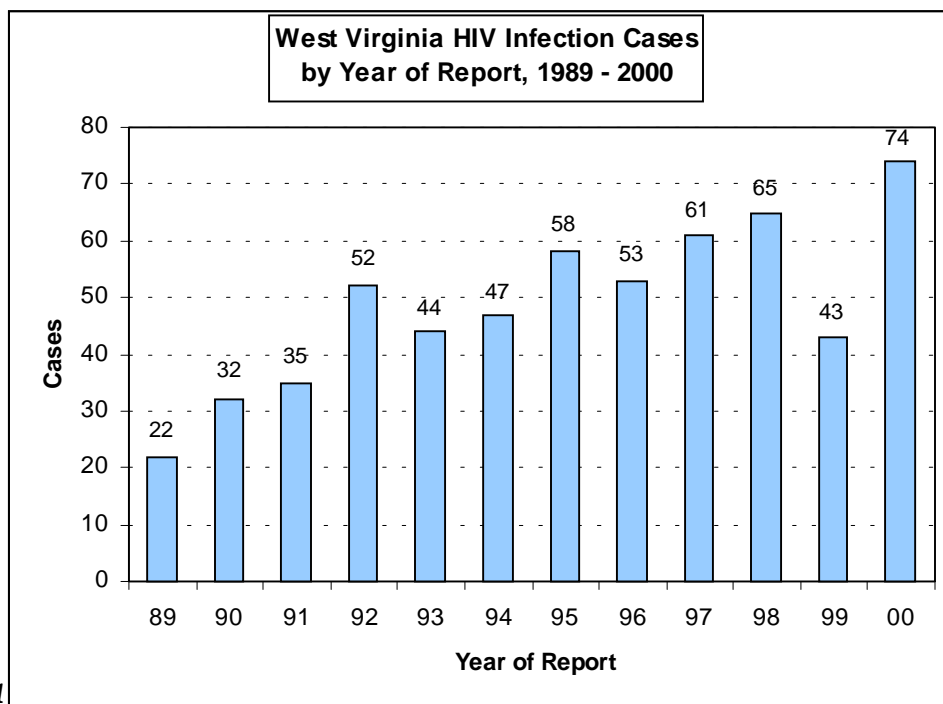




## Chapter 3: HIV Infection Cases in West Virginia

## West Virginia HIV Infection Cases 1989 - 2000



**Figure 3.1**

West Virginia HIV Infection Cases By Year of Report, 1989 - 2000													
Year of Report	89	90	91	92	93	94	95	96	97	98	99	00	Total
HIV Infection Cases	22	32	35	52	44	47	58	53	61	65	43	74	586

**Table 3.1**

The epidemic curve of reported HIV infection cases by year of report from 1989 through 2000 is displayed in Figure 3.1. Five-hundred eighty six cases of HIV infection were reported during this time period (Table 3.1). In 2000 HIV infection had a significant increase (72%) in reported infection cases compared to the previous year.

The face of HIV data is in constant change. When an individual reported with HIV antibodies is diagnosed with AIDS, the case is removed from this data set and added as an AIDS case. Rates are not calculated for HIV infection reports because case counts for HIV infection are believed to be less complete than reported AIDS cases. This can result from a person not knowing that he or she is HIV positive, or he or she can be asymptomatic and may not have been tested for HIV infection.

Active surveillance continues to monitor the status of the reported cases to determine if a change from HIV to AIDS has occurred. With the introduction of new medications to treat HIV disease, this data set will increase in importance as an indicator of prognosis of HIV-related infection to disease. It is speculated that the period of time from HIV to AIDS will widen as has been shown with the use of new anti-retrovirals, protease inhibitors, combination therapies, and increased prophylaxis for opportunistic infections which promise to lengthen the life-span of individuals living with HIV.

## West Virginia Percent of HIV Infection Cases Comparison by Year of Report 1989-2000

The following items are noted from a review of Table 3.2:

- The 20-29 age group showed a decline from 1999 to 2000 (56% and 26%) but, still is the predominate age group among HIV infection cases. This age group represented the largest portion of reported HIV infection cases (39%), followed closely by the 30-39 age group (37%).
- HIV infection cases among whites continued to increase since 1994 but declined from 1998 to 1999 from 74% to 56% and increased in 2000 to 69%.
- Females cases decreased continuously from 1994 to 1998 (38% to 25%) but increased in 1999 to 35% and declined again to 22% in 2000. Females were 27% of total HIV infection cases.
- The highest percentage of the reported HIV infection cases was among the MSM risk behavior (43%) followed by IDU (19%). MSM and IDU risk behaviors showed a decrease from 1998 to 1999 (51% and 23%) to (42% and 19%), while IDU remained the same (19%) MSM increased to 50% in 2000.
- Heterosexual contact risk behavior was 16% of HIV infection cases while only 9% of AIDS cases.

**Caution should be exercised when interpreting this table. Percentages based on small numbers can fluctuate widely with minimal changes in occurrence. To keep things in perspective, refer to the total number of reported cases sited in the bottom row of the table.**

West Virginia Percent of HIV Infection Cases Comparison by Year of Report, 1989 - 2000														
Characteristic	89	90	91	92	93	94	95	96	97	98	99	00	Total	
Age Group	Percent												#	%
Under 5	0	0	0	0	2	0	0	0	0	2	2	1	4	1
5-12	0	0	0	0	0	0	0	0	0	2	0	0	1	<1
13-19	23	13	3	2	2	2	3	0	5	5	2	3	24	4
20-29	41	31	46	46	41	30	43	51	36	29	56	26	227	39
30-39	23	50	43	35	41	47	36	36	25	46	26	35	216	37
40-49	5	3	9	13	11	19	12	11	25	14	12	26	87	15
50+	9	3	0	4	2	2	5	2	10	3	2	9	27	5
Gender	Percent													
Male	68	63	71	73	80	62	76	74	75	75	65	78	425	73
Female	32	38	29	27	20	38	24	26	25	25	35	22	160	27
Race	Percent													
White	50	34	46	54	59	53	64	66	64	74	56	69	351	60
Black	36	56	49	38	36	45	29	32	36	26	42	20	206	35
Other/Unknown	14	9	6	8	5	2	7	2	0	0	2	11	29	5
Risk Behavior	Percent													
MSM	27	41	31	40	45	30	53	42	39	51	42	50	250	43
IDU	23	25	26	17	11	26	9	17	16	23	19	19	109	19
MSM/IDU	0	3	3	6	7	0	3	4	8	2	0	3	20	3
Adult Hemophilia	5	0	0	2	0	2	0	2	5	0	0	0	7	1
Heterosexual Contact	14	9	9	17	16	21	21	26	15	11	16	15	95	16
Transfusion	0	0	0	4	2	2	0	0	0	2	0	0	5	1
NIR*/Other	32	22	31	13	16	19	14	9	16	9	21	12	95	16
Pediatric	0	0	0	0	2	0	0	0	0	3	2	1	5	1
TOTAL CASES	22	32	35	52	44	47	58	53	61	65	43	74	586	100

\*NIR=No Identified Risk

**Table 3.2**

## West Virginia HIV Infection Cases Among MSM\*

### by Age Group and Race, 1989 - 1994 and 1995 - 2000

West Virginia HIV Infection Cases Among MSM* by Age Group, 1989 - 2000						
Age Group	1989-94		1995-00		Total	
	#	%	#	%	#	%
13-19	4	5	4	2	8	3
20-29	39	46	71	43	110	44
30-39	35	41	62	38	97	39
40-49	7	8	20	12	27	11
50+	0	0	8	5	8	3
<b>Total Cases</b>	<b>85</b>	<b>100</b>	<b>165</b>	<b>100</b>	<b>250</b>	<b>100</b>
<b>% Cases</b>	<b>34</b>		<b>66</b>		<b>100</b>	

Table 3.3

West Virginia HIV Infection Cases Among MSM* by Race, 1989 - 2000						
Race	1989-94		1995-00		Total	
	#	%	#	%	#	%
White	69	81	138	84	207	83
Black	12	14	23	14	35	14
Other	4	5	4	2	8	3
<b>Total Cases</b>	<b>85</b>	<b>100</b>	<b>165</b>	<b>100</b>	<b>250</b>	<b>100</b>
<b>% Cases</b>	<b>34</b>		<b>66</b>		<b>100</b>	

Table 3.4

\*MSM = Men who have Sex with Men.

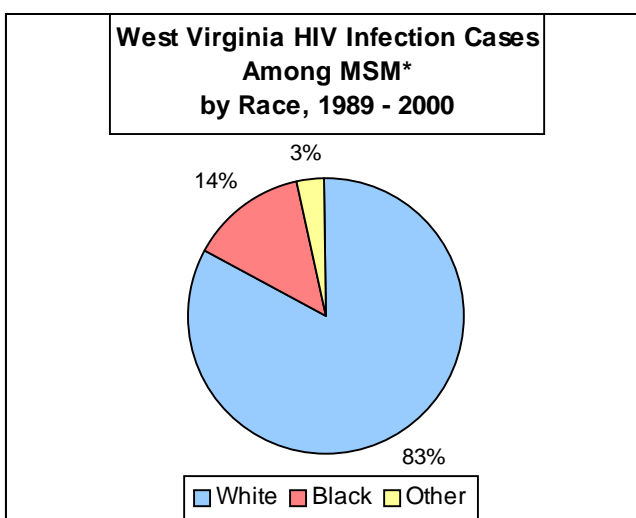
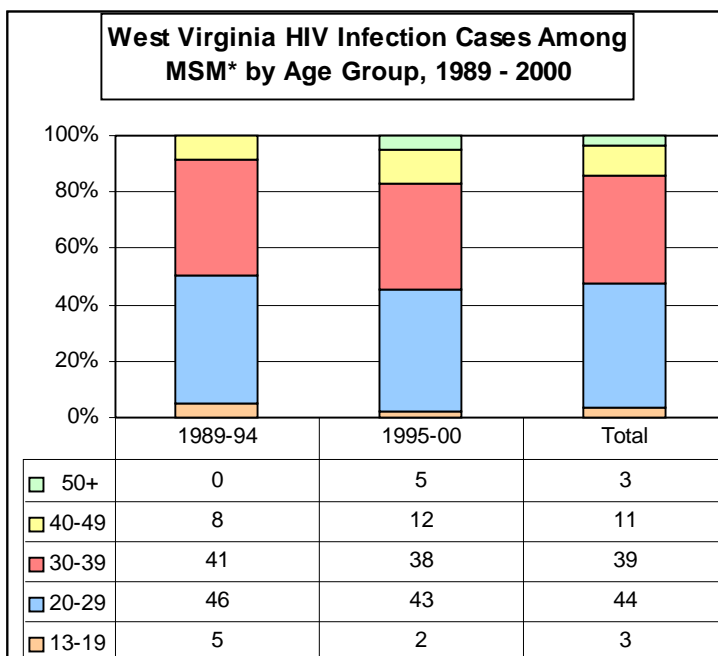


Figure 3.3

Figure 3.2

HIV infection among MSM are displayed in two 6-year aggregates of data by age groups in Table 3.3. Forty-five percent of HIV infection cases for MSM risk behavior were reported among 13-19 and 20-29 age groups in 1995-00 compared to 51% in the first time period. The 20-29 age group continues to have the highest percentage among MSM risk behavior with HIV infection (110 cases, 44%).

MSM who are HIV infected are compared in two 6-year groupings by race in Table 3.4. Overall, there was a 94% increase in MSM from the first time period to the second period. The total of white males reporting MSM as a risk behavior proportionately greater than black MSM males (83% to 14%). MSM risk behavior continues to be predominate risk of HIV infection among whites (83%).

## West Virginia HIV Infection Cases Among IDU\* by Age Group, Gender and Race, 1989 - 1994 and 1995-2000

West Virginia HIV Infection Among IDU* by Age Group, 1989 - 2000						
Age Group	1989-94		1995-00		Total	
	#	%	#	%	#	%
13-19	0	0	1	2	1	1
20-29	12	25	13	21	25	23
30-39	25	52	24	39	49	45
40-49	8	17	19	31	27	25
50+	3	6	4	7	7	6
<b>Total Cases</b>	<b>48</b>	<b>100</b>	<b>61</b>	<b>100</b>	<b>109</b>	<b>100</b>
<b>% Cases</b>	<b>44</b>		<b>56</b>		<b>100</b>	

Table 3.5

West Virginia HIV Infection Among IDU* by Race, 1989 - 2000						
Race	1989-94		1995-00		Total	
	#	%	#	%	#	%
White	8	17	28	46	36	33
Black	35	73	32	52	67	61
Other	5	10	1	2	6	6
<b>Total Cases</b>	<b>48</b>	<b>100</b>	<b>61</b>	<b>100</b>	<b>109</b>	<b>100</b>
<b>% Cases</b>	<b>44</b>		<b>56</b>		<b>100</b>	

Table 3.7

\*IDU=Injecting Drug User.

West Virginia HIV Infection Among IDU* by Gender, 1989 - 2000						
Gender	1989-94		1995-00		Total	
	#	%	#	%	#	%
Male	20	42	34	56	54	50
Female	28	58	27	44	55	50
<b>Total Cases</b>	<b>48</b>	<b>100</b>	<b>61</b>	<b>100</b>	<b>109</b>	<b>100</b>
<b>% Cases</b>	<b>44</b>		<b>56</b>		<b>100</b>	

Table 3.6

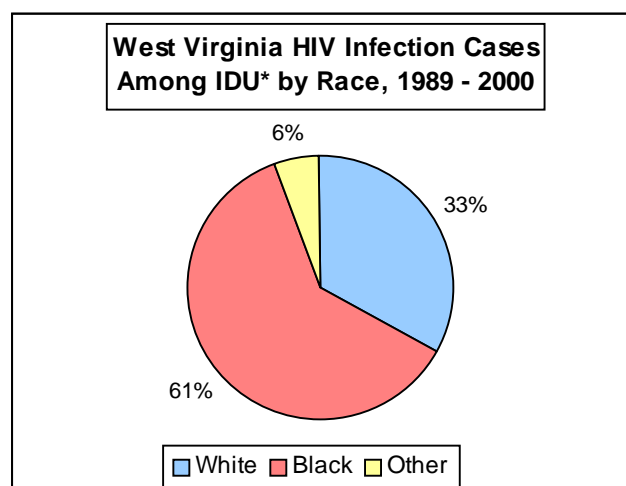


Figure 3.4

HIV infection among IDU in aggregation of two 6-year aggregates of data reported by age group, gender, and race are displayed in Tables 3.5, 3.6, and 3.7.

IDU HIV infection cases by age group appear to indicate that fewer cases are being reported in the 20-29 and 30-39 age groups (25% to 21% and 52% to 39%, respectively), while indicating that more cases are being reported in the 40-49 age group (17% to 31%) (Table 3.5).

Table 3.6 shows that total IDU risk behavior among females is higher than males (58% to 42%) in 1989-94 time period. There appears to have been a decrease in the percentage of IDU risk behavior among females from 1989-94 to 1995-00 (58% to 44%).

The total proportion of black IDUs (61%) was greater than whites (33%), although whites experienced an increase from 1989-94 (17%) to 1995-00 (46%) (Table 3.7).

## West Virginia HIV Infection Cases Among Persons With Heterosexual Contact by Age Group, Gender, and Race 1989 - 1994 and 1995 - 2000

West Virginia HIV Infection Cases Among Heterosexuals by Age Group, 1989-2000						
Age Group	1989-94		1995-00		Total	
	#	%	#	%	#	%
13-19	1	3	3	5	4	4
20-29	13	37	27	45	40	42
30-39	12	33	17	28	29	31
40-49	6	16	8	13	14	15
50+	3	8	5	8	8	8
<b>Total Cases</b>	<b>35</b>	<b>97</b>	<b>60</b>	<b>100</b>	<b>95</b>	<b>100</b>
<b>% Cases</b>	<b>37</b>		<b>63</b>		<b>100</b>	

Table 3.8

West Virginia HIV Infection Cases Among Heterosexuals by Race, 1989-2000						
Race	1989-94		1995-00		Total	
	#	%	#	%	#	%
White	15	43	31	52	46	49
Black	17	49	24	40	41	43
Other	3	9	5	8	8	8
<b>Total Cases</b>	<b>35</b>	<b>100</b>	<b>60</b>	<b>100</b>	<b>95</b>	<b>100</b>
<b>% Cases</b>	<b>37</b>		<b>63</b>		<b>100</b>	

Table 3.10

West Virginia HIV Infection Cases Among Heterosexuals by Gender, 1989-2000						
Gender	1989-94		1995-00		Total	
	#	%	#	%	#	%
Male	12	34	12	20	24	25
Female	23	66	48	80	71	75
<b>Total Cases</b>	<b>35</b>	<b>100</b>	<b>60</b>	<b>100</b>	<b>95</b>	<b>100</b>
<b>% Cases</b>	<b>37</b>		<b>63</b>		<b>100</b>	

Table 3.9

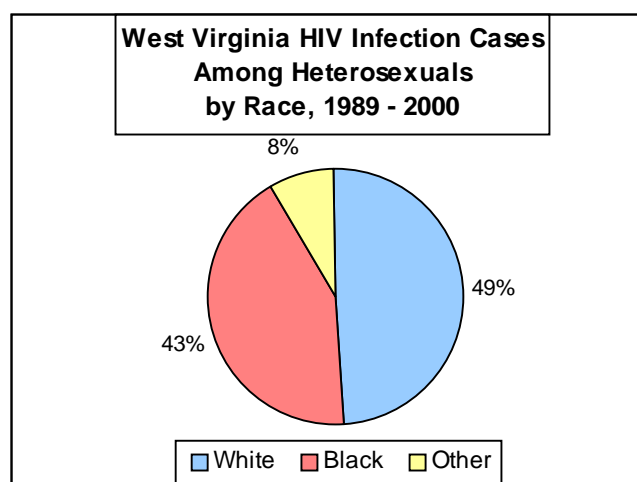


Figure 3.5

HIV infection cases among persons with heterosexual contact in aggregation of two 6-year aggregates of data reported by age group, gender, and race are displayed in Table 3.8, 3.9 and 3.10. Overall, HIV infection cases have increased 71% heterosexual contact cases in 1995-00 compared to 1989-94 time period (35 cases/37% to 60 cases/63%).

The 20-29 age group remained the highest reporting age group among persons with heterosexual contact risk behavior, accounting for (37% and 45%) of the reported case during the 1989-94 and 1995-00 time periods (Table 3.8).

From 1989-94 to 1995-00 time period, the heterosexual risk behavior increased among females (66% to 80%), as compared to males, who experienced a decrease from 34% to 20% (Table 3.9).

When considering race, white heterosexuals reported the highest occurrence of total HIV infection during 1989-00 (46 cases, 49%). Comparing each period, blacks declined proportionally from 49% of reported cases in 1989-94 to 40% in 1995-00. The occurrence of HIV infection among heterosexual whites increased from 43% in 1989-94 to 52% in 1995-00 (Table 3.10).

**Note:** Percent in columns and charts may not add up to 100% due to rounding.

## West Virginia HIV Infection Cases by Age Group and Gender, 1989 - 2000

West Virginia HIV Infection Cases by Age Group and Gender, 1989 - 2000						
Age Group	Male		Female		Total	
	#	%	#	%	#	%
0-12	3	1	2	1	5	1
13-19	13	3	11	7	24	4
20-29	161	38	66	41	227	39
30-39	161	38	55	34	216	37
40-49	68	16	19	12	87	15
50+	20	5	7	4	27	5
<b>Total Cases</b>	<b>426</b>	<b>100</b>	<b>160</b>	<b>100</b>	<b>586</b>	<b>100</b>
<b>% Cases</b>	<b>73</b>		<b>27</b>		<b>100</b>	

Table 3.11

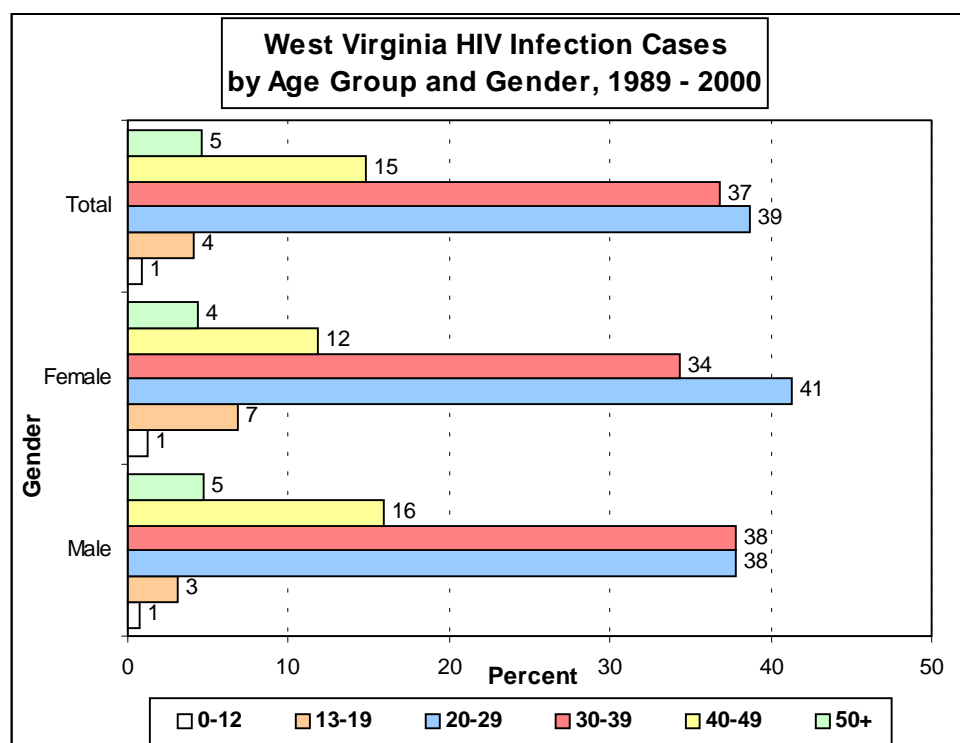


Figure 3.6

Data from 1989 through 2000 indicate that females accounted for 27% of the total reports of HIV infection, while displayed previously as only 13% of AIDS cases. Table 3.11 displays that HIV infection in females is higher in the 0-29 age group than in males in the same age group (49% to 42%) respectively. HIV infection cases among males are equally affected in 20-29 and 30-39 age groups (161 cases, 38% for both age groups). The 20-29 age group reported 39% of total HIV infection cases, followed closely by the 30-39 age group with 37% of cases (Figure 3.6).

## West Virginia HIV Infection Cases by Age Group and Race, 1989 - 2000

West Virginia HIV Infection Cases by Age Group and Race, 1989 - 2000								
Age Group	White		Black		Other		Total	
	#	%	#	%	#	%	#	%
0-12	4	1	1	0	0	0	5	1
13-19	7	2	14	7	3	10	24	4
20-29	141	40	71	34	15	52	227	39
30-39	131	37	76	37	9	31	216	37
40-49	53	15	33	16	1	3	87	15
50+	15	4	11	5	1	3	27	5
<b>Total Cases</b>	<b>351</b>	<b>100</b>	<b>206</b>	<b>100</b>	<b>29</b>	<b>100</b>	<b>586</b>	<b>100</b>
<b>% Cases</b>	<b>60%</b>		<b>35%</b>		<b>5%</b>		<b>100%</b>	

Table 3.12

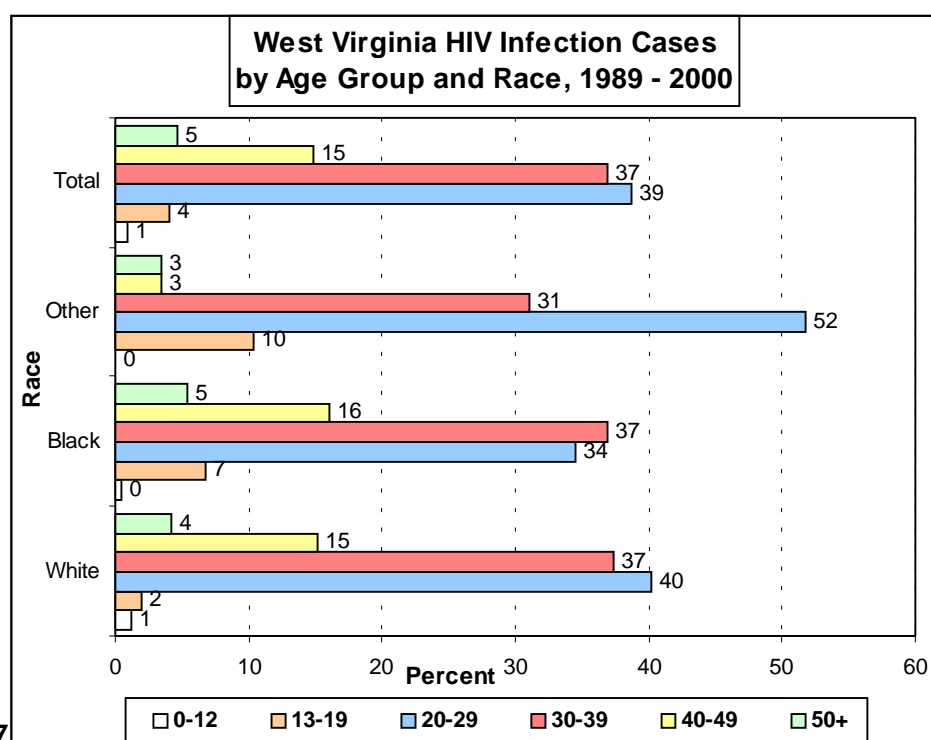


Figure 3.7

Table 3.12 and Figure 3.7 show HIV infection by age group and race from 1989 through 2000. Total HIV reports by race indicate that similar to AIDS, blacks with HIV infection in West Virginia were disproportionately affected, as they comprise 3% of the state's population and 35% of the HIV infection cases reported. When looking at HIV by age and race, whites and blacks were more heavily affected in the 20-29 and 30-39 age groups (141 cases, 40% and 131 cases, 37%) for whites and (71 cases, 34% and 76 cases, 37%) for blacks.



## West Virginia HIV Infection Cases by Risk Behavior and Gender 1989 - 1995 and 1996 - 2000

West Virginia HIV Infection Cases by Risk Behaviors and Gender 1989-1994 and 1995-2000																		
Risk Behavior	1989 - 1994						1995 - 2000						Total					
	Male		Female		Total		Male		Female		Total		Male		Female		Total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
MSM	85	52	0	0	85	37	165	63	0	0	165	47	250	59	0	0	250	43
IDU	20	12	28	40	48	21	34	13	27	30	61	17	54	13	55	34	109	19
MSM/IDU	8	5	0	0	8	3	12	5	0	0	12	3	20	5	0	0	20	3
Coagualtion Disorder	3	2	0	0	3	1	4	2	0	0	4	1	7	2	0	0	7	1
Heterosexual Contact	12	7	23	33	35	15	12	5	48	53	60	17	24	6	71	44	95	16
Transfusion/Transplant	3	2	1	1	4	2	1	0	0	0	1	0	4	1	1	1	5	1
Mother with HIV Risk	1	1	0	0	1	0	2	1	2	2	4	1	3	1	2	1	5	1
Risk Not Specified	30	19	18	26	48	21	34	13	13	14	47	13	64	15	31	19	95	16
TOTAL	162	100	70	100	232	100	264	100	90	100	354	100	426	100	160	100	586	100

Table 3.13

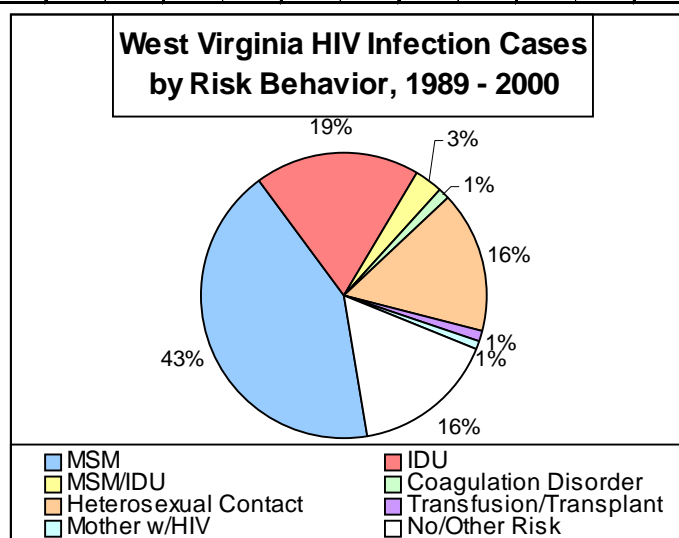
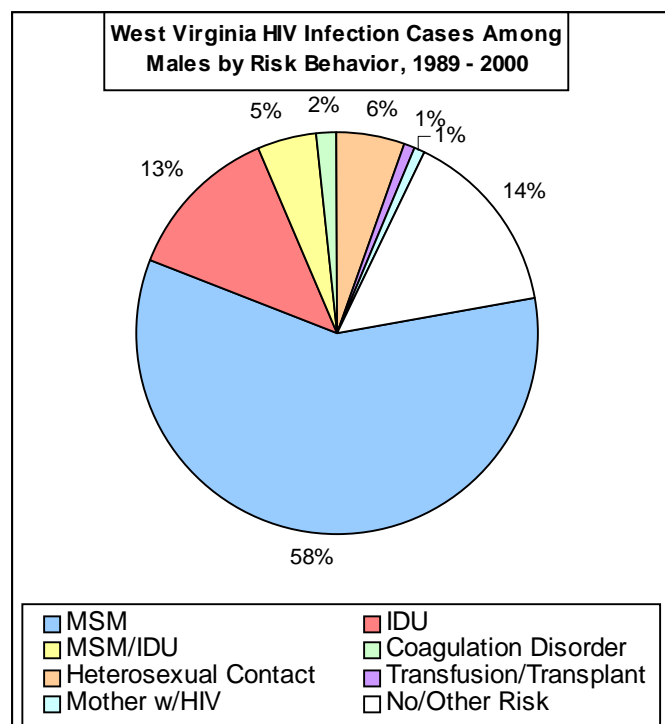


Figure 3.8

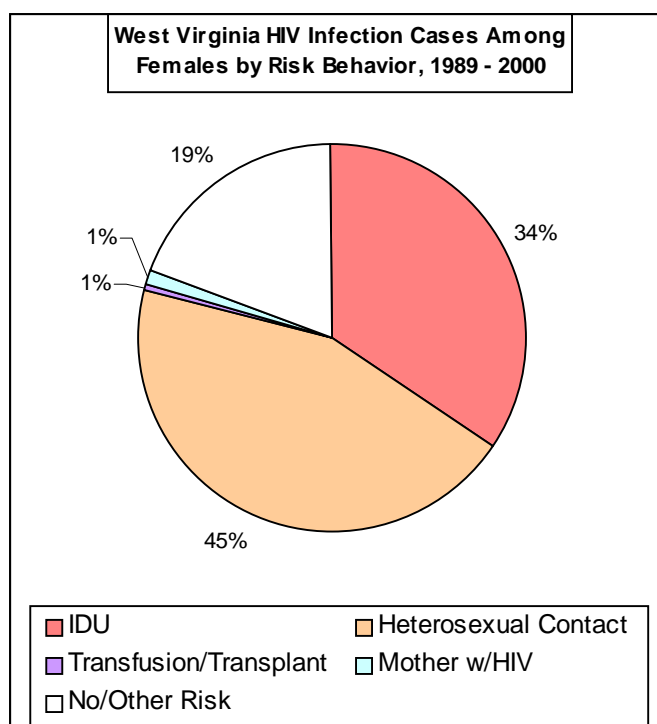
Table 3.13 shows HIV infection in these two 6-year aggregates of data by risk behavior and gender. The trend of risk behaviors for males has basically remained the same, with the predominate risk being MSM(43%) followed by IDU(19%). Reported HIV infection cases for females in the 1989-94 time period indicated IDU as the major risk behavior (40%) followed by heterosexual contact (33%). In the 1995-00 time period, heterosexual risk increased to 53% and continued to be the major risk behavior for females and IDU decreased to 30% in this time period. Among total male HIV infection cases, 76% were reported among MSM, IDU, and MSM/IDU. Only 6% of males were reported with high-risk heterosexual contact as a risk behavior. Females were reported mostly as heterosexual contact (44%) followed by IDU (34%). A high percentage of NIR (16%) indicates that people with HIV infection are initially reluctant to reveal their risk behavior or do not know the HIV status of their high risk behavior partners. Active surveillance, investigation, and follow-up are required for collecting more accurate risk behaviors.

**Note:** Percent in columns and pie charts may not add up to 100% due to rounding.

## West Virginia HIV Infection Cases by Risk Behavior and Gender, 1989-2000



**Figure 3.9**



**Figure 3.10**

Figures 3.6 and 3.7 display proportion of HIV Infection cases among males and females by risk behavior through December 2000.

From 1989 through 2000, 58% of West Virginia's male HIV infection cases reported MSM as their risk behavior followed by IDU (13%), and heterosexual contact (6%). Seventy-six percent of HIV infection cases for males reported MSM and/or IDU as their risk behavior (Figure 3.9).

Figure 3.10 displays that during this same 1989-2000 time period, 45% of females HIV infection cases were predominately infected through heterosexual contact with an at-risk male. Thirty-four percent of the female cases were reported with a risk of injecting drug use, compared to 13% among males. HIV infection cases with no identified risk behavior seem higher among females than of the males, possibly due to females being more reluctant to reveal their risk behavior.

**Note:** Percent in columns and pie charts may not add up to 100% due to rounding.

## West Virginia HIV Infection Cases by Risk Behavior and Race, 1989-2000

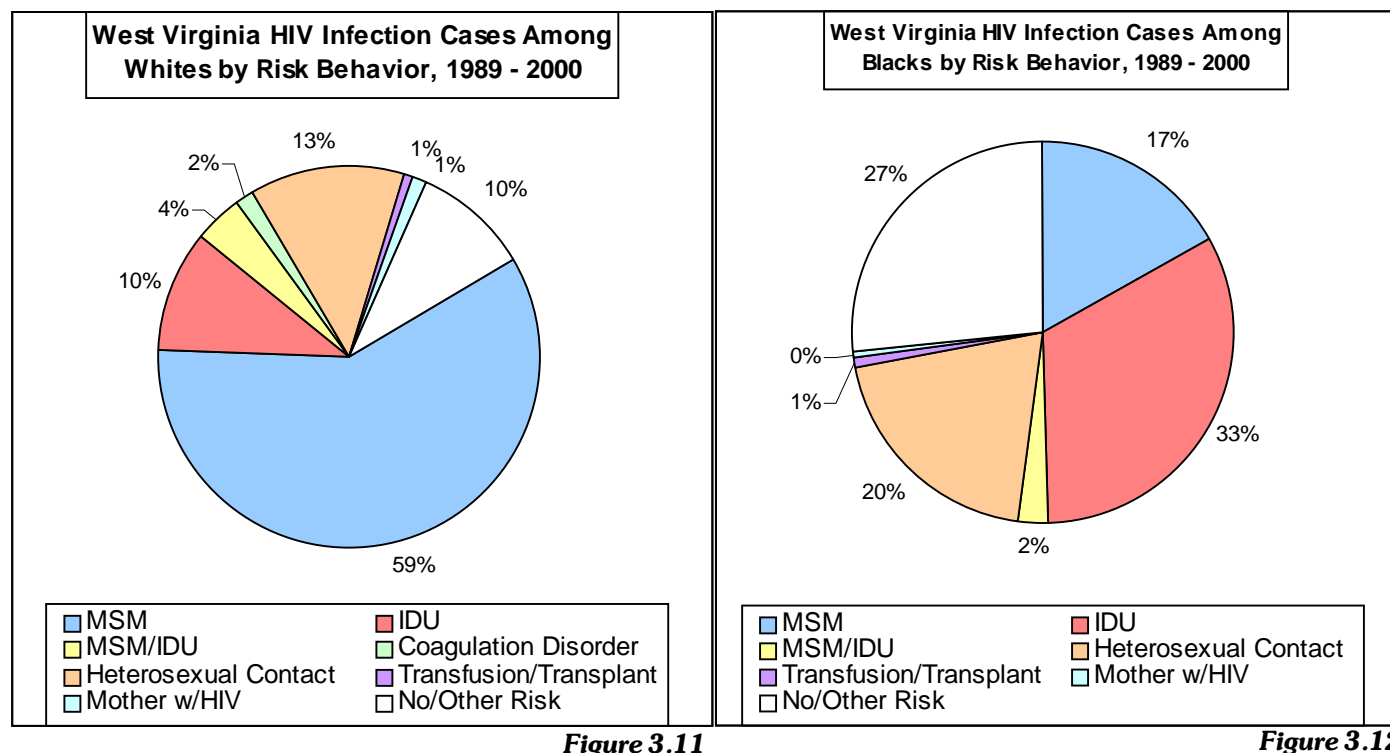


Figure 3.11

Figure 3.12

Figures 3.11 and 3.12 show distribution of West Virginia HIV infection cases among whites and blacks by risk behavior.

From 1989 through 2000, 59% of West Virginia's white HIV infection cases reported MSM as their risk behavior (Figure 3.6) followed by heterosexual contact (13%). Seventy-three percent of HIV infection cases for whites reported MSM and/or IDU as their risk behavior (Figure 3.8).

Figure 3.12 displays that during the same time period, 33% of blacks reported with HIV infection were predominately Injecting Drug Users (IDU). Seventeen percent of the blacks were reported with MSM risk behavior, compared to 59% among whites. HIV infection due to heterosexual contact accounted for 20% of the black cases, compared to 13% among white. HIV infection cases with no identified risk behavior seem higher among blacks than of the whites (27% to 10%).

**Note:** Percent in pie charts may not add up to 100% due to rounding.

## West Virginia HIV infection Cases Among Males by Risk Behavior and Race, 1996 - 2000

West Virginia HIV Infection Cases Among Males by Risk Behavior and Race, 1996-2000								
Risk Behavior	White		Black		Other		Total	
	#	%	#	%	#	%	#	%
MSM	110	70	20	36	4	50	134	61
IDU	17	11	14	25	1	13	32	15
MSM/IDU	8	5	2	4	0	0	10	5
Coagulation Disorder	4	3	0	0	0	0	4	2
Heterosexual Contact	3	2	7	13	0	0	10	5
Transfusion/Transplant	1	1	0	0	0	0	1	0
Mother with HIV Risk	1	1	1	2	0	0	2	1
Risk Not Specified	13	8	11	20	3	38	27	12
<b>Total</b>	<b>157</b>	<b>100</b>	<b>55</b>	<b>100</b>	<b>8</b>	<b>100</b>	<b>220</b>	<b>100</b>

Table 3.14

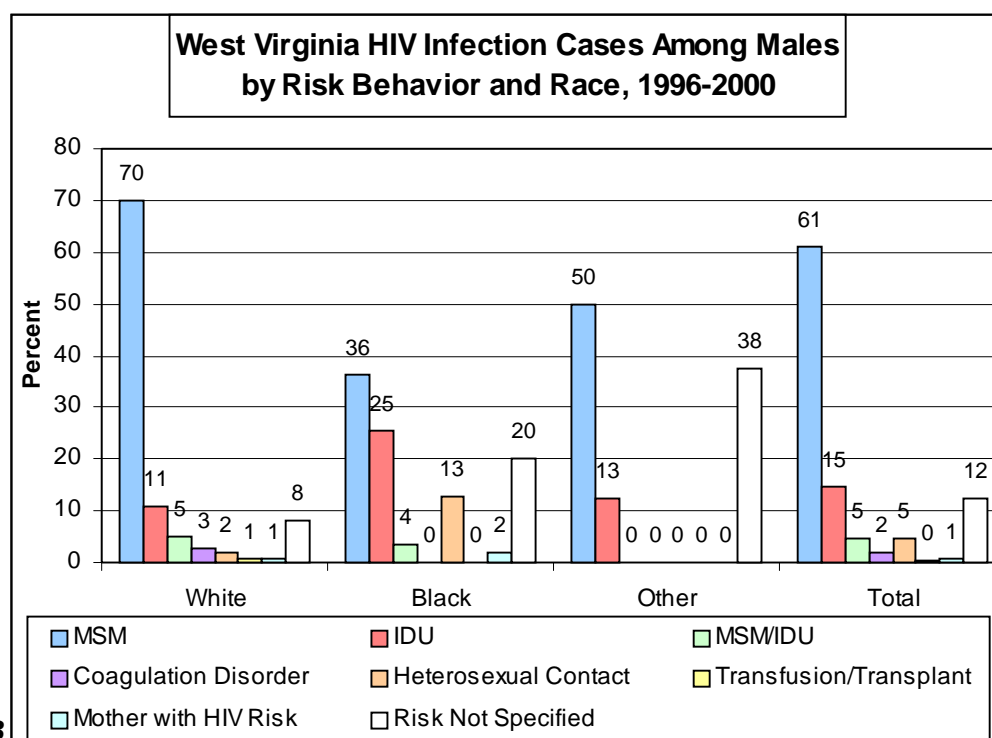


Figure 3.13

Table 3.14 and Figure 3.13 compare males by risk behaviors and race for acquiring HIV infection for 1996 through 2000. White males with HIV infection predominantly reported MSM (70%) as their risk behavior, while black males identified MSM (36%), IDU (25%), and heterosexual contact (13%). NIR's appeared in 27 of 220 reports (12%). The occurrence of NIR's and how they are investigated are explained in the technical notes.

## West Virginia HIV infection Cases Among Females by Risk Behavior and Race, 1996 - 2000

West Virginia HIV Infection Cases Among Females by Risk Behavior and Race, 1996-2000								
Risk Behavior	White		Black		Other		Total	
	#	%	#	%	#	%	#	%
IDU	10	25	14	41	0	0	24	32
Heterosexual Contact	24	60	12	35	2	100	38	50
Mother with HIV Risk	2	5	0	0	0	0	2	3
Risk Not Specified	4	10	8	24	0	0	12	16
<b>Total</b>	<b>40</b>	<b>100</b>	<b>34</b>	<b>100</b>	<b>2</b>	<b>100</b>	<b>76</b>	<b>100</b>

Table 3.15

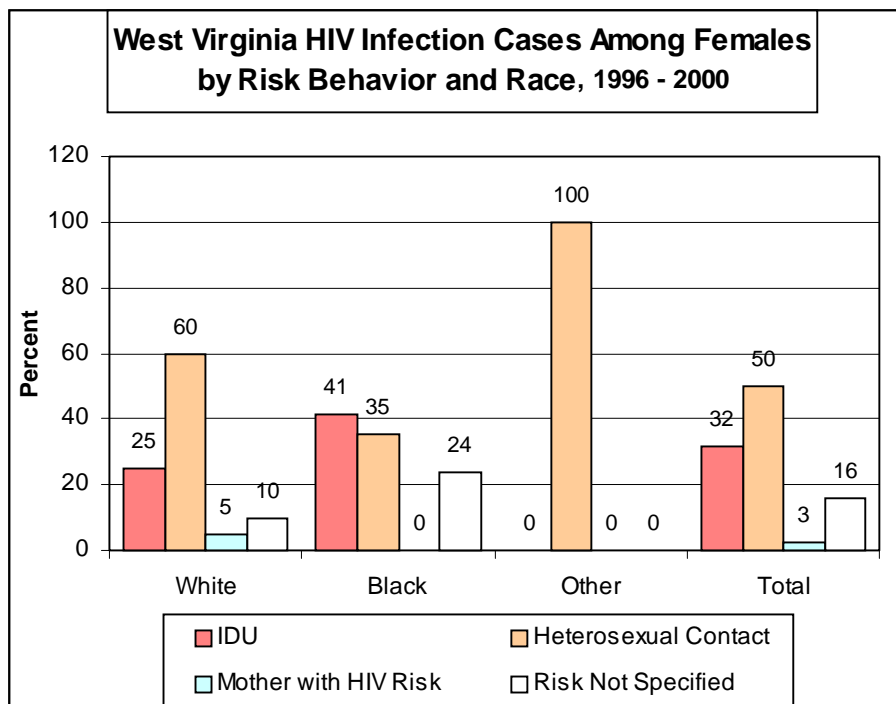
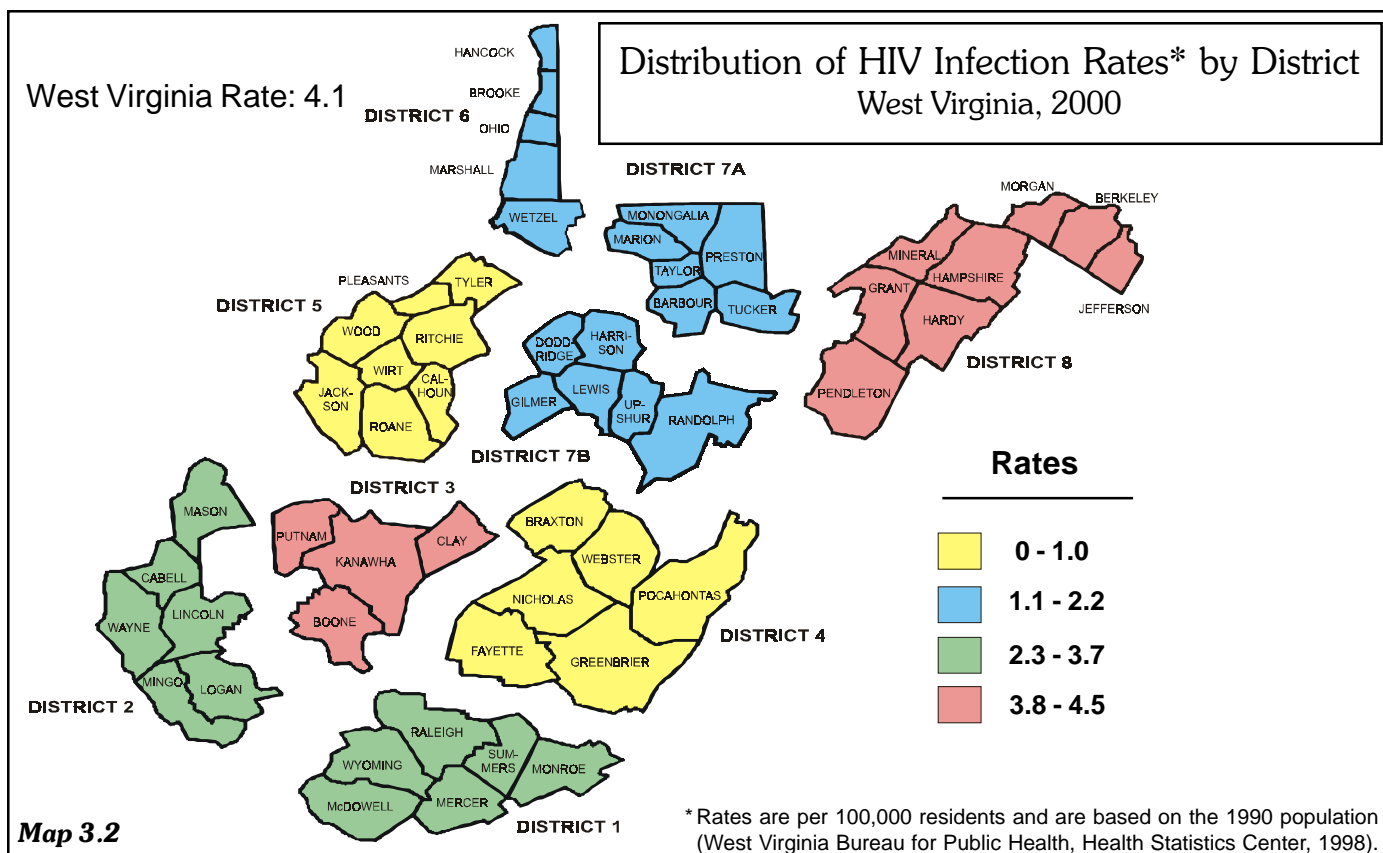
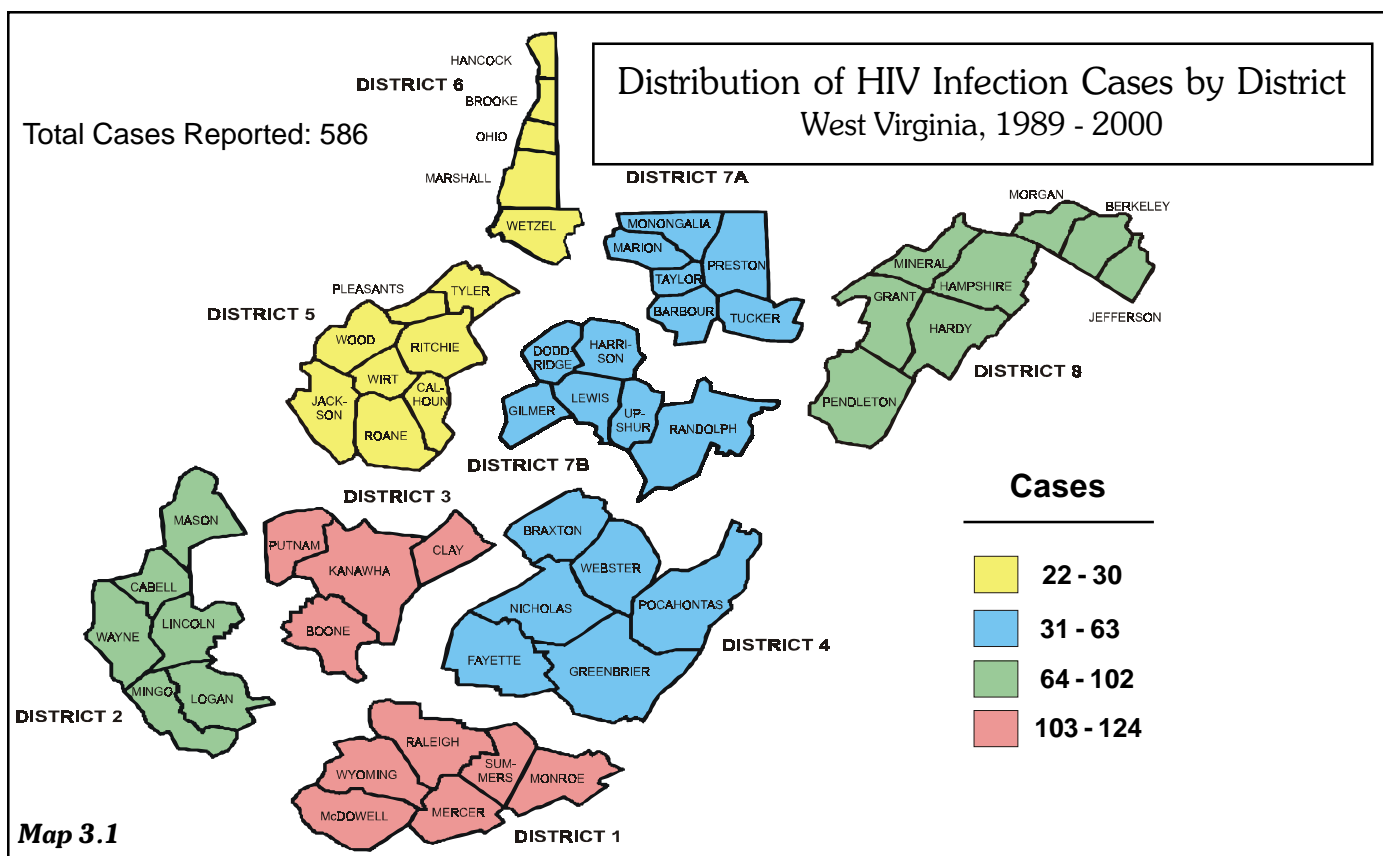
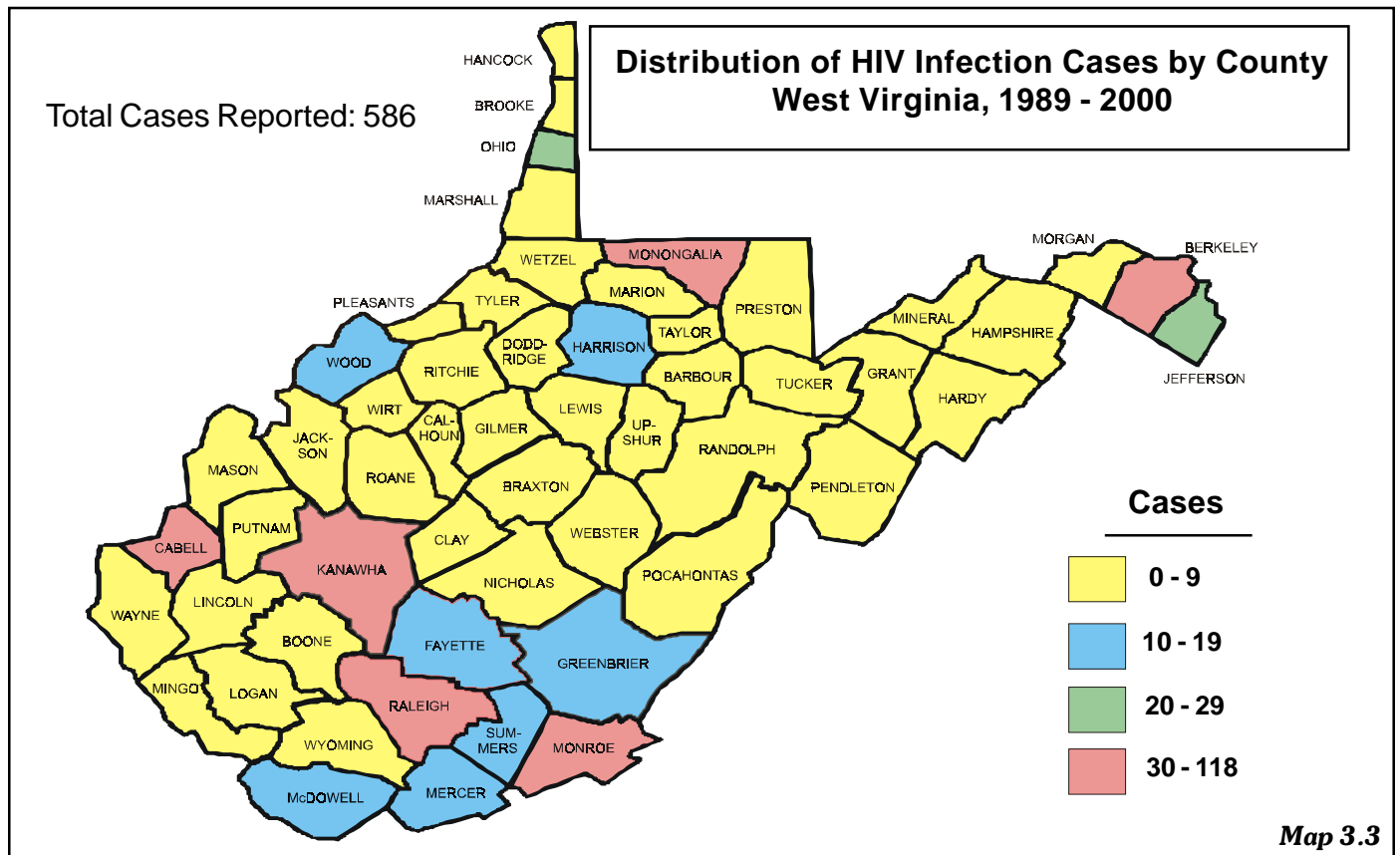


Figure 3.14

Table 3.15 and Figure 3.14 compare females HIV infection reports by risk behavior and race from 1996 through 2000. Heterosexual contact with a high-risk individual remained the most commonly identified risk behavior for both white and black females (60% and 35%, respectively). Keeping in mind that the numbers are very small, IDU appears to be a more frequently reported risk behavior for black females (41%) than for white females (25%). There were two female cases with heterosexual risk behavior belonging to the other race category.

**Note:** Percent in columns and may not add up to 100% due to rounding.





## Notes:

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