

HIV / AIDS

SURVEILLANCE

U.S. AIDS cases reported through January 1991

Issued February 1991

Contents

Figure 1. AIDS annual rates per 100,000 population	3
Figure 2. Adult/adolescent and pediatric AIDS cases	4
Figure 3. Pediatric AIDS cases	4
Table 1. AIDS cases and annual rates per 100,000 population, by state.....	5
Table 2. AIDS cases and annual rates per 100,000 population, by metropolitan area with 500,000 or more population.....	6
Table 3. AIDS cases by age group, exposure category, sex, and year of report.....	8
Table 4. AIDS cases by age group, exposure category, and race/ethnicity	9
Table 5. Adult/adolescent AIDS cases by sex, exposure category, and race/ethnicity	10
Table 6. AIDS cases in adolescents and adults under age 25, by exposure category and year of report	11
Table 7. AIDS cases by sex, age at diagnosis, and race/ethnicity	12
Table 8. AIDS cases, case-fatality rates, and deaths, by half-year and age group.....	13
Table 9. AIDS cases by year of diagnosis and definition category.....	14
Table 10. Adult/adolescent AIDS cases by single and multiple exposure categories	15
Figure 4. Results of investigations of AIDS cases with undetermined risk	16
Technical notes	17

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 February 1990 through January 1991, United States

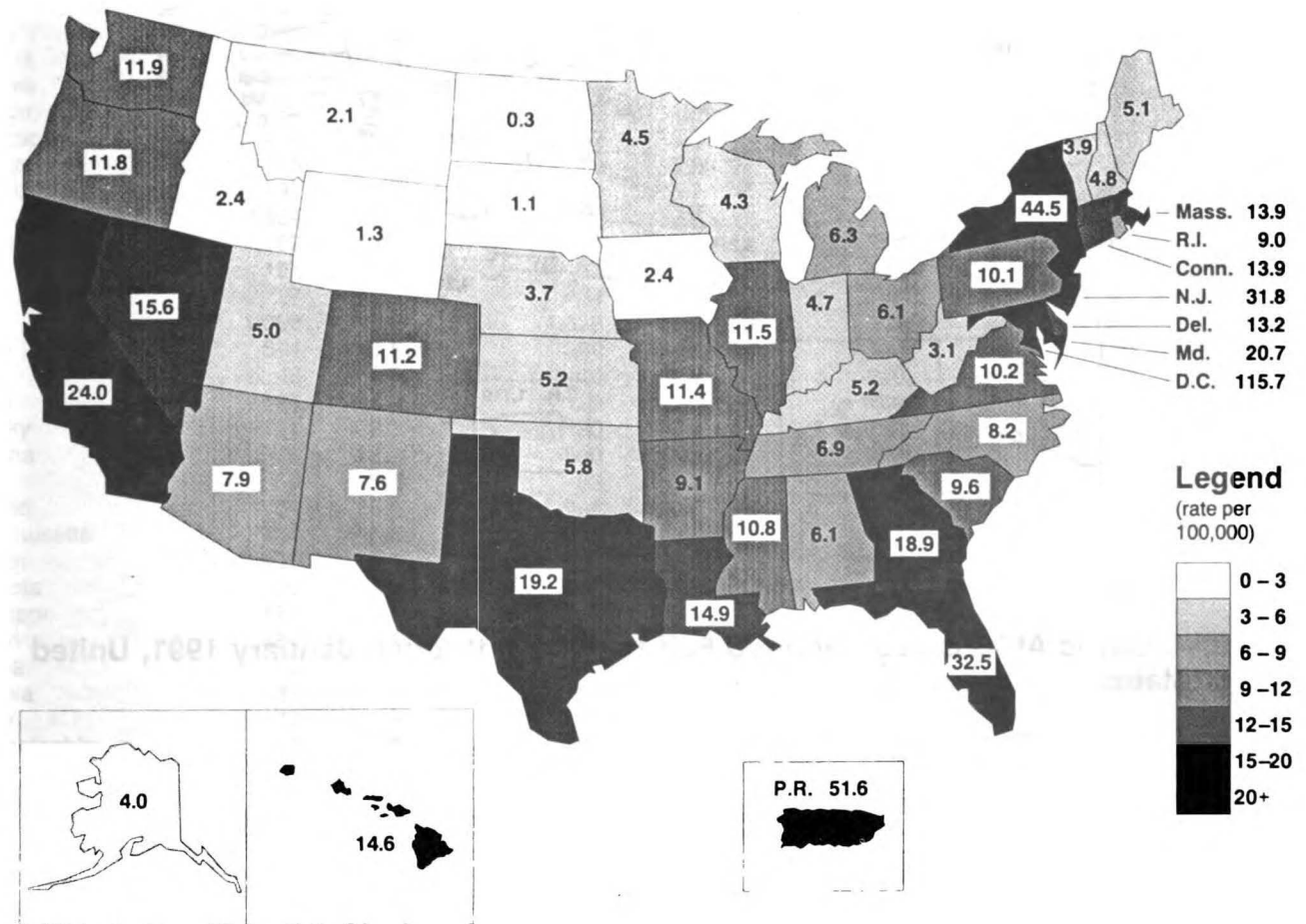


Figure 2. Adult/adolescent and pediatric AIDS cases, reported February 1990 through January 1991, United States

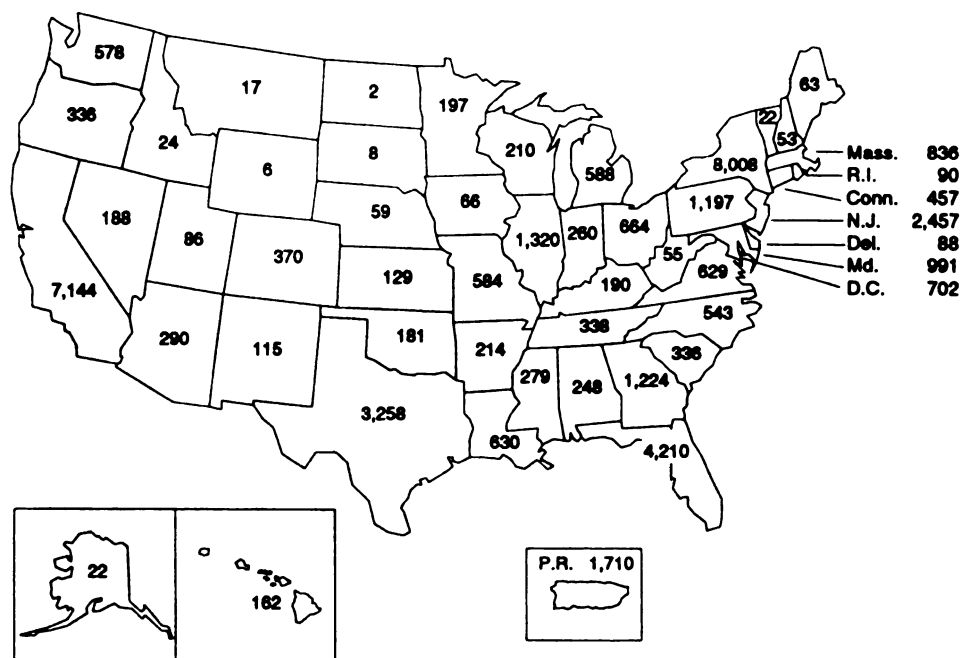


Figure 3. Pediatric AIDS cases, reported February 1990 through January 1991, United States

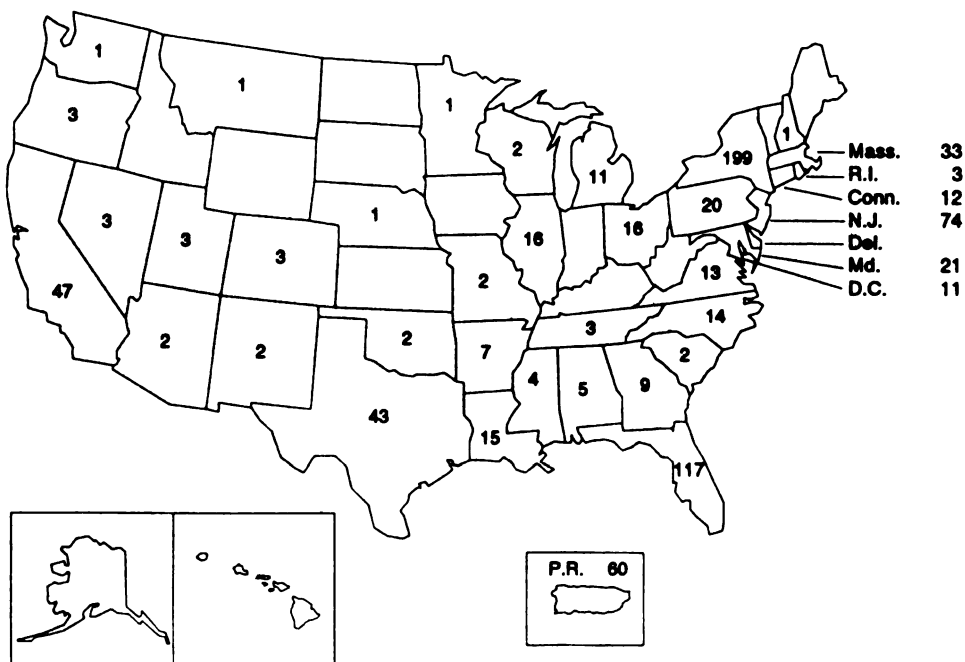


Table 1. AIDS cases and annual rates per 100,000 population, by state, reported February 1989 through January 1990, February 1990 through January 1991; and cumulative totals, by state and age group, through January 1991¹

State of residence	Feb. 1989- Jan. 1990		Feb. 1990- Jan. 1991		Cumulative totals		
	No.	Rate	No.	Rate	Adults/ adolescents	Children < 13 years old	Total
Alabama	217	5.4	248	6.1	902	21	923
Alaska	21	3.9	22	4.0	99	2	101
Arizona	361	10.1	290	7.9	1,298	8	1,306
Arkansas	79	3.4	214	9.1	458	10	468
California	6,560	22.5	7,144	24.0	30,782	214	30,996
Colorado	387	11.9	370	11.2	1,624	11	1,635
Connecticut	429	13.1	457	13.9	1,877	63	1,940
Delaware	75	11.4	88	13.2	315	4	319
District of Columbia	497	81.5	702	115.7	2,675	40	2,715
Florida	3,524	27.9	4,210	32.5	14,003	393	14,396
Georgia	1,102	17.3	1,224	18.9	4,324	46	4,370
Hawaii	191	17.5	162	14.6	645	2	647
Idaho	27	2.7	24	2.4	78	2	80
Illinois	1,098	9.6	1,320	11.5	4,775	68	4,843
Indiana	384	6.9	260	4.7	1,034	10	1,044
Iowa	48	1.7	66	2.4	229	3	232
Kansas	121	4.9	129	5.2	449	3	452
Kentucky	121	3.3	190	5.2	518	5	523
Louisiana	576	13.7	630	14.9	2,278	41	2,319
Maine	69	5.7	63	5.1	223	2	225
Maryland	754	16.0	991	20.7	3,151	68	3,219
Massachusetts	764	12.8	836	13.9	3,337	75	3,412
Michigan	499	5.4	588	6.3	2,025	33	2,058
Minnesota	190	4.4	197	4.5	830	8	838
Mississippi	171	6.7	279	10.8	667	10	677
Missouri	484	9.5	584	11.4	1,896	12	1,908
Montana	16	2.0	17	2.1	58	1	59
Nebraska	36	2.3	59	3.7	188	2	190
Nevada	172	14.8	188	15.6	643	7	650
New Hampshire	52	4.8	53	4.8	195	5	200
New Jersey	2,266	29.5	2,457	31.8	10,272	293	10,565
New Mexico	97	6.5	115	7.6	355	3	358
New York	6,477	36.1	8,008	44.5	34,167	815	34,982
North Carolina	503	7.7	543	8.2	1,667	37	1,704
North Dakota	7	1.1	2	0.3	20	—	20
Ohio	514	4.7	664	6.1	2,307	40	2,347
Oklahoma	195	6.2	181	5.8	705	11	716
Oregon	217	7.7	336	11.8	1,029	6	1,035
Pennsylvania	1,141	9.6	1,197	10.1	4,493	75	4,568
Rhode Island	82	8.2	90	9.0	376	10	386
South Carolina	360	10.4	336	9.6	1,061	21	1,082
South Dakota	3	0.4	8	1.1	25	—	25
Tennessee	293	6.0	338	6.9	1,115	15	1,130
Texas	2,561	15.3	3,258	19.2	11,535	115	11,650
Utah	81	4.8	86	5.0	334	8	342
Vermont	18	3.2	22	3.9	77	1	78
Virginia	518	8.5	629	10.2	2,059	36	2,095
Washington	540	11.3	578	11.9	2,187	12	2,199
West Virginia	63	3.5	55	3.1	179	2	181
Wisconsin	147	3.0	210	4.3	651	4	655
Wyoming	13	2.9	6	1.3	37	—	37
U.S. total	35,121	14.2	40,724	16.4	156,227	2,673	158,900
Guam	1	0.7	2	1.4	8	—	8
Pacific Islands, U.S.	—	—	1	0.5	2	—	2
Puerto Rico	1,578	47.8	1,710	51.6	4,976	164	5,140
Virgin Islands, U.S.	15	13.0	10	8.6	75	4	79
Total	36,715	14.7	42,447	16.8	161,288	2,841	164,129

¹During January 1991, 3,001 cases and 1,967 deaths among adults/adolescents and 55 cases and 23 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 February 1989 through January 1990, February 1990 through January 1991; and cumulative totals, by area and age group, through January 1991

Metropolitan area of residence	Feb. 1989- Jan. 1990		Feb. 1990- Jan. 1991		Cumulative totals		
	No.	Rate	No.	Rate	Adults/ adolescents	Children <13 years old	Total
Akron, Ohio	24	3.6	30	4.6	108	—	108
Albany-Schenectady, N.Y.	67	7.7	89	10.2	332	4	336
Allentown, Pa.	40	5.9	51	7.4	159	4	163
Anaheim, Calif.	274	11.6	375	15.6	1,339	9	1,348
Atlanta, Ga.	852	30.8	935	33.0	3,302	27	3,329
Austin, Tex.	229	30.2	225	28.8	737	7	744
Bakersfield, Calif.	35	6.6	35	6.4	115	—	115
Baltimore, Md.	496	21.0	652	27.4	1,897	49	1,946
Baton Rouge, La.	55	10.5	51	9.7	192	4	196
Bergen-Passaic, N.J.	224	17.5	352	27.5	1,349	28	1,377
Birmingham, Ala.	71	7.8	75	8.3	288	6	294
Boston, Mass.	592	15.7	583	15.4	2,589	52	2,641
Bridgeport, Conn.	132	16.0	117	14.1	548	20	568
Buffalo, N.Y.	67	6.9	93	9.6	262	2	264
Charleston, S.C.	71	14.2	69	13.6	234	—	234
Charlotte, N.C.	102	8.9	86	7.4	326	7	333
Chicago, Ill.	881	14.5	1,118	18.4	4,041	51	4,092
Cincinnati, Ohio	71	4.9	132	9.1	356	6	362
Cleveland, Ohio	131	7.1	148	8.1	587	10	597
Columbus, Ohio	109	8.0	145	10.5	513	4	517
Dallas, Tex.	611	24.5	701	27.5	2,788	14	2,802
Dayton, Ohio	60	6.3	66	6.9	234	6	240
Denver, Colo.	312	19.5	307	18.9	1,329	7	1,336
Detroit, Mich.	346	7.9	410	9.4	1,421	23	1,444
El Paso, Tex.	35	6.0	46	7.8	122	1	123
Fort Lauderdale, Fla.	617	50.1	891	71.0	2,538	50	2,588
Fort Worth, Tex.	145	11.2	205	15.4	642	8	650
Fresno, Calif.	54	8.3	57	8.5	194	2	196
Gary, Ind.	45	7.4	19	3.1	96	—	96
Grand Rapids, Mich.	25	3.7	37	5.4	106	1	107
Greensboro, N.C.	80	8.6	92	9.8	257	6	263
Greenville, S.C.	38	6.0	50	7.8	134	—	134
Harrisburg, Pa.	49	8.4	37	6.3	165	4	169
Hartford, Conn.	143	12.8	161	14.3	568	15	583
Honolulu, Hawaii	131	15.8	110	13.2	487	1	488
Houston, Tex.	924	28.5	1,371	41.5	4,852	50	4,902
Indianapolis, Ind.	192	15.5	123	9.8	487	3	490
Jacksonville, Fla.	216	24.3	279	30.8	782	27	809
Jersey City, N.J.	304	54.9	370	66.9	1,734	46	1,780
Kansas City, Mo.	261	16.8	270	17.2	1,009	4	1,013
Knoxville, Tenn.	25	4.2	30	5.0	113	1	114
Lake County, Ill.	20	3.9	18	3.5	75	2	77
Las Vegas, Nev.	125	17.5	152	20.5	478	7	485
Little Rock, Ark.	32	6.3	85	16.6	187	5	192
Los Angeles, Calif.	2,340	26.8	2,230	25.2	10,763	93	10,856
Louisville, Ky.	51	5.4	69	7.2	214	2	216
Memphis, Tenn.	89	9.1	109	11.1	357	6	363
Miami, Fla.	1,025	53.8	1,120	57.8	4,179	164	4,343
Middlesex, N.J.	194	19.3	163	16.0	816	24	840
Milwaukee, Wis.	82	5.7	112	7.8	366	2	368
Minneapolis-Saint Paul, Minn.	170	7.0	174	7.1	740	6	746
Monmouth-Ocean City, N.J.	189	19.4	200	20.3	668	24	692
Nashville, Tenn.	92	9.5	108	11.0	368	6	374
Nassau-Suffolk, N.Y.	387	14.8	400	15.3	1,652	42	1,694
New Bedford, Mass.	44	8.7	57	11.3	162	4	166
New Haven, Conn.	116	14.5	150	18.7	609	27	636
New Orleans, La.	352	28.4	353	28.5	1,440	22	1,462
New York, N.Y.	5,415	63.6	6,892	80.6	29,657	735	30,392

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

Metropolitan area of residence	Feb. 1989- Jan. 1990		Feb. 1990- Jan. 1991		Cumulative totals		
	No.	Rate	No.	Rate	Adults/ adolescents	Children <13 years old	Total
Newark, N.J.	958	52.4	984	53.9	4,286	134	4,420
Norfolk, Va.	117	8.5	147	10.5	457	7	464
Oakland, Calif.	418	20.4	587	28.2	2,041	14	2,055
Oklahoma City, Okla.	101	10.6	91	9.5	360	—	360
Omaha, Neb.	26	4.2	36	5.8	121	1	122
Orlando, Fla.	168	16.2	274	25.5	761	9	770
Oxnard-Ventura, Calif.	36	5.5	34	5.1	147	—	147
Philadelphia, Pa.	817	16.9	908	18.7	3,405	52	3,457
Phoenix, Ariz.	260	12.6	213	10.0	950	5	955
Pittsburgh, Pa.	170	8.2	131	6.4	563	2	565
Portland, Oreg.	164	13.4	270	21.8	813	3	816
Providence, R.I.	76	8.3	87	9.5	352	9	361
Raleigh-Durham, N.C.	112	15.6	107	14.5	361	10	371
Richmond, Va.	108	12.6	121	14.0	391	7	398
Riverside-San Bernardino, Calif.	279	11.2	293	11.3	1,055	16	1,071
Rochester, N.Y.	67	6.7	79	7.9	350	3	353
Sacramento, Calif.	156	10.8	147	9.9	642	9	651
Saint Louis, Mo.	205	8.4	301	12.3	865	7	872
Salt Lake City, Utah	67	6.3	79	7.4	296	5	301
San Antonio, Tex.	213	16.7	224	17.2	821	12	833
San Diego, Calif.	529	21.7	677	27.1	2,365	19	2,384
San Francisco, Calif.	1,823	114.5	2,064	128.7	9,510	17	9,527
San Jose, Calif.	128	8.7	184	12.3	718	8	726
San Juan, P.R.	960	60.5	1,123	70.3	3,130	108	3,238
Scranton, Pa.	28	3.8	49	6.7	131	3	134
Seattle, Wash.	404	20.9	429	21.7	1,660	10	1,670
Springfield, Mass.	45	7.5	94	15.6	208	11	219
Syracuse, N.Y.	41	6.2	38	5.8	156	6	162
Tacoma, Wash.	40	6.9	41	7.0	143	2	145
Tampa-Saint Petersburg, Fla.	378	18.7	452	21.9	1,589	28	1,617
Toledo, Ohio	26	4.2	39	6.4	115	3	118
Tucson, Ariz.	66	10.1	51	7.6	244	2	246
Tulsa, Okla.	58	8.2	47	6.6	198	3	201
Washington, D.C.	904	23.4	1,217	31.0	4,566	70	4,636
West Palm Beach, Fla.	327	39.2	370	42.8	1,398	52	1,450
Wilmington, Del.	62	10.8	79	13.7	265	3	268
Worcester, Mass.	37	5.3	55	7.7	178	4	182
Metropolitan area subtotal¹	30,233	20.8	35,507	24.1	137,674	2,384	140,058
All other areas	6,482	6.2	6,940	6.6	23,614	457	24,071
Total	36,715	14.7	42,447	16.8	161,288	2,841	164,129

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 February 1989 through January 1990, February 1990 through January 1991; and cumulative totals, by age group and exposure category, through January 1991, United States

Adult/adolescent exposure category	Males		Females		Totals		
	Feb. 1989-Jan. 1990	Feb. 1990-Jan. 1991	Feb. 1989-Jan. 1990	Feb. 1990-Jan. 1991	Feb. 1989-Jan. 1990	Feb. 1990-Jan. 1991	Cumulative total ¹
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Male homosexual/bisexual contact	20,601 (64)	23,158 (63)	—	—	20,601 (57)	23,158 (56)	95,687 (59)
Intravenous (IV) drug use (female and heterosexual male)	6,569 (20)	7,503 (20)	1,977 (51)	2,319 (48)	8,546 (24)	9,822 (24)	35,229 (22)
Male homosexual/bisexual contact and IV drug use	2,275 (7)	2,250 (6)	—	—	2,275 (6)	2,250 (5)	10,726 (7)
Hemophilia/coagulation disorder	289 (1)	317 (1)	6 (0)	12 (0)	295 (1)	329 (1)	1,411 (1)
Heterosexual contact:	807 (3)	1,057 (3)	1,293 (34)	1,656 (34)	2,100 (6)	2,713 (7)	8,656 (5)
<i>Sex with IV drug user</i>	390	481	821	1,041	1,211	1,522	4,581
<i>Sex with bisexual male</i>	—	—	110	134	110	134	510
<i>Sex with person with hemophilia</i>	1	2	22	27	23	29	82
<i>Born in Pattern-II country</i>	270	288	135	114	405	402	2,063
<i>Sex with person born in Pattern-II country</i>	16	25	14	22	30	47	136
<i>Sex with transfusion recipient with HIV infection</i>	11	28	23	44	34	72	162
<i>Sex with HIV-infected person, risk not specified</i>	119	233	168	274	287	507	1,122
Receipt of blood transfusion, blood components, or tissue ³	496 (2)	487 (1)	335 (9)	332 (7)	831 (2)	819 (2)	3,737 (2)
Other/undetermined ⁴	1,162 (4)	2,049 (6)	246 (6)	525 (11)	1,408 (4)	2,574 (6)	5,842 (4)
Adult/adolescent subtotal	32,199 (100)	36,821 (100)	3,857 (100)	4,844 (100)	36,056 (100)	41,665 (100)	161,288 (100)
Pediatric (<13 years old) exposure category							
Hemophilia/coagulation disorder	25 (7)	31 (8)	1 (0)	—	26 (4)	31 (4)	141 (5)
Mother with/at risk for HIV infection:	282 (83)	340 (83)	292 (91)	343 (92)	574 (87)	683 (87)	2,374 (84)
<i>IV drug use</i>	139	165	126	151	265	316	1,185
<i>Sex with IV drug user</i>	65	74	63	74	128	148	493
<i>Sex with bisexual male</i>	8	4	7	4	15	8	49
<i>Sex with person with hemophilia</i>	—	2	—	1	—	3	10
<i>Born in Pattern-II country</i>	27	21	29	19	56	40	217
<i>Sex with person born in Pattern-II country</i>	1	2	3	3	4	5	12
<i>Sex with transfusion recipient with HIV infection</i>	1	1	5	—	6	1	12
<i>Sex with HIV-infected person, risk not specified</i>	9	14	17	20	26	34	99
<i>Receipt of blood transfusion, blood components, or tissue</i>	4	5	7	7	11	12	48
<i>Has HIV infection, risk not specified</i>	28	52	35	64	63	116	249
Receipt of blood transfusion, blood components, or tissue	26 (8)	24 (6)	15 (5)	13 (4)	41 (6)	37 (5)	254 (9)
Undetermined	6 (2)	16 (4)	12 (4)	15 (4)	18 (3)	31 (4)	72 (3)
Pediatric subtotal	339 (100)	411 (100)	320 (100)	371 (100)	659 (100)	782 (100)	2,841 (100)
Total	32,538	37,232	4,177	5,215	36,715	42,447	164,129

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 Includes 14 transfusion recipients who received blood screened for HIV antibody, and 1 tissue recipient.

⁴ "Other" refers to 3 health-care workers who seroconverted to HIV and developed AIDS after occupational exposure to HIV-infected blood. "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 January 1991, United States

Adult/adolescent exposure category	White, not Hispanic	Black, not Hispanic	Hispanic	Asian/Pacific Islander	American Indian/Alaskan Native	Total ⁴
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Male homosexual/bisexual contact	68,126 (76)	16,256 (36)	10,231 (40)	744 (75)	126 (54)	95,687 (59)
Intravenous (IV) drug use (female and heterosexual male)	7,139 (8)	17,654 (39)	10,271 (40)	44 (4)	38 (16)	35,229 (22)
Male homosexual/bisexual contact and IV drug use	6,212 (7)	2,896 (6)	1,548 (6)	21 (2)	32 (14)	10,726 (7)
Hemophilia/coagulation disorder	1,171 (1)	99 (0)	112 (0)	17 (2)	8 (3)	1,411 (1)
Heterosexual contact:	1,854 (2)	5,157 (11)	1,578 (6)	37 (4)	10 (4)	8,656 (5)
<i>Sex with IV drug user</i>	1,003	2,322	1,221	16	7	4,581
<i>Sex with bisexual male</i>	281	159	59	9	1	510
<i>Sex with person with hemophilia</i>	71	7	3	1	—	82
<i>Born in Pattern-II¹ country</i>	7	2,032	16	4	—	2,063
<i>Sex with person born in Pattern-II country</i>	42	85	8	—	—	136
<i>Sex with transfusion recipient with HIV infection</i>	105	27	27	1	—	162
<i>Sex with HIV-infected person, risk not specified</i>	345	525	244	6	2	1,122
Receipt of blood transfusion, blood components, or tissue ²	2,618 (3)	648 (1)	386 (2)	71 (7)	6 (3)	3,737 (2)
Other/undetermined ³	2,135 (2)	2,263 (5)	1,319 (5)	64 (6)	12 (5)	5,842 (4)
Adult/adolescent subtotal	89,255(100)	44,973 (100)	25,445(100)	998 (100)	232(100)	161,288(100)
Pediatric (<13 years old) exposure category						
Hemophilia/coagulation disorder	96 (16)	19 (1)	23 (3)	3 (25)	—	141 (5)
Mother with/at risk for HIV infection:	373 (61)	1,357 (92)	626 (86)	4 (33)	6 (86)	2,374 (84)
<i>IV drug use</i>	183	674	321	1	2	1,185
<i>Sex with IV drug user</i>	79	213	198	1	1	493
<i>Sex with bisexual male</i>	18	21	10	—	—	49
<i>Sex with person with hemophilia</i>	7	2	1	—	—	10
<i>Born in Pattern-II country</i>	2	212	3	—	—	217
<i>Sex with person born in Pattern-II country</i>	—	11	—	—	—	12
<i>Sex with transfusion recipient with HIV infection</i>	5	3	3	—	—	12
<i>Sex with HIV-infected person, risk not specified</i>	20	47	29	1	1	99
<i>Receipt of blood transfusion, blood components, or tissue</i>	17	19	12	—	—	48
<i>Has HIV infection, risk not specified</i>	42	155	49	1	2	249
Receipt of blood transfusion, blood components, or tissue	135 (22)	56 (4)	58 (8)	5 (42)	—	254 (9)
Undetermined	9 (1)	42 (3)	20 (3)	—	1 (14)	72 (3)
Pediatric subtotal	613(100)	1,474 (100)	727(100)	12 (100)	7(100)	2,841(100)
Total	89,868	46,447	26,172	1,010	239	164,129

¹ See technical notes.

² Includes 14 transfusion recipients who received blood screened for HIV antibody, and 1 tissue recipient.

³ "Other" refers to 3 health-care workers who seroconverted to HIV and developed AIDS after occupational exposure to HIV-infected blood. "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 393 persons whose race/ethnicity is unknown.

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

Male exposure category	White, not Hispanic	Black, not Hispanic	Hispanic	Asian/Pacific Islander	American Indian/ Alaskan Native	Total ⁴
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Male homosexual/bisexual contact	68,126 (80)	16,256 (44)	10,231 (46)	744 (81)	126 (63)	95,687 (66)
Intravenous (IV) drug use (heterosexual)	5,449 (6)	12,959 (35)	8,619 (39)	30 (3)	22 (11)	27,147 (19)
Male homosexual/bisexual contact and IV drug use	6,212 (7)	2,896 (8)	1,548 (7)	21 (2)	32 (16)	10,726 (7)
Hemophilia/coagulation disorder	1,144 (1)	93 (0)	110 (0)	17 (2)	8 (4)	1,376 (1)
Heterosexual contact:	589 (1)	2,488 (7)	358 (2)	9 (1)	2 (1)	3,450 (2)
<i>Sex with IV drug user</i>	363	729	225	5	2	1,324
<i>Sex with person with hemophilia</i>	5	—	1	—	—	6
<i>Born in Pattern-II¹ country</i>	4	1,479	11	3	—	1,500
<i>Sex with person born in</i> <i>Pattern-II country</i>	35	38	7	—	—	80
<i>Sex with transfusion recipient</i> <i>with HIV infection</i>	30	14	7	—	—	52
<i>Sex with HIV-infected person,</i> <i>risk not specified</i>	152	228	107	1	—	488
Receipt of blood transfusion, blood components, or tissue ²	1,688 (2)	348 (1)	205 (1)	45 (5)	2 (1)	2,294 (2)
Other/undetermined ³	1,834 (2)	1,670 (5)	1,108 (5)	50 (5)	8 (4)	4,714 (3)
Male subtotal	85,042 (100)	36,710 (100)	22,179 (100)	916 (100)	200 (100)	145,394 (100)
Female						
exposure category						
IV drug use	1,690 (40)	4,695 (57)	1,652 (51)	14 (17)	16 (50)	8,082 (51)
Hemophilia/coagulation disorder	27 (1)	6 (0)	2 (0)	—	—	35 (0)
Heterosexual contact:	1,265 (30)	2,669 (32)	1,220 (37)	28 (34)	8 (25)	5,206 (33)
<i>Sex with IV drug user</i>	640	1,593	996	11	5	3,257
<i>Sex with bisexual male</i>	281	159	59	9	1	510
<i>Sex with person with hemophilia</i>	66	7	2	1	—	76
<i>Born in Pattern-II country</i>	3	553	5	1	—	563
<i>Sex with person born in</i> <i>Pattern-II country</i>	7	47	1	—	—	56
<i>Sex with transfusion recipient</i> <i>with HIV infection</i>	75	13	20	1	—	110
<i>Sex with HIV-infected person,</i> <i>risk not specified</i>	193	297	137	5	2	634
Receipt of blood transfusion, blood components, or tissue	930 (22)	300 (4)	181 (6)	26 (32)	4 (13)	1,443 (9)
Other/undetermined	301 (7)	593 (7)	211 (6)	14 (17)	4 (13)	1,128 (7)
Female subtotal	4,213 (100)	8,263 (100)	3,266 (100)	82 (100)	32 (100)	15,894 (100)
Total	89,255	44,973	25,445	998	232	161,288

¹ See technical notes.

² Includes 14 transfusion recipients who received blood screened for HIV antibody, and 1 tissue recipient.

³ "Other" refers to 3 health-care workers who seroconverted to HIV and developed AIDS after occupational exposure to HIV-infected blood. "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 347 males and 38 females whose race/ethnicity is unknown.

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

Exposure category	13-19 years old			20-24 years old		
	Feb. 1989- Jan. 1990	Feb. 1990- Jan. 1991	Cumulative total	Feb. 1989- Jan. 1990	Feb. 1990- Jan. 1991	Cumulative total
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Male homosexual/bisexual contact	36 (27)	29 (17)	169 (26)	815 (54)	792 (49)	3,861 (56)
Intravenous (IV) drug use (female and heterosexual male)	16 (12)	15 (9)	71 (11)	287 (19)	296 (18)	1,127 (16)
Male homosexual/bisexual contact and IV drug use	3 (2)	5 (3)	28 (4)	128 (8)	129 (8)	623 (9)
Hemophilia/coagulation disorder	44 (33)	51 (31)	198 (31)	33 (2)	34 (2)	172 (3)
Heterosexual contact:	20 (15)	34 (20)	88 (14)	165 (11)	207 (13)	663 (10)
<i>Sex with IV drug user</i>	15	26	58	98	129	376
<i>Sex with bisexual male</i>	1	1	4	11	9	52
<i>Sex with person with hemophilia</i>	1	1	2	8	4	16
<i>Born in Pattern-II¹ country</i>	—	2	13	19	19	111
<i>Sex with person born in Pattern-II country</i>	—	—	—	1	7	10
<i>Sex with transfusion recipient with HIV infection</i>	—	1	1	1	5	7
<i>Sex with HIV-infected person, risk not specified</i>	3	3	10	27	34	91
Receipt of blood transfusion, blood components, or tissue	5 (4)	12 (7)	49 (8)	14 (1)	23 (1)	99 (1)
Undetermined ²	11 (8)	21 (13)	43 (7)	64 (4)	125 (8)	296 (4)
Total	135 (100)	167 (100)	646 (100)	1,506 (100)	1,606 (100)	6,841 (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 January 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	207	(0)	660	(2)	312	(1)	3	(0)	3	(1)	1,189 (1)
5-12	162	(0)	98	(0)	72	(0)	5	(1)	—		339 (0)
13-19	227	(0)	149	(0)	96	(0)	7	(1)	5	(2)	484 (0)
20-24	2,922	(3)	1,736	(5)	1,036	(5)	28	(3)	12	(6)	5,748 (4)
25-29	12,914	(15)	5,906	(16)	3,862	(17)	125	(14)	44	(22)	22,893 (16)
30-34	20,000	(23)	9,336	(25)	5,703	(25)	197	(21)	51	(25)	35,363 (24)
35-39	18,724	(22)	8,620	(23)	4,965	(22)	209	(23)	35	(17)	32,640 (22)
40-44	12,877	(15)	5,037	(13)	3,081	(14)	148	(16)	23	(11)	21,224 (14)
45-49	7,633	(9)	2,742	(7)	1,592	(7)	88	(10)	15	(7)	12,098 (8)
50-54	4,227	(5)	1,497	(4)	891	(4)	48	(5)	4	(2)	6,686 (5)
55-59	2,665	(3)	911	(2)	545	(2)	31	(3)	6	(3)	4,173 (3)
60-64	1,514	(2)	480	(1)	246	(1)	9	(1)	4	(2)	2,256 (2)
65 or older	1,339	(2)	297	(1)	162	(1)	26	(3)	1	(0)	1,830 (1)
Male subtotal	85,411	(100)	37,469	(100)	22,563	(100)	924	(100)	203	(100)	146,923 (100)
Females											
Age at diagnosis (years)											
Under 5	200	(4)	633	(7)	289	(8)	1	(1)	4	(11)	1,128 (7)
5-12	44	(1)	82	(1)	54	(1)	3	(3)	—		184 (1)
13-19	44	(1)	92	(1)	24	(1)	1	(1)	1	(3)	162 (1)
20-24	294	(7)	520	(6)	266	(7)	4	(5)	5	(14)	1,093 (6)
25-29	795	(18)	1,604	(18)	761	(21)	8	(9)	4	(11)	3,180 (18)
30-34	958	(21)	2,371	(26)	874	(24)	17	(20)	10	(28)	4,240 (25)
35-39	667	(15)	1,858	(21)	632	(18)	11	(13)	5	(14)	3,180 (18)
40-44	377	(8)	876	(10)	343	(10)	17	(20)	2	(6)	1,617 (9)
45-49	203	(5)	390	(4)	153	(4)	7	(8)	2	(6)	759 (4)
50-54	147	(3)	224	(2)	95	(3)	5	(6)	1	(3)	472 (3)
55-59	168	(4)	138	(2)	51	(1)	3	(3)	—		362 (2)
60-64	158	(4)	92	(1)	28	(1)	6	(7)	1	(3)	285 (2)
65 or older	402	(9)	98	(1)	39	(1)	3	(3)	1	(3)	544 (3)
Female subtotal	4,457	(100)	8,978	(100)	3,609	(100)	86	(100)	36	(100)	17,206 (100)
Total	89,868		46,447		26,172		1,010		239		164,129

¹ Includes 393 persons whose race/ethnicity is unknown.

Table 8. AIDS cases, case-fatality rates, and deaths by half-year and age group, through January 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	77	81.8	30	6	66.7	1
1981 Jan.-June	92	93.5	38	8	62.5	2
July-Dec.	202	91.1	85	6	100.0	6
1982 Jan.-June	393	90.6	152	14	78.6	9
July-Dec.	686	88.8	283	15	80.0	5
1983 Jan.-June	1,267	92.0	519	32	96.9	13
July-Dec.	1,630	91.7	916	42	78.6	16
1984 Jan.-June	2,545	89.4	1,379	49	83.7	25
July-Dec.	3,341	90.2	1,920	62	74.2	24
1985 Jan.-June	4,826	89.3	2,758	94	74.5	44
July-Dec.	6,200	87.5	3,752	127	74.0	68
1986 Jan.-June	8,147	85.9	4,928	135	73.3	65
July-Dec.	9,786	83.1	6,269	180	66.1	84
1987 Jan.-June	12,620	82.5	7,290	219	62.6	113
July-Dec.	14,018	76.4	7,668	245	58.8	157
1988 Jan.-June	15,837	70.1	8,898	236	50.0	129
July-Dec.	16,180	63.8	10,111	318	45.9	151
1989 Jan.-June	17,812	53.5	11,357	313	42.8	154
July-Dec.	17,384	44.6	12,743	295	38.6	160
1990 Jan.-June	16,810	31.7	11,813	268	25.4	137
July-Dec.	11,261	18.1	8,117	176	18.2	96
1991 Jan.-Jan.	174	8.0	138	1	0.0	2
Total¹	161,288	62.8	101,339	2,841	51.5	1,464

¹ Death totals include 175 adults/adolescents and 3 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 January 1991, United States

Definition category ¹	Year of diagnosis					Cumulative total
	Before Feb. 1987	Feb. 1987-Jan. 1988	Feb. 1988-Jan. 1989	Feb. 1989-Jan. 1990	Feb. 1990-Jan. 1991	
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
Pre-1987 definition	39,063 (93)	22,036 (80)	23,594 (71)	24,472 (68)	16,734 (65)	125,899 (77)
1987 definition: ²	2,942 (7)	5,563 (20)	9,532 (29)	11,378 (32)	8,815 (35)	38,230 (23)
<i>Specific disease</i>						
<i>presumptively diagnosed</i>	1,577	2,995	5,381	6,488	5,421	21,862
<i>Specific disease</i>						
<i>definitively diagnosed</i>	453	498	654	791	543	2,939
<i>HIV encephalopathy</i>	279	748	1,166	1,310	870	4,373
<i>HIV wasting syndrome</i>	633	1,322	2,331	2,789	1,981	9,056
Total	42,005 (100)	27,599 (100)	33,126 (100)	35,850 (100)	25,549 (100)	164,129 (100)

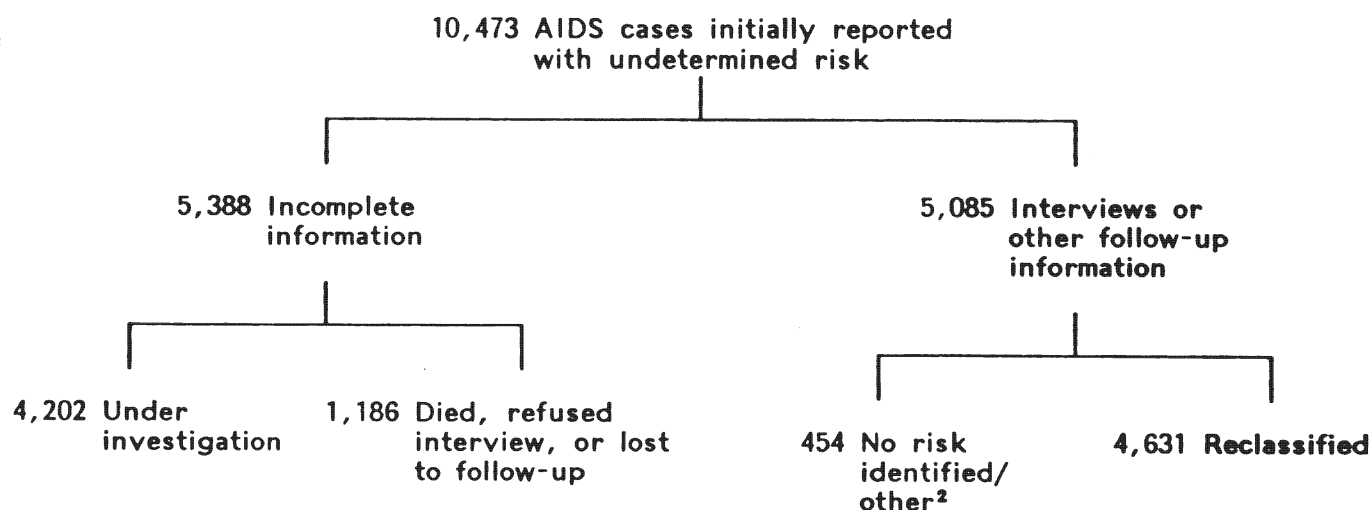
¹ Persons who meet the criteria for more than one definition category are classified in the definition category listed first.

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 January 1991, United States

Exposure category	AIDS cases	
	No.	(%)
Single mode of exposure		
Male homosexual/bisexual contact	91,903	(57)
Intravenous (IV) drug use (female and heterosexual male)	30,209	(19)
Hemophilia/coagulation disorder	872	(1)
Heterosexual contact	8,247	(5)
Receipt of transfusion of blood, blood component, or tissue	3,737	(2)
Other/undetermined	5,842	(4)
Single mode of exposure subtotal	140,810	(87)
Multiple modes of exposure		
Male homosexual/bisexual contact; IV drug use	9,655	(6)
Male homosexual/bisexual contact; hemophilia	35	(0)
Male homosexual/bisexual contact; heterosexual contact	1,943	(1)
Male homosexual/bisexual contact; receipt of transfusion	1,687	(1)
IV drug use; hemophilia	40	(0)
IV drug use; heterosexual contact	4,023	(2)
IV drug use; receipt of transfusion	716	(0)
Hemophilia; heterosexual contact	10	(0)
Hemophilia; receipt of transfusion	516	(0)
Heterosexual contact; receipt of transfusion	409	(0)
Male homosexual/bisexual contact; IV drug use; hemophilia	7	(0)
Male homosexual/bisexual contact; IV drug use; heterosexual contact	754	(0)
Male homosexual/bisexual contact; IV drug use; receipt of transfusion	267	(0)
Male homosexual/bisexual contact; hemophilia; heterosexual contact	2	(0)
Male homosexual/bisexual contact; hemophilia; receipt of transfusion	18	(0)
Male homosexual/bisexual contact; heterosexual contact; receipt of transfusion	99	(0)
IV drug use; hemophilia; heterosexual contact	2	(0)
IV drug use; hemophilia; receipt of transfusion	19	(0)
IV drug use; heterosexual contact; receipt of transfusion	215	(0)
Hemophilia; heterosexual contact; receipt of transfusion	13	(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	36	(0)
IV drug use; hemophilia; heterosexual contact; receipt of transfusion	5	(0)
Multiple modes of exposure subtotal	20,478	(13)
Total	161,288	(100)

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



¹ Excludes 72 children under 13 years of age who have an undetermined risk: 64 children are under investigation and 8 have died, refused interview, or were lost to follow-up. An additional 109 children who were initially reported with an undetermined risk have been reclassified after investigation.

² **Health-care workers.** 3 of the 454 adults/adolescents are classified as "other" and are health-care workers who seroconverted to HIV and developed AIDS after occupational exposure to HIV-infected blood. For the remaining 451, the mode of exposure to HIV remains undetermined after investigation. 70 of these are health-care workers, 64 of whom responded to a standardized questionnaire. 37 (58%) 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 the 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. 393 of the 451 patients who had no risk identified after follow-up responded to a standardized questionnaire; 126 (35%) of 359 persons responding to questions related to sexually transmitted disease gave a history of such disease and 84 (34%) of 247 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.

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 1989 or 1990 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-Chavez, 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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