (100)	22,312 (100)
Total	108,788	58,791	33,204	1,253	321	202,843

¹ Includes 486 persons whose race/ethnicity is unknown.

Table 8. AIDS cases, case-fatality rates, and deaths by half-year and age group, through November 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	80	86.3	31	6	66.7	1
1981 Jan.-June	91	91.2	38	9	77.8	2
July-Dec.	207	90.8	86	5	100.0	7
1982 Jan.-June	393	92.1	151	14	78.6	7
July-Dec.	692	89.2	285	15	80.0	5
1983 Jan.-June	1,281	93.1	522	34	97.1	13
July-Dec.	1,645	92.5	927	42	83.3	16
1984 Jan.-June	2,559	90.7	1,387	49	85.7	26
July-Dec.	3,381	91.5	1,945	62	80.6	24
1985 Jan.-June	4,850	90.6	2,796	97	74.2	44
July-Dec.	6,273	89.4	3,825	129	77.5	69
1986 Jan.-June	8,272	88.1	5,037	136	77.9	66
July-Dec.	9,895	85.5	6,431	188	69.1	91
1987 Jan.-June	12,839	85.3	7,463	222	68.5	117
July-Dec.	14,241	81.0	7,825	252	62.3	163
1988 Jan.-June	16,272	76.9	9,149	243	56.4	133
July-Dec.	16,692	73.9	10,410	328	54.0	164
1989 Jan.-June	18,738	66.2	11,960	332	52.1	166
July-Dec.	18,630	60.6	13,631	313	46.3	180
1990 Jan.-June	19,356	50.5	13,115	322	37.0	177
July-Dec.	18,006	40.0	13,504	320	29.4	170
1991 Jan.-June	17,399	26.1	12,556	237	25.7	135
July-Nov.	7,625	14.2	5,581	71	11.3	48
Total¹	199,417	64.6	128,857	3,426	53.4	1,830

¹ Death totals include 202 adults/adolescents and 6 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 November 1991, United States

Definition category ¹	Year of diagnosis					Cumulative total
	Before Dec. 1987	Dec. 1987-Nov. 1988	Dec. 1988-Nov. 1989	Dec. 1989-Nov. 1990	Dec. 1990-Nov. 1991	
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Pre-1987 definition	57,983 (89)	23,862 (72)	26,387 (70)	25,168 (66)	17,507 (62)	150,907 (74)
1987 definition: ²	7,441 (11)	9,193 (28)	11,504 (30)	13,018 (34)	10,780 (38)	51,936 (26)
<i>Specific disease</i>						
<i>presumptively diagnosed</i>	3,980	5,207	6,610	8,065	6,642	30,504
<i>Specific disease</i>						
<i>definitively diagnosed</i>	870	629	784	832	639	3,754
<i>HIV encephalopathy</i>	902	1,129	1,354	1,342	956	5,683
<i>HIV wasting syndrome</i>	1,689	2,228	2,756	2,779	2,543	11,995
Total	65,424 (100)	33,055 (100)	37,891 (100)	38,186 (100)	28,287 (100)	202,843 (100)

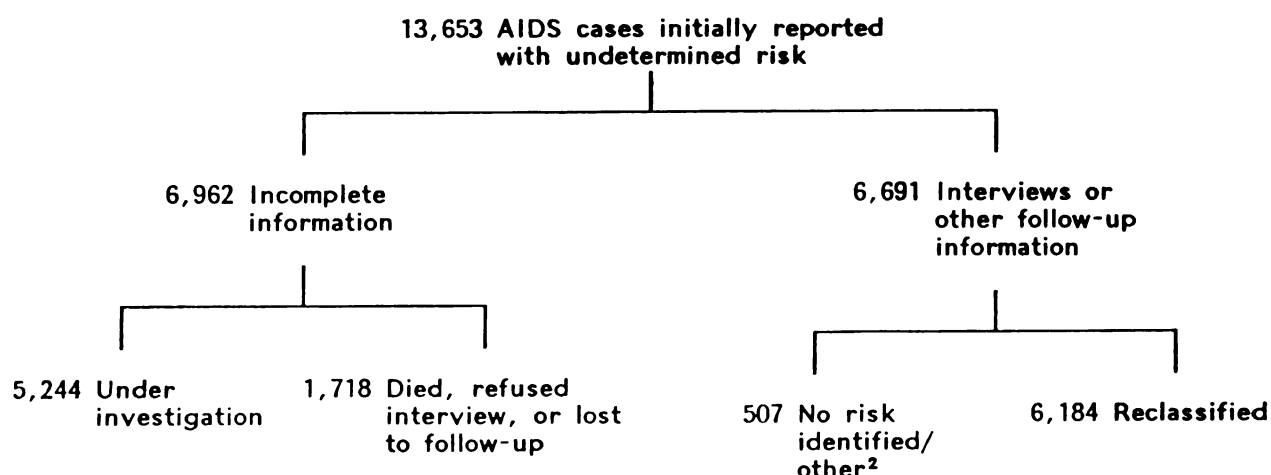
¹ Persons who meet the criteria for more than one definition category are classified in the definition category listed first.

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 November 1991, United States

Exposure category	AIDS cases	
	No.	(%)
Single mode of exposure		
Men who have sex with men	112,116	(56)
Injecting drug use	38,266	(19)
Hemophilia/coagulation disorder	1,081	(1)
Heterosexual contact	11,122	(6)
Receipt of transfusion of blood, blood component, or tissue	4,306	(2)
Other/undetermined	7,469	(4)
Single mode of exposure subtotal	174,360	(87)
Multiple modes of exposure		
Men who have sex with men; injecting drug use	11,614	(6)
Men who have sex with men; hemophilia	42	(0)
Men who have sex with men; heterosexual contact	2,404	(1)
Men who have sex with men; receipt of transfusion	1,910	(1)
Injecting drug use; hemophilia	45	(0)
Injecting drug use; heterosexual contact	5,381	(3)
Injecting drug use; receipt of transfusion	813	(0)
Hemophilia; heterosexual contact	9	(0)
Hemophilia; receipt of transfusion	577	(0)
Heterosexual contact; receipt of transfusion	487	(0)
Men who have sex with men; injecting drug use; hemophilia	10	(0)
Men who have sex with men; injecting drug use; heterosexual contact	990	(0)
Men who have sex with men; injecting drug use; receipt of transfusion	290	(0)
Men who have sex with men; hemophilia; heterosexual contact	3	(0)
Men who have sex with men; hemophilia; receipt of transfusion	20	(0)
Men who have sex with men; heterosexual contact; receipt of transfusion	114	(0)
Injecting drug use; hemophilia; heterosexual contact	6	(0)
Injecting drug use; hemophilia; receipt of transfusion	22	(0)
Injecting drug use; heterosexual contact; receipt of transfusion	250	(0)
Hemophilia; heterosexual contact; receipt of transfusion	13	(0)
Men who have sex with men; injecting drug use; hemophilia; heterosexual contact	1	(0)
Men who have sex with men; injecting drug use; hemophilia; receipt of transfusion	6	(0)
Men who have sex with men; injecting drug use; heterosexual contact; receipt of transfusion	42	(0)
Injecting drug use; hemophilia; heterosexual contact; receipt of transfusion	8	(0)
Multiple modes of exposure subtotal	25,057	(13)
Total	199,417	(100)

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



¹ Excludes 83 children under 13 years of age who have an undetermined risk: 73 children are under investigation and 10 have died, refused interview, or were lost to follow-up. An additional 122 children who were initially reported with an undetermined risk have been reclassified after investigation.

² Of the 507 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 503, the mode of exposure to HIV remains undetermined after investigation.

Health-care workers. 82 of the 503 patients who had no risk identified after follow-up are health-care workers, 74 of whom responded to a standardized questionnaire. 44 (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. 435 of the 503 patients who had no risk identified after follow-up responded to a standardized questionnaire; 139 (35%) of 401 persons responding to questions related to sexually transmitted disease gave a history of such disease and 96 (35%) of 274 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 injecting 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. For example, AIDS cases and annual rates pre-

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.

sented 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 men with both a history of sexual contact with other men and injecting drug use. They make up a separate exposure category.

"Men who have sex with men" cases include men who report sexual contact with other men (i.e., homosexual contact) and men who report sexual contact with both men and women (i.e., bisexual contact). "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 injecting 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. Injecting 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 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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POSTAGE & FEES PAID
PHS / CDC
Permit No. G 284**