

HIV/AIDS

SURVEILLANCE

U.S. AIDS cases reported through July 1991

Issued August 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 August 1990 through July 1991, United States

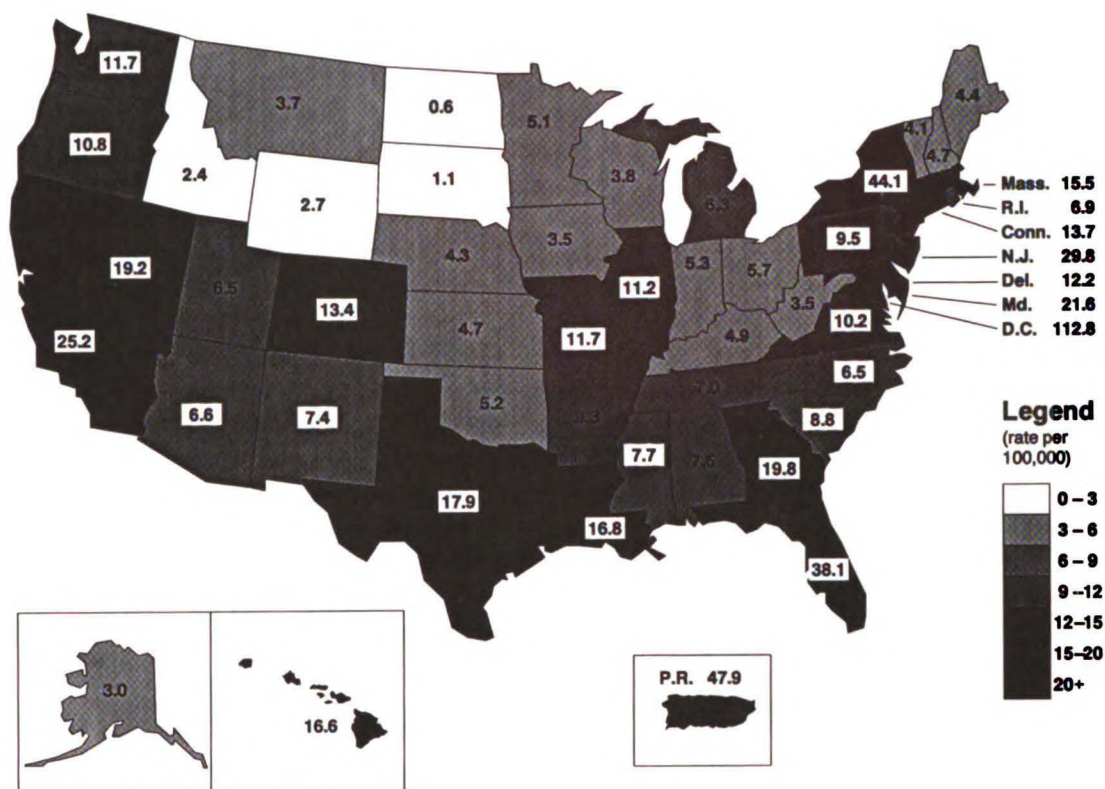


Figure 2. Adult/adolescent and pediatric AIDS cases, reported August 1990 through July 1991, United States

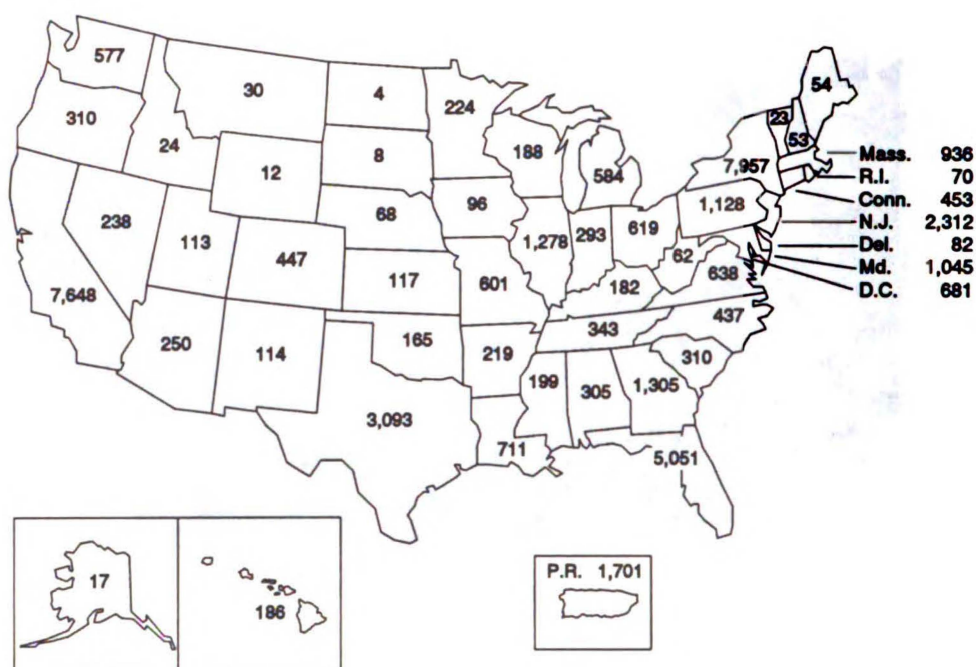


Figure 3. Pediatric AIDS cases, reported August 1990 through July 1991, United States

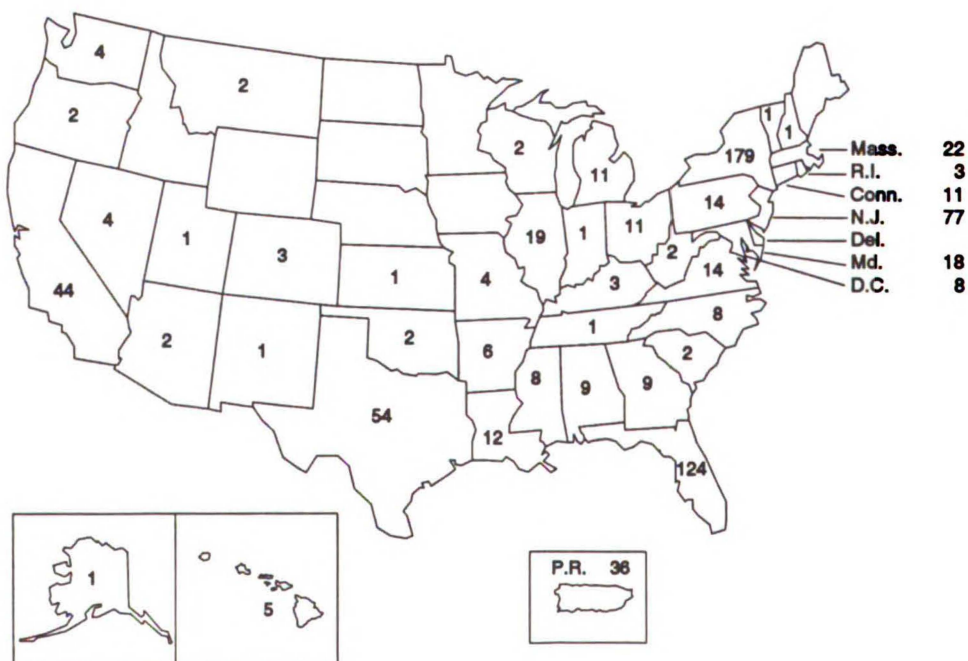


Table 1. AIDS cases and annual rates per 100,000 population, by state, reported August 1989 through July 1990, August 1990 through July 1991; and cumulative totals, by state and age group, through July 1991¹

State of residence	Aug. 1989- July 1990		Aug. 1990- July 1991		Cumulative totals		
	No.	Rate	No.	Rate	Adults/ adolescents	Children < 13 years old	Total
Alabama	219	5.4	305	7.5	1,063	26	1,089
Alaska	29	5.3	17	3.0	110	3	113
Arizona	380	10.4	250	6.6	1,435	10	1,445
Arkansas	132	5.6	219	9.3	556	13	569
California	6,899	23.2	7,648	25.2	34,778	231	35,009
Colorado	346	10.5	447	13.4	1,846	11	1,857
Connecticut	433	13.2	453	13.7	2,097	65	2,162
Delaware	85	12.8	82	12.2	354	4	358
District of Columbia	634	104.5	681	112.8	3,055	42	3,097
Florida	4,067	31.4	5,051	38.1	16,870	462	17,332
Georgia	1,208	18.6	1,305	19.8	4,983	51	5,034
Hawaii	166	15.0	186	16.6	734	7	741
Idaho	24	2.4	24	2.4	89	2	91
Illinois	1,210	10.6	1,278	11.2	5,385	78	5,463
Indiana	342	6.2	293	5.3	1,199	11	1,210
Iowa	46	1.7	96	3.5	280	3	283
Kansas	129	5.2	117	4.7	500	4	504
Kentucky	157	4.3	182	4.9	602	8	610
Louisiana	685	16.2	711	16.8	2,691	46	2,737
Maine	64	5.2	54	4.4	245	2	247
Maryland	864	18.1	1,045	21.6	3,652	80	3,732
Massachusetts	811	13.5	936	15.5	3,841	86	3,927
Michigan	554	6.0	584	6.3	2,305	37	2,342
Minnesota	175	4.0	224	5.1	936	8	944
Mississippi	259	10.1	199	7.7	761	18	779
Missouri	554	10.8	601	11.7	2,163	14	2,177
Montana	16	2.0	30	3.7	75	2	77
Nebraska	44	2.8	68	4.3	221	2	223
Nevada	173	14.4	238	19.2	770	9	779
New Hampshire	49	4.4	53	4.7	217	5	222
New Jersey	2,375	30.7	2,312	29.8	11,419	331	11,750
New Mexico	97	6.4	114	7.4	405	3	408
New York	7,886	43.8	7,957	44.1	38,346	902	39,248
North Carolina	589	8.9	437	6.5	1,888	37	1,925
North Dakota	5	0.8	4	0.6	24	—	24
Ohio	640	5.9	619	5.7	2,626	43	2,669
Oklahoma	225	7.2	165	5.2	809	12	821
Oregon	255	9.0	310	10.8	1,165	7	1,172
Pennsylvania	1,147	9.7	1,128	9.5	5,040	80	5,120
Rhode Island	89	8.9	70	6.9	404	9	413
South Carolina	386	11.1	310	8.8	1,233	23	1,256
South Dakota	2	0.3	8	1.1	26	—	26
Tennessee	301	6.2	343	7.0	1,285	15	1,300
Texas	3,144	18.5	3,093	17.9	13,032	138	13,170
Utah	93	5.4	113	6.5	406	9	415
Vermont	19	3.4	23	4.1	84	2	86
Virginia	589	9.5	638	10.2	2,403	46	2,449
Washington	666	13.7	577	11.7	2,551	15	2,566
West Virginia	65	3.6	62	3.5	212	4	216
Wisconsin	197	4.0	188	3.8	736	5	741
Wyoming	5	1.1	12	2.7	45	—	45
U.S. total	39,529	15.9	41,860	16.7	177,952	3,021	180,973
Guam	1	0.7	4	2.8	10	—	10
Pacific Islands, U.S.	1	0.5	—	—	2	—	2
Puerto Rico	1,490	42.3	1,701	47.9	5,645	174	5,819
Virgin Islands, U.S.	9	7.7	15	12.7	87	4	91
Total	41,030	16.2	43,580	17.1	183,696	3,199	186,895

¹During July 1991, 4,002 cases and 2,396 deaths among adults/adolescents and 59 cases and 31 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 August 1989 through July 1990, August 1990 through July 1991; and cumulative totals, by area and age group, through July 1991

Metropolitan area of residence	Aug. 1989- July 1990		Aug. 1990- July 1991		Cumulative totals		
	No.	Rate	No.	Rate	Adults/ adolescents	Children <13 years old	Total
Akron, Ohio	28	4.3	29	4.4	124	—	124
Albany-Schenectady, N.Y.	96	11.0	88	10.0	374	6	380
Allentown, Pa.	52	7.6	38	5.5	176	5	181
Anaheim, Calif.	338	14.0	328	13.3	1,503	10	1,513
Atlanta, Ga.	923	32.6	1,029	35.4	3,847	30	3,877
Austin, Tex.	244	31.2	206	25.6	828	8	836
Bakersfield, Calif.	36	6.6	49	8.8	146	2	148
Baltimore, Md.	592	24.9	644	26.8	2,216	59	2,275
Baton Rouge, La.	63	11.9	64	12.0	238	4	242
Bergen-Passaic, N.J.	303	23.7	261	20.4	1,464	29	1,493
Birmingham, Ala.	68	7.5	94	10.3	340	7	347
Boston, Mass.	603	15.9	616	16.2	2,924	60	2,984
Bridgeport, Conn.	111	13.4	122	14.7	614	21	635
Buffalo, N.Y.	107	11.0	78	8.1	308	3	311
Charleston, S.C.	85	16.8	62	12.0	276	1	277
Charlotte, N.C.	108	9.3	50	4.2	345	7	352
Chicago, Ill.	1,017	16.8	1,030	17.0	4,503	60	4,563
Cincinnati, Ohio	119	8.2	105	7.2	411	6	417
Cleveland, Ohio	135	7.4	158	8.7	671	12	683
Columbus, Ohio	136	9.9	130	9.3	571	4	575
Dallas, Tex.	706	27.6	733	28.1	3,193	19	3,212
Dayton, Ohio	58	6.1	63	6.6	256	6	262
Denver, Colo.	282	17.4	377	23.0	1,518	7	1,525
Detroit, Mich.	404	9.2	392	9.0	1,617	25	1,642
El Paso, Tex.	44	7.4	43	7.1	136	1	137
Fort Lauderdale, Fla.	888	70.7	882	68.9	3,060	60	3,120
Fort Worth, Tex.	184	13.8	192	14.0	737	10	747
Fresno, Calif.	59	8.8	61	8.9	230	2	232
Gary, Ind.	36	6.0	29	4.8	111	1	112
Grand Rapids, Mich.	22	3.2	36	5.2	116	1	117
Greensboro, N.C.	93	9.9	76	8.0	300	6	306
Greenville, S.C.	46	7.2	39	6.0	153	—	153
Harrisburg, Pa.	39	6.6	36	6.1	182	4	186
Hartford, Conn.	161	14.3	150	13.3	636	15	651
Honolulu, Hawaii	117	14.0	133	15.8	551	4	555
Houston, Tex.	1,241	37.6	1,250	37.2	5,435	58	5,493
Indianapolis, Ind.	172	13.8	138	11.0	570	3	573
Jacksonville, Fla.	238	26.2	254	27.5	864	28	892
Jersey City, N.J.	326	58.9	399	72.2	1,949	56	2,005
Kansas City, Mo.	331	21.1	227	14.4	1,113	4	1,117
Knoxville, Tenn.	26	4.3	32	5.3	130	1	131
Lake County, Ill.	18	3.5	34	6.5	100	3	103
Las Vegas, Nev.	133	17.9	177	23.0	568	9	577
Little Rock, Ark.	57	11.1	80	15.5	223	7	230
Los Angeles, Calif.	2,235	25.2	2,709	30.1	12,294	98	12,392
Louisville, Ky.	66	6.9	68	7.1	245	5	250
Memphis, Tenn.	106	10.8	95	9.6	406	6	412
Miami, Fla.	1,086	56.1	1,649	83.8	5,234	180	5,414
Middlesex, N.J.	177	17.4	189	18.3	923	25	948
Milwaukee, Wis.	111	7.8	84	5.9	406	2	408
Minneapolis-Saint Paul, Minn.	161	6.5	195	7.8	835	6	841
Monmouth-Ocean City, N.J.	187	19.0	192	19.2	757	27	784
Nashville, Tenn.	87	8.8	126	12.6	429	6	435
Nassau-Suffolk, N.Y.	446	17.1	358	13.7	1,818	45	1,863
New Bedford, Mass.	50	9.9	80	15.7	207	5	212
New Haven, Conn.	129	16.0	152	18.8	680	28	708
New Orleans, La.	403	32.5	411	33.2	1,683	26	1,709
New York, N.Y.	6,589	77.1	6,838	79.8	33,275	815	34,090

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

Metropolitan area of residence	Aug. 1989- July 1990		Aug. 1990- July 1991		Cumulative totals		
	No.	Rate	No.	Rate	Adults/ adolescents	Children <13 years old	Total
Newark, N.J.	993	54.4	895	49.2	4,720	153	4,873
Norfolk, Va.	152	10.9	153	10.8	538	12	550
Oakland, Calif.	538	25.8	479	22.6	2,255	14	2,269
Oklahoma City, Okla.	119	12.4	79	8.2	411	—	411
Omaha, Neb.	35	5.7	44	7.1	155	1	156
Orlando, Fla.	195	18.2	424	38.2	992	14	1,006
Oxnard-Ventura, Calif.	36	5.4	43	6.3	174	—	174
Philadelphia, Pa.	838	17.3	870	17.9	3,817	57	3,874
Phoenix, Ariz.	283	13.3	187	8.6	1,054	6	1,060
Pittsburgh, Pa.	139	6.8	112	5.5	611	2	613
Portland, Oreg.	198	16.0	248	19.8	921	4	925
Providence, R.I.	84	9.2	68	7.4	381	8	389
Raleigh-Durham, N.C.	138	18.8	102	13.5	422	10	432
Richmond, Va.	121	14.0	99	11.3	443	9	452
Riverside-San Bernardino, Calif.	279	10.8	307	11.4	1,190	17	1,207
Rochester, N.Y.	90	9.0	85	8.5	401	4	405
Sacramento, Calif.	123	8.3	213	14.0	761	10	771
Saint Louis, Mo.	201	8.2	326	13.3	989	9	998
Salt Lake City, Utah	80	7.5	101	9.3	358	6	364
San Antonio, Tex.	214	16.4	200	15.1	900	13	913
San Diego, Calif.	680	27.2	582	22.7	2,637	19	2,656
San Francisco, Calif.	1,927	120.2	2,167	134.2	10,606	18	10,624
San Jose, Calif.	156	10.4	187	12.3	815	8	823
San Juan, P.R.	946	56.0	1,087	63.7	3,535	114	3,649
Scranton, Pa.	37	5.0	41	5.6	146	3	149
Seattle, Wash.	503	25.5	407	20.3	1,915	10	1,925
Springfield, Mass.	67	11.1	118	19.5	271	13	284
Syracuse, N.Y.	57	8.6	40	6.0	179	6	185
Tacoma, Wash.	48	8.2	49	8.2	175	5	180
Tampa-Saint Petersburg, Fla.	416	20.1	456	21.6	1,828	34	1,862
Toledo, Ohio	50	8.1	39	6.4	145	3	148
Tucson, Ariz.	63	9.4	48	7.1	270	3	273
Tulsa, Okla.	57	8.0	51	7.1	232	4	236
Washington, D.C.	1,057	26.9	1,260	31.6	5,232	73	5,305
West Palm Beach, Fla.	354	41.0	386	43.3	1,574	62	1,636
Wilmington, Del.	74	12.8	63	10.8	289	3	292
Worcester, Mass.	39	5.5	68	9.5	208	4	212
Metropolitan area subtotal¹	34,065	23.1	36,244	24.4	156,369	2,669	159,038
All other areas	6,965	6.6	7,336	6.9	27,327	530	27,857
Total	41,030	16.2	43,580	17.1	183,696	3,199	186,895

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

Adult/adolescent exposure category	Males		Females		Totals		
	Aug. 1989- July 1990	Aug. 1990- July 1991	Aug. 1989- July 1990	Aug. 1990- July 1991	Aug. 1989- July 1990	Aug. 1990- July 1991	Cumulative total ¹
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Male homosexual/bisexual contact	22,908 (64)	23,355 (62)	—	—	22,908 (57)	23,355 (55)	108,087 (59)
Intravenous (IV) drug use (female and heterosexual male)	7,365 (21)	7,808 (21)	2,215 (50)	2,540 (48)	9,580 (24)	10,348 (24)	40,774 (22)
Male homosexual/bisexual contact and IV drug use	2,440 (7)	2,328 (6)	—	—	2,440 (6)	2,328 (5)	12,089 (7)
Hemophilia/coagulation disorder	298 (1)	294 (1)	6 (0)	10 (0)	304 (1)	304 (1)	1,559 (1)
Heterosexual contact:	974 (3)	1,148 (3)	1,562 (35)	1,824 (35)	2,536 (6)	2,972 (7)	10,279 (6)
Sex with IV drug user	434	497	989	1,096	1,423	1,593	5,445
Sex with bisexual male	—	—	137	142	137	142	588
Sex with person with hemophilia	1	2	26	27	27	29	94
Born in Pattern-II ² country	306	309	136	133	442	442	2,295
Sex with person born in Pattern-II country	24	29	21	23	45	52	164
Sex with transfusion recipient with HIV infection	19	32	34	53	53	85	209
Sex with HIV-infected person, risk not specified	190	279	219	350	409	629	1,484
Receipt of blood transfusion, blood components, or tissue ³	510 (1)	459 (1)	342 (8)	280 (5)	852 (2)	739 (2)	4,081 (2)
Other/undetermined ⁴	1,372 (4)	2,200 (6)	311 (7)	592 (11)	1,683 (4)	2,792 (7)	6,827 (4)
Adult/adolescent subtotal	35,867 (100)	37,592 (100)	4,436 (100)	5,246 (100)	40,303 (100)	42,838 (100)	183,696 (100)
Pediatric (<13 years old) exposure category							
Hemophilia/coagulation disorder	30 (8)	24 (6)	—	1 (0)	30 (4)	25 (3)	153 (5)
Mother with/at risk for HIV infection:	305 (82)	346 (86)	324 (91)	310 (91)	629 (87)	656 (88)	2,696 (84)
IV drug use	145	157	149	133	294	290	1,321
Sex with IV drug user	73	70	72	64	145	134	561
Sex with bisexual male	8	2	8	6	16	8	56
Sex with person with hemophilia	—	3	1	—	1	3	11
Born in Pattern-II country	23	20	24	10	47	30	229
Sex with person born in Pattern-II country	2	—	2	2	4	2	13
Sex with transfusion recipient with HIV infection	—	1	3	—	3	1	12
Sex with HIV-infected person, risk not specified	13	23	20	19	33	42	128
Receipt of blood transfusion, blood components, or tissue	7	6	3	8	10	14	54
Has HIV infection, risk not specified	34	64	42	68	76	132	311
Receipt of blood transfusion, blood components, or tissue	25 (7)	24 (6)	16 (5)	17 (5)	41 (6)	41 (6)	275 (9)
Undetermined	12 (3)	9 (2)	15 (4)	11 (3)	27 (4)	20 (3)	75 (2)
Pediatric subtotal	372 (100)	403 (100)	355 (100)	339 (100)	727 (100)	742 (100)	3,199 (100)
Total	36,239	37,995	4,791	5,585	41,030	43,580	186,895

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 July 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	76,452 (76)	18,538 (36)	11,841 (40)	857 (75)	150 (54)	108,087 (59)
Intravenous (IV) drug use (female and heterosexual male)	8,327 (8)	20,486 (39)	11,772 (40)	49 (4)	49 (18)	40,774 (22)
Male homosexual/bisexual contact and IV drug use	6,989 (7)	3,297 (6)	1,727 (6)	26 (2)	38 (14)	12,089 (7)
Hemophilia/coagulation disorder	1,289 (1)	114 (0)	126 (0)	17 (1)	8 (3)	1,559 (1)
Heterosexual contact:	2,180 (2)	6,145 (12)	1,867 (6)	42 (4)	15 (5)	10,279 (6)
<i>Sex with IV drug user</i>	1,154	2,833	1,413	17	11	5,445
<i>Sex with bisexual male</i>	314	189	72	10	1	588
<i>Sex with person with hemophilia</i>	81	7	5	1	—	94
<i>Born in Pattern-II¹ country</i>	7	2,261	18	3	—	2,295
<i>Sex with person born in Pattern-II country</i>	49	103	10	1	—	164
<i>Sex with transfusion recipient with HIV infection</i>	130	41	34	2	—	209
<i>Sex with HIV-infected person, risk not specified</i>	445	711	315	8	3	1,484
Receipt of blood transfusion, blood components, or tissue ²	2,841 (3)	718 (1)	430 (1)	75 (7)	6 (2)	4,081 (2)
Other/undetermined ³	2,457 (2)	2,680 (5)	1,553 (5)	77 (7)	12 (4)	6,827 (4)
Adult/adolescent subtotal	100,535(100)	51,978 (100)	29,316(100)	1,143 (100)	278(100)	183,696(100)
Pediatric (<13 years old) exposure category						
Hemophilia/coagulation disorder	105 (15)	21 (1)	24 (3)	3 (19)	—	153 (5)
Mother with/at risk for HIV infection:	423 (62)	1,559 (92)	692 (87)	8 (50)	7(100)	2,696 (84)
<i>IV drug use</i>	201	765	349	2	1	1,321
<i>Sex with IV drug user</i>	88	248	221	2	1	561
<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	226	2	—	—	229
<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>	27	63	34	1	2	128
<i>Receipt of blood transfusion, blood components, or tissue</i>	19	22	13	—	—	54
<i>Has HIV infection, risk not specified</i>	54	195	57	2	3	311
Receipt of blood transfusion, blood components, or tissue	146 (21)	62 (4)	62 (8)	5 (31)	—	275 (9)
Undetermined	10 (1)	46 (3)	19 (2)	—	—	75 (2)
Pediatric subtotal	684(100)	1,688 (100)	797(100)	16 (100)	7(100)	3,199(100)
Total	101,219	53,666	30,113	1,159	285	186,895

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 453 persons whose race/ethnicity is unknown.

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

	White, not Hispanic	Black, not Hispanic	Hispanic	Asian/Pacific Islander	American Indian/ Alaskan Native	Total ⁴
Male exposure category	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Male homosexual/bisexual contact	76,452 (80)	18,538 (44)	11,841 (46)	857 (82)	150 (63)	108,087 (65)
Intravenous (IV) drug use (heterosexual)	6,309 (7)	14,997 (36)	9,844 (39)	34 (3)	28 (12)	31,285 (19)
Male homosexual/bisexual contact and IV drug use	6,989 (7)	3,297 (8)	1,727 (7)	26 (2)	38 (16)	12,089 (7)
Hemophilia/coagulation disorder	1,260 (1)	109 (0)	122 (0)	17 (2)	8 (3)	1,521 (1)
Heterosexual contact:	707 (1)	2,910 (7)	433 (2)	9 (1)	5 (2)	4,070 (2)
<i>Sex with IV drug user</i>	424	895	260	5	5	1,589
<i>Sex with person with hemophilia</i>	6	—	1	—	—	7
<i>Born in Pattern-II¹ country</i>	5	1,635	13	2	—	1,660
<i>Sex with person born in Pattern-II country</i>	40	47	8	1	—	96
<i>Sex with transfusion recipient with HIV infection</i>	38	18	12	—	—	69
<i>Sex with HIV-infected person, risk not specified</i>	194	315	139	1	—	649
Receipt of blood transfusion, blood components, or tissue ²	1,834 (2)	387 (1)	230 (1)	47 (4)	1 (0)	2,506 (2)
Other/undetermined ³	2,113 (2)	1,965 (5)	1,301 (5)	60 (6)	9 (4)	5,490 (3)
Male subtotal	95,664 (100)	42,203 (100)	25,498 (100)	1,050 (100)	239 (100)	165,048 (100)
Female						
exposure category						
IV drug use	2,018 (41)	5,489 (56)	1,928 (50)	15 (16)	21 (54)	9,489 (51)
Hemophilia/coagulation disorder	29 (1)	5 (0)	4 (0)	—	—	38 (0)
Heterosexual contact:	1,473 (30)	3,235 (33)	1,434 (38)	33 (35)	10 (26)	6,209 (33)
<i>Sex with IV drug user</i>	730	1,938	1,153	12	6	3,856
<i>Sex with bisexual male</i>	314	189	72	10	1	588
<i>Sex with person with hemophilia</i>	75	7	4	1	—	87
<i>Born in Pattern-II country</i>	2	626	5	1	—	635
<i>Sex with person born in Pattern-II country</i>	9	56	2	—	—	68
<i>Sex with transfusion recipient with HIV infection</i>	92	23	22	2	—	140
<i>Sex with HIV-infected person, risk not specified</i>	251	396	176	7	3	835
Receipt of blood transfusion, blood components, or tissue	1,007 (21)	331 (3)	200 (5)	28 (30)	5 (13)	1,575 (8)
Other/undetermined	344 (7)	715 (7)	252 (7)	17 (18)	3 (8)	1,337 (7)
Female subtotal	4,871 (100)	9,775 (100)	3,818 (100)	93 (100)	39 (100)	18,648 (100)
Total	100,535	51,978	29,316	1,143	278	183,696

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

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

Exposure category	13-19 years old			20-24 years old		
	Aug. 1989- July 1990	Aug. 1990- July 1991	Cumulative total	Aug. 1989- July 1990	Aug. 1990- July 1991	Cumulative total
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Male homosexual/bisexual contact	34 (22)	28 (18)	181 (25)	826 (52)	718 (48)	4,189 (55)
Intravenous (IV) drug use (female and heterosexual male)	18 (12)	19 (12)	86 (12)	295 (19)	293 (19)	1,273 (17)
Male homosexual/bisexual contact and IV drug use	6 (4)	5 (3)	31 (4)	153 (10)	97 (6)	681 (9)
Hemophilia/coagulation disorder	47 (31)	42 (27)	215 (30)	31 (2)	40 (3)	194 (3)
Heterosexual contact:	33 (21)	28 (18)	100 (14)	190 (12)	207 (14)	765 (10)
<i>Sex with IV drug user</i>	22	21	66	114	126	437
<i>Sex with bisexual male</i>	1	—	3	8	9	54
<i>Sex with person with hemophilia</i>	1	2	3	6	2	16
<i>Born in Pattern-II¹ country</i>	2	3	16	25	14	120
<i>Sex with person born in Pattern-II country</i>	—	—	—	4	4	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	2	11	28	50	120
Receipt of blood transfusion, blood components, or tissue	6 (4)	9 (6)	51 (7)	17 (1)	18 (1)	108 (1)
Undetermined ²	10 (6)	27 (17)	51 (7)	80 (5)	131 (9)	339 (4)
Total	154 (100)	158 (100)	715 (100)	1,592 (100)	1,504 (100)	7,549 (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 July 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	232 (0)	750 (2)	349 (1)	5 (0)	4 (2)	1,343 (1)
5-12	178 (0)	116 (0)	82 (0)	5 (0)	—	383 (0)
13-19	248 (0)	160 (0)	105 (0)	7 (1)	5 (2)	525 (0)
20-24	3,177 (3)	1,912 (4)	1,154 (4)	37 (3)	14 (6)	6,308 (4)
25-29	14,489 (15)	6,713 (16)	4,349 (17)	144 (14)	49 (20)	25,796 (15)
30-34	22,356 (23)	10,593 (25)	6,554 (25)	215 (20)	62 (26)	39,862 (24)
35-39	21,179 (22)	9,962 (23)	5,733 (22)	237 (22)	50 (21)	37,255 (22)
40-44	14,617 (15)	5,927 (14)	3,571 (14)	177 (17)	29 (12)	24,382 (15)
45-49	8,687 (9)	3,180 (7)	1,847 (7)	103 (10)	15 (6)	13,873 (8)
50-54	4,717 (5)	1,772 (4)	1,046 (4)	57 (5)	5 (2)	7,620 (5)
55-59	2,974 (3)	1,064 (2)	637 (2)	36 (3)	5 (2)	4,733 (3)
60-64	1,720 (2)	564 (1)	302 (1)	11 (1)	4 (2)	2,606 (2)
65 or older	1,500 (2)	356 (1)	200 (1)	26 (2)	1 (0)	2,088 (1)
Male subtotal	96,074 (100)	43,069 (100)	25,929 (100)	1,060(100)	243 (100)	166,774 (100)
Females						
Age at diagnosis (years)						
Under 5	220 (4)	724 (7)	307 (7)	1 (1)	3 (7)	1,256 (6)
5-12	54 (1)	98 (1)	59 (1)	5 (5)	—	217 (1)
13-19	53 (1)	108 (1)	27 (1)	1 (1)	1 (2)	190 (1)
20-24	309 (6)	610 (6)	305 (7)	5 (5)	5 (12)	1,241 (6)
25-29	904 (18)	1,850 (17)	876 (21)	8 (8)	5 (12)	3,654 (18)
30-34	1,113 (22)	2,779 (26)	1,000 (24)	18 (18)	12 (29)	4,933 (25)
35-39	785 (15)	2,204 (21)	754 (18)	14 (14)	5 (12)	3,773 (19)
40-44	462 (9)	1,046 (10)	403 (10)	20 (20)	5 (12)	1,939 (10)
45-49	244 (5)	490 (5)	190 (5)	7 (7)	3 (7)	939 (5)
50-54	182 (4)	292 (3)	114 (3)	5 (5)	1 (2)	594 (3)
55-59	195 (4)	165 (2)	63 (2)	4 (4)	—	429 (2)
60-64	171 (3)	113 (1)	38 (1)	7 (7)	1 (2)	330 (2)
65 or older	453 (9)	118 (1)	48 (1)	4 (4)	1 (2)	626 (3)
Female subtotal	5,145 (100)	10,597 (100)	4,184 (100)	99(100)	42 (100)	20,121 (100)
Total	101,219	53,666	30,113	1,159	285	186,895

¹ Includes 453 persons whose race/ethnicity is unknown.

Table 8. AIDS cases, case-fatality rates, and deaths by half-year and age group, through July 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	91.3	38	8	62.5	2
July-Dec.	203	91.1	86	6	100.0	6
1982 Jan.-June	390	91.3	151	14	78.6	9
July-Dec.	689	89.0	282	15	80.0	5
1983 Jan.-June	1,277	92.8	521	34	97.1	13
July-Dec.	1,642	92.1	923	42	78.6	16
1984 Jan.-June	2,550	90.4	1,380	49	85.7	25
July-Dec.	3,368	91.2	1,942	62	75.8	24
1985 Jan.-June	4,842	90.1	2,785	95	74.7	44
July-Dec.	6,225	88.7	3,794	128	77.3	68
1986 Jan.-June	8,215	87.3	4,991	136	77.9	65
July-Dec.	9,860	84.4	6,368	183	66.7	87
1987 Jan.-June	12,764	84.0	7,384	218	67.0	115
July-Dec.	14,173	79.0	7,748	250	61.2	158
1988 Jan.-June	16,113	74.2	9,047	239	54.0	130
July-Dec.	16,507	69.9	10,269	322	51.6	159
1989 Jan.-June	18,452	61.0	11,765	328	47.0	163
July-Dec.	18,252	54.1	13,342	306	43.5	172
1990 Jan.-June	18,601	43.5	12,721	306	33.0	159
July-Dec.	16,636	31.0	12,248	286	24.5	158
1991 Jan.-June	12,620	17.2	8,615	166	20.5	91
July-July	146	7.5	114	—	0.0	1
Total¹	183,696	63.5	116,734	3,199	52.4	1,677

¹ Death totals include 190 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 July 1991, United States

Definition category ¹	Year of diagnosis					Cumulative total
	Before Aug. 1987	Aug. 1987-July 1988	Aug. 1988-July 1989	Aug. 1989-July 1990	Aug. 1990-July 1991	
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Pre-1987 definition	50,443 (91)	22,988 (74)	25,309 (70)	25,090 (67)	16,925 (63)	140,755 (75)
1987 definition: ²	5,128 (9)	8,153 (26)	10,648 (30)	12,198 (33)	10,013 (37)	46,140 (25)
<i>Specific disease</i>						
<i>presumptively diagnosed</i>	2,748	4,528	6,077	7,322	6,218	26,893
<i>Specific disease</i>						
<i>definitively diagnosed</i>	707	595	696	834	595	3,427
<i>HIV encephalopathy</i>	569	1,085	1,230	1,359	925	5,168
<i>HIV wasting syndrome</i>	1,104	1,945	2,645	2,683	2,275	10,652
Total	55,571 (100)	31,141 (100)	35,957 (100)	37,288 (100)	26,938 (100)	186,895 (100)

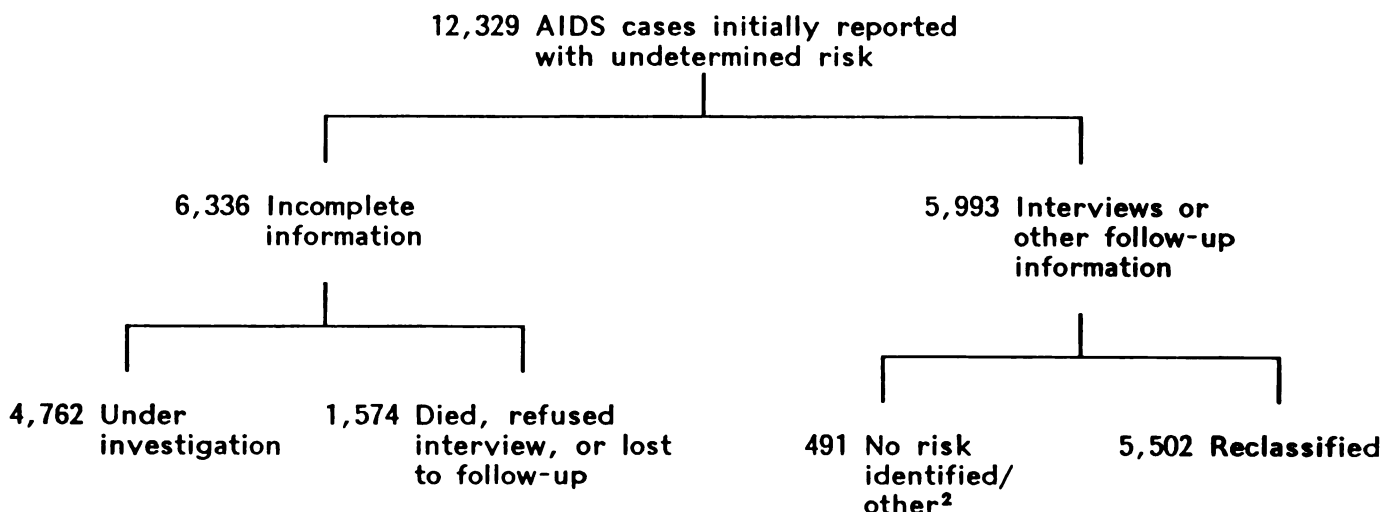
¹ Persons who meet the criteria for more than one definition category are classified in the definition category listed first.

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 July 1991, United States

Exposure category	AIDS cases	
	No.	(%)
Single mode of exposure		
Male homosexual/bisexual contact	103,915	(57)
Intravenous (IV) drug use (female and heterosexual male)	34,929	(19)
Hemophilia/coagulation disorder	986	(1)
Heterosexual contact	9,830	(5)
Receipt of transfusion of blood, blood component, or tissue	4,081	(2)
Other/undetermined	6,827	(4)
Single mode of exposure subtotal	160,568	(87)
Multiple modes of exposure		
Male homosexual/bisexual contact; IV drug use	10,896	(6)
Male homosexual/bisexual contact; hemophilia	38	(0)
Male homosexual/bisexual contact; heterosexual contact	2,190	(1)
Male homosexual/bisexual contact; receipt of transfusion	1,814	(1)
IV drug use; hemophilia	42	(0)
IV drug use; heterosexual contact	4,763	(3)
IV drug use; receipt of transfusion	778	(0)
Hemophilia; heterosexual contact	9	(0)
Hemophilia; receipt of transfusion	553	(0)
Heterosexual contact; receipt of transfusion	449	(0)
Male homosexual/bisexual contact; IV drug use; hemophilia	8	(0)
Male homosexual/bisexual contact; IV drug use; heterosexual contact	862	(0)
Male homosexual/bisexual contact; IV drug use; receipt of transfusion	277	(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	108	(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	233	(0)
Hemophilia; heterosexual contact; receipt of transfusion	11	(0)
Male homosexual/bisexual contact; IV drug use; hemophilia; heterosexual contact	1	(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	23,128	(13)
Total	183,696	(100)

Figure 4. Results of investigations of adult/adolescent AIDS cases with undetermined risk, reported through July 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 118 children who were initially reported with an undetermined risk have been reclassified after investigation.

² Of the 491 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 487, the mode of exposure to HIV remains undetermined after investigation.

Health-care workers. 75 of the 487 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. 427 of the 487 patients who had no risk identified after follow-up responded to a standardized questionnaire; 138 (35%) of 394 persons responding to questions related to sexually transmitted disease gave a history of such disease and 96 (36%) of 270 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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