

Facts about... Geographic distribution of HIV/AIDS across King County

Summary: Most HIV-infected residents of King County live around central Seattle, with progressively lower case rates further from the central core. Compared to cases from other areas in the county, South King County has a distinctive racial distribution, with a lower proportion of whites and a higher proportion of blacks than other areas. South King County cases were also more likely to be female, fall into the heterosexual exposure category and be born outside of the United States.

Characteristics of HIV/AIDS cases by region of residence (Table 1): King County accounts for 59% of newly diagnosed HIV/AIDS cases in Washington state.¹ For 2,310 people newly diagnosed with HIV in King County from 2002 through 2008, the residence at the time of diagnosis was categorized in terms of four broad regions of the county: Seattle, East King County, North King County and South King County. From 1999 to 2007 the proportion of King County cases residing in the City of Seattle decreased from 84% to 75%, the proportion from South King County increased from 10% to 16% and the proportion from North and East King

Table 1: Demographic characteristics and transmission mode of HIV/AIDS cases newly diagnosed in King County 2002-2008

	East King County		North King County		Seattle		South King County		Total	
	N	%	N	%	N	%	N	%	N	%
Age at diagnosis										
<18	1	<1%	0	-	1	<1%	8	2%	10	<1%
18-29	46	30%	7	15%	404	24%	113	29%	570	25%
30-39	29	19%	9	19%	320	29%	65	17%	423	18%
40-49	63	40%	27	56%	813	47%	162	42%	1,065	46%
50+	17	11%	5	10%	181	11%	39	10%	242	11%
Race										
White	100	65%	32	67%	1,053	62%	165	43%	1,350	59%
Black	22	14%	9	19%	315	18%	139	36%	485	21%
Hispanic	23	15%	5	10%	207	12%	49	13%	284	12%
Native American	0	-	0	-	27	2%	4	1%	31	1%
Asian/Other	9	6%	2	4%	78	5%	20	5%	109	5%
Multiple races	1	<1%	0	-	31	2%	10	3%	42	2%
Sex										
Male	135	87%	43	90%	1,558	91%	297	77%	2,033	88%
Female	21	13%	5	10%	161	9%	90	23%	277	12%
Transmission mode										
MSM	100	64%	34	71%	1,141	66%	166	43%	1,441	62%
IDU	0	-	0	-	93	5%	23	6%	116	5%
MSM/IDU	5	3%	6	13%	156	9%	19	5%	186	8%
Heterosexual	28	18%	3	6%	153	9%	97	25%	281	12%
Other	1	<1%	1	2%	1	<1%	5	1%	8	<1%
Not reported	22	14%	4	8%	175	10%	77	20%	278	12%
Total	156	7%	48	2%	1,719	74%	387	17%	2,310	100%

County rose from 6% to 9%.¹ Cases from South King County differed from those in other regions of the county in a number of characteristics: they were less likely to be white and more likely to be black, female, classified in the heterosexual exposure category and born outside of the U.S.

Numbers of new HIV cases and rates by zip code (Table 2 and Figure 1): The zip code of residence at the time of new HIV diagnosis is shown for the 2,157 people with valid data. Zip codes are grouped by Health Planning Areas, 25 areas that represent the county on a broader scale by breaking Seattle into neighborhood groupings and pooling together contiguous cities and areas in King County outside of Seattle. Health Planning Areas were designed to correspond with neighborhoods, utilization of health clinics, travel patterns and other community factors.

Table 2 also presents rates of new diagnoses of HIV by zip code, based on King County zip code population estimates for 2006.² These figures are not be influenced by differences in survival or migration across zip codes after diagnosis.

The overall rate for new HIV/AIDS cases 2002-2008 in King County was 17.9 annually per 100,000 population, similar to the national rate of 19.0 annually per 100,000 population reported by CDC in 2006.³ The geographic distribution showed a concentration of new cases in a three central zip codes and a relatively rapid fall off beyond these areas. The 98122 zip code had the highest numbers and rate of new cases. This zip code encompasses Capitol Hill south of Denny Way, and includes parts of the Central District and Madrona. The next highest concentrations are in the 98102 zip code (Capitol Hill north of Denny Way and Eastlake), and 98104 (downtown Seattle south of Spring Street, First Hill, Pioneer Square and the International District). These three zip codes account of 22% of all cases reported in King County. Five zip codes in King County reported no new HIV/AIDS cases in 2002-2008.

Table 2: Number and rate of newly diagnosed HIV/AIDS cases by zip code in King County 2002-2008

Health Planning Area	Zip Code	Population in 2006	Total # new HIV cases	Cases /100,000 Per year ¹
King County Total		1,840,884	2,310	17.9
N Seattle/North King County	Total	130,107	115	12.6
	98125	35,951	48	19.1
	98133	42,314	32	10.8
	98155	33,180	21	9.0
	98177	18,662	14	10.7
N Seattle (Ballard, Fremont, Greenlake)	Total	91,334	105	16.4
	98103	43,225	57	18.8
	98107	19,157	27	20.1
	98117	28,952	21	10.4
N Central Seattle (Capitol Hill, Eastlake)	Total	40,702	234	82.1
	98102	20,685	171	118.1
	98112	20,017	63	45.0
N East Seattle (University, Wedgewood)	Total	82,826	68	11.7
	98105	37,315	28	10.7
	98115	42,902	40	13.3
	98195	2,609	0	0
N West Seattle (Queen Anne, Magnolia)	Total	56,371	127	32.2
	98109	16,355	68	59.4
	98119	20,977	42	28.6
	98199	19,039	17	12.8

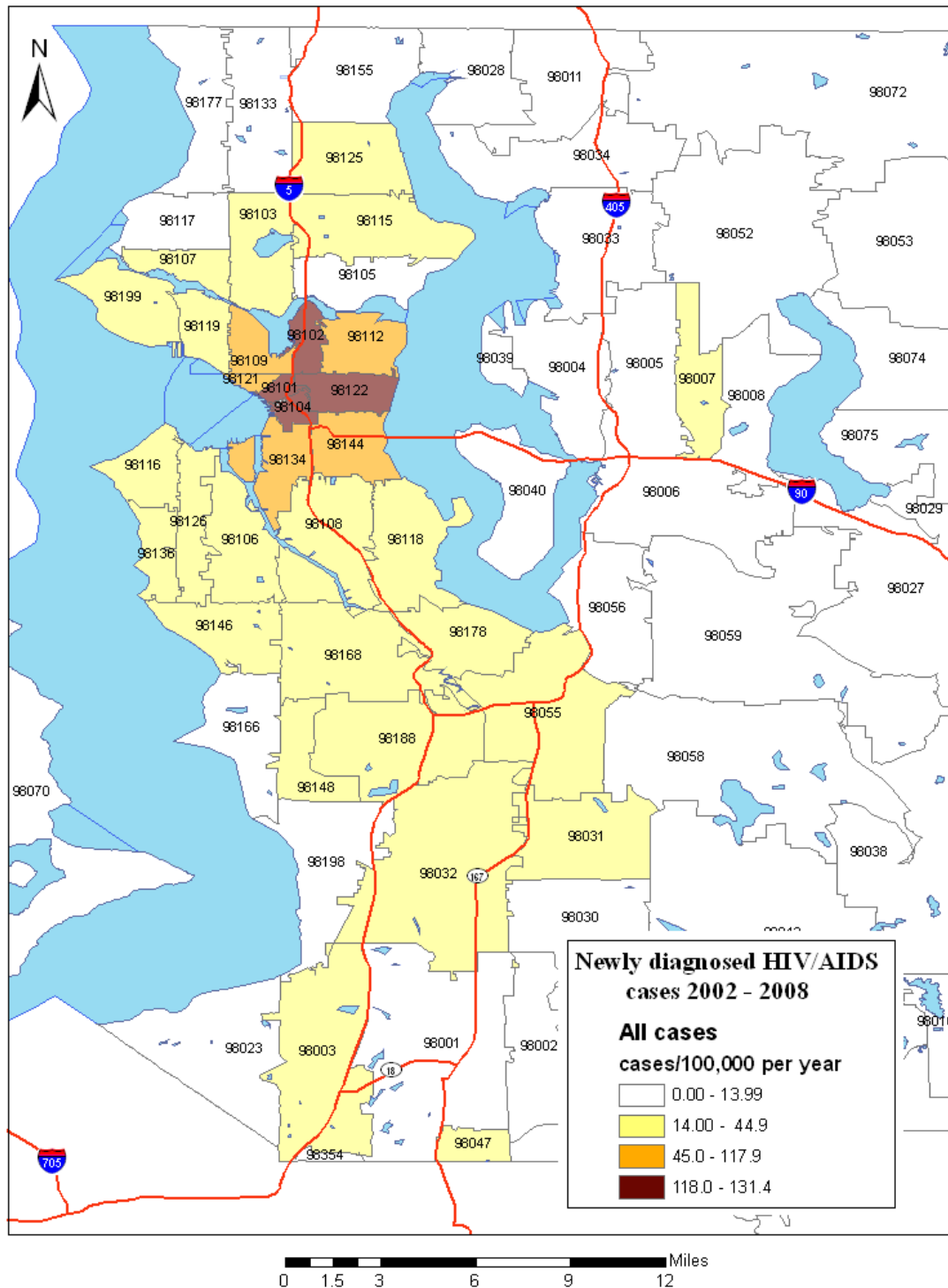
Central Seattle / Downtown	Total	67,469	554	117.3
	98101	10,732	90	119.8
	98104	13,782	125	129.6
	98121	13,281	66	80.0
	98122	29,674	273	131.4
West Seattle	Total	77,842	117	21.5
	98106	23,358	47	28.7
	98116	20,834	18	12.3
	98126	20,006	33	23.6
	98136	13,644	19	19.9
SE Seattle (Beacon Hill, Georgetown)	Total	90,477	227	35.8
	98108	22,382	46	29.4
	98118	40,797	98	34.3
	98134	1,333	5	53.6
	98144	20,637	78	54.0
Auburn	Total	94,732	68	10.3
	98001	28,272	6	3.0
	98002	30,946	13	6.0
	98047	5,075	5	14.1
	98092	30,437	8	3.8
Bellevue	Total	124,941	61	7.0
	98004	24,420	17	9.9
	98005	17,030	2	1.7
	98006	36,352	10	3.9
	98007	23,127	20	12.4
	98008	24,012	10	5.9
Bothell / Woodinville / Kenmore	Total	86,399	24	4.0
	98011	29,137	11	5.4
	98028	20,104	6	4.3
	98072	21,797	7	4.6
	98077	15,361	0	0
Burien / Highline	Total	54,153	39	10.3
	98166	20,856	16	11.0
	98198	33,297	23	9.9
Cascade / Covington	Total	68,981	20	4.1
	98038	28,075	1	0.5
	98058	40,906	19	6.6
Federal Way	Total	92,168	32	5.0
	98003	43,544	42	13.8
	98023	48,624	26	7.6
Issaquah / Sammamish	Total	83,858	19	3.2
	98027	26,434	11	5.9
	98029	17,634	5	4.0
	98074	22,944	3	1.9
	98075	16,846	0	0
Kent	Total	141,362	97	9.8
	98030	33,195	17	7.3
	98031	36,815	34	13.2
	98032	29,396	29	14.1
	98042	41,956	17	5.8
Kirkland	Total	74,095	25	4.8
	98033	32,348	8	3.5
	98034	41,747	17	5.8

Lower Valley / Snoqualmie¹	Total	47,316	6	1.8
	98014	7,193	1	2.0
	98019	9,775	0	0
	98024	7,298	0	0
	98045	14,107	2	2.0
	98065	8,490	2	3.4
Mercer Island	Total	24,830	5	2.9
	98039	2,967	2	9.6
	98040	21,863	3	2.0
Redmond / Union Hill	Total	71,304	33	6.6
	98052	54,469	27	7.1
	98053	16,835	6	5.1
Renton	Total	110,145	86	11.2
	98055	21,227	31	20.9
	98056	30,211	21	9.9
	98057	10,092	0	0
	98059	27,499	8	4.2
	98178	21,116	26	17.6
Southeast King County	Total	31,367	5	2.3
	98010	5,392	2	5.3
	98022	22,279	3	1.9
	98051	3,696	1	3.9
Tukwila / SeaTac¹	Total	29,394	53	25.8
	98148	8,269	17	29.4
	98188	21,087	36	24.4
Vashon Island	98070	11,151	5	6.4
White Center / Skyway	Total	57,560	67	16.6
	98146	25,754	25	13.9
	98168	31,806	42	18.9

1. Zip codes with fewer than 500 King County residents are not listed in the table separately but are included in the total for each area. These zip codes include 98158, 98224, and 98288.

Figure 1 maps the rates of new HIV/AIDS diagnoses by zip code. The map represents only the western, more densely populated portion of King County. No zip code missing from the map had more than 10 cases in 2002-2008. The map highlights the focal pattern of HIV/AIDS case rates, with the highest rates concentrated in central Seattle and progressively lower rates in zip codes farther from this central area.

Figure 1: Map of HIV/AIDS case rates by King County zip code, 2002-2008



1. HIV/AIDS Epidemiology Unit. Public Health - Seattle & King County and the Infectious Disease and Reproductive Health Assessment Unit, Washington state Department of Health, HIV/AIDS Epidemiology Report, First Half, 2008: volume 72. Available at: <http://www.kingcounty.gov/healthservices/health/communicable/hiv/epi/reports.aspx> 2008.
2. Washington state Department of Health, Vista Partnership, Krupski Consulting. *Population Estimates for Public Health Assessment*, accessed June 2009.
3. Centers for Disease Control and Prevention. National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. *2006 Disease Profile*, Available at: <http://www.cdc.gov/hiv/topics/surveillance/resources/reports.2008>.