

## AIDS Case Reports, 1990—2000

**Introduction.** This article summarizes AIDS cases reported to the Division of HIV/STD in the interval 1990—2000. Cases reported to the Division are carefully reviewed and entered into a confidential database. Aggregate data from this database are used for public health purposes. Purposes include tracking trends in the state's epidemic, providing information to plan and deliver services and education, and contributing to the Centers for Disease Control and Prevention's (CDC) national HIV/AIDS database.<sup>1</sup>

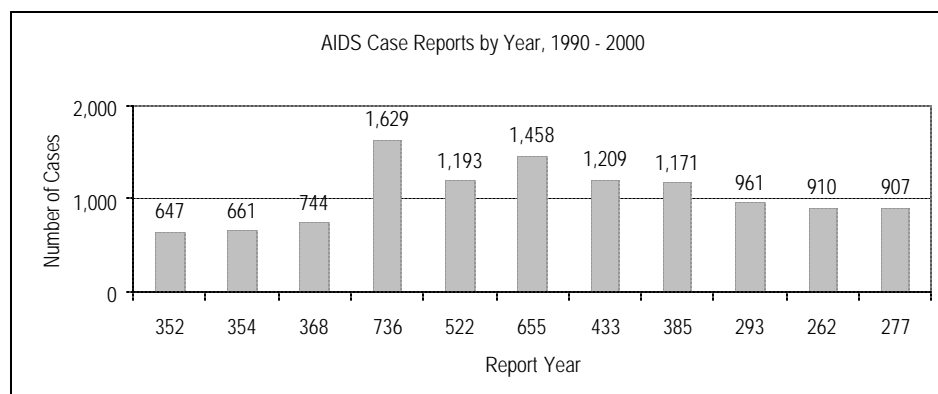
Data in this summary report are based on the year a case was reported, not the year it was diagnosed. A gap exists between diagnosis date and report date; reporting on cases diagnosed in one year may not be complete until the following year(s). Because of this gap, information presented here is preliminary for 2000 but more complete for the preceding years. Case reporting is also influenced by staff time available for active case surveillance and physician compliance with reporting requirements. Timely submission of case reports minimizes the lag time. Data tables appear at the end of this report

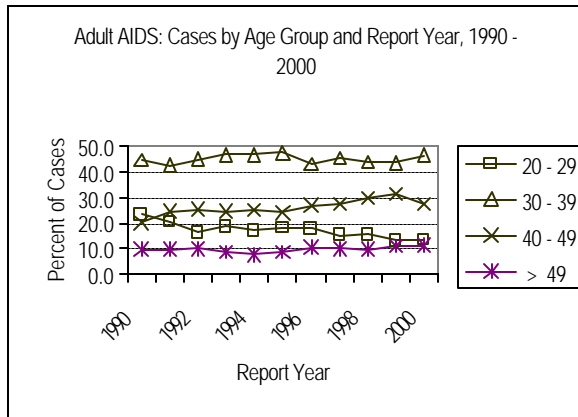
**Year of Report.** The number of cases reported fluctuates annually but a gradual decrease has occurred since 1995. The jump in reports in 1993 occurred in part because CDC changed

the AIDS case definition; the change resulted in an increase of over 100% in case reports over 1992 (see chart).<sup>2</sup> Reports fell from 1,458 in 1995 to 907 in 2000 (a decline of 38%). The decline was not steady; the years 1998—2000 show little change in reported cases. In part this reflects the positive effect that better treatment has had in slowing the progression from an HIV infection to a diagnosis of AIDS. Monitoring HIV infection numbers is a better means of tracking recent trends in the epidemic.

**Race.** In 1990, 54% of AIDS case reports were white. By 2000, 63% were African American. African American cases rose above 50% in 1993 and reached 66% in 1998 and 1999. For this period as a whole, the percentage of African American reports is 56%. White cases declined continuously and reached a low of 29% in 1999. AIDS among Virginia's Hispanic population comprised 3.7% in 1990 and then varied between 2.7% and 4.5% between 1991 and 1999. In 2000, Hispanics accounted for 4.7% of all cases. AIDS cases were also reported among the state's Asian and Pacific Islander (76 cases total) and American Indian and Alaskan Native residents (10 cases) between 1990 and 2000.

**Age at Diagnosis.** A total of 141 pediatric AIDS cases (0—12 years old) were reported





during this period. The highest number of pediatric cases (32) was reported in 1994. With the advent in 1994 of more effective treatment for HIV-positive pregnant women, the number of infants infected perinatally decreased. Because fewer infected infants were born, the number developing AIDS also declined. The increase in pediatric reports from 3 in 1999 to 7 in 2000 is attributable to effective surveillance activities by the Division's new pediatric HIV/AIDS surveillance specialist (see the Division Directory at the end of this *Quarterly* for a list of HIV/AIDS surveillance consultants). Among adolescents 13–19 years old, the number of AIDS cases between 1990 and 2000 was 57. The highest numbers of cases were reported between 1993 (9 cases) and 1997 (8 cases). Reports in 2000 dropped to 3 cases.

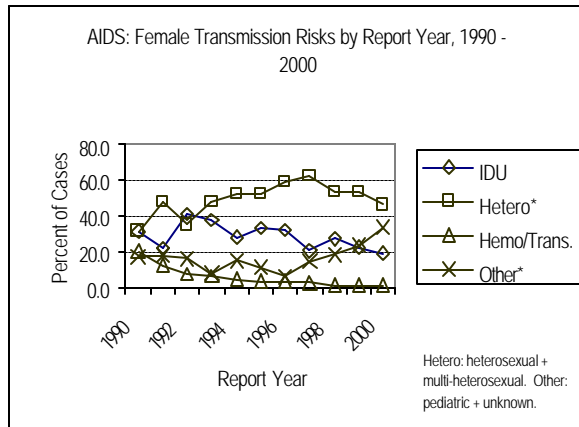
The accompanying chart shows adult case reports presented by age group. Proportionately more cases were reported among 30–39 year olds in all years. Overall, 45% of AIDS cases were reported among this group. Reports among those 40–49 increased between 1990 and 2000; case reports in this group rose from 20% in 1990 to a high of 31% in 1999 and then declined to 28% in 2000. Better HIV treatments that postpone developing AIDS contributed to the rising percentage of cases from this group. The marked decline in reports among adults 20 to 29 can also be attributed to better treatments. In 1990, about 24% of case reports came from

this group. By 2000, this figure had declined to 14%. An important trend in the HIV/AIDS epidemic in Virginia is that HIV-infected adults are developing AIDS later in life because treatment is more effective.

**Sex.** Female AIDS cases accounted for almost 10% of all case reports in 1990. This percentage rose throughout the period, climbing to 18% in 1995 and reaching 25% of all reports in 2000. Although males still account for three-quarters of all reports, the consistent rise in female case reports indicates that heterosexual sex and injecting drug use, the two leading female transmission risks, require continuing attention in prevention and education programs (see below).

**Transmission Risk.** Transmission risk patterns changed between 1990 and 2000. For males, the most important change has been that men having sex with men (MSM) declined as an attributable risk during this period. MSM fell from 71% of male case reports in 1990 to 49% in 2000. Part of this decline is traced to an increase in heterosexual and multi-heterosexual risks.<sup>3</sup> These two risks accounted for a combined 1.4% of male cases in 1990; by 2000, the figure had reached 14.3%. Injecting drug use (IDU) rose from almost 12% of male cases in 1990 to a high of 20% in 1996. Although male IDU cases fell in 2000 to 12%, this decline can be attributed partially to incomplete data.

A factor contributing to the decline of MSM as a male transmission risk is an increase in cases for which no risk has been identified (NIR cases and not interviewed cases). These two factors represented 5% of male reports in 1990 but were 19% in 2000. The percentage for 2000 is artificially high; many of these cases will be assigned a risk factor as a result of continuing, active case investigations. Labor constraints, however, may lead to higher long-term percentages of NIR cases than has been true in the past.



The female risk pattern differs from the male pattern in important respects. The two primary female transmission risks are heterosexual relations and IDU. In 1990, each of these risks accounted for 31% of case reports; cases due to contaminated blood or blood products (hemophilia and transfusion in the female risk chart) accounted for 20% of female cases. Because blood and blood products are more rigorously screened for HIV, infections due to this are much less likely now than in the past. The principal female risk factor has been heterosexual contact continuously since 1993. In 1993, 46% of reports were in this category. Between 1994 and 1999, one half or more of reported female cases were in this category. Although the 2000 figure is 41%, this percentage will rise as case reports are completed and unknown risks are replaced by known risks. Virginia assigns heterosexual risks to two subcategories. One consists of case reports for which a particular HIV-infected sexual partner is identified as the woman's transmission risk. The second consists of reports for which multiple sexual partners are identified. Reports on women who have sex for money or drugs, and for whom no specific partner can be identified as the risk, are in this subcategory.

**Geographic distribution.** Although cases are reported from throughout the state, AIDS remains a primarily urban occurrence in Virginia. Case reports for residents of locales

outside of Metropolitan Statistical Areas (MSA) accounted for 10% of all reports in both and 2000. Although the rural percentage fluctuated between a low of 9.1% in 1995 and a high of 15.9% in 1998, there is no trend indicating that rural AIDS cases are increasing in proportion to the whole. The Virginia portion of the Washington, DC MSA and the Norfolk MSA accounted for the majority of reports during this period. Together, these areas reported approximately 60% of all AIDS cases each year between 1990 and 2000. The percent of reports from the Richmond MSA varied between 19% and 21% except in 1993, when Richmond reports rose to 25% of the total.

**Reporting AIDS.** Timely and routine reporting by health care providers are important for effective HIV/AIDS surveillance. Virginia law requires physicians, directors of medical care facilities and laboratory directors to report HIV or AIDS cases to the health department serving the area in which the practice, facility or laboratory is located. Reporting involves completing a *Confidential Morbidity Report* form (an Epi-1 form). These forms are mailed to the local health department, which then forwards them to the Division of HIV/STD. Laboratories sometimes use their own forms for reporting. Persons making reports remain confidential and are immune from liability as provided by section 32.1-38 of the Code of Virginia. After a *Confidential Morbidity Report* is received, HIV/AIDS surveillance staff provide follow up services to complete a standardized HIV/AIDS case report form. Surveillance staff names and contact numbers are listed in the Division of HIV/STD directory at the end of this *Quarterly*.

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Submitted by J. Martin, Statistical Analyst Sr., Division of HIV/STD.

## Data Tables: AIDS Case Reports, 1990 — 2000

Report Year by Race

Race	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
White	352	354	368	736	522	655	433	385	293	262	277	4,637
Black	263	287	341	833	631	754	724	731	637	602	574	6,377
Hispanic	24	18	29	49	30	40	40	47	25	41	43	386
Other*	8	2	6	11	10	9	12	8	6	5	13	90
<b>Total</b>	<b>647</b>	<b>661</b>	<b>744</b>	<b>1,629</b>	<b>1,193</b>	<b>1,458</b>	<b>1,209</b>	<b>1,171</b>	<b>961</b>	<b>910</b>	<b>907</b>	<b>11,490</b>

\* Includes Asian, Indian and unknown

Report Year by Age Group

Age	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
0 - 12	12	16	19	10	32	18	10	10	4	3	7	141
13 - 19	0	2	5	9	6	7	7	8	5	5	3	57
20 - 29	152	135	122	304	205	263	217	179	150	120	122	1,969
30 - 39	289	281	335	761	556	693	520	532	421	396	422	5,206
40 - 49	131	163	189	401	301	350	327	323	286	285	249	3,005
> 49	63	64	74	144	93	127	128	119	95	101	104	1,112
<b>Total</b>	<b>647</b>	<b>661</b>	<b>744</b>	<b>1,629</b>	<b>1,193</b>	<b>1,458</b>	<b>1,209</b>	<b>1,171</b>	<b>961</b>	<b>910</b>	<b>907</b>	<b>11,490</b>

Report Year by Sex

Sex	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
Male	583	588	639	1,377	1,018	1,190	990	928	742	700	684	9,439
Female	64	73	105	252	175	268	219	243	219	210	223	2,051
<b>Total</b>	<b>647</b>	<b>661</b>	<b>744</b>	<b>1,629</b>	<b>1,193</b>	<b>1,458</b>	<b>1,209</b>	<b>1,171</b>	<b>961</b>	<b>910</b>	<b>907</b>	<b>11,490</b>

Report Year by Transmission Risk

Transmission risk	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
MSM	416	419	450	856	626	729	554	498	374	346	333	5,601
IDU	89	91	129	346	232	303	264	204	201	175	125	2,159
Transfusion	26	24	18	39	14	20	14	17	12	6	5	195
MSM/IDU	31	39	35	106	81	88	67	68	42	37	32	626
Perinatal	7	15	18	7	30	16	10	11	4	3	7	128
Hemophilia	7	1	7	22	4	9	6	6	5	6	3	76
Heterosexual	27	51	51	179	147	217	222	246	189	162	162	1,653
NIR	1	1	5	13	9	18	26	43	60	56	60	292
Not interviewed	37	18	24	39	32	40	19	42	44	90	139	524
Ped hemophilia	1	1	1	4	3	2	0	0	0	2	1	15
Ped transfusion	3	0	1	2	2	2	1	2	0	0	0	13
Multi-heterosexual	1	1	5	15	13	14	26	34	30	27	40	206
Confirmed pediatric	0	0	0	1	0	0	0	0	0	0	0	1
Ped. NIR	1	0	0	0	0	0	0	0	0	0	0	1
<b>Total</b>	<b>647</b>	<b>661</b>	<b>744</b>	<b>1,629</b>	<b>1,193</b>	<b>1,458</b>	<b>1,209</b>	<b>1,171</b>	<b>961</b>	<b>910</b>	<b>907</b>	<b>11,490</b>

## Data Tables: AIDS Case Reports, 1990 — 2000

Report Year by Transmission Risk, Male Case Reports, Percent of Reports

Transmission risk	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
MSM	71.4	71.3	70.4	62.2	61.5	61.3	56.0	53.7	50.4	49.4	48.7	59.3
IDU	11.8	12.8	13.5	18.2	18.0	18.0	19.6	16.6	19.0	18.3	12.1	16.7
Transfusion	2.2	2.6	1.6	1.7	0.6	0.9	0.8	1.2	1.3	0.6	0.4	1.2
MSM/IDU	5.3	6.6	5.5	7.7	8.0	7.4	6.8	7.3	5.7	5.3	4.7	6.6
Perinatal	0.7	1.2	1.6	0.2	1.4	0.8	0.3	0.8	0.1	0.1	0.4	0.7
Hemophilia	1.2	0.2	1.1	1.6	0.4	0.8	0.5	0.6	0.7	0.9	0.4	0.8
Heterosexual	1.2	2.9	2.3	4.5	5.8	6.9	10.0	11.0	10.9	8.3	10.4	6.9
NIR	0.2	0.2	0.6	0.5	0.6	0.8	2.1	2.4	4.3	5.6	4.7	1.9
Not Interviewed	5.1	2.2	2.7	2.2	2.6	2.3	1.8	3.6	4.7	8.6	14.0	4.1
Ped. Hemophilia	0.2	0.2	0.2	0.3	0.3	0.2	0.0	0.0	0.0	0.3	0.1	0.2
Ped Transfusion	0.3	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.1
Multi-Heterosexual	0.2	0.0	0.6	0.8	0.9	0.8	2.0	2.8	2.8	2.7	3.9	1.6
Ped. NIR	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Report Year by Transmission Risk, Female Case Reports, Percent of Reports

Transmission Risk	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
IDU	31.3	21.9	41.0	37.7	28.0	33.2	32.0	20.6	27.4	22.4	18.8	28.3
Transfusion	20.3	12.3	7.6	6.3	4.6	3.4	2.7	2.5	0.9	1.0	0.9	3.9
Perinatal	4.7	11.0	7.6	1.6	9.1	2.6	3.2	1.6	1.4	1.0	1.8	3.2
Hemophilia	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
Heterosexual	31.3	46.6	34.3	46.4	50.3	50.4	56.2	59.3	49.3	49.5	40.8	48.8
NIR	0.0	0.0	1.0	2.4	1.7	3.0	2.3	8.6	12.8	8.1	12.6	5.7
Not Infected	10.9	6.8	6.7	3.6	3.4	4.9	0.5	3.7	4.1	14.3	19.3	6.8
Ped. Transfusion	1.6	0.0	1.0	0.0	0.6	0.7	0.0	0.4	0.0	0.0	0.0	0.3
Multi-Heterosexual	0.0	1.4	1.0	1.6	2.3	1.9	2.7	3.3	4.1	3.8	5.8	2.9
Confirmed Ped.	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Report Year by MSA (Urban Area)

MSA	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
Rural - no MSA	67	62	85	179	119	133	149	140	153	109	92	1,288
Charlottesville	13	18	6	29	18	21	16	15	19	12	9	176
Danville	7	6	6	17	12	11	9	15	16	8	5	112
Johnson City	2	4	1	5	5	3	6	2	1	3	1	33
Lynchburg	10	13	13	23	23	41	20	17	12	10	30	212
Norfolk	162	135	162	343	409	527	431	421	328	271	282	3,471
Richmond	121	141	153	405	237	267	238	223	204	181	173	2,343
Roanoke	14	29	29	55	40	65	34	58	25	38	26	413
Washington DC	251	253	289	573	330	390	306	280	203	278	289	3,442
Total	647	661	744	1,629	1,193	1,458	1,209	1,171	961	910	907	11,490

<sup>1</sup> No personal identifying information is sent to CDC.

<sup>2</sup> The AIDS case definition was expanded in 1993 to include immunologic cases. See technical note 20 at the end of this *Quarterly* for an explanation of the change.

<sup>3</sup> Multiheterosexual as a transmission risk is defined in technical note 5 at the end of this *Quarterly*.