

CHAPTER 3: GENERAL HEALTH STATUS

In this chapter, we present health indicators which summarize the general health status of King County residents, including total deaths, leading causes of death, life expectancy, years of potential life lost, leading causes of hospitalization, leading causes

of disability, and quality of life indicators. In general, compared to the state and national rates, King County residents are healthier with a lower mortality rate, a longer life expectancy, and a better self-reported health status.

Table 3-1:
General Health Status: Death, Hospitalization, and Life Expectancy

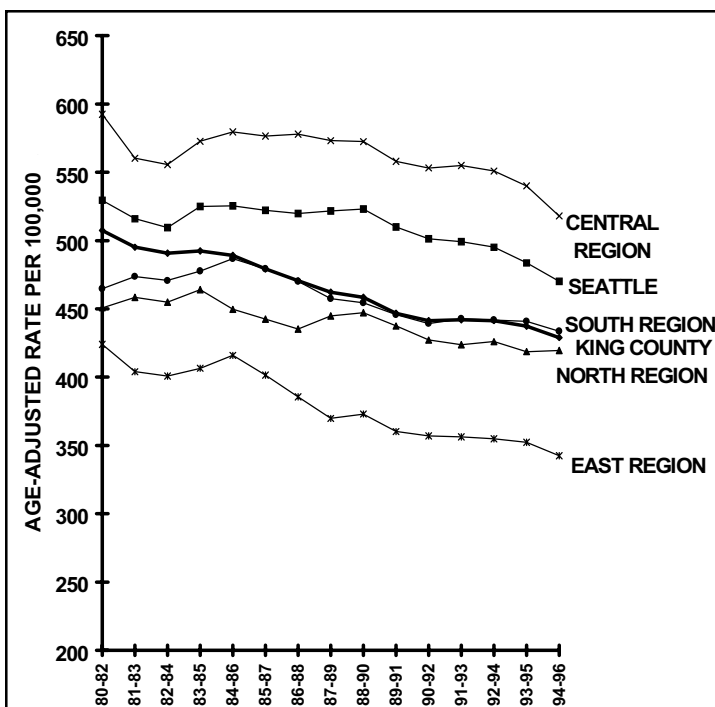
	TOTAL DEATHS		TOTAL HOSPITALIZATIONS*		LIFE EXPECTANCY	SELF-REPORTED HEALTH IS FAIR/POOR
	Rate**	Number	Rate**	Number		
King County 1996	427.0	11,748	5,647.6	111,908	78.0	8.1%
Seattle 1996	460.8	5,131	6,052.6	47,332	77.4	--
Washington State 1996	446.2	42,242	5,385.8	366,140	77.3	10.8%
United States 1995	503.9	2,312,132	-	-	75.8	-

Source: Death Certificates, CHARS, and BRFS.

* Non-childbirth hospitalizations.

** Rate is age-adjusted rate per 100,000 population.

Figure 3-1:
Total Death, Age-Adjusted Rate By Health Region, King County
Three Year Rolling Averages, 1980-1996



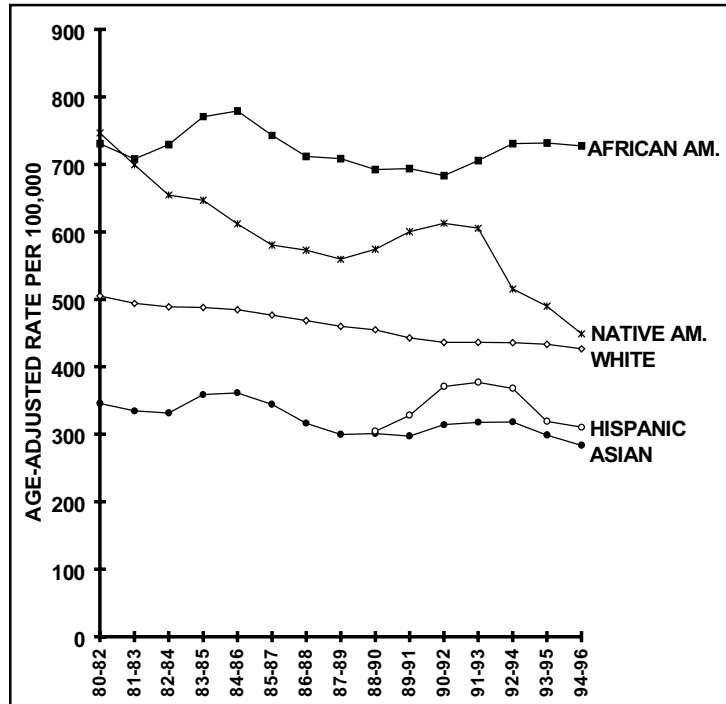
Source: Death Certificate Data: WA State Department of Health, Center for Health Statistics.

TOTAL DEATHS

- ◆ In 1996, 11,748 King County residents died, including 5,131 residents of Seattle.
- ◆ Of the 11,748 deaths, persons under age 65 accounted for 25.4% while 18.0% were age 65 to 74, 29.6% were age 75 to 84, and 27.0% were age 85 and older.
- ◆ The age-adjusted death rate differed significantly between neighborhoods of different poverty levels. Averaged over 1994-1996, the rates were 612.3, 450.1, and 362.0 in high, medium, and low poverty neighborhoods respectively. However, the gaps in total mortality between high and low poverty neighborhoods have narrowed since the late 1980s.
- ◆ Between 1980 and 1996, the age-adjusted total death rate declined significantly in Seattle, King County, and all four Health Regions.
- ◆ Averaged over 1994-1996, the age-adjusted total death rates in Central Region and Seattle were significantly higher while the rate in East Region was significantly lower than the King County average rate (Figure 3-1).

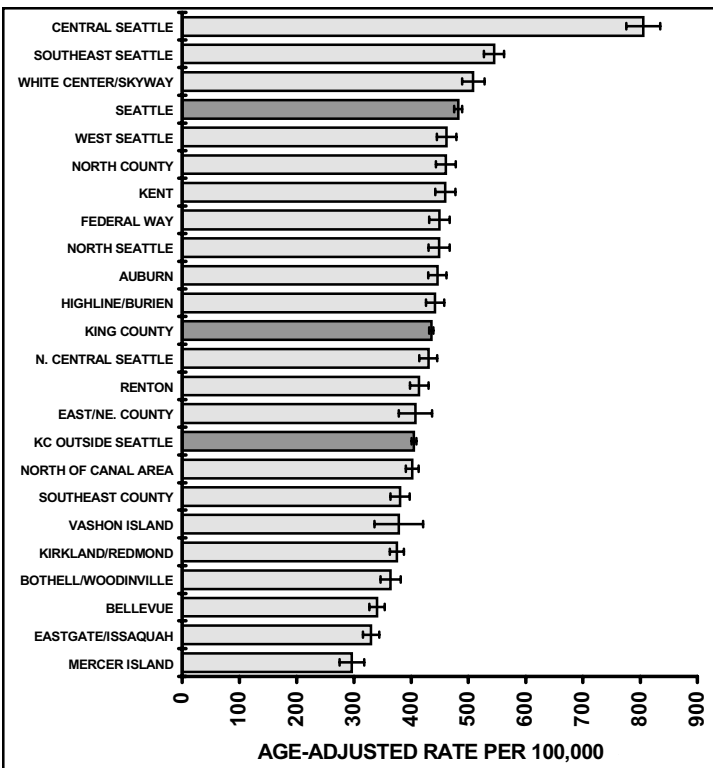
Figure 3-2:
Total Death, Age-Adjusted Rate
By Race/Ethnicity, King County
Three Year Rolling Averages, 1980-1996

- ◆ Among the racial/ethnic groups, the total death rate between 1980 and 1996 declined significantly for whites, Native Americans, and Asians. The time trends in the death rate for African Americans (1980-1996) and Hispanics (1988-1996) were flat (Figure 3-2).
- ◆ Disparities in the age-adjusted death rate between racial/ethnic groups in King County remained. The gap in total mortality between African Americans and whites has widened since the late 1980s. Averaged over 1994-1996, the rate for African Americans (727.7) was significantly higher while the rates for Asians (270.6) and Hispanics (280.9) were significantly lower than the white rate (426.6). The rate for Native Americans (448.8) was similar to the rate for whites (Figure 3-2).



Source: Death Certificate Data: WA State Department of Health, Center for Health Statistics.

Figure 3-3:
Total Death, Age-Adjusted Rate
By Health Planning Area, King County
Five Year Average, 1992-1996



Source: Death Certificate Data: WA State Department of Health, Center for Health Statistics.

- ◆ Age-adjusted death rate also varied between Health Planning Areas. Averaged over 1992-1996, the rates for Central Seattle, Southeast Seattle, and White Center/Skyway were significantly higher while the rates for Eastside communities, Vashon Island, Southeast County, and North of Canal were significantly lower than the county average rate (Figure 3-3).

LEADING CAUSES OF DEATH

- ◆ In 1996, the three leading causes of death in King County were heart disease, cancer, and stroke.
- ◆ The leading causes of death differed between the various age groups. In general, unintentional injury, cancer, homicide, and suicide ranked higher

among the younger age groups while heart disease, cancer, and other chronic diseases ranked higher among the older age groups (Table 3-2). AIDS was the number one killer among males age 25 to 44.

**Table 3-2:
The Leading Causes of Death*
Numbers By Age Group
King County, 1996**

Rank	Age <1	Age 1-14	Age 15-24	Age 25-44	Age 45-64	Age 65+	Total
1st	Congenital Anomalies 31	Unintentional Injury 15	Unintentional Injury 63	Unintentional Injury 189	Cancer 679	Heart Disease 2,681	Heart Disease 3,148
2nd	SIDS 22	Cancer 8	Suicide 28	AIDS 171	Heart Disease 381	Cancer 2,060	Cancer 2,892
3rd	Prematurity 19	Congenital Anomalies 7	Homicide 19	Cancer 136	Unintentional Injury 91	Stroke 855	Stroke 935
4th		Homicide 6	Cancer 7	Suicide 98	Diabetes 76	COPD 470	COPD 513
5th				Heart Disease 83	Stroke 63	Pneumonia/ Influenza 433	Unintentional Injury 502
6th				Homicide 35	AIDS 63	Diabetes 229	Pneumonia/ Influenza 470
7th				Cirrhosis 23	Cirrhosis 53	Unintentional Injury 143	Diabetes 318
8th				Stroke 17	Suicide 50	Alzheimer's 129	AIDS 238
9th				Pneumonia/ Influenza 13	COPD 42	Athero- sclerosis 82	Suicide 217
10th				Diabetes 13	Pneumonia/ Influenza 23	Septicemia 56	Alzheimer's 130
Total Death	118	52	134	892	1,790	8,758	11,748

Source: Death Certificate Data: WA State Department of Health, Center for Health Statistics.

* SIDS = sudden infant death syndrome; COPD = Chronic Obstructive Pulmonary Disease; Cirrhosis includes all forms of chronic liver diseases. A cell is left blank if the number of death is less than 5. The discrepancy between the age group aggregated total and the actual total is because age data are missing on 4 death certificates.

◆ The leading causes of death also varied among the racial/ethnic groups. In general, unintentional injury, homicide, and diabetes ranked relatively

higher among the minority populations. Cirrhosis was the fourth leading cause of death in Native Americans (Table 3-3).

**Table 3-3:
The Leading Causes of Death, Number and Age-Adjusted Rate*
By Race/Ethnicity
King County, 1992-1996**

Rank **	White	African Am.	Native Am.	Asian	Hispanic
1st	Heart Disease	Cancer	Heart disease	Cancer	Cancer
Rate	102.5	171.9	104.6	88.7	74.8
Number	13,901	637	81	732	123
2nd	Cancer	Heart Disease	Cancer	Heart Disease	Heart Disease
Rate	123.8	163.7	102.6	64.5	70.4
Number	12,668	633	77	583	115
3rd	Stroke	Stroke	Unintent. Injuries	Stroke	Unintent. Injuries
Rate	24.5	44.9	33.5	27.9	29.0
Number	3,964	189	34	260	76
4th	COPD	Unintent. Injuries	Cirrhosis	Unintent. Injuries	AIDS
Rate	19.2	37.2	24.4	16.6	24.1
Number	2,317	165	24	134	69
5th	Pneumonia	Homicide	Stroke	Pneumonia	Stroke
Rate	12.0	38.7	29.0	8.4	24.1
Number	2,148	161	21	90	40
6th	Unintent. Injuries	Diabetes	Pneumonia	Diabetes	Homicide
Rate	23.8	41.9	21.9	10.0	15.4
Number	1,910	149	19	83	40
7th	AIDS	AIDS	AIDS	COPD	Diabetes
Rate	18.1	31.8	16.6	8.3	17.1
Number	1,453	147	19	73	27
8th	Diabetes	COPD	Homicide	Homicide	Suicide
Rate	11.2	22.8	13.9	7.9	10.0
Number	1,200	87	15	59	27
9th	Suicide	Pneumonia	Suicide	Suicide	Cirrhosis
Rate	12.7	15.0	13.7	6.7	10.1
Number	939	65	14	53	21
10th	Cirrhosis	Suicide	Diabetes	AIDS	COPD
Rate	6.8	9.5	11.2	4.0	9.4
Number	581	41	8	36	14
Total Death					
Rate	431.7	722.0	497.5	298.4	348.9
Number	50,748	2,902	420	2,603	700

* Rates per 100,000 are age-adjusted to the 1940 U.S. population. Numbers are five-year total. COPD = Chronic Obstructive Pulmonary Disease. Cirrhosis includes all forms of chronic liver diseases. Unintent. Injuries = Unintentional Injuries. Pneumonia includes both pneumonia and influenza.

** The leading causes of death are ranked by the number of deaths. Because of age-adjustment, the sequence may not correspond to those ranked by the rates.

Source: Death Certificate Data: Washington State Department of Health, Center for Health Statistics.

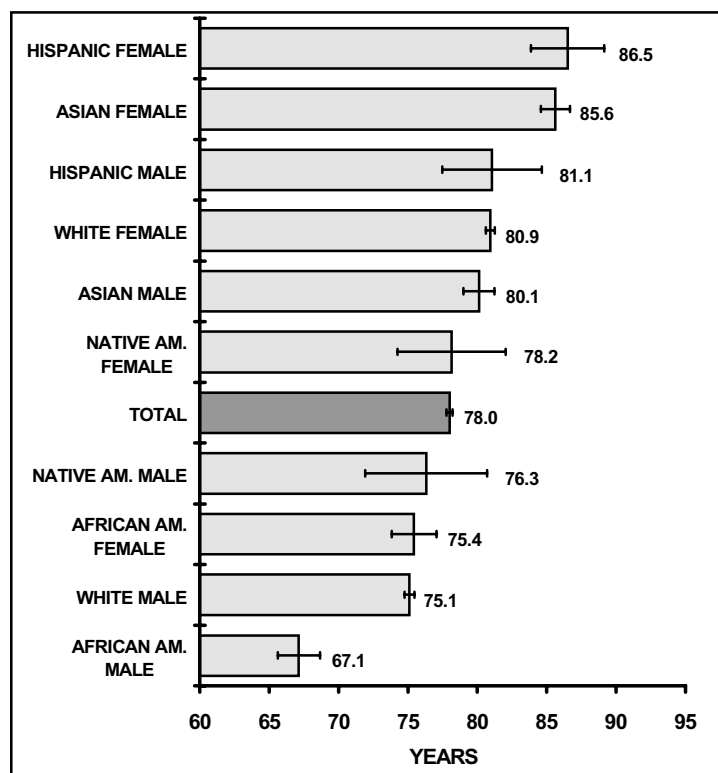
LIFE EXPECTANCY

Life expectancy at birth is the average number of years a person born in 1996 would live if the current

age-specific death rates remained unchanged over that person's lifetime.

- ◆ In King County, the life expectancy at birth in 1996 was 78.0 years, 75.0 for males and 80.9 for females. Compared to 1980, the life expectancy increased 2.6 years overall, 3.0 for males and 2.2 for females.
- ◆ The life expectancies for Hispanic females,¹ Asian females, white females, and Asian males were significantly higher while the life expectancies for African American males, white males, and African American females were significantly lower than the county average (Figure 3-4).
- ◆ The increase in life expectancy between 1980-1982 average and 1994-1996 average was 2.2 years for whites, 0.2 for African Americans, and 1.6 for Asians. For Native Americans, the increase in life expectancy between 1980-1984 average and 1992-1996 average was 5.2 years. For those of Hispanic ethnicity, the change between 1987-1989 average and 1994-1996 average was -0.1 years.

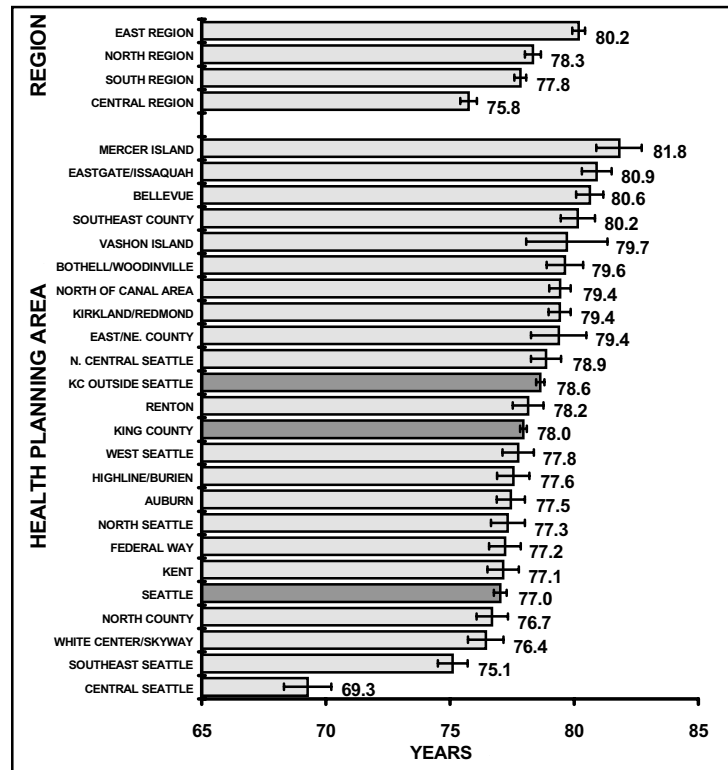
Figure 3-4:
Life Expectancy at Birth
By Race/Ethnicity and Gender, King County
1996



Source: Death Certificate Data: WA State Department of Health, Center for Health Statistics.

¹ According to a study by the Washington State Department of Health (Juliet VanEenwyk, Eric Ossiander and Cathy O'Connor, Hispanic Mortality: Discussion Paper, Working Draft Revised January 1998), the lower overall mortality rates and the higher life expectancy for Hispanics could be the result of a number of factors, such as underreporting of Hispanic ethnicity on the death certificates, migration of Hispanics to country of origin to die, and a healthier lifestyle among older Hispanics. However, the significance of under reporting is unclear. Although older Hispanics may have a healthier lifestyle than non-Hispanics, it is known that younger Hispanics have a higher death rate than their non-Hispanic counterparts. Since most deaths occur among the elderly, the impact of the higher death rate for Hispanic youth on the overall death rate and life expectancy for Hispanics is limited.

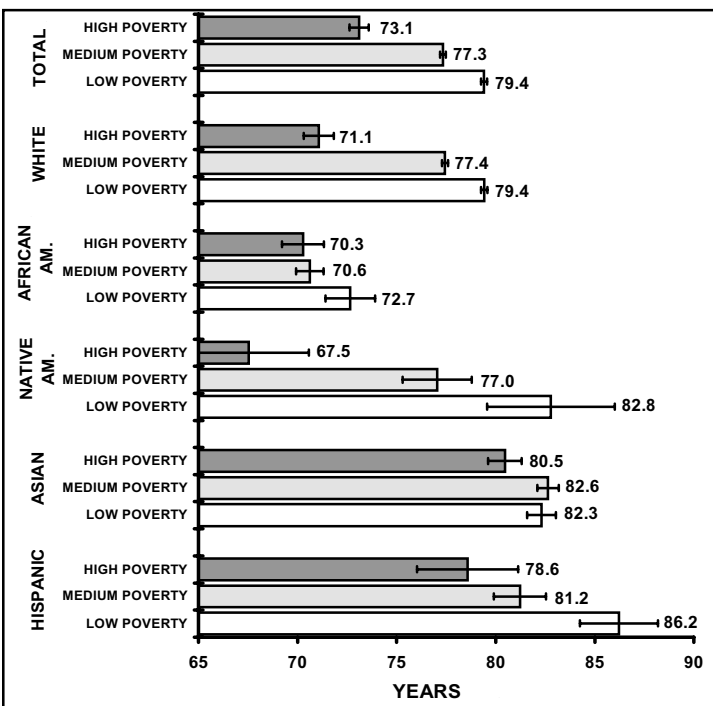
Figure 3-5:
Life Expectancy at Birth
By Region and Health Planning Area, King County
Three Year Average, 1994-1996



Source: Death Certificate Data: WA State Department of Health, Center for Health Statistics.

- ◆ Among the four Health Regions, the life expectancy for residents of East Region was significantly higher than the county average during 1994 to 1996, while the life expectancies for residents of South and Central Region were significantly lower than the county average.
- ◆ Among the Health Planning Areas, residents of Mercer Island had the highest life expectancy (81.8) which was 12.5 years more than that for residents of Central Seattle where the life expectancy (69.3) was the lowest in the county (Figure 3-5).

Figure 3-6:
Life Expectancy at Birth
By Race/Ethnicity and Level of Poverty, King County
Five Year Average, 1992-1996



Source: Death Certificate Data: WA State Department of Health, Center for Health Statistics.

- ◆ The impact of socioeconomic status on health, especially for the minority populations, can be shown in the association between neighborhood poverty level² and life expectancy. This association was highly significant for whites, African Americans, Native Americans, and Hispanics. The association was not significant for Asians (Figure 3-6).

² Poverty level is based on the percentage of persons living below the Federal Poverty Level in a particular census tract in 1989. Those census tracts with more than 20 percent, 5 to 20 percent, and less than 5 percent of the residents living below poverty are classified as high poverty, medium poverty, and low poverty neighborhoods respectively.

YEARS OF POTENTIAL LIFE LOST (YPLL)

Years of Potential Life Lost (YPLL) before age 65 measures the impact of a cause on premature death. For each death, this measure counts the number of years between the age of death and age 65 as the years of potential life lost. As a result, diseases that cause more deaths among younger persons have a higher weight in YPLL.

◆ The five leading causes of YPLL in King County were cancer, unintentional injury, AIDS, heart disease, and suicide during 1994-1996 (Table 3-4).

- ◆ Homicide was the number one cause of YPLL in African Americans and the number three cause of YPLL in Hispanics. Unintentional injury and AIDS caused more YPLL than cancer in African Americans, Native Americans, and Hispanics.
- ◆ The overall rates of YPLL (per 100,000 population) for African Americans (8,878.6), Native Americans (6,528.8), and Hispanics (5,183.4) were significantly higher than the rate for whites (4,104.7). The Asian rate (2,504.9) was significantly lower than the white rate.

**Table 3-4:
The Five Leading Causes of Years of Potential Life Lost* (YPLL) Before Age 65
By Race/Ethnicity, King County
1994-1996 Averages**

Rank	Total	White	African Am.	Native Am.	Asian	Hispanic
1st	Cancer 706.4	Cancer 726.0	Homicide 1,242.7	Unintentional Injury 804.0	Cancer 407.5	Unintentional Injury 983.3
2nd	Unintentional Injury 681.7	Unintentional Injury 685.0	Unintentional Injury 1105.1	AIDS 700.6	Unintentional Injury 368.0	AIDS 792.0
3rd	AIDS 581.1	AIDS 604.5	AIDS 1021.6	Cancer 513.4	Suicide 234.6	Homicide 605.0
4th	Heart Disease 367.2	Heart Disease 371.4	Cancer 1001.7	Suicide 481.1	Homicide 221.1	Cancer 337.4
5th	Suicide 335.5	Suicide 345.6	Heart Disease 587.1	Heart Disease 416.5	Heart Disease 209.8	Heart Disease 285.7
All Causes	4260.0	4104.7	8878.6	6528.8	2504.9	5183.4

Source: Death Certificate Data: WA State Department of Health, Center for Health Statistics.

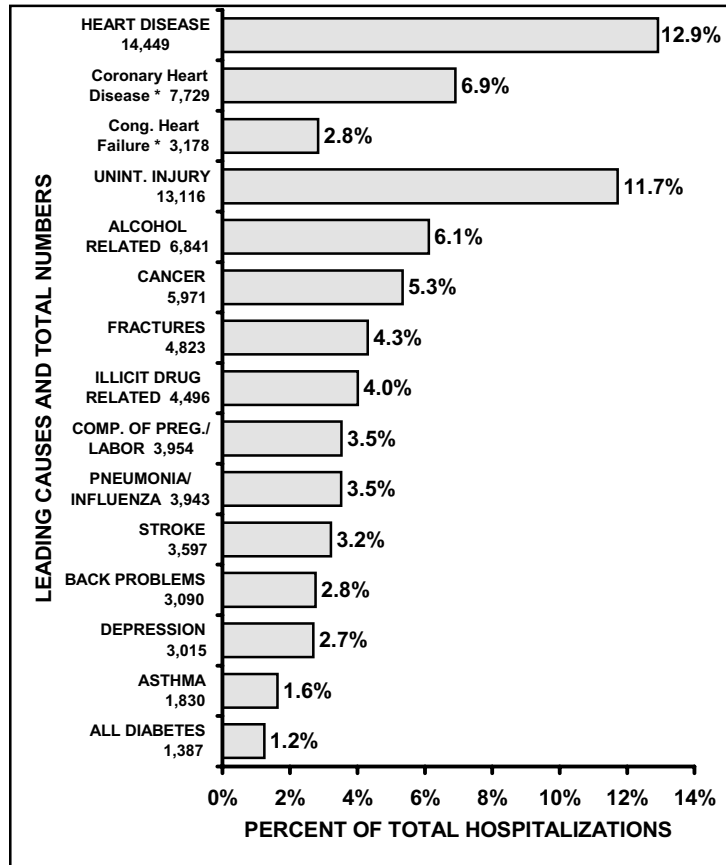
* Years of Potential Life Lost Per 100,000 Population.

LEADING CAUSES OF HOSPITALIZATION

Certain types of diseases or health conditions account for large shares of hospitalization but are not reflected in mortality data. Some examples of these diseases or conditions include mental health problems, alcohol/drug related conditions, fractures, and asthma.

- ◆ In 1996, there were a total of 111,908 non-childbirth hospitalizations among King County residents.
- ◆ The leading causes of non-childbirth hospitalization included heart disease, unintentional injury, alcohol related conditions, and cancer (Figure 3-7).

**Figure 3-7:
Leading Causes of Non-Childbirth Hospitalization
King County, 1996**



* Coronary Heart Disease and Congenital Heart Failure are included in heart disease.

Source: Hospitalization Discharge Data: WA State Department of Health, Office of Hospital and Patient Data Systems.

LEADING CAUSES OF DISABILITY

In addition to death and hospitalization, a significant number of people in the population are disabled by a variety of illnesses such as chronic conditions, mental health problems, visual impairment and deafness. The leading causes of disability include arthritis, back or spine problems, heart disease, respiratory problems, and high blood pressure.³ Data on the prevalence of these conditions are not available at the local level. In Table 3-5, we

estimated the number of people in King County who suffer from these leading causes of disability using the King County 1996 population estimates and the prevalence rates at the national level.⁴ In Table 3-5, disability is measured by limitation of activity, which is defined as a long-term reduction in a person's capacity to perform the average kind or amount of activities associated with his or her age group.

**Table 3-5:
The Leading Causes of Disability
King County Estimates, 1996**

Condition	Male Rate per 1,000 in U.S.				Female Rate per 1,000 in U.S.				King County Estimates			Percent Disabled**	Disabled in King Co.
	<45	45-64	65-74	75+	<45	45-64	65-74	75+	Male	Female	Total		
Arthritis	27.4	176.8	430.8	424.9	38.2	297.0	513.6	604.4	77,140	130,384	207,524	23.1%	47,938
Heart Disease	27.0	162.0	319.3	429.9	33.1	111.0	250.8	361.4	69,684	69,080	138,764	27.3%	37,883
Back/Spine Deformity *	55.2	94.5	88.6	74.3	71.5	109.6	90.9	95.8	53,384	67,569	120,953	23.8%	28,787
Leg/Foot Deformity *	40.5	68.4	66.1	70.1	33.0	71.5	66.7	108.0	39,515	39,408	78,923	26.6%	20,993
Asthma	57.1	32.3	39.3	70.3	60.0	68.0	62.8	34.1	41,461	49,448	90,910	20.2%	18,364
Diabetes	7.3	63.3	102.4	115.6	8.9	63.0	101.0	91.8	22,884	25,785	48,669	34.7%	16,888
High Blood Pressure	31.9	220.0	307.7	339.2	32.4	224.5	378.7	417.5	79,268	97,932	177,200	9.0%	15,948
Visual Impairment	29.5	52.7	78.4	113.7	12.9	38.0	48.0	110.7	32,441	21,845	54,286	15.8%	8,577
Stroke	1.3	20.4	39.6	75.9	1.9	16.2	41.6	84.4	8,212	10,392	18,604	34.7%	6,456
Emphysema	1.2	10.3	59.9	81.3	0.1	9.5	36.7	20.4	7,450	4,677	12,127	44.4%	5,384
Migraine Headache	22.0	24.2	17.1	5.2	67.1	78.9	29.9	26.2	17,442	53,062	70,504	3.1%	2,186
Chronic Bronchitis	43.6	43.8	41.7	68.0	56.5	82.7	79.0	51.7	35,892	51,848	87,740	1.8%	1,579

* Includes deformity or orthopedic impairment.

** U.S. estimates, percent of persons with the condition who report that the condition caused limitation in activity.

3 CDC. Prevalence of Disability and Associated Health Conditions - United States, 1991-1992, MMWR, 1994, 43(40): 730-739.

4 CDC. Current Estimates from the National Health Interview Survey, 1994, December, 1995, Series 10, No. 193.

QUALITY OF LIFE

The Behavioral Risk Factor Survey data (Table 3-6) showed that:

- ◆ Sixty-nine percent of the King County adults considered their general health as excellent or very good.
- ◆ On the average, King County adults had three “not good physical health days” and three “not good mental health days” per month.
- ◆ Persons with less income were significantly less likely to report excellent or very good health than those with higher incomes.
- ◆ The younger age groups were more likely to report poor mental health.

Table 3-6:
Self-Reported Health Status Among King County Adults Age 18+
1994-1996 Averages

	Sample Size	General Health is Excellent/Very Good		Not Good Physical Health Days/Month		Not Good Mental Health Days/Month	
		Percent	(95% CI)	Days	(95% CI)	Days	(95% CI)
Total	2,939	68.6	(66.8 - 70.5)	3.0	(2.7 - 3.3)	3.0	(2.8 - 3.3)
Age:							
18-24	275	71.7	(65.8 - 77.5)	2.6	(1.9 - 3.2)	5.0	(4.0 - 5.9)
25-44	1,432	74.6	(72.2 - 77.0)	2.5	(2.1 - 2.8)	3.2	(2.9 - 3.6)
45-64	800	68.8	(65.3 - 72.3)	2.9	(2.4 - 3.5)	2.6	(2.2 - 3.1)
65+	432	45.9	(40.7 - 51.1)	5.2	(4.0 - 6.4)	1.7	(0.9 - 2.5)
Sex:							
Male	1,328	69.7	(67.0 - 72.4)	2.6	(2.2 - 3)	2.5	(2.1 - 2.8)
Female	1,611	67.6	(65.1 - 70.1)	3.3	(2.9 - 3.7)	3.6	(3.2 - 4.0)
Race/Ethnicity:							
White	2,548	69.1	(67.2 - 71.1)	3.1	(2.7 - 3.4)	3.0	(2.7 - 3.3)
African American	119	66.0	(57.0 - 75.3)	2.3	(1.2 - 3.3)	3.5	(2.2 - 4.9)
Asian	180	62.0	(53.8 - 70.1)	2.5	(1.6 - 3.4)	2.6	(1.7 - 3.4)
Hispanic	124	60.6	(51.4 - 69.8)	2.9	(1.7 - 4.1)	4.3	(2.8 - 5.9)
Annual Household Income:							
<\$10,000	165	32.9	(25.1 - 40.6)	8.6	(6.2-11.1)	6.8	(4.4 - 9.1)
\$10,000 - 24,999	609	59.9	(55.6 - 64.2)	3.5	(2.9 - 4.2)	3.8	(3.2 - 4.4)
\$25,000 - 34,999	410	66.2	(51.2 - 71.3)	2.5	(1.9 - 3.1)	3.6	(2.8 - 4.3)
\$35,000 - 49,999	561	69.9	(65.7 - 74.1)	2.8	(2.1 - 3.5)	2.8	(2.3 - 3.3)
\$50,000+	851	80.3	(77.4 - 83.2)	2.1	(1.7 - 2.5)	2.2	(1.8 - 2.6)

Source: Behavioral Risk Factor Surveillance System; WA State Department of Public Health, Center for Health Statistics.