Washington State
Vital Statistics
2005

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Washington State Vital Statistics
Highlights for 2005

http://www.doh.wa.gov/EHSPHL/CHS/CHS-Data/main.htm

- **More babies were born in 2005**
  Washington women had 82,625 babies in 2005, an increase of 910 births compared to 2004. Despite this increase, the birth rate remained unchanged at 13.2 births per 1,000 population. After dropping fairly steadily in the 1990s, the birth rate has changed little since 2001.

- **Maternal smoking rate is the same as 2004**
  The percent of women who smoked during pregnancy decreased nearly 40% between 1995 and 2004 (from 16.1% to 10.2%) but remained the same (10.2%) in 2005.

- **Gestational diabetes is increasing; hypertension remains steady**
  The percent of women with gestational diabetes has nearly doubled over the decade (from 2.6% in 1996 to 5.0% in 2005), while pregnancy-associated hypertension increased about 30% between 1996 and 2003 but has been unchanged (at 5.3%) since then.

- **Cesarean section deliveries are increasing**
  In 2005, more than a quarter of deliveries (27.8%) were by primary or repeat C-section, compared to 17.2% ten years ago.

- **More residents died in 2005**
  There were 46,015 deaths of Washington State residents in 2005. The number of resident deaths increased from 2004; however the age-adjusted rate decreased.

- **Cancer remained the leading cause of death in 2005, with Heart Disease in second place.**
  Accidents are the 5th leading cause of death, and Alzheimer's disease remains in 6th place. However, the percent distribution of deaths among the leading causes has changed very little.

- **The infant death rate remains low**
  The infant death rate was 5.1 per 1,000 live births in 2005. For comparison, the infant death rate in 1996 was 6.0 per 1,000 live births.

- **Emma and Jacob remained the most popular names for babies born in 2005**
  The next most popular names were Emily and Olivia for girls and Ethan and Alexander for boys.

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On an average day, these events occurred among Washington State Residents

- 226 births including:
  - 6 to teens <18
  - 7 to women aged 40+
  - 69 to unmarried women
  - 14 with low birth weight
  - 63 by Cesarean section
  - 22 to maternal smokers
- 126 deaths including:
  - 30 due to heart disease
  - 30 due to cancer
  - 7 due to unintentional injuries (accidents)
  - 2 due to suicide

Washington State outperformed the nation[1] by experiencing a…

- lower percentage of low weight births
- lower proportion of Cesarean deliveries
- lower percentage of births to unmarried women
- lower infant mortality rate
- lower crude and age-adjusted death rate for cancer, now the leading cause of death in WA State
- higher life expectancy

Washington State fell below the nation[1] by experiencing a…

- higher age-adjusted death rate from cerebrovascular disease (strokes)
- higher crude and age-adjusted death rate from suicide
- much higher crude and age-adjusted death rate from Alzheimer's Disease

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[1] National data reported in "Births: Preliminary Data for 2005" *National Center for Health Statistics NCHS – Health E Stats* November 2006, available on the internet at http://www.cdc.gov/nchs/products/pubs/pubd/hestats/prelimbirths05/prelimbirths05.htm and for Death data: Miniño AM, Heron M, Smith BL, Kochanek KD, "Deaths: Final Data for 2004." Health E-Stats. Released November 24, 2006.

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Introduction

Washington Counties and County Seats

Introduction

Washington State Vital Statistics, 2005, published by the Center for Health Statistics of the Washington State Department of Health, contains tables on births, deaths, marriages and dissolutions of marriage (i.e., divorces, annulments) that occurred during calendar year 2005.

Publication of vital statistics supports the mission of the Department of Health to protect and improve the health of people in Washington State. Timely and wide-ranging health information, such as that presented in *Washington State Vital Statistics*, is crucial to accomplishing this mission. Vital statistics data are used by policy makers, health professionals, community-based organizations, researchers, and citizens to understand trends in vital statistics, identify high risk populations (and geographic areas), set prevention priorities, and plan targeted health promotion strategies. This report is often the first resource used to identify problems related to prenatal care, maternal and infant health, family planning, and mortality due to various causes.

Source of Vital Statistics

Data used to prepare this report come from Certificates of Live Birth, Certificates of Fetal Death, Certificates of Death, Certificates of Marriage, and Certificates of Dissolution. The forms for these certificates are provided by the Washington State Department of Health. The following table describes who completes the forms and where they are filed:

Filing of Washington State Vital Statistics

Certificate	Completed by	Initially Filed with
Live Birth	Hospital or Birth Attendant	State Dept. of Health
Fetal Death	Hospital or Birth Attendant	Local Health Jurisdiction
Death	Funeral Director and Physician, Coroner or Medical Examiner	Local Health Jurisdiction
Marriage	Person Performing the Marriage	County Auditor
Dissolution	Clerk of Court, Petitioner's Attorney	County Clerk

RCW 70.58 which governs the registration and reporting of vital statistics requires births, fetal deaths, deaths, marriages, and dissolutions of marriage to be reported within a timely fashion. Birth and death certificates are designed to gather information in a manner consistent with federal reporting requirements of the National Center for Health Statistics.

On October 1, 2002, the Department of Health adopted amendments to Washington Administrative Code (WAC) 246-491, sections 029,039 and 149. These changes assured that the state's birth, death and fetal death certificates will be consistent with the US Standard Certificates.

New Birth and Fetal Death Certificates have been in place since January 1, 2003. The 2003 Vital Statistics Report covered the first year's data collected using the new Birth and Fetal Death Certificates.

The new Death Certificate was in place on January 1, 2004. Death data in this Vital Statistics Report cover the first year's data collected using the new death certificate.

A formal interstate exchange agreement governs the mutual exchange of information on births, deaths and fetal deaths between states and other countries so that events occurring to Washington residents elsewhere are also reported to this state. Such an interstate exchange agreement does not exist, however, for marriages and divorces. Therefore, the Center for Health Statistics does not have the marriage and divorce records for all of the state's residents since some may have gone elsewhere to be married or divorced.

Between 1992 and 2002, hospitals or birth attendants used the Electronic Birth Certificate (EBC) system to send birth records directly to the Department of Health instead of to registrars of local health jurisdictions. On January, 1, 2003, hospitals and birth attendants began using the *Birth Record Realtime Registration (BR3)* system, a web-based reporting system that allows almost instantaneous registration of births directly to the Center for Health Statistics at the Department of Health.

See Appendix A, Section I for information on how to best use and interpret Vital Statistics.

How to Access Annual Statistical and other CHS Information

This annual report, which provides an overview of the vital statistics data collected from certificates, is available through the Washington State Center for Health Statistics. Birth, death, and fetal death data are also available as raw data files on the Center's CD-ROM *"Vital Registration System Annual*

Statistical Files, Washington State." The CD-ROM contains data in ASCII format, detailed technical documentation, and annual summary tables for 1980-2005 in Excel format. To order a copy of the CD-ROM, call (360) 236-4327.

All of the information in this report is available on the Internet. To access this information, go to the DOH web page at: http://www.doh.wa.gov/EHSPHL/CHS/CHS-Data/main.htm. At that point a list of subject topics appears (e.g., "births," "deaths"). Click on any of these topics to locate a table or tables of particular interest. Tables are available not only for the current year but for previous years as well. Click on "publications" to download a PDF copy of this report.

The Center for Health Statistics also works with data users on a variety of levels: 1) to help users formulate requests so they get the data they need; 2) to provide technical consultation about how to use or interpret data; 3) to perform special analyses to address a specific problem or need; and 4) to help users access data files. For more information, call the Manager of Research of the Center for Health Statistics at (360) 236-4321.

The Center for Health Statistics also houses data from the Behavioral Risk Factor Surveillance Survey (BRFSS) which is the largest, continuously conducted, telephone health survey in the world. It enables the state and local health departments, the Centers for Disease Control and Prevention (CDC), and other health agencies to monitor modifiable risk factors for chronic diseases and other leading causes of death.

The Center for Health Statistics also captures and publishes several types of hospital data, including the Comprehensive Hospital Abstract Reporting System (CHARS) which has all admissions and discharges to all hospitals in Washington State by year, as well as various financial reports on Washington State hospitals, including the *Charity Care in Washington Hospitals* report.

Annual Trends

Overview Table 1 provides a historical context for interpreting 2005 vital statistics in Washington State. The number of births increased in 2005, compared to 2004. However, the state's population also increased. As a result, there was no difference in the birth rate. The number of deaths increased in 2004 but the overall death rate changed little. The number and rate for infant deaths both decreased by about 7% in 2005. The number and ratio for fetal deaths both had relatively large increases in 2003, decreased in 2004 to levels consistent with 2000-2002, and increased again in 2005 to levels slightly larger than in 2003.

Trends in vital statistics since the early part of the last century have been dramatic. The state population increased more than five-fold from 1910-2005, while the number of fetal deaths is about 40% lower than it was and the number of infant deaths is less than one-quarter what it was early in the century. The difference in rates is even more dramatic. The fetal death ratio had about a six-fold decrease while the infant death rate decreased about 18-fold.

Maternal mortality

Notes on maternal death reporting: Maternal death rates are based on very small numbers (even the relatively large 2005 rate is only based on 26 deaths) and should be interpreted with particular caution. Specifically, in 2004 Washington State implemented the U.S. Standard Certificate of Death which includes a separate check box related to pregnancy status of female decedents around the time of their death. If the box is marked yes, then the death will be included in the maternal death category regardless of the actual underlying cause of death. This separate pregnancy status item on the death certificate may explain much of the increase in maternal deaths.

Overview Table 1. Live Births, Deaths, Infant Deaths, Maternal Deaths, and Fetal Deaths Washington Residents, 1910-2005

		Live Births		Deaths		Infant Deaths		Maternal Deaths		Fetal Deaths	
Year	Population[1]	Number	Rate[2]	Number	Rate[2]	Number	Rate[3]	Number[4]	Rate[5]	Number	Ratio[3]
1910	1,142,000	19,916	17.4	11,502	10.1	1,862	93.5	194	974.1	705	35.4
1911	1,168,800	20,728	17.7	10,845	9.3	1,531	73.9	177	853.9	699	33.7
1912	1,190,600	20,683	17.4	10,187	8.6	1,365	66.0	179	865.4	724	35.0
1913	1,212,400	21,200	17.5	11,397	9.4	1,566	73.9	178	839.6	688	32.5
1914	1,234,000	23,008	18.6	11,448	9.3	1,540	66.9	152	660.6	783	34.0
1915	1,256,000	24,046	19.1	11,895	9.5	1,461	60.8	156	648.8	779	32.4
1916	1,277,800	23,831	18.7	11,805	9.2	1,531	64.2	175	734.3	705	29.6
1917	1,299,600	23,464	18.1	12,137	9.3	1,625	69.3	173	737.3	691	29.4
1918	1,321,400	25,682	19.4	16,837	12.7	1,769	68.9	253	985.1	730	28.4
1919	1,343,200	25,112	18.7	14,370	10.7	1,584	63.1	216	860.1	730	29.1
1920	1,356,600	27,072	20.0	15,164	11.2	1,797	66.4	249	919.8	888	32.8
1921	1,385,700	27,267	19.7	13,254	9.6	1,512	55.5	192	704.1	852	31.2
1922	1,407,100	25,378	18.0	14,249	10.1	1,566	61.7	190	748.7	731	28.8
1923	1,427,300	25,259	17.7	13,856	9.7	1,428	56.5	159	629.5	680	26.9
1924	1,447,200	25,378	17.5	14,580	10.1	1,426	56.2	167	658.1	711	28.0
1925	1,467,600	24,741	16.9	15,280	10.4	1,395	56.4	140	565.9	667	27.0
1926	1,487,600	23,989	16.1	15,670	10.5	1,352	56.4	174	725.3	719	30.0
1927	1,507,800	23,315	15.5	15,950	10.6	1,162	49.8	151	647.7	650	27.9
1928	1,528,200	23,161	15.2	16,723	10.9	1,115	48.1	175	755.6	641	27.7
1929	1,548,400	22,685	14.7	16,413	10.6	1,110	48.9	150	661.2	572	25.2
1930	1,563,400	23,019	14.7	16,678	10.7	1,122	48.7	148	642.9	601	26.1
1931	1,585,000	22,028	13.9	16,524	10.4	1,064	48.3	141	640.1	591	26.8
1932	1,602,500	21,379	13.3	16,581	10.3	967	45.2	139	650.2	530	24.8
1933	1,619,700	20,882	12.9	16,705	10.3	811	38.8	140	670.4	446	21.4
1934	1,636,900	22,484	13.7	17,456	10.7	968	43.1	105	467.0	520	23.1
1935	1,654,000	22,378	13.5	18,046	10.9	998	44.6	120	536.2	469	21.0
1936	1,671,400	23,354	14.0	19,057	11.4	1,064	45.6	115	492.4	468	20.0
1937	1,689,100	24,882	14.7	18,771	11.1	978	39.3	118	474.2	495	19.9
1938	1,706,000	26,702	15.7	18,514	10.9	1,035	38.8	94	352.0	440	16.5
1939	1,723,400	26,471	15.4	18,528	10.8	977	36.9	97	366.4	450	17.0
1940	1,736,200	27,952	16.1	19,837	11.4	969	34.7	89	318.4	459	16.4
1941	1,816,700	30,916	17.0	19,359	10.7	1,065	34.4	66	213.5	445	14.4
1942	1,880,700	38,744	20.6	20,190	10.7	1,278	33.0	78	201.3	606	15.6
1943	1,945,000	44,258	22.8	22,017	11.3	1,534	34.7	72	162.7	575	13.0
1944	2,009,600	44,246	22.0	21,144	10.5	1,493	33.7	72	162.7	607	13.7
1945	2,073,600	44,296	21.4	21,292	10.3	1,523	34.4	79	178.3	672	15.2
1946	2,137,600	51,941	24.3	21,620	10.1	1,723	33.2	65	125.1	869	16.7
1947	2,202,400	58,230	26.4	21,763	9.9	1,630	28.0	59	101.3	907	15.6
1948	2,266,400	55,460	24.5	21,925	9.7	1,525	27.5	36	64.9	776	14.0
1949	2,331,000	56,433	24.2	22,420	9.6	1,526	27.0	36	63.8	850	15.1

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Year	Population[1]	Number	Rate[2]	Number	Rate[2]	Number	Rate[3]	Number[4]	Rate[5]	Number	Ratio[3]
1950	2,379,000	55,755	23.4	22,450	9.4	1,526	27.4	28	50.2	799	14.3
1951	2,424,000	57,994	23.9	23,300	9.6	1,412	24.3	23	39.7	852	14.7
1952	2,448,000	61,436	25.1	22,874	9.3	1,522	24.8	15	24.4	857	13.9
1953	2,466,000	61,571	25.0	23,279	9.4	1,556	25.3	18	29.2	834	13.5
1954	2,516,000	62,703	24.9	23,238	9.2	1,514	24.1	29	46.2	829	13.2
1955	2,604,000	62,290	23.9	24,410	9.4	1,520	24.4	16	25.7	806	12.9
1956	2,668,000	64,999	24.4	24,207	9.1	1,524	23.4	13	20.0	777	12.0
1957	2,724,000	65,982	24.2	25,140	9.2	1,596	24.2	20	30.3	793	12.0
1958	2,773,000	65,574	23.6	25,429	9.2	1,707	26.0	11	16.8	764	11.7
1959	2,821,000	65,729	23.3	26,229	9.3	1,570	23.9	9	13.7	749	11.4
1960	2,853,200	65,251	22.9	26,505	9.3	1,528	23.4	17	26.1	738	11.3
1961	2,897,000	65,013	22.4	26,353	9.1	1,467	22.6	19	29.2	756	11.6
1962	2,948,000	64,812	22.0	27,343	9.3	1,476	22.8	6	9.3	704	10.9
1963	2,972,000	61,013	20.5	27,550	9.3	1,339	21.9	10	16.4	657	10.8
1964	3,008,000	57,148	19.0	28,106	9.3	1,277	22.3	7	12.2	637	11.1
1965	3,065,000	52,806	17.2	27,379	8.9	1,130	21.4	15	28.4	639	12.1
1966	3,125,000	51,777	16.6	29,035	9.3	1,084	20.9	13	25.1	554	10.7
1967	3,229,000	54,875	17.0	29,302	9.1	1,050	19.1	12	21.9	573	10.4
1968	3,336,000	57,206	17.1	30,360	9.1	1,120	19.6	8	14.0	620	10.8
1969	3,397,000	59,354	17.5	30,504	9.0	1,118	18.8	12	20.2	651	11.0
1970	3,413,300	60,499	17.7	29,901	8.8	1,135	18.8	9	14.9	640	10.6
1971	3,436,300	55,304	16.1	30,318	8.8	1,008	18.2	5	9.0	574	10.4
1972	3,430,300	48,250	14.1	29,747	8.7	805	16.7	6	12.4	428	8.9
1973	3,444,300	47,636	13.8	30,751	8.9	781	16.4	3	6.3	430	9.0
1974	3,508,700	50,096	14.3	29,773	8.5	763	15.2	4	8.0	450	9.0
1975	3,567,900	50,821	14.2	29,778	8.3	798	15.7	5	9.8	421	8.3
1976	3,634,900	53,004	14.6	30,275	8.3	765	14.4	3	5.7	439	8.3
1977	3,715,400	57,256	15.4	29,789	8.0	696	12.2	5	8.7	426	7.4
1978	3,836,200	58,725	15.3	30,469	7.9	737	12.6	4	6.8	465	7.9
1979	3,979,200	64,377	16.2	30,418	7.6	737	11.4	5 (8)	12.4	466	7.2
1980	4,132,400	67,989	16.5	32,049	7.8	802	11.8	1 (10)	14.7	533	7.8
1981	4,229,300	69,987	16.5	32,035	7.6	735	10.5	4 (7)	10.0	487	7.0
1982	4,276,500	69,681	16.3	32,316	7.6	755	10.8	4 (8)	11.5	499	7.2
1983	4,307,200	68,794	16.0	32,653	7.6	656	9.5	6	8.7	473	6.9
1984	4,354,100	69,059	15.9	33,809	7.8	702	10.2	7	10.1	444	6.4
1985	4,415,800	70,357	15.9	34,478	7.8	749	10.6	5	7.1	403	5.7
1986	4,462,200	69,572	15.6	34,176	7.7	676	9.7	2	2.9	445	6.4
1987	4,527,100	70,409	15.6	34,983	7.7	683	9.7	1	1.4	411	5.8
1988	4,616,900	72,660	15.7	36,341	7.9	656	9.0	1	1.4	381	5.2
1989	4,728,100	75,595	16.0	36,130	7.6	694	9.2	2	2.6	388	5.1

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Year	Population[1]	Number	Rate[2]	Number	Rate[2]	Number	Rate[3]	Number[4]	Rate[5]	Number	Ratio[3]
1990	4,866,700	79,468	16.3	37,047	7.6	622	7.8	4 (5)	5.0	462	5.8
1991	5,021,335	79,962	15.9	37,028	7.4	603	7.5	3 (8)	3.8	426	5.3
1992	5,141,177	79,897	15.5	38,095	7.4	540	6.8	3 (6)	3.8	448	5.6
1993	5,265,688	78,771	15.0	40,380	7.7	495	6.3	6 (8)	7.6	396	5.0
1994	5,364,338	77,368	14.4	39,906	7.4	478	6.2	3 (4)	3.9	443	5.7
1995	5,470,104	77,240	14.1	40,729	7.4	449	5.8	0 (3)	0.0	419	5.4
1996	5,567,764	77,874	14.0	42,248	7.6	467	6.0	3 (6)	3.9	462	5.9
1997	5,663,763	78,141	13.8	41,429	7.3	440	5.6	2	2.6	457	5.8
1998	5,750,033	79,640	13.9	42,585	7.4	452	5.7	3	3.8	471	5.9
1999	5,830,835	79,577	13.6	43793	7.5	401	5.0	6	7.5	468	5.9
2000	5,894,121	81,004	13.7	43,904	7.4	423	5.2	3	3.7	437	5.4
2001	5,974,900	79,542	13.3	44,563	7.5	461	5.8	9	11.3	418	5.3
2002	6,041,710	79,003	13.1	45,244	8.0	452	5.7	7	8.9	434	5.5
2003	6,098,300	80,482	13.2	45,807	8.0	447	5.6	2	2.5	498	6.2
2004	6,167,800	81,715	13.2	44,703	7.2	451	5.5	22	26.9	432	5.3
2005	6,256,400	82,625	13.2	46,015	7.4	420	5.1	27	32.7	519	6.3

[1] Population figures for 1910-1950 ten year intervals and for 1950-2001 single years are from the Office of Financial Management, Forecasting Division. Current Population Data: See Appendix A: Technical Appendix

[2] Rate per 1,000 population.

[3] Ratio per 1,000 live births.

[4] Numbers in parentheses include maternal deaths that are based on 1979-1998 studies using links from birth and death certificates and 1990-1996 links of deaths and hospitalizations with birth and fetal deaths; Maternal deaths in other years are based only on the death certificate and may undercount deaths due to complications of pregnancy.

[5] Rate per 100,000 live births (change from previous reports).

* The increase in maternal deaths should be interpreted with caution. The 2004 Death Certificate includes a new question which asks if the decedent is female was she pregnant. If the box is marked yes, then the death will be included in the maternal death category regardless of the actual underlying cause of death.

Note: Rates based on fewer than 20 events are likely to be unstable and imprecise.

Exploring high relative risk regions

As was done in last year's report, this year we have included maps of high relative risk regions and graphs of statewide trends for a subset of natality measures:

- Maternal smoking,
- Late or no prenatal care,
- Low birth weight, and
- Singleton low birth weight;

and, mortality measures:

- All deaths,
- Heart disease deaths,
- Stroke deaths,
- All cancer deaths,
- Lung cancer deaths, and
- Infant mortality.

The methods used in these analyses are described in the introduction to the *Vital Statistics 2004* report.

In this year's report, we are highlighting heart disease and lung cancer by exploring those regions with higher than expected mortality rates for these two leading causes of death, and by assessing the age-adjusted mortality rate trends within those regions.

Heart Disease

For each year between 2001 and 2005, as well as for those five years combined, the spatial scan statistic program, SaTScan[1], identified regions in south central and south west Washington as having a heart disease mortality rate higher than in the rest of the state. For 2001-2005 combined, this high rate or high relative risk (RR) region included all or portions of 13 of the 39 counties in Washington State. The RR for this region was 1.2, or 20% higher than expected, equaling about 450 more heart disease deaths per year than expected.

Concurrently, the JoinPoint[2] regression program found that the statewide trend for age-adjusted heart disease mortality rates had been significantly decreasing from 1980 to 2005.

Taken together, these two findings raised the following questions:

> ***While the statewide trend is decreasing, what are the rates and trends like within and outside of this high RR region? Are the rates within significantly different from those outside the high RR region? Are their trends parallel, incongruent, or heading in opposite directions?***

To answer these questions, we identified all the census tracts in the 2001-2005 combined high relative risk region. For this region we then computed each individual year's age-adjusted mortality rate from 1990 through 2005. At the same time, we identified all the census tracts outside the high relative risk region (calling this our heart disease *reference area*) and computed this area's age-adjusted mortality rate for each year from 1990 through 2005. Rates prior to 1990 were not computed because we do not have tract-specific population estimates for those years.

What we found --

For each year assessed, the age-adjusted heart disease mortality rate within the high RR region was significantly higher than the age-adjusted rate for the reference area.

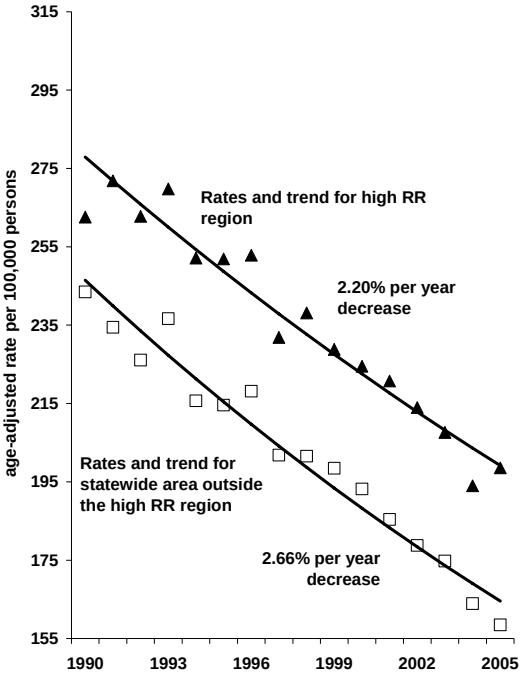
By applying the JoinPoint trend model we also found that while rates in both the high RR region and the reference area were decreasing, rates were decreasing more rapidly in the reference area (2.7% per year) than in the high RR region (2.2% per year).

Heart disease deaths: High relative risk regions 2001-2005 combined

Overall this meant that from 1990 to 2005 the rates within the high RR region fell by 40%, while those in the reference area fell by 50%.

Since the rates within the high RR region are decreasing at a slower pace, the differences between the two regions have been increasing: in 1990 the rate within the high RR region was 13% higher than the rate in the reference area; by 2005 it was 21% higher.

Heart disease death rates: Trends inside and outside the high relative risk region, 1990-2005



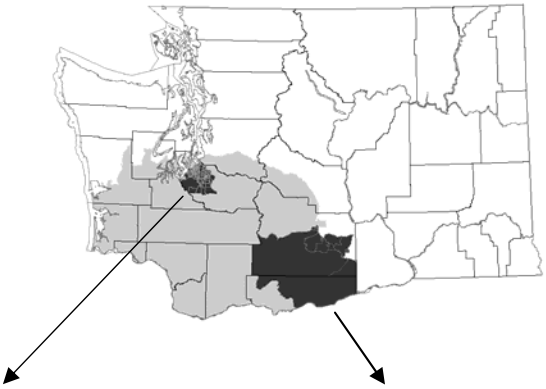
Because the high RR region encompasses such a large area, we next reran SaTScan focusing only on the high RR region to see if we could identify any sub-regional areas with particularly high rates. SaTScan identified two such sub-regional areas: one included the western Pierce County and Tacoma environs; the other, portions of Yakima and Klickitat Counties. Trends for these two sub-regional areas were then computed.

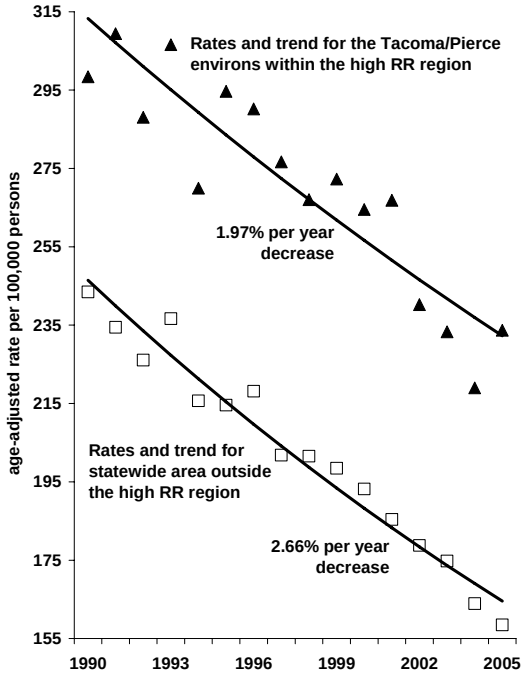
Compared to the reference area, the rates within the Tacoma/Pierce County area were significantly higher for each year assessed. The rates within the Yakima/Klickitat area were significantly higher than those in the reference area for 10 of the 16 years assessed.

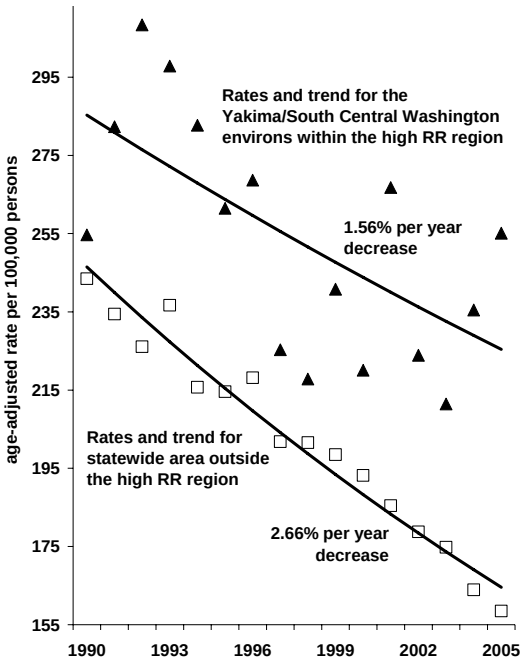
Although both the Tacoma/Pierce and Yakima/Klickitat areas had significantly decreasing rates, the speed at which those rates declined differed from that seen in the reference area: in the Tacoma/Pierce area they decreased by 2.0% per year, equaling an overall decline of 26% from 1990 to 2005; in the Yakima/Klickitat area they decreased by 1.6% per year, equaling an overall decline of 21% from 1990 to 2005. As was previously noted, the rates in the reference area decreased by 2.7% per year, equaling a 50% decline from 1990 to 2005.

Because of these differences in the trends, not only are the rates higher in the Tacoma/Pierce and Yakima/Klickitat areas than in the reference area, the differences between those areas and the reference area are increasing. Specifically, in 1990 the age-adjusted heart disease mortality rate in the Tacoma/Pierce area was 29% higher than the rate in the reference area; in 2005 it was 47% higher. In the Yakima/Klickitat area the rate was 15% higher than the reference area rate in 1990 and 37% higher in 2005.

Heart disease deaths: High rate areas within the high RR region together with trends for those areas, 1990-2005







Lung Cancer

As with heart disease, for each year between 2001 and 2005 and for those five years combined, the spatial scan statistic identified varying size regions in western and southwestern Washington as having a lung cancer mortality rate or relative risk (RR) higher than in the rest of the state. For 2001-2005 combined this region included all or portions of 12 counties, and, with an RR of 1.24, averaged 160 more lung cancer deaths per year than expected.

Concurrently, the statewide trend for age-adjusted lung cancer mortality rates showed a significant increase from 1980 to 1993 and then a significant decline from 1993 to 2005.

As with heart disease, we thought it worthwhile to assess the trends within and outside this high RR lung cancer region. We therefore identified all the tracts within the 2001-2005 combined high RR region and computed age-adjusted rates for each year from 1990 to 2005. Similarly, we computed the age-adjusted lung cancer mortality rates from 1990 to 2005 for the remainder of the state outside the high RR region, calling this our lung cancer reference area.

Lung cancer deaths: High relative risk regions 2001-2005 combined

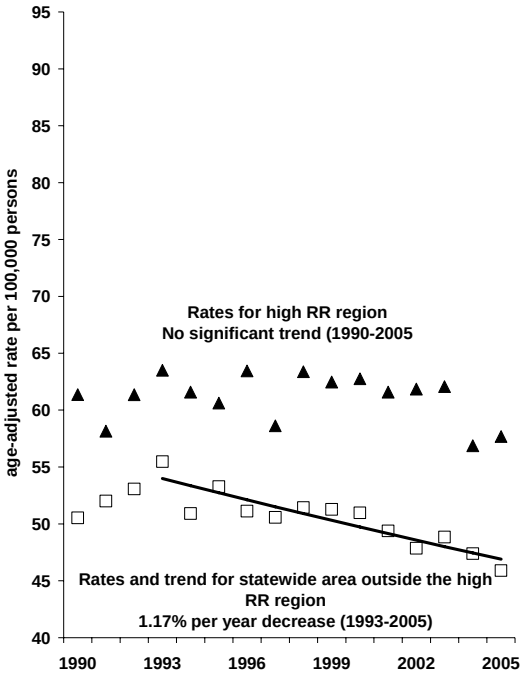
What we found --

For each year from 1990 to 2005 the age-adjusted mortality rate in the high RR region was significantly higher than the rate in the reference area, except in 1991.

Within the reference area, JoinPoint found that between 1993 and 2005 there was a significant trend with the rates decreasing by 1.2% per year; from 1990 to 1993 JoinPoint identified no significant trend for the reference area.

Within the high RR region JoinPoint found no significant trend during the entire period from 1990 to 2005. Because the rates within the high RR region have remained essentially unchanged while those outside the high RR region are decreasing, the difference between the two areas is increasing.

Lung cancer death rates: Trends inside and outside the high relative risk region, 1990-2005



As was done with heart disease, the SaTScan program was next rerun focusing this time only on the high RR region to see if any sub-regional areas with particularly high rates could be identified. Two such areas were found, one in the Pierce County and Tacoma environs, the other including most of Grays Harbor and portions of Mason and Pacific Counties. Trends for these areas were computed, and for both of the sub-regional areas JoinPoint found that the rates were significantly increasing.

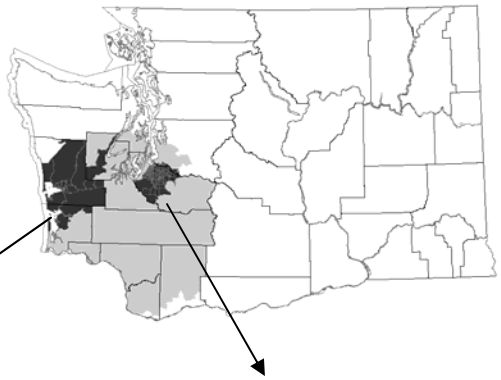
In the Tacoma/Pierce area rates had increased by 2.3% per year from 1990 to 2000 and then leveled off with no significant trend from 2000 to 2005.

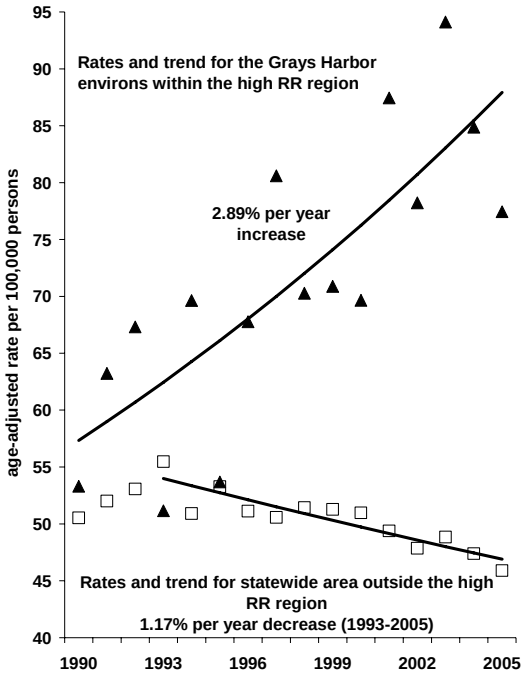
In the Grays Harbor area, rates were found to be significantly increasing from 1990 to 2005 by 2.9% per year. Overall that equaled a 53% increase in the lung cancer mortality rates for the residents of this region from 1990 to 2005.

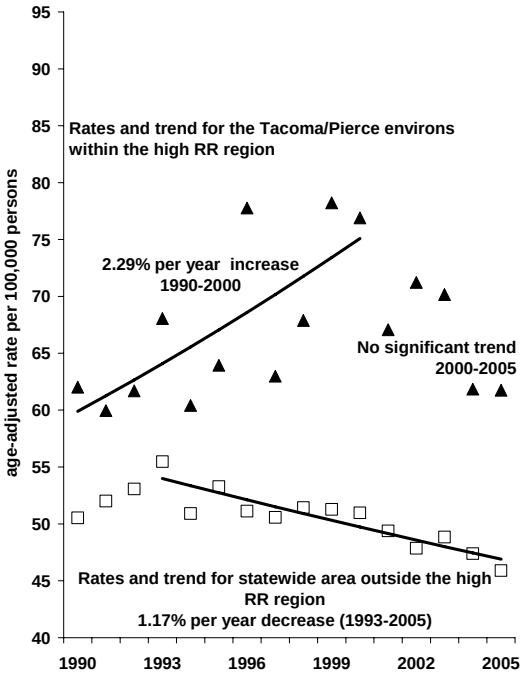
Given its relatively large and continuing upward trend, we choose to examine the Grays Harbor/Pacific/Mason Counties region more closely by assessing that area's sex-specific rates.

In doing so we found that although the rates for men in this region are consistently higher than the rates for women, the differences are significant for only 2 of the 16 years examined, 1992 and 1996.

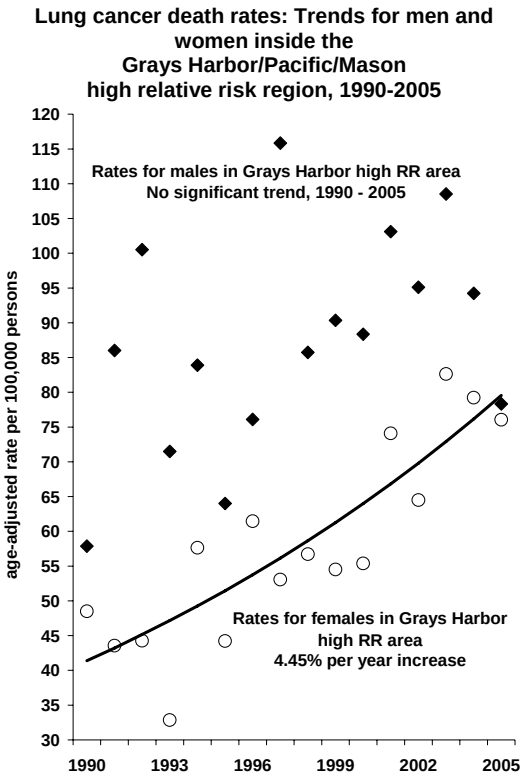
Lung cancer deaths: High rate areas within the high RR region together with trends for those areas, 1990-2005







In addition, while JoinPoint did not identify a significant trend among the men's rates, it did identify one for women: each year their age-adjusted lung cancer mortality rates increased by an average of 4.4%. Overall that represents a 92% increase in this area's female rates from 1990 to 2005 – a near doubling in 16 years. Conversely, within the reference area, women's rates increased by 1.3% per year from 1990 to 2000 and then leveled off with no significant trend thereafter.



Discussion

In examining two of the leading causes of death, heart disease and lung cancer, we found large regions with higher than expected mortality rates, and, within those large regions, smaller areas that have particularly high rates.

In looking at the trends for these high RR areas we found that they were decreasing at a slower rate, not changing over time, or actually increasing while the rest of the state was experiencing a significant decline or having no significant trend in their rates.

We believe these high RR areas might be considered a priority concern and could warrant further assessment. Given that tobacco use and obesity are well-known risk factors for heart disease, and tobacco use alone is the leading cause of lung cancer, these data might be an indication of higher smoking and obesity rates in these areas – risk factors that can be changed through public health interventions.

There are, of course, limitations to administrative data sets, and while we strive to maintain high quality vital statistics data, variations in coding practices within regions should also be considered.

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[1] Kulldorff M. and Information Management Services, Inc. SaTScanTM v6.0: Software for the spatial and space-time scan statistics. http://www.satscan.org/, 2005. SaTScanTM is a trademark of Martin Kulldorff. The SaTScanTM software was developed under the joint auspices of Martin Kulldorff, of the National Cancer Institute and of Farzad Mostashari at the New York City Department of Health and Mental Hygiene.

[2] Joinpoint Regression Program, Version 3.0. April 2005; Statistical Research and Applications Branch, National Cancer Institute. http://srab.cancer.gov/joinpoint/

Natality

Natality

A. Demographics

Demographics (such as education, marital status and race) provide basic data about the women who are having babies. Lack of money or cultural/language barriers may prevent women from getting the care and services they need so that they can have a safe pregnancy and a healthy baby. Demographic birth data help health programs understand and address these disparities.

Natality Table A1. Demographic Summary Indicators for Residents, 1996 - 2005

	Percent of Births[1] where Mother is…			
	A Teenager (<20)	Unmarried	Not a High School Graduate	A Woman of Color[2]
1996	11.2	27.2	18.3	24.8
1997	11.0	27.2	18.1	25.5
1998	10.9	27.9	18.1	26.1
1999	10.8	28.0	17.8	27.7
2000	10.2	28.3	17.4	29.5
2001	9.6	28.7	17.3	30.6
2002	9.0	28.8	17.0	31.8
2003	8.5	28.7	19.4	32.2
2004	8.4	30.2	19.3	33.3
2005	8.3	30.8	19.2	33.9

[1] Unknowns have been subtracted from total births in calculating percentages

[2] Includes all but White Non-Hispanic births.

Trends for teenagers, women of color, and unmarried mothers continue as they have over the decade. The percent of births to women without a high school degree increased in 2003. However, the education item on the birth certificate changed substantially in 2003. High school graduation may have been overestimated in the past because of the way the data were collected (see 'Birth Data Notes' in the Technical Appendix). These data have changed very little since 2003.

Natality Table A2a. Mother's Race/Ethnicity by Child's Sex[1] for Residents, 2005

Race/Ethnicity	Total Number	Total Percent[2]	Male	Female
State Total	**82,625**	**100.0**	**42,329**	**40,296**
White	68,597	83.0	35,101	33,496
African American	3,664	4.4	1,872	1,792
Native American	1,795	2.2	929	866
Japanese	433	0.5	230	203
Chinese	999	1.2	515	484
Filipino	1,271	1.5	645	626
Other Asian	4,828	5.8	2,512	2,316
Other	0	0.0	0	0
Unknown	1,038	1.3	525	513
Hispanic[3]	14,988	18.1	7,635	7,353

[1] Total includes 0 births for which sex is unknown.

[2] Percents may not add to 100% due to rounding.

[3] Persons of Hispanic Origin may be of any race. See Appendix A, "Hispanic Origin."

NOTE: Uses bridged race, see Technical Appendix

Natality Table A2b. Mother's Multiple Race by Child's Sex[1] for Residents, 2005

Race	Total Number	Total Percent[2]	Male	Female
State Total	**82,625**	**100.0**	**42,329**	**40,296**
Single Race				
White	67,531	81.7	34,555	32,976
African American	3,122	3.8	1,589	1,533
Native American	1,573	1.9	809	764
Asian	6,334	7.7	3,265	3,069
Pacific Islander	727	0.9	395	332
Multiple Race				
White/African American	495	0.6	256	239
White/Native American	749	0.9	396	353
White/Asian	636	0.8	313	323
White/Pacific Islander	105	0.1	58	47
Other mulitple race	462	0.6	248	214
Unknown	891	1.1	445	446

[1] Total includes 0 births for which sex is unknown.

[2] Percents may not add to 100% due to rounding.

NOTE: Includes all races reported by mother, see Technical Appendix.

Natality Table A3. Mother's Age Group by Child's Sex[1] for Residents, 2005

Age	Total Number	Total Percent[2]	Male	Female
State Total	**82,625**	**100.0**	**42,329**	**40,296**
Under 15	84	0.1	48	36
15 - 17	1,966	2.4	961	1,005
18 - 19	4,773	5.8	2,469	2,304
20 - 24	19,911	24.1	10,199	9,712
25 - 29	23,198	28.1	11,916	11,282
30 - 34	19,797	24.0	10,095	9,702
35 - 39	10,490	12.7	5,406	5,084
40 - 44	2,232	2.7	1,147	1,085
45 and Over	145	0.2	69	76
Unknown	29	0.0	19	10

[1] Total includes 0 births for which sex is unknown.

[2] Percents may not add to 100% due to rounding.

Natality Table A4. Child's Birth Order by Mother's Age Group for Residents, 2005

Order at Birth	All Ages	Under 15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45 and Over	Age Unk
State Total	**82,625**	**84**	**1,966**	**4,773**	**19,911**	**23,198**	**19,797**	**10,490**	**2,232**	**145**	**29**
1st Child	32,385	81	1,713	3,539	9,659	8,164	5,940	2,745	496	36	12
2nd Child	24,787	2	143	848	6,221	7,319	6,317	3,268	626	33	10
3rd Child	12,294	0	13	117	2,253	4,107	3,521	1,894	368	19	2
4th Child	5,240	0	1	16	572	1,598	1,812	998	228	12	3
5th Child	2,035	0	0	0	148	589	690	470	135	3	0
6th Child	826	0	0	0	28	184	285	250	68	11	0
7th Child	392	0	0	0	11	62	122	136	56	5	0
8th Child	186	0	0	0	2	25	49	60	47	3	0
9th Child	95	0	0	0	3	7	22	45	16	2	0
10th or more	188	0	0	0	6	22	26	69	59	6	0
Unknown	4,197	1	96	253	1,008	1,121	1,013	555	133	15	2

Natality Table A5. Mother's Education by Mother's Age Group for Residents, 2005

Education	All Ages	Under 15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45 and Over	Age Unk
State Total	**82,625**	**84**	**1,966**	**4,773**	**19,911**	**23,198**	**19,797**	**10,490**	**2,232**	**145**	**29**
8th Grade or Less	4,123	53	195	263	981	1,183	923	399	114	11	1
Some High School	11,399	26	1,486	1,902	4,016	2,240	1,145	476	98	6	4
High School / GED	19,448	0	196	1,892	7,350	5,327	2,953	1,409	301	14	6
Some College	17,889	0	29	582	5,246	5,997	3,814	1,791	402	23	5
Associate Degree	6,677	0	0	30	1,104	2,425	1,910	969	223	13	3
Bachelor's Degree	14,721	0	0	0	741	4,288	5,731	3,259	656	41	5
Postgraduate Educ.	6,766	0	0	0	62	1,303	2,973	2,012	382	30	4
Unknown	1,602	5	60	104	411	435	348	175	56	7	1

Natality Table A6a. Top 100 Baby Names of Girls for Residents, 2005

Rank	First Name	N	%	Cumulative N	Cumulative %	Rank	First Name	N	%	Cumulative N	Cumulative %
1	EMMA	428	1.1	428	1.1	51	KAITLYN	106	0.3	9,882	24.5
2	EMILY	425	1.1	853	2.1	52	TRINITY	106	0.3	9,988	24.8
3	OLIVIA	361	0.9	1,214	3.0	53	RACHEL	105	0.3	10,093	25.0
4	MADISON	360	0.9	1,574	3.9	54	CLAIRE	103	0.3	10,196	25.3
5	ISABELLA	332	0.8	1,906	4.7	55	AMELIA	101	0.3	10,297	25.6
6	AVA	324	0.8	2,230	5.5	56	MACKENZIE	101	0.3	10,398	25.8
7	SOPHIA	311	0.8	2,541	6.3	57	MAYA	101	0.3	10,499	26.1
8	SAMANTHA	305	0.8	2,846	7.1	58	RILEY	101	0.3	10,600	26.3
9	ABIGAIL	299	0.7	3,145	7.8	59	AVERY	96	0.2	10,696	26.5
10	HANNAH	297	0.7	3,442	8.5	60	ALLISON	93	0.2	10,789	26.8
11	GRACE	267	0.7	3,709	9.2	61	JENNIFER	93	0.2	10,882	27.0
12	ELIZABETH	249	0.6	3,958	9.8	62	MAKAYLA	92	0.2	10,974	27.2
13	NATALIE	238	0.6	4,196	10.4	63	GABRIELLA	91	0.2	11,065	27.5
14	ELLA	237	0.6	4,433	11.0	64	JENNA	90	0.2	11,155	27.7
15	ALEXIS	229	0.6	4,662	11.6	65	NICOLE	89	0.2	11,244	27.9
16	ASHLEY	218	0.5	4,880	12.1	66	ISABEL	88	0.2	11,332	28.1
17	ANNA	212	0.5	5,092	12.6	67	KATELYN	85	0.2	11,417	28.3
18	SARAH	210	0.5	5,302	13.2	68	SARA	84	0.2	11,501	28.5
19	CHLOE	208	0.5	5,510	13.7	69	ANDREA	83	0.2	11,584	28.7
20	HAILEY	192	0.5	5,702	14.2	70	KIMBERLY	80	0.2	11,664	28.9
21	TAYLOR	188	0.5	5,890	14.6	71	ALEXA	79	0.2	11,743	29.1
22	MIA	179	0.4	6,069	15.1	72	BROOKLYN	79	0.2	11,822	29.3
23	JESSICA	175	0.4	6,244	15.5	73	HALEY	79	0.2	11,901	29.5
24	ALYSSA	166	0.4	6,410	15.9	74	NAOMI	79	0.2	11,980	29.7
25	LAUREN	163	0.4	6,573	16.3	75	RUBY	78	0.2	12,058	29.9
26	JASMINE	162	0.4	6,735	16.7	76	VANESSA	78	0.2	12,136	30.1
27	SYDNEY	161	0.4	6,896	17.1	77	LEAH	77	0.2	12,213	30.3
28	ZOE	160	0.4	7,056	17.5	78	NEVAEH	77	0.2	12,290	30.5
29	LILY	153	0.4	7,209	17.9	79	GABRIELLE	76	0.2	12,366	30.7
30	AUDREY	136	0.3	7,345	18.2	80	SIERRA	76	0.2	12,442	30.9
31	KYLIE	133	0.3	7,478	18.6	81	BAILEY	75	0.2	12,517	31.1
32	PAIGE	133	0.3	7,611	18.9	82	ELLIE	75	0.2	12,592	31.2
33	VICTORIA	131	0.3	7,742	19.2	83	GRACIE	74	0.2	12,666	31.4
34	MEGAN	130	0.3	7,872	19.5	84	AMANDA	73	0.2	12,739	31.6
35	MARIA	129	0.3	8,001	19.9	85	DESTINY	73	0.2	12,812	31.8
36	BRIANNA	128	0.3	8,129	20.2	86	EVA	73	0.2	12,885	32.0
37	JULIA	128	0.3	8,257	20.5	87	MARISSA	73	0.2	12,958	32.2
38	LILLIAN	128	0.3	8,385	20.8	88	REBECCA	73	0.2	13,031	32.3
39	KAYLA	127	0.3	8,512	21.1	89	ISABELLE	72	0.2	13,103	32.5
40	MORGAN	126	0.3	8,638	21.4	90	CHARLOTTE	71	0.2	13,174	32.7
41	KATHERINE	125	0.3	8,763	21.7	91	KATIE	71	0.2	13,245	32.9
42	SOFIA	121	0.3	8,884	22.0	92	KYLEE	71	0.2	13,316	33.0
43	SAVANNAH	117	0.3	9,001	22.3	93	MARIAH	70	0.2	13,386	33.2
44	FAITH	115	0.3	9,116	22.6	94	SOPHIE	70	0.2	13,456	33.4
45	MADELINE	114	0.3	9,230	22.9	95	AMY	69	0.2	13,525	33.6
46	ANGELINA	113	0.3	9,343	23.2	96	LUCY	69	0.2	13,594	33.7
47	BROOKE	110	0.3	9,453	23.5	97	STEPHANIE	69	0.2	13,663	33.9
48	EVELYN	110	0.3	9,563	23.7	98	MICHELLE	67	0.2	13,730	34.1
49	KAYLEE	107	0.3	9,670	24.0	99	KATHRYN	65	0.2	13,795	34.2
50	ALEXANDRA	106	0.3	9,776	24.3	100	ASHLYN	64	0.2	13,859	34.4

Natality Table A6b. Top 100 Baby Names of Boys for Residents, 2005

Rank	First Name	N	%	Cumulative N	Cumulative %	Rank	First Name	N	%	Cumulative N	Cumulative %
1	JACOB	487	1.2	487	1.2	51	JAYDEN	172	0.4	13,888	32.8
2	ETHAN	448	1.1	935	2.2	52	CAMERON	170	0.4	14,058	33.2
3	ALEXANDER	425	1.0	1,360	3.2	53	WYATT	164	0.4	14,222	33.6
4	ANDREW	398	0.9	1,758	4.2	54	CARTER	157	0.4	14,379	34.0
5	DANIEL	391	0.9	2,149	5.1	55	ROBERT	155	0.4	14,534	34.3
6	JOSHUA	364	0.9	2,513	5.9	56	COLE	152	0.4	14,686	34.7
7	MICHAEL	363	0.9	2,876	6.8	57	HAYDEN	152	0.4	14,838	35.1
8	TYLER	361	0.9	3,237	7.6	58	AARON	151	0.4	14,989	35.4
9	DAVID	349	0.8	3,586	8.5	59	JORDAN	151	0.4	15,140	35.8
10	LOGAN	343	0.8	3,929	9.3	60	KADEN	147	0.3	15,287	36.1
11	MATTHEW	335	0.8	4,264	10.1	61	NATHANIEL	147	0.3	15,434	36.5
12	BENJAMIN	334	0.8	4,598	10.9	62	CODY	145	0.3	15,579	36.8
13	WILLIAM	328	0.8	4,926	11.6	63	KEVIN	143	0.3	15,722	37.1
14	NOAH	327	0.8	5,253	12.4	64	IAN	142	0.3	15,864	37.5
15	SAMUEL	325	0.8	5,578	13.2	65	ALEX	139	0.3	16,003	37.8
16	JOSEPH	323	0.8	5,901	13.9	66	JUAN	136	0.3	16,139	38.1
17	NATHAN	313	0.7	6,214	14.7	67	HENRY	133	0.3	16,272	38.4
18	RYAN	303	0.7	6,517	15.4	68	JASON	129	0.3	16,401	38.7
19	ANTHONY	286	0.7	6,803	16.1	69	KYLE	129	0.3	16,530	39.1
20	DYLAN	281	0.7	7,084	16.7	70	LANDON	125	0.3	16,655	39.3
21	GABRIEL	278	0.7	7,362	17.4	71	RILEY	125	0.3	16,780	39.6
22	JAMES	268	0.6	7,630	18.0	72	CHASE	124	0.3	16,904	39.9
23	ELIJAH	262	0.6	7,892	18.6	73	ERIC	123	0.3	17,027	40.2
24	ZACHARY	259	0.6	8,151	19.3	74	BRAYDEN	122	0.3	17,149	40.5
25	JACK	254	0.6	8,405	19.9	75	BRIAN	122	0.3	17,271	40.8
26	ISAAC	247	0.6	8,652	20.4	76	SEAN	122	0.3	17,393	41.1
27	CHRISTOPHER	245	0.6	8,897	21.0	77	BLAKE	120	0.3	17,513	41.4
28	JONATHAN	244	0.6	9,141	21.6	78	CHARLES	120	0.3	17,633	41.7
29	AIDEN	240	0.6	9,381	22.2	79	JULIAN	120	0.3	17,753	41.9
30	JACKSON	234	0.6	9,615	22.7	80	ADRIAN	117	0.3	17,870	42.2
31	NICHOLAS	229	0.5	9,844	23.3	81	LIAM	114	0.3	17,984	42.5
32	EVAN	222	0.5	10,066	23.8	82	ADAM	111	0.3	18,095	42.7
33	CALEB	218	0.5	10,284	24.3	83	DIEGO	110	0.3	18,205	43.0
34	MASON	217	0.5	10,501	24.8	84	LUIS	107	0.3	18,312	43.3
35	GAVIN	215	0.5	10,716	25.3	85	JESUS	106	0.3	18,418	43.5
36	JOSE	215	0.5	10,931	25.8	86	TANNER	106	0.3	18,524	43.8
37	LUCAS	215	0.5	11,146	26.3	87	JADEN	102	0.2	18,626	44.0
38	LUKE	215	0.5	11,361	26.8	88	JESSE	100	0.2	18,726	44.2
39	AIDAN	209	0.5	11,570	27.3	89	TRISTAN	100	0.2	18,826	44.5
40	AUSTIN	208	0.5	11,778	27.8	90	LEVI	98	0.2	18,924	44.7
41	CHRISTIAN	204	0.5	11,982	28.3	91	TIMOTHY	98	0.2	19,022	44.9
42	JOHN	203	0.5	12,185	28.8	92	CARLOS	97	0.2	19,119	45.2
43	ISAIAH	201	0.5	12,386	29.3	93	COOPER	97	0.2	19,216	45.4
44	CONNOR	198	0.5	12,584	29.7	94	CADEN	96	0.2	19,312	45.6
45	OWEN	198	0.5	12,782	30.2	95	CONNER	95	0.2	19,407	45.8
46	HUNTER	195	0.5	12,977	30.7	96	DOMINIC	95	0.2	19,502	46.1
47	BRANDON	194	0.5	13,171	31.1	97	JOSIAH	94	0.2	19,596	46.3
48	ANGEL	190	0.4	13,361	31.6	98	COLIN	92	0.2	19,688	46.5
49	JUSTIN	181	0.4	13,542	32.0	99	KAI	92	0.2	19,780	46.7
50	THOMAS	174	0.4	13,716	32.4	100	TREVOR	92	0.2	19,872	46.9

Natality Table A7. County/City of Residence, Sex[1], and County/City of Occurrence, 2005

	Residence				Occurrence
County and City	**Total**	**Rate[2]**	**Male**	**Female**	**Total**
State Total	**82,625**	**13.2**	**42,329**	**40,296**	**82,364**
Adams	424	24.9	217	207	551
Asotin	237	11.3	119	118	3
Benton	2,164	13.7	1,096	1,068	3,528
Kennewick	1,121	18.6	556	565	1,217
Richland	512	11.8	260	252	1,989
Chelan	902	13.0	466	436	1,398
Wenatchee	559	19.1	295	264	1,314
Clallam	617	9.2	313	304	588
Port Angeles	222	11.9	113	109	469
Clark	5,635	14.4	2,833	2,802	5,144
Camas	296	19.1	135	161	3
Vancouver	3,667	23.7	1,902	1,765	5,110
Columbia	24	5.9	10	14	0
Cowlitz	1,242	13.0	620	622	1,191
Longview	576	16.3	279	297	1,185
Douglas	518	14.9	262	256	0
Ferry	82	11.1	44	38	5
Franklin	1,484	24.5	750	734	486
Pasco	1,223	27.7	618	605	483
Garfield	16	6.7	11	5	0
Grant	1,451	18.3	755	696	1,090
Moses Lake	395	24.2	206	189	1,013
Grays Harbor	857	12.3	444	413	590
Aberdeen	312	19.0	169	143	581
Island	997	13.1	533	464	695
Oak Harbor	566	26.1	308	258	426
Jefferson	204	7.4	110	94	126
King	22,680	12.5	11,625	11,055	27,160
Auburn	994	22.8	502	492	1,016
Bellevue	1,287	11.1	672	615	3,891
Bothell part	331	20.4	172	159	3
Burien	371	12.0	180	191	1,302
Covington	224	13.5	113	111	0
Des Moines	361	12.5	179	182	0
Federal Way	1,223	14.3	621	602	1,404
Issaquah	507	29.7	246	261	1
Kenmore	235	12.2	126	109	1
Kent	1,633	19.2	868	765	1
Kirkland	834	18.2	423	411	4,614
Maple Valley	354	19.8	186	168	0
Mercer Island	143	6.6	74	69	1
Redmond	905	19.0	450	455	2
Renton	1,466	25.8	743	723	2,748
Sammamish	652	16.9	336	316	0
SeaTac	383	15.2	190	193	1
Seattle	7,026	12.3	3,624	3,402	11,730
Shoreline	430	8.2	226	204	15

Natality Table A7. (Continued) County/City of Residence, Sex[1], and County/City of Occurrence, 2005

	Residence				Occurrence
County and City	Total	Rate[2]	Male	Female	Total
Tukwila	285	16.7	135	150	0
Kitsap	2,902	12.1	1,496	1,406	2,689
Bainbridge Island	136	6.1	71	65	1
Bremerton	971	28.1	495	476	730
Kittitas	333	9.1	166	167	304
Ellensburg	157	9.4	79	78	304
Klickitat	209	10.7	118	91	143
Lewis	874	12.2	469	405	595
Centralia	291	19.0	159	132	528
Lincoln	94	9.3	51	43	0
Mason	620	11.9	300	320	344
Okanogan	530	13.4	276	254	531
Pacific	219	10.3	106	113	7
Pend Oreille	120	9.8	50	70	111
Pierce	10,469	13.8	5,306	5,163	10,584
Lakewood	961	16.3	510	451	6
Puyallup	1,156	32.3	600	556	1,853
Tacoma	3,780	19.1	1,879	1,901	7,759
University Place	368	11.9	187	181	1
San Juan	108	7.0	51	57	6
Skagit	1,451	13.1	729	722	1,601
Anacortes	135	8.6	77	58	384
Mount Vernon	553	19.6	277	276	1,208
Skamania	94	9.1	45	49	1
Snohomish	8,924	13.6	4,638	4,286	5,808
Edmonds	442	11.1	219	223	1,238
Everett	2,276	23.3	1,162	1,114	3,775
Lynnwood	1,028	29.5	551	477	4
Marysville	716	24.3	388	328	3
Monroe	322	20.2	158	164	422
Mountlake Terrace	236	11.6	129	107	1
Mukilteo	186	9.6	103	83	0
Spokane	5,593	12.8	2,874	2,719	6,452
Spokane (city)	3,429	17.3	1,733	1,696	6,387
Spokane Valley	595	7.0	328	267	64
Stevens	451	10.9	240	211	281
Thurston	2,618	11.7	1,373	1,245	2,798
Lacey	611	18.4	324	287	6
Olympia	959	22.1	495	464	2,781
Wahkiakum	37	9.5	15	22	0
Walla Walla	721	12.5	371	350	920
Walla Walla (city)	481	15.7	248	233	918
Whatcom	2,122	11.7	1,099	1,023	2,130
Bellingham	929	12.8	497	432	2,115
Whitman	432	10.2	224	208	422
Pullman	250	9.4	137	113	361
Yakima	4,170	18.2	2,124	2,046	4,082
Yakima (city)	1,681	21.1	852	829	2,909

[1] Total includes 0 births for which sex is unknown.

[2] Rate per 1,000 population.

Note: Occurrence represents all births which occur in Washington State regardless of the mother's residence.

Residence represents all births to residents of Washington State regardless of where the birth occurred.

Natality Table A8. Month of Birth by County of Residence, 2005

County	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
State Total	**82,625**	**6,488**	**6,262**	**7,090**	**6,703**	**7,222**	**7,106**	**7,110**	**7,272**	**7,132**	**6,806**	**6,652**	**6,782**
Adams	424	33	31	44	26	37	33	40	35	45	33	35	32
Asotin	237	17	14	19	16	21	25	19	15	24	16	28	23
Benton	2,164	149	169	167	180	176	202	190	174	199	198	161	199
Chelan	902	57	84	67	83	73	82	79	66	81	78	73	79
Clallam	617	35	54	40	45	58	56	48	62	68	46	54	51
Clark	5,635	434	443	467	479	477	504	506	518	469	442	446	450
Columbia	24	1	3	3	3	2	0	1	2	4	3	2	0
Cowlitz	1,242	113	77	115	106	100	116	107	75	104	102	111	116
Douglas	518	36	43	47	48	49	55	40	49	30	44	33	44
Ferry	82	4	10	8	7	12	6	6	6	7	5	7	4
Franklin	1,484	123	102	127	131	124	136	118	145	130	114	106	128
Garfield	16	2	2	2	2	0	2	0	0	1	2	1	2
Grant	1,451	96	107	130	105	135	114	139	131	150	116	113	115
Grays Harbor	857	73	67	75	74	75	78	61	82	68	66	70	68
Island	997	84	67	97	88	78	87	86	86	75	74	112	63
Jefferson	204	16	8	17	17	19	20	17	16	24	22	15	13
King	22,680	1,807	1,758	1,920	1,865	1,999	1,959	1,959	1,971	1,892	1,910	1,793	1,847
Kitsap	2,902	231	185	243	238	244	247	241	277	246	258	247	245
Kittitas	333	28	22	37	21	32	27	18	37	20	29	24	38
Klickitat	209	14	10	24	23	20	18	21	21	15	12	22	9
Lewis	874	79	66	90	60	89	74	81	60	58	80	55	82
Lincoln	94	9	9	10	7	8	8	6	13	7	5	9	3
Mason	620	55	47	47	45	47	45	59	61	55	64	52	43
Okanogan	530	39	50	51	37	51	42	46	43	47	38	42	44
Pacific	219	14	23	16	13	19	17	14	22	28	12	19	22
Pend Oreille	120	6	6	9	15	7	7	10	11	16	10	11	12
Pierce	10,469	812	787	933	809	897	852	806	965	952	899	882	875
San Juan	108	8	5	7	7	7	11	9	15	11	6	8	14
Skagit	1,451	100	129	121	135	135	114	112	109	139	119	112	126
Skamania	94	11	8	8	8	7	8	6	8	6	7	11	6
Snohomish	8,924	697	692	789	721	757	771	783	787	739	720	725	743
Spokane	5,593	441	407	492	446	504	467	512	460	494	468	456	446
Stevens	451	36	41	45	39	28	42	45	36	38	31	35	35
Thurston	2,618	222	176	215	197	235	240	240	247	232	209	192	213
Wahkiakum	37	3	5	4	4	3	2	4	2	4	3	2	1
Walla Walla	721	60	69	54	48	71	50	71	64	58	55	57	64
Whatcom	2,122	171	150	164	173	205	191	190	188	202	159	167	162
Whitman	432	35	35	36	50	35	35	43	40	32	25	36	30
Yakima	4,170	337	301	350	332	386	363	377	373	362	326	328	335

Natality Table A9. Mother's Age Group by County of Residence, 2005

County	All Ages	Under 15	15-19	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45 and Over	Age Unk
State Total	**82,625**	**84**	**6,739**	**1,966**	**4,773**	**19,911**	**23,198**	**19,797**	**10,490**	**2,232**	**145**	**29**
Adams	424	3	67	26	41	146	122	58	23	5	0	0
Asotin	237	0	35	6	29	87	60	33	18	4	0	0
Benton	2,164	1	233	77	156	611	644	429	199	44	3	0
Chelan	902	1	111	26	85	260	249	181	77	21	2	0
Clallam	617	2	66	18	48	179	170	126	63	10	1	0
Clark	5,635	4	434	104	330	1,312	1,712	1,362	676	126	8	1
Columbia	24	0	5	0	5	5	4	4	6	0	0	0
Cowlitz	1,242	5	179	56	123	385	353	205	87	24	3	1
Douglas	518	3	58	18	40	134	147	123	43	10	0	0
Ferry	82	0	12	3	9	29	20	13	8	0	0	0
Franklin	1,484	2	172	70	102	402	484	281	110	30	2	1
Garfield	16	0	1	0	1	5	4	5	1	0	0	0
Grant	1,451	6	208	76	132	454	398	251	112	21	1	0
Grays Harbor	857	3	129	36	93	274	243	144	56	8	0	0
Island	997	1	76	13	63	325	291	186	100	17	0	1
Jefferson	204	0	23	7	16	45	42	42	43	9	0	0
King	22,680	11	1,056	327	729	3,542	5,682	6,985	4,380	955	62	7
Kitsap	2,902	1	235	49	186	896	791	593	304	77	5	0
Kittitas	333	0	24	4	20	87	121	65	31	5	0	0
Klickitat	209	0	29	6	23	64	55	30	17	13	1	0
Lewis	874	0	101	24	77	304	256	141	59	13	0	0
Lincoln	94	0	8	2	6	25	35	17	8	1	0	0
Mason	620	1	87	30	57	198	181	110	30	13	0	0
Okanogan	530	1	59	20	39	170	144	106	41	9	0	0
Pacific	219	0	23	9	14	72	62	36	21	5	0	0
Pend Oreille	120	1	20	5	15	35	25	22	14	2	1	0
Pierce	10,469	8	949	246	703	2,911	3,121	2,223	1,013	222	17	5
San Juan	108	0	8	0	8	26	38	21	11	4	0	0
Skagit	1,451	1	191	66	125	394	397	267	163	36	2	0
Skamania	94	0	6	0	6	19	36	22	10	1	0	0
Snohomish	8,924	8	538	155	383	2,055	2,501	2,404	1,174	224	12	8
Spokane	5,593	5	478	118	360	1,583	1,733	1,119	554	112	8	1
Stevens	451	1	62	12	50	136	134	74	35	9	0	0
Thurston	2,618	0	185	41	144	666	758	616	321	66	4	2
Wahkiakum	37	0	2	1	1	19	10	3	1	2	0	0
Walla Walla	721	2	88	38	50	194	209	141	78	9	0	0
Whatcom	2,122	3	148	51	97	503	647	505	259	52	5	0
Whitman	432	0	11	4	7	108	157	109	39	6	2	0
Yakima	4,170	10	622	222	400	1,251	1,162	745	305	67	6	2

Natality Table A10. Age Specific Live Birth Rates[1] by County of Residence, 2005

County	All Ages	15-19	15-17	18-19	20-24	25-29	30-34	35-39	40-44
State Total	**63.1**	**30.7**	**14.9**	**54.5**	**91.4**	**115.7**	**95.9**	**47.6**	**9.2**
Adams	129.3	93.8	56.6	160.8	254.8	235.5	119.3	49.4	9.6
Asotin	59.4	44.3	11.9	102.1	140.1	106.6	56.9	26.7	*
Benton	67.7	37.3	19.1	70.3	124.7	142.3	90.1	36.8	7.2
Chelan	69.1	44.5	16.4	93.2	131.7	130.6	95.3	35.0	8.2
Clallam	60.0	31.7	13.4	65.0	128.7	131.6	94.0	34.2	4.3
Clark	69.0	31.9	12.1	65.7	104.3	136.2	102.2	47.4	8.2
Columbia	36.5	39.1	*	138.9	50.0	*	*	50.0	*
Cowlitz	68.2	53.6	26.6	99.8	135.0	130.4	73.5	28.6	6.9
Douglas	76.9	43.1	20.6	84.7	135.2	157.2	128.8	36.7	7.5
Ferry	65.2	41.4	*	98.9	172.6	125.8	77.4	38.6	*
Franklin	121.9	67.7	43.7	108.6	180.2	235.9	158.8	61.1	16.8
Garfield	42.3	*	*	*	135.1	*	89.3	*	*
Grant	94.8	65.0	37.2	114.3	175.3	166.2	111.5	48.2	8.2
Grays Harbor	67.6	50.6	22.2	100.6	147.2	139.5	79.1	26.3	3.1
Island	71.0	32.6	8.7	74.9	145.4	141.5	84.4	39.8	6.3
Jefferson	52.3	31.0	13.8	68.4	107.1	98.8	76.6	60.8	8.5
King	56.4	19.2	10.1	32.2	54.2	82.4	100.4	63.6	12.9
Kitsap	61.4	28.3	9.1	63.6	122.6	121.5	81.6	36.5	8.0
Kittitas	37.7	13.6	*	18.0	28.5	121.0	75.8	31.5	4.3
Klickitat	61.7	43.5	12.8	115.0	150.2	119.8	63.8	28.2	17.0
Lewis	67.9	38.3	14.1	82.4	150.9	148.3	79.4	27.2	5.1
Lincoln	58.6	22.9	*	61.9	145.3	197.7	73.6	27.4	*
Mason	72.0	50.8	26.2	100.0	171.3	162.8	92.1	19.2	6.9
Okanogan	74.9	39.4	20.2	76.9	182.4	148.9	106.2	35.4	5.9
Pacific	71.6	37.2	21.7	68.6	187.0	169.9	83.3	39.8	6.8
Pend Oreille	59.3	44.2	15.4	117.2	182.3	112.1	79.4	34.8	*
Pierce	64.5	34.3	14.7	64.1	108.6	128.0	85.9	36.7	7.4
San Juan	49.9	22.0	*	66.7	116.1	159.7	74.5	26.0	*
Skagit	69.1	47.5	26.2	83.1	120.0	131.5	85.1	47.1	8.8
Skamania	48.3	15.5	*	46.5	86.8	146.3	79.4	26.9	*
Snohomish	63.4	23.6	10.8	45.5	102.6	118.6	103.2	45.5	8.1
Spokane	61.5	28.4	12.4	49.3	93.1	132.4	86.5	37.9	6.8
Stevens	62.1	38.2	10.3	107.8	161.3	161.6	71.9	28.6	5.2
Thurston	56.3	22.6	8.1	45.8	85.7	113.7	89.9	41.0	7.2
Wahkiakum	63.9	*	*	*	301.6	142.9	*	*	*
Walla Walla	64.0	35.2	30.5	39.9	80.5	152.8	93.9	49.2	4.7
Whatcom	53.0	19.2	13.9	24.0	51.3	122.1	98.1	45.5	8.2
Whitman	35.5	4.0	*	3.4	22.0	116.8	102.5	39.8	5.5
Yakima	91.4	68.4	38.7	119.3	156.2	158.9	111.1	43.8	8.9

[1] The general fertility rate shown under "All Ages" equals total live births per 1,000 women of childbearing age (15-44). Age-Specific rate equal the number of live births to women in a specific age group per 1,000 women in the age group.

[*] Rate not calculated because number of events was less than 5.

Natality Table A11. Single Mothers, Mother's Age Group by County of Residence, 2005

County	All Ages	Under 15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45 and Over	Age Unk
State Total	**25,344**	**80**	**1,777**	**3,555**	**9,846**	**5,600**	**2,778**	**1,340**	**347**	**16**	**5**
Adams	168	3	17	32	54	45	8	7	2	0	0
Asotin	116	0	6	26	53	16	7	7	1	0	0
Benton	762	1	72	113	315	151	74	32	4	0	0
Chelan	337	1	25	61	130	71	30	16	3	0	0
Clallam	251	2	16	37	105	51	31	7	2	0	0
Clark	1,470	4	98	222	579	323	150	83	11	0	0
Columbia	10	0	0	5	1	1	2	1	0	0	0
Cowlitz	544	4	53	99	221	115	33	15	4	0	0
Douglas	169	3	17	22	66	36	17	4	4	0	0
Ferry	42	0	2	5	20	7	5	3	0	0	0
Franklin	538	2	58	67	183	135	61	21	11	0	0
Garfield	5	0	0	1	3	0	1	0	0	0	0
Grant	583	6	62	93	219	115	62	22	4	0	0
Grays Harbor	396	2	35	73	142	82	43	19	0	0	0
Island	183	1	10	30	84	37	13	6	2	0	0
Jefferson	76	0	6	14	29	8	6	9	4	0	0
King	5,507	10	299	592	1,904	1,336	800	429	128	8	1
Kitsap	781	1	45	120	349	154	69	35	7	1	0
Kittitas	87	0	4	16	32	21	10	4	0	0	0
Klickitat	84	0	4	16	39	17	5	2	1	0	0
Lewis	343	0	23	59	158	61	25	13	4	0	0
Lincoln	22	0	2	3	7	4	5	1	0	0	0
Mason	284	1	29	43	115	58	26	8	4	0	0
Okanogan	259	1	20	35	104	58	26	10	5	0	0
Pacific	97	0	9	10	36	22	8	10	2	0	0
Pend Oreille	50	1	5	9	24	4	4	3	0	0	0
Pierce	3,396	8	223	502	1,364	741	356	156	41	3	2
San Juan	33	0	0	6	13	11	1	2	0	0	0
Skagit	486	1	52	84	192	91	38	19	9	0	0
Skamania	28	0	0	6	7	12	2	1	0	0	0
Snohomish	2,532	8	149	290	1,042	562	312	127	40	2	0
Spokane	1,820	5	108	273	752	427	147	89	17	1	1
Stevens	179	1	12	37	70	38	13	7	1	0	0
Thurston	770	0	34	107	313	176	91	40	8	1	0
Wahkiakum	16	0	1	1	9	4	0	0	1	0	0
Walla Walla	274	2	33	39	103	60	20	16	1	0	0
Whatcom	593	2	46	76	232	125	70	37	5	0	0
Whitman	74	0	4	5	40	15	7	2	1	0	0
Yakima	1,979	10	198	326	737	410	200	77	20	0	1

Natality Table A12. Father's Age Group by County of Residence, 2005

County	All Ages	Under 15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45 and Over	Age Unk
State Total	**82,625**	**3**	**393**	**1,520**	**12,106**	**19,571**	**20,098**	**13,129**	**5,316**	**2,339**	**8,150**
Adams	424	0	7	15	95	122	84	40	18	1	42
Asotin	237	0	2	7	40	72	36	24	10	4	42
Benton	2,164	1	18	55	374	560	451	278	100	51	276
Chelan	902	0	4	20	180	235	201	121	59	21	61
Clallam	617	0	2	25	117	154	127	68	37	22	65
Clark	5,635	0	14	75	701	1,355	1,402	828	348	139	773
Columbia	24	0	0	1	5	7	2	5	1	0	3
Cowlitz	1,242	0	12	40	252	328	230	139	49	35	157
Douglas	518	0	10	17	97	134	125	71	30	10	24
Ferry	82	0	0	2	20	19	15	13	2	1	10
Franklin	1,484	1	14	33	262	410	357	162	51	43	151
Garfield	16	0	0	0	0	7	4	1	1	1	2
Grant	1,451	0	17	50	291	413	269	154	57	29	171
Grays Harbor	857	0	6	33	178	209	178	87	37	15	114
Island	997	0	1	21	242	316	182	118	43	19	55
Jefferson	204	0	1	5	37	40	39	41	17	9	15
King	22,680	0	61	218	1,928	4,285	6,496	5,148	2,046	934	1,564
Kitsap	2,902	0	5	49	621	761	605	358	150	71	282
Kittitas	333	0	0	7	65	97	85	41	19	5	14
Klickitat	209	0	2	3	39	45	44	25	14	10	27
Lewis	874	0	3	18	170	214	173	83	41	19	153
Lincoln	94	0	0	2	14	28	24	9	7	2	8
Mason	620	0	10	17	143	163	124	58	20	11	74
Okanogan	530	0	4	18	116	135	117	55	22	18	45
Pacific	219	0	0	8	33	63	40	29	11	6	29
Pend Oreille	120	0	1	5	29	26	15	18	9	2	15
Pierce	10,469	0	29	222	1,802	2,631	2,297	1,363	547	224	1,354
San Juan	108	0	0	1	15	33	31	13	7	4	4
Skagit	1,451	0	9	46	272	353	292	200	81	33	165
Skamania	94	0	0	2	12	27	20	11	7	0	15
Snohomish	8,924	0	34	104	1,163	2,047	2,374	1,545	603	222	832
Spokane	5,593	0	19	119	969	1,587	1,237	702	280	106	574
Stevens	451	0	4	9	100	120	84	46	22	11	55
Thurston	2,618	0	8	54	375	661	648	375	171	77	249
Wahkiakum	37	0	0	0	6	12	9	1	4	1	4
Walla Walla	721	0	10	29	130	169	176	84	43	18	62
Whatcom	2,122	0	11	28	297	568	554	316	122	58	168
Whitman	432	0	0	3	70	133	120	65	23	8	10
Yakima	4,170	1	75	159	846	1,032	831	434	207	99	486

Natality Table A13a. Mother's Race/Ethnicity by County of Residence, 2005

County	Total	White	African American	Native American	Japa-nese	Chinese	Filipino	Other Asian	Other	Unk	Hispanic Origin[1]
State Total	**82,625**	**68,597**	**3,664**	**1,795**	**433**	**999**	**1,271**	**4,828**	**0**	**1,038**	**14,988**
Adams	424	404	0	14	0	0	0	1	0	5	313
Asotin	237	229	2	6	0	0	0	0	0	0	6
Benton	2,164	1,985	24	17	2	10	5	36	0	85	598
Chelan	902	868	4	11	0	2	4	10	0	3	404
Clallam	617	541	4	61	1	2	2	4	0	2	48
Clark	5,635	5,128	108	50	25	50	48	215	0	11	588
Columbia	24	23	1	0	0	0	0	0	0	0	2
Cowlitz	1,242	1,173	15	23	2	1	5	18	0	5	179
Douglas	518	506	0	4	0	0	1	1	0	6	238
Ferry	82	55	0	27	0	0	0	0	0	0	2
Franklin	1,484	1,330	13	7	1	3	0	17	0	113	935
Garfield	16	16	0	0	0	0	0	0	0	0	1
Grant	1,451	1,418	11	10	0	0	1	8	0	3	781
Grays Harbor	857	761	2	72	0	2	2	11	0	7	146
Island	997	844	50	14	7	2	42	30	0	8	110
Jefferson	204	181	2	14	0	1	1	3	0	2	13
King	22,680	16,133	1,826	226	278	742	603	2,571	0	301	3,153
Kitsap	2,902	2,466	124	52	21	8	98	120	0	13	243
Kittitas	333	327	1	1	0	0	1	2	0	1	46
Klickitat	209	193	0	11	0	0	1	3	0	1	35
Lewis	874	835	4	15	0	0	4	5	0	11	123
Lincoln	94	92	0	1	0	0	0	1	0	0	0
Mason	620	558	5	31	1	0	5	8	0	12	126
Okanogan	530	420	2	91	0	0	2	2	0	13	155
Pacific	219	206	2	3	0	1	1	4	0	2	43
Pend Oreille	120	115	0	3	0	1	0	0	0	1	5
Pierce	10,469	8,288	921	203	23	25	168	742	0	99	1,360
San Juan	108	102	0	2	0	0	1	2	0	1	12
Skagit	1,451	1,377	11	27	1	0	8	18	0	9	470
Skamania	94	91	1	2	0	0	0	0	0	0	9
Snohomish	8,924	7,371	266	178	50	92	178	583	0	206	1,179
Spokane	5,593	5,103	124	164	7	14	28	127	0	26	324
Stevens	451	404	1	40	0	0	2	4	0	0	18
Thurston	2,618	2,232	84	47	6	13	32	152	0	52	255
Wahkiakum	37	35	0	1	0	0	0	1	0	0	1
Walla Walla	721	689	5	6	0	3	2	10	0	6	250
Whatcom	2,122	1,883	9	101	5	11	13	77	0	23	290
Whitman	432	384	7	3	1	10	4	23	0	0	14
Yakima	4,170	3,831	35	257	2	6	9	19	0	11	2,513

[1]Persons of Hispanic Origin maybe of any race. See Appendix A, "Hispanic Origin."

NOTE: Uses bridged race, see Technical Appendix

Natality Table A13b. Mother's Multiple Race by County of Residence, 2005

County	Total	Single race					More than one race given	Race unknown
		White	African Amer.	Native Amer.	Asian	Pacific Islander		
State Total	**82,625**	**67,531**	**3,122**	**1,573**	**6,334**	**727**	**2,447**	**891**
Adams	424	403	0	13	0	0	3	5
Asotin	237	226	2	6	0	0	3	0
Benton	2,164	1,967	17	15	45	6	30	84
Chelan	902	863	2	9	14	0	12	2
Clallam	617	536	3	59	9	0	8	2
Clark	5,635	5,063	97	35	238	35	157	10
Columbia	24	23	0	0	0	0	1	0
Cowlitz	1,242	1,140	12	20	21	2	45	2
Douglas	518	505	0	4	2	0	1	6
Ferry	82	54	0	26	0	0	2	0
Franklin	1,484	1,322	9	5	20	1	14	113
Garfield	16	16	0	0	0	0	0	0
Grant	1,451	1,408	9	9	6	1	16	2
Grays Harbor	857	744	1	64	14	0	28	6
Island	997	832	44	12	65	6	34	4
Jefferson	204	181	1	13	4	1	3	1
King	22,680	15,921	1,644	190	3,774	280	637	234
Kitsap	2,902	2,408	103	39	170	42	132	8
Kittitas	333	322	0	1	2	0	8	0
Klickitat	209	190	0	10	4	0	5	0
Lewis	874	821	3	12	6	1	21	10
Lincoln	94	91	0	1	0	1	1	0
Mason	620	546	3	26	9	3	22	11
Okanogan	530	414	2	87	3	1	10	13
Pacific	219	200	2	3	5	0	8	1
Pend Oreille	120	116	0	3	1	0	0	0
Pierce	10,469	8,083	761	163	643	219	521	79
San Juan	108	101	0	1	2	0	4	0
Skagit	1,451	1,363	2	24	22	4	30	6
Skamania	94	90	1	2	0	0	1	0
Snohomish	8,924	7,239	213	157	796	47	278	194
Spokane	5,593	5,012	91	147	138	28	153	24
Stevens	451	392	0	38	4	1	16	0
Thurston	2,618	2,167	64	41	144	40	117	45
Wahkiakum	37	35	0	1	0	0	1	0
Walla Walla	721	686	5	4	14	1	7	4
Whatcom	2,122	1,867	6	94	95	4	39	17
Whitman	432	378	6	2	34	1	11	0
Yakima	4,170	3,806	19	237	30	2	68	8

NOTE: Includes all races reported by mother, see Technical Appendix

Natality Table A14. Mother's Education by County of Residence, 2005

County	Total	8th Grade or Less	Some High School	High School / GED	Some College	Associate Degree	Bachelor's Degree	Postgrad Educ	Unknown
State Total	**82,625**	**4,123**	**11,399**	**19,448**	**17,889**	**6,677**	**14,721**	**6,766**	**1,602**
Adams	424	125	131	82	44	17	14	9	2
Asotin	237	3	49	66	79	11	21	7	1
Benton	2,164	153	396	485	486	171	284	127	62
Chelan	902	157	164	266	114	64	87	44	6
Clallam	617	19	88	196	172	51	62	27	2
Clark	5,635	137	719	1,521	1,535	428	1,010	261	24
Columbia	24	1	4	8	6	2	3	0	0
Cowlitz	1,242	71	270	348	319	96	94	39	5
Douglas	518	85	93	139	73	52	47	24	5
Ferry	82	1	18	32	13	9	5	3	1
Franklin	1,484	309	362	293	234	102	111	41	32
Garfield	16	0	2	6	2	1	4	1	0
Grant	1,451	278	436	359	196	50	90	39	3
Grays Harbor	857	87	184	242	200	58	60	20	6
Island	997	12	94	268	346	77	145	49	6
Jefferson	204	0	23	58	61	13	32	15	2
King	22,680	668	2,206	4,118	3,675	1,684	6,403	3,528	398
Kitsap	2,902	39	336	715	907	283	431	171	20
Kittitas	333	18	30	83	77	23	84	18	0
Klickitat	209	9	47	66	44	9	29	5	0
Lewis	874	51	167	295	186	74	61	27	13
Lincoln	94	0	14	31	25	6	14	4	0
Mason	620	68	137	193	129	44	36	10	3
Okanogan	530	54	117	150	96	41	44	17	11
Pacific	219	20	33	81	44	11	26	3	1
Pend Oreille	120	2	25	47	25	8	8	5	0
Pierce	10,469	297	1,488	2,684	2,551	922	1,319	607	601
San Juan	108	2	10	24	22	9	34	7	0
Skagit	1,451	145	261	416	242	91	132	55	109
Skamania	94	1	8	27	25	8	20	5	0
Snohomish	8,924	324	1,081	2,032	2,267	797	1,696	580	147
Spokane	5,593	46	562	1,515	1,451	655	915	424	25
Stevens	451	3	70	187	100	40	41	9	1
Thurston	2,618	49	254	639	728	247	458	188	55
Wahkiakum	37	1	7	17	5	3	3	1	0
Walla Walla	721	72	136	152	174	62	83	40	2
Whatcom	2,122	75	241	477	489	199	434	159	48
Whitman	432	0	16	52	94	44	140	85	1
Yakima	4,170	741	1,120	1,078	653	215	241	112	10

B. Behavioral and Health Characteristics

Behaviors such as smoking during pregnancy and medical risk factors such as diabetes and hypertension may affect the health of both the mother and her infant. Birth data on these characteristics can identify problem areas and track changes over time, especially if new prevention programs have been started.

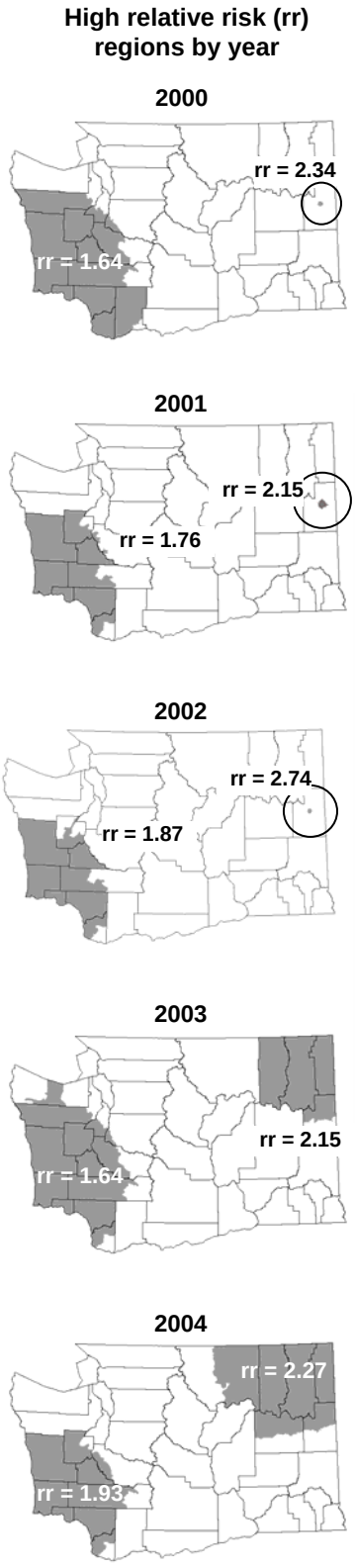
Natality Table B1. Behavioral and Health Summary Indicators for Residents, 1996 - 2005

	Percent of Births where Mother…		
	Smokes[1]	Has Gestational Diabetes	Has Pregnancy-Associated Hypertension
1996	16.0	2.6	4.2
1997	14.6	2.5	4.5
1998	14.6	2.6	4.5
1999	14.2	2.7	4.7
2000	13.5	3.1	5.1
2001	12.6	3.5	5.1
2002	12.0	3.6	4.8
2003	10.9	4.3	5.3
2004	10.2	4.5	5.3
2005	10.2	5.0	5.3

[1]Unknowns have been subtracted from total births in calculating percentages.

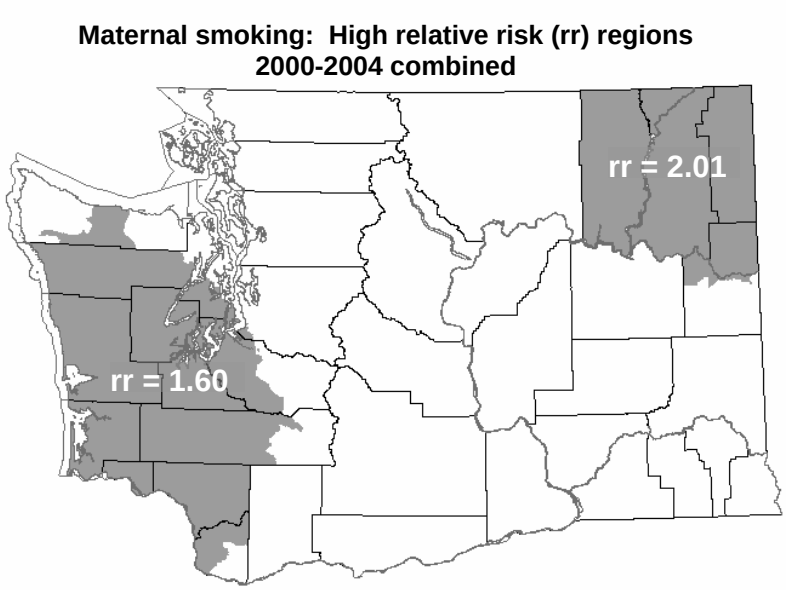
The percent of births with gestational diabetes has nearly doubled over the decade. After initial increases, the percent of births with pregnancy-associated hypertension has remained steady for the past three years. The percent of women smoking during pregnancy decreased from 1996 to 2004 but was unchanged in 2005. It is encouraging to note that even though the maternal smoking item was significantly revised in 2003 (see 'Birth Data Notes' in the Technical Appendix), the data are consistent with data from previous years.

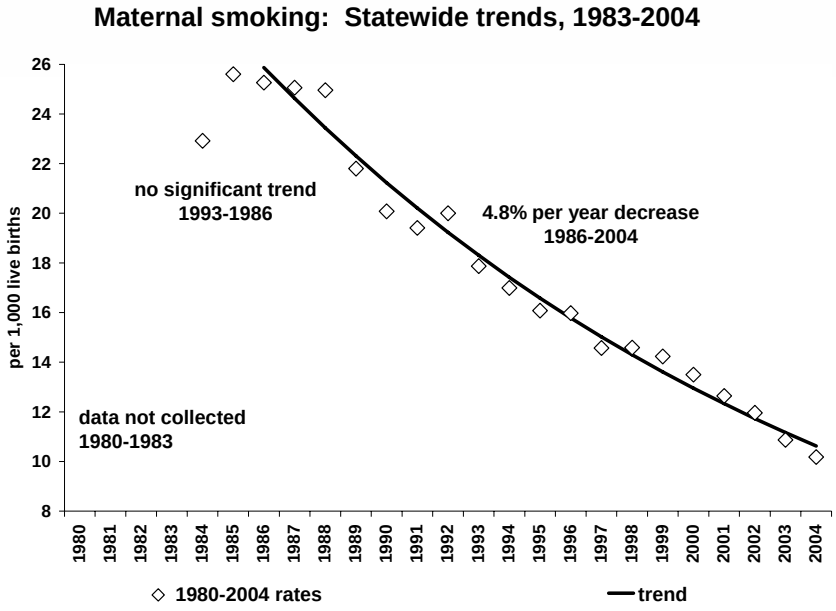
Natality Figure 1. Maternal smoking, regions and trends



Regions: For each year analyzed, two regions of varying size were identified as having higher than expected numbers of mothers smoking during their pregnancy: southwest Washington, and the Spokane and/or northeast region. For 2000-2004 combined, the southwest region had a relative risk (rr) of 1.60, or 60% higher maternal smoking rates than expected; the northeast region had an rr of 2.01, or twice what would be expected. Per year, these two regions combined had on average 1400 more mothers-to-be smoking than expected.

Trends: Statewide maternal smoking rates have been decreasing by 4.8% per year from 1989 to 2004.





Natality Table B2. Mother's Age Group by Maternal Smoking for Residents, 2005

Age	Total	Maternal Smoking	No Maternal Smoking	Unknown
State Total	**82,625**	**8,174**	**72,128**	**2,323**
Under 15	84	10	74	0
15 - 17	1,966	268	1,649	49
18 - 19	4,773	910	3,754	109
20 - 24	19,911	3,194	16,235	482
25 - 29	23,198	2,131	20,424	643
30 - 34	19,797	1,056	18,138	603
35 - 39	10,490	482	9,670	338
40 - 44	2,232	117	2,026	89
45 and Over	145	2	134	9
Unknown	29	4	24	1

Natality Table B3. Mother's Education by Maternal Smoking for Residents, 2005

Education	Total	Maternal Smoking	No Maternal Smoking	Unknown
State Total	**82,625**	**8,174**	**72,128**	**2,323**
8th Grade or Less	4,123	232	3,819	72
Some High School	11,399	2,309	8,794	296
High School / GED	19,448	3,149	15,691	608
Some College	17,889	1,850	15,478	561
Associate Degree	6,677	337	6,258	82
Bachelor's Degree	14,721	174	14,016	531
Postgraduate Educ.	6,766	24	6,676	66
Unknown	1,602	99	1,396	107

Natality Table B4. Maternal Smoking During Pregnancy by County of Residence, 2005

County	Total Births	No Smoking During Pregnancy	Smoking 3 Months Before	Maternal Smoking First Trimester	Maternal Smoking Second Trimester	Maternal Smoking Third Trimester	Unknown Maternal Smoking
State Total	**82,625**	**72,128**	**9,773**	**7,991**	**6,993**	**6,720**	**2,323**
Adams	424	408	16	14	13	13	2
Asotin	237	165	86	72	57	54	0
Benton	2,164	1,873	293	225	183	169	56
Chelan	902	856	37	37	37	36	8
Clallam	617	493	138	124	114	108	0
Clark	5,635	4,172	895	674	558	533	772
Columbia	24	18	5	4	4	5	1
Cowlitz	1,242	854	317	305	264	250	82
Douglas	518	499	13	13	13	13	6
Ferry	82	59	25	22	20	20	1
Franklin	1,484	1,390	74	49	37	37	44
Garfield	16	12	4	4	4	3	0
Grant	1,451	1,314	145	133	125	107	1
Grays Harbor	857	624	254	203	180	166	24
Island	997	874	175	117	95	81	3
Jefferson	204	159	48	44	40	38	0
King	22,680	21,084	1,294	1,048	902	883	518
Kitsap	2,902	2,539	390	353	328	305	8
Kittitas	333	289	63	40	30	32	0
Klickitat	209	98	38	34	28	27	76
Lewis	874	682	210	168	150	145	17
Lincoln	94	78	16	16	16	16	0
Mason	620	517	109	88	77	73	15
Okanogan	530	450	87	72	64	59	6
Pacific	219	105	24	16	16	16	96
Pend Oreille	120	98	26	22	22	22	0
Pierce	10,469	9,140	1,204	975	834	798	338
San Juan	108	97	18	11	8	8	0
Skagit	1,451	1,284	192	165	160	157	0
Skamania	94	46	17	12	10	7	35
Snohomish	8,924	8,029	999	824	707	693	59
Spokane	5,593	4,506	1,201	1,072	996	978	1
Stevens	451	335	127	114	107	104	0
Thurston	2,618	2,138	512	341	280	268	120
Wahkiakum	37	19	9	8	8	8	10
Walla Walla	721	649	77	70	64	60	2
Whatcom	2,122	1,951	186	155	134	131	14
Whitman	432	404	32	27	25	24	1
Yakima	4,170	3,820	417	320	283	273	7

Natality Table B5. Selected Medical Risk Factors[1] by County of Residence, 2005

County	Total Births	Diabetes		Hypertension		Previous Poor Pregnancy Outcome	Infertility Treatment	Group B Strep Culture Positive
		Gestational	Established	Gestational	Established			
State Total	**82,625**	**4,114**	**527**	**4,342**	**1,034**	**3,010**	**879**	**13,459**
Adams	424	21	4	15	2	14	0	42
Asotin	237	17	1	8	2	7	1	47
Benton	2,164	104	6	142	19	101	21	334
Chelan	902	19	7	13	7	6	5	86
Clallam	617	37	3	48	8	15	2	116
Clark	5,635	242	19	463	64	363	43	899
Columbia	24	0	1	0	1	3	0	4
Cowlitz	1,242	58	6	104	33	45	3	200
Douglas	518	17	3	9	0	2	0	51
Ferry	82	3	1	3	3	3	1	11
Franklin	1,484	84	10	79	7	62	9	174
Garfield	16	3	1	3	0	0	0	2
Grant	1,451	60	7	56	8	36	4	150
Grays Harbor	857	69	6	49	20	37	0	165
Island	997	46	6	70	22	32	10	195
Jefferson	204	7	1	8	1	5	4	36
King	22,680	1,112	138	844	244	597	427	3,757
Kitsap	2,902	122	15	179	66	68	10	642
Kittitas	333	21	1	23	2	14	2	74
Klickitat	209	10	0	18	3	34	0	19
Lewis	874	47	8	48	15	53	2	165
Lincoln	94	5	0	1	0	3	0	19
Mason	620	28	4	28	12	31	1	134
Okanogan	530	29	6	48	5	54	3	56
Pacific	219	8	2	15	4	35	0	26
Pend Oreille	120	3	0	11	1	4	0	24
Pierce	10,469	374	72	471	123	314	66	1,546
San Juan	108	2	0	3	0	1	0	17
Skagit	1,451	86	8	86	40	49	15	188
Skamania	94	2	0	11	2	13	0	11
Snohomish	8,924	482	72	661	152	304	119	1,628
Spokane	5,593	342	34	268	42	254	58	991
Stevens	451	11	4	26	4	17	2	40
Thurston	2,618	203	17	102	26	146	19	448
Wahkiakum	37	0	0	1	0	2	0	4
Walla Walla	721	30	4	45	7	36	8	73
Whatcom	2,122	79	16	145	38	59	12	395
Whitman	432	20	2	29	2	19	9	70
Yakima	4,170	311	42	209	49	172	23	620

Natality Table B6. Body Mass Index[1] by County of Residence, 2005

County	Total Births	Underweight (<18.5)	Normal (18.5-24.9)	Overweight (25.0-29.9)	Obese (30.0+)	Unknown
State Total	**82,625**	**2,153**	**33,732**	**17,657**	**15,314**	**13,769**
Adams	424	9	181	138	82	14
Asotin	237	12	109	54	55	7
Benton	2,164	58	852	470	392	392
Chelan	902	14	286	153	125	324
Clallam	617	19	262	156	170	10
Clark	5,635	159	2,432	1,148	1,086	810
Columbia	24	1	10	7	4	2
Cowlitz	1,242	24	485	257	242	234
Douglas	518	12	163	98	77	168
Ferry	82	6	31	23	18	4
Franklin	1,484	23	580	343	284	254
Garfield	16	0	4	3	8	1
Grant	1,451	27	613	378	347	86
Grays Harbor	857	21	314	191	245	86
Island	997	27	443	230	213	84
Jefferson	204	5	108	47	41	3
King	22,680	645	9,923	4,437	3,252	4,423
Kitsap	2,902	92	1,323	741	641	105
Kittitas	333	5	150	84	75	19
Klickitat	209	6	52	33	39	79
Lewis	874	28	359	202	218	67
Lincoln	94	5	42	19	21	7
Mason	620	13	182	128	139	158
Okanogan	530	6	232	127	133	32
Pacific	219	5	48	36	26	104
Pend Oreille	120	1	50	33	29	7
Pierce	10,469	237	3,537	2,000	1,808	2,887
San Juan	108	1	61	25	17	4
Skagit	1,451	34	499	322	323	273
Skamania	94	2	29	18	9	36
Snohomish	8,924	191	3,573	2,045	1,810	1,305
Spokane	5,593	212	2,755	1,257	1,080	289
Stevens	451	16	208	104	109	14
Thurston	2,618	78	1,087	600	522	331
Wahkiakum	37	0	9	4	5	19
Walla Walla	721	13	302	176	180	50
Whatcom	2,122	45	878	421	347	431
Whitman	432	10	196	100	65	61
Yakima	4,170	91	1,364	1,049	1,077	589

C. Health Service Utilization

The health service utilization data in this section describe the prenatal care and delivery services the mother received. Prenatal care data are used to assess whether women are receiving timely prenatal care. Data on the birth attendant, birth facility, and method of delivery help to assure that appropriate delivery services are available, including both 'low tech' and 'high tech' services.

Natality Table C1. Health Service Utilization Summary Indicators for Residents, 1995 - 2005

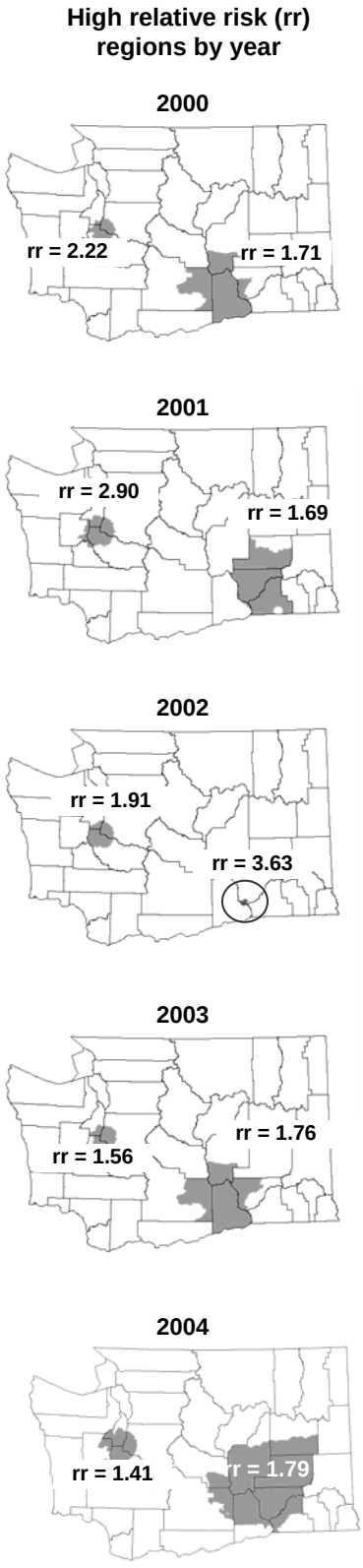
	Percent of Births[1] where Mother has…		
	1st Trimester Prenatal Care	Late/No Prenatal Care[2]	Primary C-Section Delivery
1996	83.3	3.6	11.2
1997	83.3	3.4	11.3
1998	83.0	3.2	12.2
1999	82.8	3.1	12.3
2000	82.6	3.3	13.1
2001	83.2	3.0	14.0
2002	83.4	3.1	14.8
2003	81.1	4.2	18.6
2004	79.6	4.5	19.2
2005	79.2	4.7	19.4

[1]Unknowns have been subtracted from total births in calculating percentages.

[2]Includes no care or care beginning in third trimester.

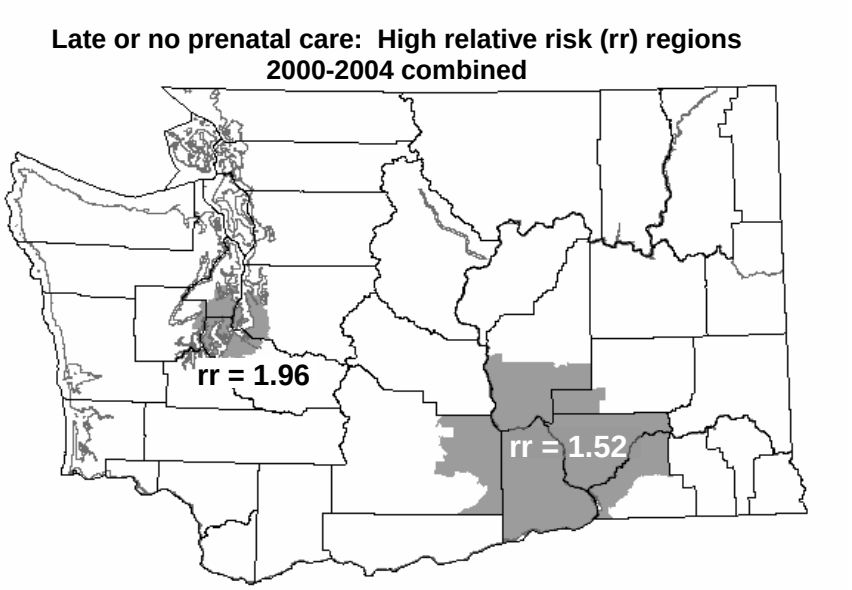
C-section delivery continues to increase, following a national trend. In 2005, mothers were less likely to have timely prenatal care than they had been for the past decade. These numbers should be viewed with caution because the data collection method for this item changed significantly (see 'Birth Data Notes' in the Technical Appendix) and the unknowns are still very high. However, even though the large change between 2002 and 2003 can be attributed at least in part to the certificate revision, it is important to note that timely prenatal care continues to decline.

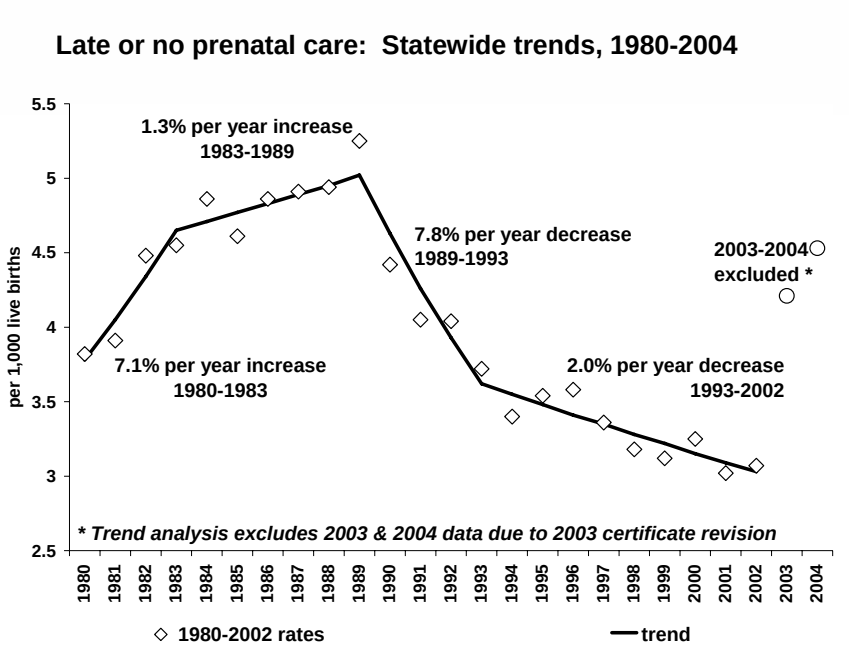
Natality Figure 2. Late or no prenatal care, regions and trends



Regions: Although varying in size and shape, for each year assessed two regions were consistently identified as having more "late or no prenatal care" than expected: south Puget Sound, and south central Washington. For 2000-2004 combined, south Puget Sound had a relative risk (rr) of 1.96, about twice what would be expected; south central Washington had an rr of 1.5, or 50% more than expected. These two regions averaged 330 more births per year with late or no prenatal care than expected.

Trends: From 1980-1983 late or no prenatal care births increased by 7.1% per year; from 1983 to 1989 the rate of increase was 1.3% per year. Between 1989 and 1993 the rate decreased by 7.8% per year, and from 1993 to 2000 the rate decreased by 2% per year.





Natality Table C2. Month Prenatal Care Began by Mother's Age Group for Residents, 2005

Month Care Began	All Ages	Under 15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45 and Over	Unk
State Total	**82,625**	**84**	**1,966**	**4,773**	**19,911**	**23,198**	**19,797**	**10,490**	**2,232**	**145**	**29**
First	10,378	2	125	403	2,284	3,161	2,696	1,409	277	19	2
Second	28,494	12	444	1,301	6,038	8,513	7,530	3,810	799	40	7
Third	15,776	15	419	1,010	4,073	4,341	3,598	1,918	379	21	2
Fourth	5,936	12	252	545	1,854	1,509	1,054	561	136	11	2
Fifth	3,210	12	162	336	1,018	794	527	272	80	7	2
Sixth	1,980	10	101	201	634	489	323	176	45	1	0
Seventh	1,300	3	64	139	407	351	204	103	26	3	0
Eighth	831	5	44	74	279	206	137	74	12	0	0
Ninth +	319	1	18	29	121	74	43	26	6	1	0
No Care	814	3	40	69	264	212	137	61	27	1	0
Unknown	13,587	9	297	666	2,939	3,548	3,548	2,080	445	41	14

Natality Table C3. Number of Prenatal Visits by Month Prenatal Care Began for Residents, 2005

Number of Prenatal Visits	Total	1 - 3	4 - 6	7 - 9+	No Care	Unk
State Total	**82,625**	**54,648**	**11,126**	**2,450**	**814**	**13,587**
9 or More	52,311	44,123	5,500	304	2	2,382
5 - 8	13,365	7,486	4,343	1,008	2	526
1 - 4	2,854	678	884	1,045	0	247
No Visits	818	0	0	0	810	8
Unknown	13,277	2,361	399	93	0	10,424

Natality Table C4. Month Prenatal Care Began by County of Residence, 2005

County	Total	1st	2nd	3rd	4th	5th	6th	7th	8th	9th+	No Care	Unk
State Total	**82,625**	**10,378**	**28,494**	**15,776**	**5,936**	**3,210**	**1,980**	**1,300**	**831**	**319**	**814**	**13,587**
Adams	424	52	172	79	40	22	19	7	11	4	7	11
Asotin	237	16	67	101	26	6	6	3	2	0	1	9
Benton	2,164	213	816	368	178	96	51	44	19	9	22	348
Chelan	902	51	402	235	57	39	30	13	7	5	10	53
Clallam	617	66	252	153	54	33	14	15	4	2	3	21
Clark	5,635	386	2,265	1,603	612	312	199	110	55	17	25	51
Columbia	24	6	6	5	0	2	0	0	0	0	1	4
Cowlitz	1,242	170	530	249	115	56	27	27	11	5	22	30
Douglas	518	28	239	130	42	18	12	5	6	2	3	33
Ferry	82	12	24	12	6	8	4	0	3	0	3	10
Franklin	1,484	125	492	247	136	82	59	38	23	6	25	251
Garfield	16	2	3	6	3	2	0	0	0	0	0	0
Grant	1,451	167	571	288	129	69	51	31	32	3	69	41
Grays Harbor	857	114	262	159	99	55	31	29	13	4	16	75
Island	997	101	448	202	67	36	32	37	23	6	4	41
Jefferson	204	15	68	61	19	11	11	2	6	2	1	8
King	22,680	2,715	7,565	3,711	1,289	732	428	293	187	98	179	5,483
Kitsap	2,902	260	969	830	276	136	96	83	54	24	33	141
Kittitas	333	60	155	68	20	8	2	1	0	0	4	15
Klickitat	209	23	79	67	17	10	3	1	4	1	2	2
Lewis	874	188	296	142	87	42	19	14	10	4	4	68
Lincoln	94	20	37	10	5	2	0	1	0	0	1	18
Mason	620	83	228	128	56	48	23	9	5	2	2	36
Okanogan	530	79	220	104	34	21	21	19	9	3	5	15
Pacific	219	18	84	66	17	11	3	5	2	0	8	5
Pend Oreille	120	23	43	25	11	4	2	2	2	2	3	3
Pierce	10,469	1,366	3,265	1,626	650	373	215	144	73	44	89	2,624
San Juan	108	3	43	34	12	8	1	1	2	0	2	2
Skagit	1,451	132	585	333	118	91	55	29	18	6	9	75
Skamania	94	11	37	26	12	2	2	0	2	0	1	1
Snohomish	8,924	954	2,914	1,677	640	337	215	158	115	34	80	1,800
Spokane	5,593	1,389	2,024	760	240	115	75	39	21	8	71	851
Stevens	451	82	157	101	32	20	8	5	4	1	5	36
Thurston	2,618	622	825	343	166	70	58	32	28	4	17	453
Wahkiakum	37	5	17	6	3	1	1	0	0	1	1	2
Walla Walla	721	54	258	225	62	47	18	5	6	2	4	40
Whatcom	2,122	91	674	748	234	110	68	38	27	5	10	117
Whitman	432	35	168	140	44	20	7	2	4	0	2	10
Yakima	4,170	641	1,234	708	328	155	114	58	43	15	70	804

Natality Table C5. Birth Facility by County of Occurrence, 2005

County	Total	Hospital	Birth Center	Federal Facility	Home	Born On Arrival	Other	Unknown
State Total	**82,364**	**77,535**	**771**	**3,107**	**914**	**32**	**5**	**0**
Adams	551	550	0	0	0	1	0	0
Asotin	3	0	0	0	3	0	0	0
Benton	3,528	3,492	29	0	7	0	0	0
Chelan	1,398	1,376	21	0	1	0	0	0
Clallam	588	573	0	0	15	0	0	0
Clark	5,144	5,088	0	0	52	4	0	0
Columbia	0	0	0	0	0	0	0	0
Cowlitz	1,191	1,178	0	0	13	0	0	0
Douglas	0	0	0	0	0	0	0	0
Ferry	5	5	0	0	0	0	0	0
Franklin	486	476	0	0	10	0	0	0
Garfield	0	0	0	0	0	0	0	0
Grant	1,090	1,083	0	0	7	0	0	0
Grays Harbor	590	578	0	0	10	1	1	0
Island	695	241	24	426	4	0	0	0
Jefferson	126	99	0	0	27	0	0	0
King	27,160	26,613	305	0	231	10	1	0
Kitsap	2,689	1,941	0	709	37	2	0	0
Kittitas	304	291	0	0	13	0	0	0
Klickitat	143	137	0	0	6	0	0	0
Lewis	595	547	0	0	47	1	0	0
Lincoln	0	0	0	0	0	0	0	0
Mason	344	339	0	0	5	0	0	0
Okanogan	531	524	0	0	7	0	0	0
Pacific	7	0	0	0	5	2	0	0
Pend Oreille	111	111	0	0	0	0	0	0
Pierce	10,584	8,305	238	1,972	64	4	1	0
San Juan	6	0	0	0	5	0	1	0
Skagit	1,601	1,566	0	0	34	1	0	0
Skamania	1	0	0	0	1	0	0	0
Snohomish	5,808	5,672	44	0	90	2	0	0
Spokane	6,452	6,336	80	0	33	3	0	0
Stevens	281	263	0	0	18	0	0	0
Thurston	2,798	2,728	0	0	69	1	0	0
Wahkiakum	0	0	0	0	0	0	0	0
Walla Walla	920	902	9	0	9	0	0	0
Whatcom	2,130	2,029	20	0	80	0	1	0
Whitman	422	417	1	0	4	0	0	0
Yakima	4,082	4,075	0	0	7	0	0	0

Natality Table C6. Method of Delivery[1] by County of Occurrence, 2005

County	Total	Vaginal Deliveries				Primary C-Section	Repeat C-Section		Unk
		Sponta-neous	Forceps	Vacuum	VBAC		With Labor	No Labor	
State Total	**82,364**	**53,578**	**577**	**4,283**	**1,051**	**16,004**	**458**	**6,412**	**1**
Adams	551	289	2	101	0	76	0	83	0
Asotin	3	3	0	0	0	0	0	0	0
Benton	3,528	2,283	25	193	104	579	15	329	0
Chelan	1,398	999	2	11	8	266	8	104	0
Clallam	588	433	1	15	1	93	7	38	0
Clark	5,144	3,541	39	196	103	775	40	450	0
Columbia	0	0	0	0	0	0	0	0	0
Cowlitz	1,191	742	2	62	27	226	8	124	0
Douglas	0	0	0	0	0	0	0	0	0
Ferry	5	5	0	0	0	0	0	0	0
Franklin	486	317	0	37	7	83	4	38	0
Garfield	0	0	0	0	0	0	0	0	0
Grant	1,090	699	5	102	2	219	2	61	0
Grays Harbor	590	392	1	5	7	123	3	59	0
Island	695	426	11	37	0	137	1	83	0
Jefferson	126	104	0	2	0	15	0	5	0
King	27,160	16,672	266	1,653	298	6,136	174	1,960	1
Kitsap	2,689	1,734	10	178	21	491	35	220	0
Kittitas	304	207	2	5	2	46	1	41	0
Klickitat	143	84	0	8	1	37	0	13	0
Lewis	595	383	20	33	0	99	0	60	0
Lincoln	0	0	0	0	0	0	0	0	0
Mason	344	241	0	7	7	53	3	33	0
Okanogan	531	345	0	20	5	95	4	62	0
Pacific	7	6	0	0	1	0	0	0	0
Pend Oreille	111	79	0	0	0	24	1	7	0
Pierce	10,584	7,243	53	385	98	2,078	22	705	0
San Juan	6	6	0	0	0	0	0	0	0
Skagit	1,601	1,027	4	76	33	334	14	113	0
Skamania	1	1	0	0	0	0	0	0	0
Snohomish	5,808	3,807	8	269	91	992	31	610	0
Spokane	6,452	4,166	56	272	72	1,270	16	600	0
Stevens	281	217	0	7	4	41	1	11	0
Thurston	2,798	1,815	14	176	21	563	15	194	0
Wahkiakum	0	0	0	0	0	0	0	0	0
Walla Walla	920	658	0	47	3	172	2	38	0
Whatcom	2,130	1,421	43	47	34	415	26	144	0
Whitman	422	259	0	26	1	95	1	40	0
Yakima	4,082	2,974	13	313	100	471	24	187	0

[1]Based on first or second methods given. See Appendix A for details.

Natality Table C7. Birth Attendant by County of Occurrence, 2005

County	Total	MD	DO	Cert Midwife	Lic Midwife	Other Midwife	Nurse	Hosp Admin	Father	Other	Unk
State Total	**82,364**	**72,064**	**1,127**	**6,824**	**1,441**	**41**	**549**	**0**	**50**	**243**	**25**
Adams	551	535	0	0	0	0	0	0	0	16	0
Asotin	3	0	0	2	0	0	0	0	1	0	0
Benton	3,528	2,882	231	354	7	0	39	0	1	3	11
Chelan	1,398	1,339	0	37	22	0	0	0	0	0	0
Clallam	588	387	0	186	13	0	0	0	2	0	0
Clark	5,144	3,656	41	1,383	29	15	8	0	5	7	0
Columbia	0	0	0	0	0	0	0	0	0	0	0
Cowlitz	1,191	1,092	5	79	12	0	0	0	1	2	0
Douglas	0	0	0	0	0	0	0	0	0	0	0
Ferry	5	1	0	0	0	0	2	0	0	1	1
Franklin	486	467	0	11	6	0	0	0	2	0	0
Garfield	0	0	0	0	0	0	0	0	0	0	0
Grant	1,090	863	97	121	0	0	0	0	3	6	0
Grays Harbor	590	417	0	165	2	0	1	0	1	4	0
Island	695	648	18	0	27	0	0	0	1	1	0
Jefferson	126	97	1	0	27	0	0	0	0	1	0
King	27,160	24,702	4	1,867	498	9	17	0	3	55	5
Kitsap	2,689	2,533	13	60	35	0	18	0	1	29	0
Kittitas	304	274	0	13	10	0	0	0	3	4	0
Klickitat	143	137	0	2	4	0	0	0	0	0	0
Lewis	595	233	314	0	47	0	0	0	1	0	0
Lincoln	0	0	0	0	0	0	0	0	0	0	0
Mason	344	331	0	0	4	0	0	0	1	8	0
Okanogan	531	419	36	69	4	0	0	0	1	2	0
Pacific	7	1	0	1	2	0	1	0	1	1	0
Pend Oreille	111	85	26	0	0	0	0	0	0	0	0
Pierce	10,584	9,078	48	1,175	226	0	38	0	4	14	1
San Juan	6	1	0	0	4	0	0	0	0	1	0
Skagit	1,601	1,412	0	128	60	0	0	0	0	1	0
Skamania	1	0	0	0	1	0	0	0	0	0	0
Snohomish	5,808	5,259	119	285	125	0	4	0	3	11	2
Spokane	6,452	5,937	1	387	100	8	4	0	4	10	1
Stevens	281	239	24	0	1	9	0	0	5	3	0
Thurston	2,798	2,396	0	332	69	0	0	0	1	0	0
Wahkiakum	0	0	0	0	0	0	0	0	0	0	0
Walla Walla	920	812	37	68	1	0	0	0	0	2	0
Whatcom	2,130	2,019	0	8	97	0	1	0	4	0	1
Whitman	422	357	0	0	4	0	2	0	0	59	0
Yakima	4,082	3,455	112	91	4	0	414	0	1	2	3

Natality Table C8 County of Residence by County of Occurrence, 2005

County of Residence	County of Occurrence																		
	Adams	Asotin	Benton	Chelan	Clallam	Clark	Columbia	Cowlitz	Douglas	Ferry	Franklin	Garfield	Grant	Grays Harbor	Island	Jefferson	King	Kitsap	Kittitas
Adams	287		26								4		65						
Asotin		3															1		
Benton	2		1,999								79		1			1	7		
Chelan			1	856													35	1	
Clallam					575									2		3	19	9	
Clark			2	1		4,825		20									4		
Columbia																			
Cowlitz			1			135		1,006									5	3	
Douglas				430									2	1			10		1
Ferry										4			7						
Franklin	51		1,022			2					383		6				8		
Garfield																			
Grant	210		21	88		1					2		952				8		6
Grays Harbor					1			1						507			15	1	1
Island					1										673		41		
Jefferson					7									6		119	15	52	
King			1	1	1	2		2					1	1	1		21,994	3	1
Kitsap					2	1										2	200	2,436	
Kittitas				3													21		279
Klickitat			7			3													
Lewis						3		32						1			8		
Lincoln				1									10						
Mason														1		1	15	101	
Okanogan				13									37				4		
Pacific						2		6						70			3		
Pend Oreille																			
Pierce						3		1							1		1,163	63	
San Juan															2		2		
Skagit															15		58		
Skamania						38													
Snohomish				1		1									1		3,300	8	
Spokane			3	1									2				7	2	1
Stevens										1									
Thurston			2			1		2							1		55	2	
Wahkiakum						2		25											
Walla Walla			53								13						4		
Whatcom				1				1									60		
Whitman																	2		
Yakima	1		262										3				15		11
Out of State			128	2	1	125		95			5		4	1	1		81	8	4
Occurrence Total	551	3	3,528	1,398	588	5,144	0	1,191	0	5	486	0	1,090	590	695	126	27,160	2,689	304

Note: Diagonal numbers are shaded where county of occurrence and county of residence are the same.

Natality Table C8 (Continued) County of Residence by County of Occurrence, 2005

County of Occurrence																					
Klickitat	Lewis	Lincoln	Mason	Okanogan	Pacific	Pend Oreille	Pierce	San Juan	Skagit	Skamania	Snohomish	Spokane	Stevens	Thurston	Wahkiakum	Walla Walla	Whatcom	Whitman	Yakima	Out-of-State	Residence Total
												38						3		1	424
												9				1		8		215	237
							3					3				5			54	10	2,164
				4			2				1	2									902
	2						6							1							617
3							2					2		1			1			774	5,635
																23				1	24
	6						5							3						78	1,242
				67								3				1				3	518
				5								18	44						1	3	82
												7				3				2	1,484
																		1		15	16
				1			1					47				1		1	111	1	1,451
	11		8				24							286						2	857
							31		136		105	1				1	4		1	3	997
							2				2			1							204
							488		3		136	3	1	7			4		3	27	22,680
				1			242		1		5		1	1						10	2,902
							2				1								27		333
113																2			8	76	209
	517						42							264					1	6	874
												82								1	94
			325				36				1			138						2	620
				453							1	19	1						1	1	530
	12				7		3							20						96	219
						61						52	5							2	120
1	1						9,138		2		4	4		61		1	2	1	1	22	10,469
							1	6	88		2						6			1	108
							3		1,257		42	2					74				1,451
19							1			1										35	94
1			1				14		76		5,497	3		2			5		2	12	8,924
						6	3					5,541	1					1		25	5,593
												221	227							2	451
	42		7				487							2,012			1			6	2,618
																				10	37
							1					5				642				3	721
							1		37		5						2,015			2	2,122
												41						360		29	432
							1				1	2				1	1		3,866	6	4,170
6	4		3			44	45		1		5	347	1	1		239	17	47	6		1,221
143	595	0	344	531	7	111	10,584	6	1,601	1	5,808	6,452	281	2,798	0	920	2,130	422	4,082	1,482	83,846

D. Infant Health

The items in this section are used to assess the health of infants born in Washington State and their chances for survival. The data are also used to track progress towards reducing infant health problems and to identify areas where more work is still needed.

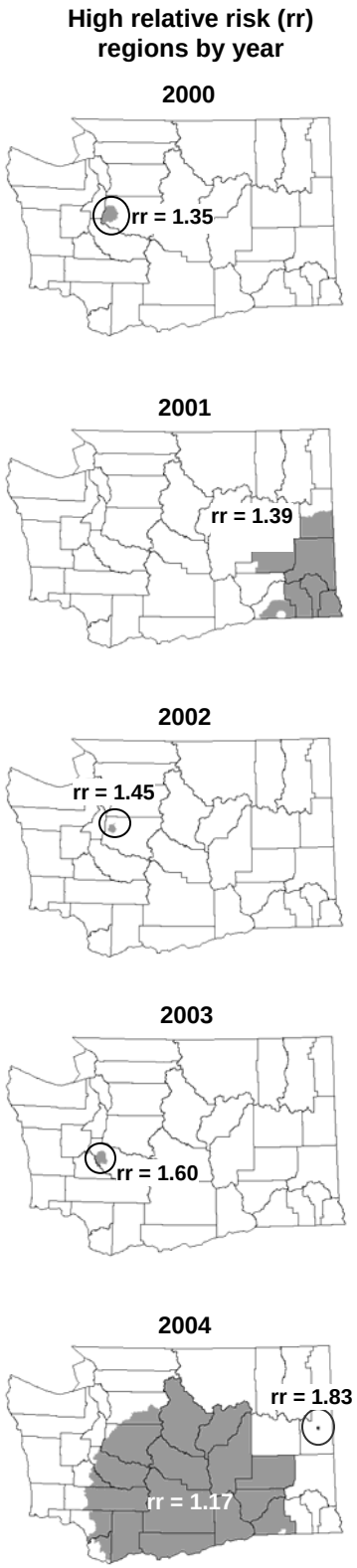
Natality Table D1. Infant Health Summary Indicators for Residents, 1996- 2005

	Percent of Births[1] that are…			
	Low Birth Weight	Low Birth Weight - Singletons	Plural (Twins+)	Preterm (< 37 Weeks)
1996	5.6	4.4	2.5	8.7
1997	5.6	4.5	2.5	8.9
1998	5.7	4.5	2.6	9.4
1999	5.9	4.5	2.8	9.2
2000	5.6	4.3	2.8	9.7
2001	5.8	4.5	2.9	10.1
2002	5.8	4.4	3.0	9.8
2003	6.1	4.6	3.0	10.0
2004	6.2	4.8	3.0	10.0
2005	6.1	4.7	3.0	10.3

[1]Unknowns have been subtracted from total births in calculating percentages.

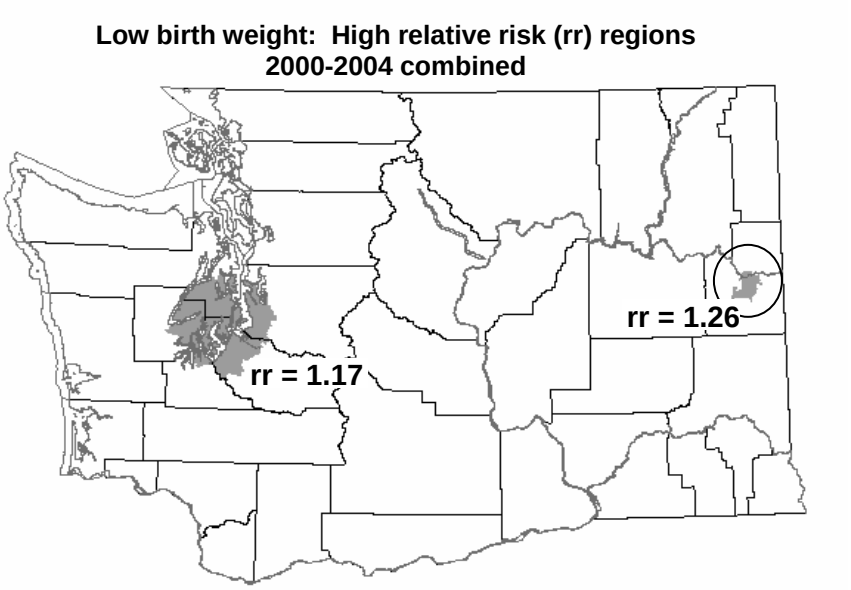
After a seven-year period of relatively little change, the percent low birth weight (infants weighing <2500 grams) was higher for 2003-2005. Nationally, the percent low birth weight has been increasing for several years. Birth weight is strongly related to plurality. However, low birth weight was higher in 2005-2005 even for singletons. Preterm deliveries remained relatively constant at about 10% of births for 2001-2004 but increased slightly in 2005.

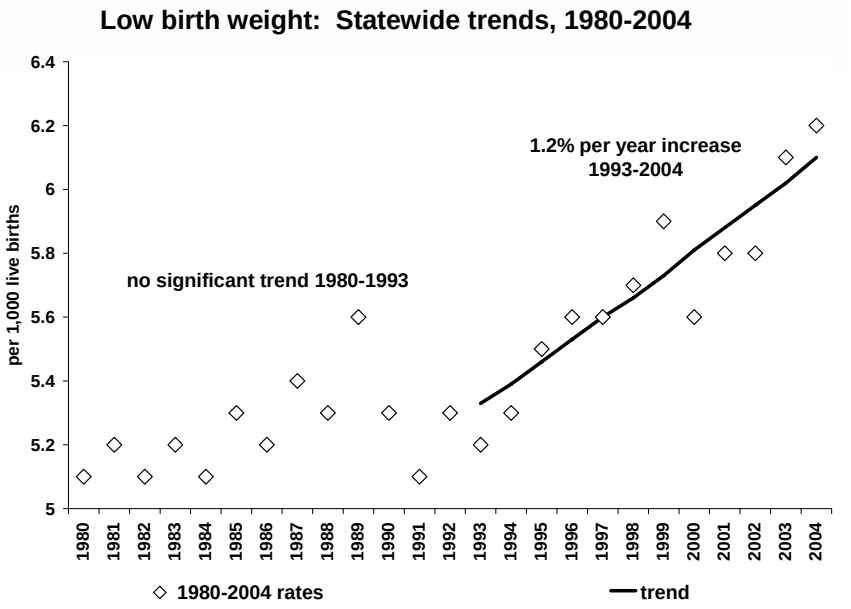
Natality Figure 3. Low birth weight



Regions: Specific regions with more than expected low birth weight newborns varied year to year, although urban areas within the Puget Sound environs showed elevated rates for 4 of the 5 years analyzed. For 2000-2004 combined, the whole south Puget Sound region had a relative risk (rr) of 1.17, that is, 17% more low birth weight newborns than expected. The Spokane region was also found to have more than expected low birth weight newborns during the 2000-2004 combined time period. The rr there was1.26, or 26% more than expected. Taken together, these two regions had about 180 more low weight births per year than would have been expected.

Trends: Statewide, low birth weight rates have been increasing by 1.2% per year from 1993 to 2004. Previously, the trend was essentially flat.



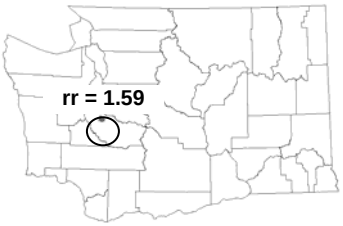


Natality Figure 4. Singleton birth low birth weight

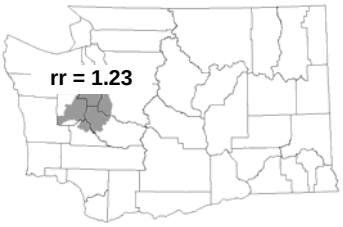
High relative risk (rr) regions by year

2000

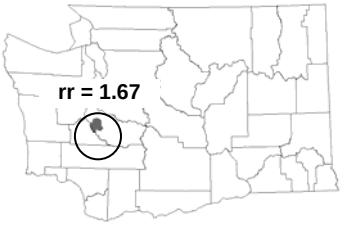
2001



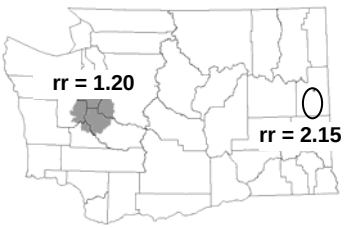
2002



2003



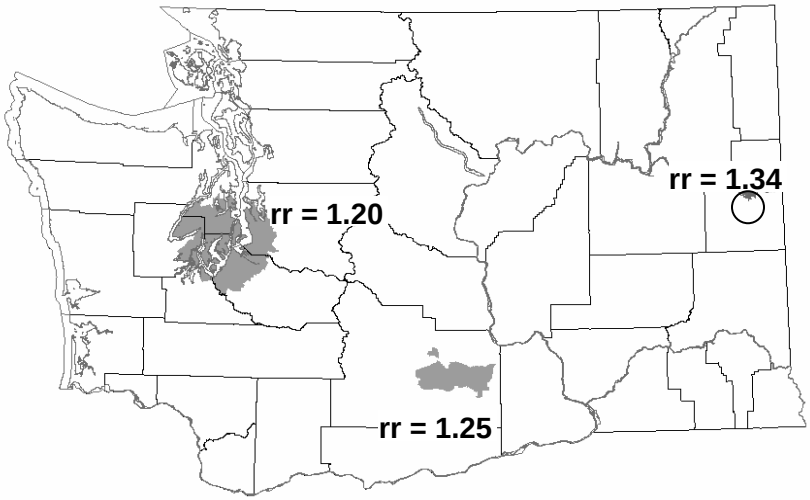
2004



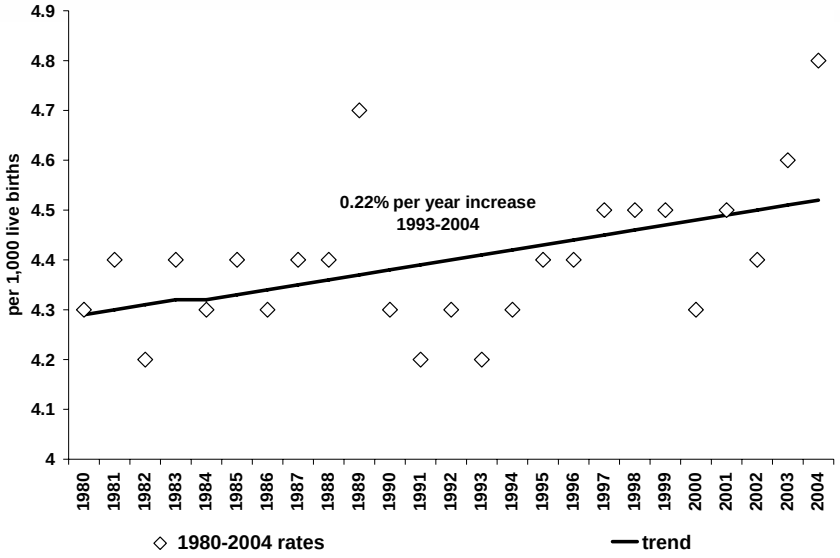
Regions: For singleton births there is a persistent pattern of low birth weight newborns seen in the urban Pierce County/south Puget Sound area. For 2000-2004 combined this region had a relative risk of 1.20, that is, 20% more low birth weight singleton newborns than expected. Per year, that equals about 130 more low weight singleton newborn than expected. Spokane and Yakima regions also had higher than expected low birth weight singletons for 2000-2004, although there is no persistent year-to-year pattern. In Spokane the rr was 1.34, or 34% more than expected; in Yakima, 1.25, or 25% more than expected. Combined the two regions had about 45 more low birth weight singleton births per year than would have been expected.

Trends: Singleton low birth weight rates have been increasing statewide by 0.22% per year from 1980 to 2004.

Singleton low birth weight: High relative risk (rr) regions 2000-2004 combined



Singleton low birth weight: Statewide trends, 1980-2004



Natality Table D2a. Birth Weight in Grams by Mother's Race/Ethnicity for Residents, 2005

Birth Weight in Grams	Total	White	African Amer.	Native Amer.	Japanese	Chinese	Filipino	Other Asian	Other	Unk	Hispanic Origin[1]
State Total	**82,625**	**68,597**	**3,664**	**1,795**	**433**	**999**	**1,271**	**4,828**	**0**	**1,038**	**14,988**
Under 1,000	351	264	42	9	0	7	4	20	0	5	68
1,000 - 1,499	399	312	31	12	4	2	9	23	0	6	71
1,500 - 1,999	981	768	74	28	8	4	22	54	0	23	192
2,000 - 2,499	3,309	2,573	224	88	26	37	74	245	0	42	581
2,500 - 2,999	12,003	9,371	749	245	79	177	261	984	0	137	2,329
3,000 - 3,499	30,383	24,847	1,358	641	197	433	524	2,001	0	382	5,847
3,500 - 3,999	25,803	22,244	879	559	88	279	294	1,129	0	331	4,528
4,000 - 4,499	7,649	6,720	252	164	26	46	70	292	0	79	1,121
4,500 and Over	1,448	1,267	46	38	2	12	9	53	0	21	205
Unknown	299	231	9	11	3	2	4	27	0	12	46

[1]Persons of Hispanic Origin may be of any race. See Appendix A, "Hispanic Origin."
NOTE: Uses bridged race, see Technical Appendix

Natality Table D2b. Birth Weight in Grams by Mother's Multiple Race for Residents, 2005

Birth Weight in Grams	Total	Single race: White	Single race: African Amer.	Single race: Native Amer.	Single race: Asian	Single race: Pacific Islander	More than one race given	Race unknown
State Total	**82,625**	**67,531**	**3,122**	**1,573**	**6,334**	**727**	**2,447**	**891**
Under 1,000	351	258	39	8	27	2	13	4
1,000 - 1,499	399	310	26	9	32	4	12	6
1,500 - 1,999	981	759	67	26	72	7	29	21
2,000 - 2,499	3,309	2,539	200	80	329	31	95	35
2,500 - 2,999	12,003	9,228	645	217	1,308	117	374	114
3,000 - 3,499	30,383	24,453	1,175	558	2,699	259	916	323
3,500 - 3,999	25,803	21,903	725	485	1,457	214	728	291
4,000 - 4,499	7,649	6,611	199	146	332	70	221	70
4,500 and Over	1,448	1,246	39	34	47	21	45	16
Unknown	299	224	7	10	31	2	14	11

NOTE: Includes all races reported by mother, see Technical Appendix.

Natality Table D3. Birth Weight in Grams by Mother's Age Group for Residents, 2005

Birth Weight in Grams	Total	Under 15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45 and Over	Age Unk
State Total	**82,625**	**84**	**1,966**	**4,773**	**19,911**	**23,198**	**19,797**	**10,490**	**2,232**	**145**	**29**
Under 1,000	351	0	7	39	89	96	66	41	12	0	1
1,000 - 1,499	399	0	12	33	81	89	96	72	16	0	0
1,500 - 1,999	981	3	31	61	231	225	228	145	51	6	0
2,000 - 2,499	3,309	3	93	221	780	869	772	449	102	19	1
2,500 - 2,999	12,003	20	359	798	3,134	3,231	2,601	1,486	341	29	4
3,000 - 3,499	30,383	26	834	1,900	7,692	8,429	7,073	3,679	697	42	11
3,500 - 3,999	25,803	29	494	1,344	5,964	7,513	6,447	3,266	705	33	8
4,000 - 4,499	7,649	3	113	315	1,605	2,240	2,046	1,067	243	13	4
4,500 and Over	1,448	0	15	40	275	418	396	243	59	2	0
Unknown	299	0	8	22	60	88	72	42	6	1	0

Natality Table D4. Birth Weight in Grams by Calculated Gestational Age[1] for Residents, 2005

Birth Weight in Grams	Total	Preterm (<37 wks)	Term (37-41 wks)	Postterm (42+ wks)	Unknown
State Total	82,625	8,354	67,760	5,241	1,270
Under 1,000	351	350	1	0	0
1,000 - 1,499	399	365	23	1	10
1,500 - 1,999	981	753	112	9	107
2,000 - 2,499	3,309	1,629	1,355	70	255
2,500 - 2,999	12,003	2,300	8,957	491	255
3,000 - 3,499	30,383	1,831	26,431	1,867	254
3,500 - 3,999	25,803	858	22,792	1,980	173
4,000 - 4,499	7,649	168	6,780	658	43
4,500 and over	1,448	33	1,249	162	4
Unknown	299	67	60	3	169

[1]See Appendix A for method used to calculate gestational age.

Natality Table D5. Birth Weight in Grams by Plurality for Residents, 2005

Birth Weight in Grams	Total	Single	Twin	Triplet	Quadruplet+	Unknown
State Total	82,625	80,109	2,448	60	8	0
Under 1,000	351	292	55	3	1	0
1,000 - 1,499	399	276	103	13	7	0
1,500 - 1,999	981	659	297	25	0	0
2,000 - 2,499	3,309	2,509	785	15	0	0
2,500 - 2,999	12,003	11,179	821	3	0	0
3,000 - 3,499	30,383	30,082	301	0	0	0
3,500 - 3,999	25,803	25,763	40	0	0	0
4,000 - 4,499	7,649	7,642	7	0	0	0
4,500 and over	1,448	1,446	2	0	0	0
Unknown	299	261	37	1	0	0

Natality Table D6. Mother's Age Group by Plurality for Residents, 2005

Age	Total	Single	Twin	Triplet	Quadruplet+	Unknown
State Total	82,625	80,109	2,448	60	8	0
Under 15	84	83	1	0	0	0
15 - 17	1,966	1,944	22	0	0	0
18 - 19	4,773	4,701	72	0	0	0
20 - 24	19,911	19,481	421	9	0	0
25 - 29	23,198	22,552	631	11	4	0
30 - 34	19,797	19,053	715	25	4	0
35 - 39	10,490	10,045	430	15	0	0
40 - 44	2,232	2,106	126	0	0	0
45 and Over	145	115	30	0	0	0
Unknown	29	29	0	0	0	0

Natality Table D7. Birth Weight in Grams by County of Residence, 2005

County	Total	Under 1000	1000-1499	1500-1999	2000-2499	2500-2999	3000-3499	3500-3999	4000-4499	4500+	Unk
State Total	**82,625**	**351**	**399**	**981**	**3,309**	**12,003**	**30,383**	**25,803**	**7,649**	**1,448**	**299**
Adams	424	4	1	5	9	89	169	109	36	2	0
Asotin	237	3	2	2	14	31	89	73	19	4	0
Benton	2,164	10	14	23	101	331	826	673	162	20	4
Chelan	902	8	8	14	42	147	324	286	65	8	0
Clallam	617	1	2	0	17	67	218	225	73	12	2
Clark	5,635	20	26	58	181	797	2,046	1,816	582	109	0
Columbia	24	1	0	0	0	6	6	7	3	1	0
Cowlitz	1,242	8	4	21	49	172	448	412	109	19	0
Douglas	518	4	2	1	19	84	195	160	41	11	1
Ferry	82	1	0	1	3	17	38	17	4	1	0
Franklin	1,484	7	13	16	70	242	514	471	125	23	3
Garfield	16	0	0	0	0	5	5	3	3	0	0
Grant	1,451	6	5	16	55	214	600	419	118	18	0
Grays Harbor	857	6	2	10	30	121	317	271	85	14	1
Island	997	3	2	4	31	119	378	319	111	22	8
Jefferson	204	0	2	0	7	30	70	72	21	2	0
King	22,680	72	106	280	997	3,373	8,371	6,915	2,050	423	93
Kitsap	2,902	16	14	28	120	404	1,014	958	286	61	1
Kittitas	333	0	1	2	7	45	123	103	48	4	0
Klickitat	209	0	0	3	6	33	85	66	12	4	0
Lewis	874	5	3	17	40	122	286	304	82	15	0
Lincoln	94	0	0	0	5	16	36	27	8	2	0
Mason	620	3	5	10	20	97	244	179	53	9	0
Okanogan	530	2	1	8	23	84	199	163	37	12	1
Pacific	219	1	0	2	7	31	79	74	20	5	0
Pend Oreille	120	0	0	1	8	20	41	33	14	3	0
Pierce	10,469	59	52	139	437	1,505	3,829	3,296	976	167	9
San Juan	108	0	1	0	2	18	35	38	10	4	0
Skagit	1,451	4	6	21	48	218	525	458	137	31	3
Skamania	94	1	1	2	2	16	27	36	7	2	0
Snohomish	8,924	28	38	97	303	1,193	3,238	2,775	919	169	164
Spokane	5,593	28	27	72	233	876	2,082	1,720	470	85	0
Stevens	451	2	1	7	20	55	159	153	42	11	1
Thurston	2,618	10	19	37	113	312	914	875	287	47	4
Wahkiakum	37	0	0	1	2	5	12	9	7	1	0
Walla Walla	721	5	2	7	46	115	259	203	73	10	1
Whatcom	2,122	10	12	23	65	229	747	738	238	57	3
Whitman	432	1	1	5	13	58	175	128	41	10	0
Yakima	4,170	22	26	48	164	706	1,660	1,219	275	50	0

Natality Table D8. Calculated Gestational Age[1] by County of Residence, 2005

County	Total	Preterm (<37 wks)	Term (37-41 wks)	Postterm (42+ wks)	Unknown
State Total	**82,625**	**8,354**	**67,760**	**5,241**	**1,270**
Adams	424	46	345	29	4
Asotin	237	29	196	10	2
Benton	2,164	272	1,582	123	187
Chelan	902	104	748	43	7
Clallam	617	42	498	74	3
Clark	5,635	532	4,696	392	15
Columbia	24	6	18	0	0
Cowlitz	1,242	132	983	111	16
Douglas	518	55	430	30	3
Ferry	82	12	67	3	0
Franklin	1,484	191	1,089	71	133
Garfield	16	1	15	0	0
Grant	1,451	133	1,231	81	6
Grays Harbor	857	77	700	75	5
Island	997	85	828	79	5
Jefferson	204	24	160	18	2
King	22,680	2,151	18,820	1,328	381
Kitsap	2,902	268	2,489	131	14
Kittitas	333	19	280	30	4
Klickitat	209	21	171	17	0
Lewis	874	96	686	79	13
Lincoln	94	9	78	7	0
Mason	620	62	496	59	3
Okanogan	530	68	417	41	4
Pacific	219	20	176	21	2
Pend Oreille	120	11	91	16	2
Pierce	10,469	1,076	8,617	639	137
San Juan	108	6	96	5	1
Skagit	1,451	155	1,222	68	6
Skamania	94	5	79	10	0
Snohomish	8,924	889	7,355	536	144
Spokane	5,593	586	4,619	331	57
Stevens	451	51	367	32	1
Thurston	2,618	247	2,114	218	39
Wahkiakum	37	2	34	1	0
Walla Walla	721	88	567	57	9
Whatcom	2,122	205	1,757	143	17
Whitman	432	33	370	27	2
Yakima	4,170	545	3,273	306	46

[1]See Appendix A for method used to calculate gestational age.

Natality Table D9. Plurality by County of Residence, 2005

County	Total	Single	Twin	Triplet	Quadruplet+	Unknown
State Total	**82,625**	**80,109**	**2,448**	**60**	**8**	**0**
Adams	424	418	6	0	0	0
Asotin	237	231	6	0	0	0
Benton	2,164	2,107	54	3	0	0
Chelan	902	879	19	0	4	0
Clallam	617	605	12	0	0	0
Clark	5,635	5,450	177	8	0	0
Columbia	24	22	2	0	0	0
Cowlitz	1,242	1,194	48	0	0	0
Douglas	518	513	5	0	0	0
Ferry	82	80	2	0	0	0
Franklin	1,484	1,445	39	0	0	0
Garfield	16	16	0	0	0	0
Grant	1,451	1,422	29	0	0	0
Grays Harbor	857	851	6	0	0	0
Island	997	979	18	0	0	0
Jefferson	204	197	7	0	0	0
King	22,680	21,923	745	12	0	0
Kitsap	2,902	2,820	82	0	0	0
Kittitas	333	323	10	0	0	0
Klickitat	209	201	8	0	0	0
Lewis	874	845	26	3	0	0
Lincoln	94	92	2	0	0	0
Mason	620	610	10	0	0	0
Okanogan	530	516	14	0	0	0
Pacific	219	217	2	0	0	0
Pend Oreille	120	112	8	0	0	0
Pierce	10,469	10,130	324	15	0	0
San Juan	108	106	2	0	0	0
Skagit	1,451	1,404	44	3	0	0
Skamania	94	94	0	0	0	0
Snohomish	8,924	8,627	290	7	0	0
Spokane	5,593	5,404	186	3	0	0
Stevens	451	441	10	0	0	0
Thurston	2,618	2,545	69	0	4	0
Wahkiakum	37	37	0	0	0	0
Walla Walla	721	700	18	3	0	0
Whatcom	2,122	2,061	61	0	0	0
Whitman	432	424	8	0	0	0
Yakima	4,170	4,068	99	3	0	0

Mortality

Mortality

A. Demographics

Demographics provide basic data (such as gender and age) about people who have died. Information about patterns of mortality by demographic characteristics is important for understanding the health of the citizens of Washington State. As such, they help health programs assess risks or needs in certain areas. For example, age at death is used to compute life expectancy. Life expectancy combines rates of mortality at different age groups and determines how long a person of a specified age is expected to live.

In addition, demographic death data are used in conjunction with birth and migration data to provide population estimates used in resource allocation and planning as well as denominators of population-based rates.

Mortality Table A1. Age-Adjusted Mortality Rates and Life Expectancy by Sex for Residents, 1996-2005.

	Age-Adjusted Rate[1]						Infant Life Expectancy[2]					
	Washington State			United States[3]			Washington State			United States[3]		
Year	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
1996	850.0	1,043.3	704.6	902.4	1117.5	742.8	77.5	74.8	80.3	76.1	73.1	79.1
1997	813.7	992.5	681.1	887.3	1090.5	736.3	78.1	75.5	80.6	76.5	73.6	79.4
1998	815.0	990.4	684.7	875.8	1064.6	732.7	78.2	75.6	80.6	76.7	73.8	79.5
1999	818.4	988.7	692.1	881.9	1061.8	743.6	78.2	75.6	80.6	76.7	73.9	79.4
2000	803.6	960.5	683.2	872.4	1042.7	739.8	78.4	76.0	80.7	76.9	74.1	79.5
2001	797.7	943.2	684.7	854.5	1029.1	721.8	78.5	76.2	80.7	77.2	74.4	79.8
2002	790.3	946.3	671.2	846.8	1015.3	716.7	78.6	76.1	80.9	77.3	74.5	79.9
2003	782.4	924.0	671.4	831.2	991.7	705.4	78.7	76.4	80.9	77.6	74.8	80.1
2004	746.1	891.8	635.8	800.8	955.7	679.2	79.3	76.9	81.6	77.8	75.2	80.4
2005	738.4	871.1	633.9				79.3	76.9	81.6			

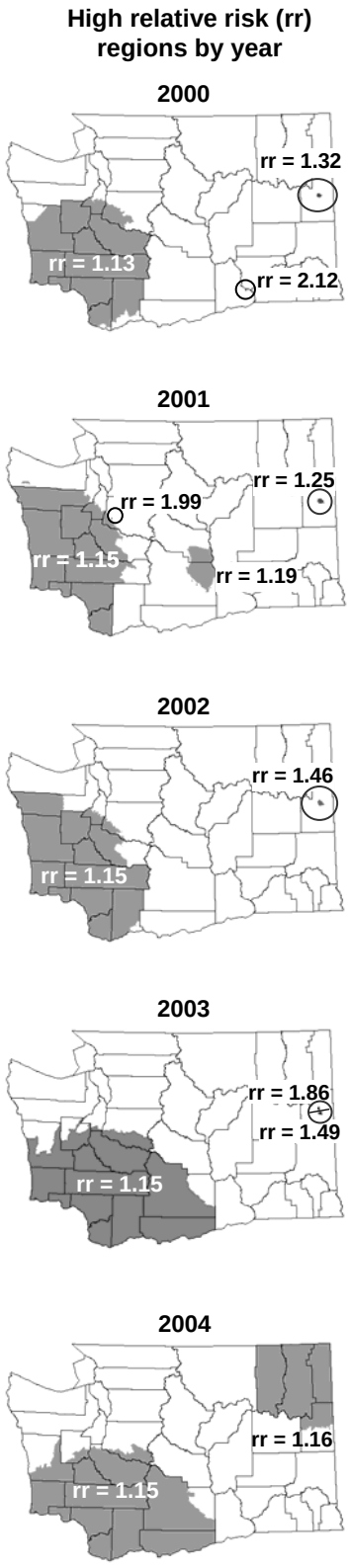
[1]Rate per 100,000 age-adjusted to U.S. 2000 population.

[2]Life expectancy is the average number of years an infant is expected to live.

[3]Source for United States mortality and Life Expectancy are:
Miniño AM, Heron M, Smith BL, Kochanek KD, Deaths: Final data for 2004. Health E-Stats. Released November 24, 2006.

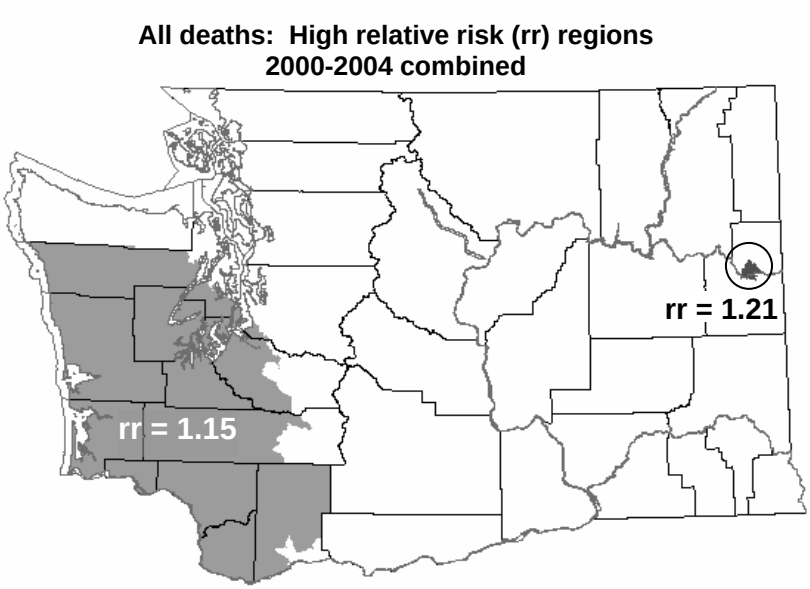
The mortality rate of 738.4 in 2005 is the lowest mortality rate ever reported in Washington State and continues an almost steady decline in mortality over time. Mortality rates for males are much higher than females. This results in life expectancies of 76.9 years for males and 81.6 for females. The differences between male and female life expectancies are decreasing over time, however. Mortality rates in Washington State are considerably lower than the U.S. as a whole.

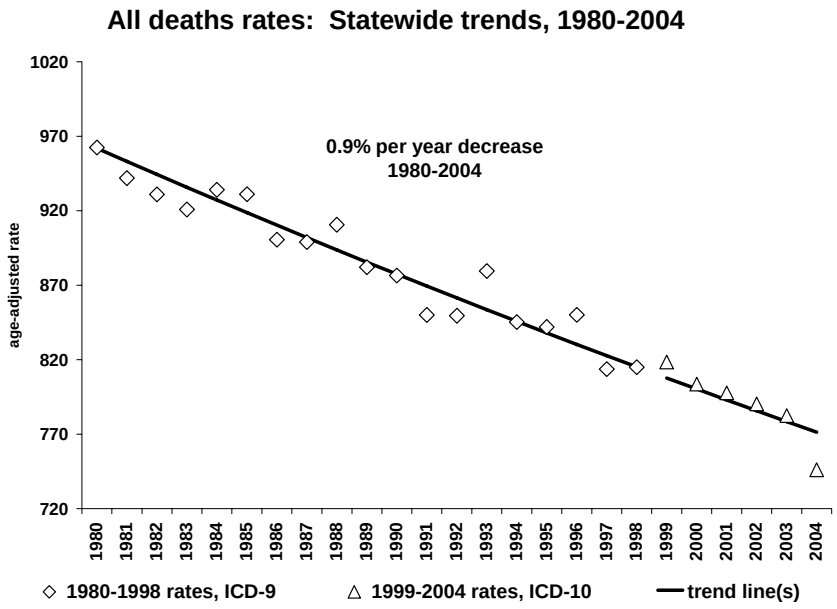
Mortality Figure 5. All deaths



Regions: For each individual year, and for all years combined, the southwest region and a portion of Spokane County have consistently had more deaths than expected. For 2000-2004 combined the relative risk (rr) for the southwest region was 1.15, indicating there were 15% more deaths than expected; in the Spokane area the rr was 1.21, or 21% more than expected. Because these areas are so large and populous even with these relatively small rr's the effect is large: on average the two regions combined had approximately 1500 more deaths per year than expected.

Trends: Overall the statewide age-adjusted mortality rates have been decreasing by 0.9% per year from 1980 to 2004.





Mortality Table A2. Age by Race/Ethnicity for Residents, 2005

Age Group	Total	White	African American	Native American	Japa-nese	Chi-nese	Filipino	Other Asian	Other	Unk	Hispanic Origin[1]
State Total	**46,015**	**42,683**	**1,222**	**630**	**270**	**231**	**268**	**645**	**0**	**66**	**982**
Under 1	420	331	42	16	0	3	1	23	0	4	76
1-4	76	61	7	5	0	0	0	3	0	0	15
5-14	104	78	12	2	0	0	1	10	0	1	7
15-19	237	196	14	14	1	0	2	10	0	0	30
20-24	362	296	26	21	0	2	2	12	0	3	48
25-34	737	600	56	35	2	3	6	29	0	6	91
35-44	1,392	1,207	81	50	4	4	5	38	0	3	64
45-54	3,453	3,007	202	96	18	18	27	77	0	8	129
55-64	5,078	4,585	198	124	13	22	40	84	0	12	118
65-74	7,137	6,589	183	97	41	46	52	124	0	5	136
75-84	13,027	12,283	250	104	101	66	78	130	0	15	150
85-94	11,774	11,294	135	59	82	59	41	95	0	9	102
95 and over	2,218	2,156	16	7	8	8	13	10	0	0	16
Unknown	0	0	0	0	0	0	0	0	0	0	0

[1] Persons of Hispanic Origin may be of any race. See Appendix A, "Hispanic Origin."

Mortality Table A2b. Age by Multiple Race for Residents, 2005

Age Group	Total	White	African American	Native American	Asian	Pacific Islander	More Than One Race Given	Unk
State Total	**46,015**	**42,564**	**1,189**	**589**	**1,249**	**130**	**232**	**62**
Under 1	420	324	29	14	20	3	26	4
1-4	76	55	6	5	1	2	7	0
5-14	104	76	8	2	9	1	7	1
15-19	237	192	13	12	10	3	7	0
20-24	362	294	24	20	14	2	5	3
25-34	737	593	53	34	27	9	16	5
35-44	1,392	1,199	79	46	35	13	17	3
45-54	3,453	2,991	201	91	115	21	26	8
55-64	5,078	4,572	196	111	129	24	34	12
65-74	7,137	6,568	183	92	232	25	32	5
75-84	13,027	12,267	247	98	349	20	32	14
85-94	11,774	11,281	134	58	270	6	18	7
95 and over	2,218	2,152	16	6	38	1	5	0
Unknown	0	0	0	0	0	0	0	0

[1]Includes all races as reported on the Death Certificate.

Mortality Table A3. Age by Sex for Residents, 2005

Age Group	Total		Male	Female
	Number	Percent[1]		
State Total	**46,015**	**100.0**	**22,862**	**23,153**
Under 1	420	0.9	240	180
1 - 4	76	0.2	46	30
5 - 14	104	0.2	61	43
15 - 19	237	0.5	176	61
20 - 24	362	0.8	271	91
25 - 34	737	1.6	511	226
35 - 44	1,392	3.0	897	495
45 - 54	3,453	7.5	2,144	1,309
55 - 64	5,078	11.0	3,060	2,018
65 - 74	7,137	15.5	3,962	3,175
75 - 84	13,027	28.3	6,442	6,585
85 - 94	11,774	25.6	4,534	7,240
95 and Over	2,218	4.8	518	1,700
Unknown	0	0.0	0	0

[1] Percents may not add to 100% due to rounding.

Mortality Table A4. Life Expectancy[1] by Age and Sex for Residents, 2005

Age Group	Total	Male	Female
Under 1	79.3	76.9	81.6
1-5	78.7	76.4	81.0
5-10	74.8	72.5	77.0
10-15	69.8	67.5	72.1
15-20	64.9	62.5	67.1
20-25	60.0	57.8	62.2
25-30	55.3	53.1	57.3
30-35	50.5	48.4	52.5
35-40	45.7	43.7	47.6
40-45	41.0	39.0	42.8
45-50	36.3	34.4	38.1
50-55	31.8	30.0	33.5
55-60	27.5	25.7	29.0
60-65	23.2	21.6	24.6
65-70	19.3	17.8	20.5
70-75	15.6	14.3	16.7
75-80	12.4	11.1	13.3
80-85	9.6	8.6	10.3
85 and Over	7.5	6.7	7.9

[1] Persons of Hispanic Origin may be of any race. See Appendix A, "Hispanic Origin."

Mortality Table A5. Marital Status by Sex for Residents, 2005

Marital Status	Total		Male	Female
	Number	Percent[1]		
State Total	**46,015**	**100.0**	**22,862**	**23,153**
Single	4,306	9.4	2,887	1,419
Married	17,730	38.5	11,793	5,937
Divorced	7,007	15.2	3,660	3,347
Widowed	16,599	36.1	4,283	12,316
Seperated	151	0.3	84	67
Unknown	222	0.5	155	67

[1] Percents may not add to 100% due to rounding.

Mortality Table A6. Education by Age for Residents, 2005

Age	Total	8th Grade or Less	Some High School	High School / GED	Some College	Associate Degree	Bachelor's Degree	Postgrad Educ	Unknown
State Total	**46,015**	**5,276**	**4,972**	**18,244**	**7,377**	**2,567**	**4,584**	**2,221**	**774**
Under 1	420	415	0	0	0	0	0	0	5
1-4	76	76	0	0	0	0	0	0	0
5-14	104	93	8	0	0	0	0	0	3
15-19	237	23	123	71	16	1	0	0	3
20-24	362	16	74	152	77	26	8	1	8
25-34	737	50	103	310	130	44	79	11	10
35-44	1,392	49	214	593	256	92	124	42	22
45-54	3,453	133	390	1,401	645	314	337	148	85
55-64	5,078	237	464	1,894	1,056	426	573	319	109
65-74	7,137	599	832	2,849	1,211	405	699	416	126
75-84	13,027	1,444	1,370	5,408	2,038	606	1,332	642	187
85-94	11,774	1,668	1,163	4,811	1,685	544	1,182	547	174
95 and over	2,218	473	231	755	263	109	250	95	42
Unknown	0	0	0	0	0	0	0	0	0

Mortality Table A7-a. Residence and Occurrence by County and City, 2005

County and City	Residence			Occurrence
	Total	Crude Rate[1]	Age-Adj Rate[2]	Total
State Total	**46015**	**7.4**	**7.5**	**46273**
Adams	112	6.6	7.4	106
Asotin	202	9.7	7	174
Benton	1029	6.5	7.5	1131
Kennewick	456	7.5	.	604
Richland	296	6.8	.	412
Chelan	607	8.8	7.3	718
Wenatchee	315	10.7	.	535
Clallam	826	12.4	7.7	741
Port Angeles	233	12.5	.	437
Clark	2714	6.9	8.1	2575
Camas	97	6.3	.	79
Vancouver	1669	10.8	.	2235
Columbia	38	9.3	6.3	32
Cowlitz	1042	10.9	9.7	1097
Longview	513	14.5	.	890
Douglas	258	7.4	7.2	165
Ferry	83	11.2	12	55
Franklin	276	4.6	6.3	187
Pasco	231	5.2	.	179
Garfield	25	10.4	7.8	20
Grant	573	7.2	7.7	460
Moses Lake	174	10.6	.	251
Grays Harbor	764	10.9	9	625
Aberdeen	184	11.2	.	305
Island	591	7.8	7.1	460
Oak Harbor	128	5.9	.	147
Jefferson	295	10.7	7.1	224
King	11418	6.3	6.6	12819
Auburn	418	9.6	.	534
Bellevue	747	6.5	.	818
Bothell part	129	7.9	.	103
Burien	216	7	.	414
Covington	39	2.3	.	20
Des Moines	269	9.3	.	278
Federal Way	534	6.2	.	611
Issaquah	187	11	.	227
Kenmore	113	5.9	.	49
Kent	470	5.5	.	298
Kirkland	347	7.6	.	848
Maple Valley	56	3.1	.	43
Mercer Island	163	7.5	.	126
Redmond	260	5.5	.	325
Renton	489	8.6	.	723
Sammamish	75	1.9	.	36
SeaTac	137	5.4	.	68
Seattle	4426	7.7	.	6303
Shoreline	487	9.3	.	464

Mortality Table A7-a. (Continued) Residence and Occurrence by County and City, 2005

County and City	Residence			Occurrence
	Total	Crude Rate[1]	Age-Adj Rate[2]	Total
Tukwila	81	4.7	.	42
Kitsap	1799	7.5	8	1721
Bainbridge Island	130	5.9	.	120
Bremerton	515	14.9	.	422
Kittitas	236	6.4	6.5	207
Ellensburg	99	5.9	.	159
Klickitat	175	9	7.7	138
Lewis	752	10.5	8.3	663
Centralia	257	16.8	.	435
Lincoln	132	13.1	8.7	94
Mason	592	11.4	9.5	438
Okanogan	365	9.2	8.2	320
Pacific	294	13.8	8.8	213
Pend Oreille	119	9.8	9	100
Pierce	5502	7.3	8.2	5559
Lakewood	526	8.9	.	471
Puyallup	418	11.7	.	971
Tacoma	1888	9.5	.	2507
University Place	249	8	.	552
San Juan	103	6.6	4.6	84
Skagit	1024	9.2	7.6	1019
Anacortes	162	10.3	.	185
Mount Vernon	266	9.4	.	453
Skamania	79	7.7	8.2	51
Snohomish	4236	6.5	7.7	3868
Edmonds	360	9	.	548
Everett	961	9.9	.	1475
Lynnwood	376	10.8	.	318
Marysville	262	8.9	.	268
Monroe	103	6.5	.	182
Mountlake Terrace	140	6.9	.	65
Mukilteo	102	5.3	.	52
Spokane	3637	8.3	7.6	4124
Spokane (city)	2055	10.3	.	3303
Spokane Valley	699	8.2	.	450
Stevens	389	9.4	8.7	287
Thurston	1738	7.8	7.7	1852
Lacey	358	10.8	.	319
Olympia	542	12.5	.	1321
Wahkiakum	43	11	8.1	35
Walla Walla	547	9.5	7.3	584
Walla Walla (city)	332	10.8	.	480
Whatcom	1320	7.3	7.2	1313
Bellingham	657	9.1	.	946
Whitman	225	5.3	6.6	190
Pullman	57	2.1	.	66
Yakima	1855	8.1	8.2	1824
Yakima (city)	928	11.7	.	1294

[1] Rate per 1,000 population.

[2] Rate per 1,000 age-adjusted to U.S. 2000 population. Does not include deaths where age is unknown.

[*] Age by city population not available.

Note: Occurrence represents all deaths which occur in Washington State regardless of the decedent's residence.

Residence represents all deaths to residents of Washington State regardless of where the death occurred.

Mortality Table A7-b. Residence and Occurrence by County Listed by Age-Adjusted Rates for 2003-2005.

	2003 - 2005			2005		
County	**Total**	**Crude Rate[1]**	**Age-Adj[2]**	**Total**	**Crude Rate[1]**	**Age-Adj[2]**
San Juan	330	7.3	**5.2**	103	6.6	4.6
Whitman	640	5.1	**6.4**	225	5.3	6.6
King	34,201	6.4	**6.7**	11,418	6.3	6.6
Franklin	825	4.8	**6.7**	276	4.6	6.3
Kittitas	730	6.8	**6.8**	236	6.4	6.5
Garfield	76	10.6	**6.9**	25	10.4	7.8
Lincoln	330	10.9	**7.2**	132	13.1	8.7
Chelan	1,742	8.5	**7.2**	607	8.8	7.3
Asotin	610	9.8	**7.2**	202	9.7	7.0
Walla Walla	1,587	9.3	**7.3**	547	9.5	7.3
Whatcom	3,952	7.4	**7.4**	1,320	7.3	7.2
Island	1,803	8.0	**7.4**	591	7.8	7.1
Jefferson	901	11.1	**7.5**	295	10.7	7.1
Klickitat	504	8.7	**7.5**	175	9.0	7.7
State Total	**136,525**	**7.4**	**7.6**	**46,015**	**7.4**	**7.5**
Adams	333	6.6	**7.6**	112	6.6	7.4
Douglas	799	7.8	**7.6**	258	7.4	7.2
Benton	3,066	6.6	**7.6**	1,029	6.5	7.5
Thurston	5,027	7.6	7.7	1,738	7.8	7.7
Skamania	214	7.1	**7.8**	79	7.7	8.2
Skagit	3,069	9.4	**7.8**	1,024	9.2	7.6
Spokane	10,986	8.5	**7.8**	3,637	8.3	7.6
Snohomish	12,597	6.5	**7.9**	4,236	6.5	7.7
Clallam	2,461	12.4	**7.9**	826	12.4	7.7
Grant	1,720	7.3	**7.9**	573	7.2	7.7
Columbia	138	11.2	**8.0**	38	9.3	6.3
Yakima	5,332	7.8	**8.0**	1,855	8.1	8.2
Kitsap	5,351	7.5	**8.0**	1,799	7.5	8.0
Clark	7,831	6.8	**8.1**	2,714	6.9	8.1
Okanogan	1,097	9.2	**8.3**	365	9.2	8.2
Pierce	16,238	7.3	**8.3**	5,502	7.3	8.2
Pacific	856	13.5	**8.7**	294	13.8	8.8
Lewis	2,352	11.1	**8.8**	752	10.5	8.3
Stevens	1,183	9.7	**9.0**	389	9.4	8.7
Wahkiakum	143	12.4	**9.0**	43	11.0	8.1
Mason	1,653	10.8	**9.1**	592	11.4	9.5
Grays Harbor	2,298	11.1	**9.2**	764	10.9	9.0
Cowlitz	2,931	10.2	**9.2**	1,042	10.9	9.7
Pend Oreille	393	10.9	**10.2**	119	9.8	9.0
Ferry	226	10.3	**11.0**	83	11.2	12.0

[1] Rate per 1,000 population.

[2] Rate per 1,000 age-adjusted to U.S. 2000 population. Does not include deaths where age is unknown.

Mortality Table A8. Sex and Race/Ethnicity by County/City of Residence, 2005

County & City	Total	Male	Female	White	African Amer.	Native Amer.	Japa-nese	Chi-nese	Fili-pino	Other Asian	Other	Unk	Hispanic[1]
State Total	**46,015**	**22,862**	**23,153**	**42,683**	**1,222**	**630**	**270**	**231**	**268**	**645**	**0**	**66**	**982**
Adams	112	69	43	110	1	0	0	0	0	1	0	0	23
Asotin	202	90	112	196	0	2	0	0	0	0	0	4	0
Benton	1,029	491	538	1,002	12	4	2	0	0	8	0	1	32
Kennewick	456	211	245	443	7	2	0	0	0	3	0	1	16
Richland	296	126	170	287	4	0	1	0	0	4	0	0	5
Chelan	607	290	317	597	3	4	0	3	0	0	0	0	18
Wenatchee	315	153	162	310	2	2	0	1	0	0	0	0	12
Clallam	826	449	377	799	2	20	1	0	0	3	0	1	6
Port Angeles	233	103	130	229	1	3	0	0	0	0	0	0	3
Clark	2,714	1,309	1,405	2,624	29	12	10	5	6	26	0	2	34
Camas	97	34	63	95	0	1	0	0	0	1	0	0	0
Vancouver	1,669	813	856	1,605	24	5	7	4	2	20	0	2	23
Columbia	38	20	18	38	0	0	0	0	0	0	0	0	1
Cowlitz	1,042	505	537	1,022	4	10	2	2	2	0	0	0	18
Longview	513	226	287	504	0	5	1	1	2	0	0	0	12
Douglas	258	141	117	254	0	2	0	0	0	1	0	1	7
Ferry	83	43	40	70	0	12	1	0	0	0	0	0	2
Franklin	276	159	117	254	12	4	1	0	2	2	0	1	38
Pasco	231	131	100	211	12	4	0	0	1	2	0	1	34
Garfield	25	10	15	25	0	0	0	0	0	0	0	0	0
Grant	573	306	267	551	6	9	7	0	0	0	0	0	49
Moses Lake	174	76	98	165	2	3	4	0	0	0	0	0	14
Grays Harbor	764	404	360	727	4	23	0	0	2	5	0	3	4
Aberdeen	184	97	87	172	2	5	0	0	1	3	0	1	1
Island	591	303	288	571	4	2	3	1	4	4	0	2	6
Oak Harbor	128	66	62	120	2	0	1	0	2	1	0	2	4
Jefferson	295	162	133	283	0	6	1	1	0	1	0	3	1
King	11,418	5,614	5,804	9,831	679	104	167	173	140	308	0	16	206
Auburn	418	182	236	388	12	6	1	3	3	5	0	0	16
Bellevue	747	367	380	678	12	3	17	14	1	22	0	0	15
Bothell part	129	60	69	119	3	2	1	0	3	1	0	0	3
Burien	216	102	114	195	14	1	1	2	1	2	0	0	5
Covington	39	26	13	39	0	0	0	0	0	0	0	0	1
Des Moines	269	105	164	250	7	0	4	1	4	2	0	1	4
Federal Way	534	265	269	457	30	3	7	3	6	28	0	0	12
Issaquah	187	85	102	175	2	0	0	4	1	5	0	0	3
Kenmore	113	56	57	105	2	1	1	1	2	1	0	0	2
Kent	470	249	221	390	38	8	8	1	4	21	0	0	10
Kirkland	347	147	200	321	6	1	2	4	5	8	0	0	8
Maple Valley	56	36	20	54	0	0	0	0	1	1	0	0	2
Mercer Island	163	66	97	154	1	0	1	2	0	5	0	0	0
Redmond	260	131	129	246	1	0	2	0	0	9	0	2	5
Renton	489	241	248	406	39	5	8	8	8	14	0	1	10
Sammamish	75	44	31	69	0	0	1	1	0	4	0	0	1
SeaTac	137	78	59	115	8	3	2	0	3	6	0	0	7
Seattle	4,426	2,217	2,209	3,472	470	43	96	115	84	136	0	10	75
Shoreline	487	205	282	450	6	4	4	7	8	6	0	2	3

Mortality Table A8. (Continued) Sex and Race/Ethnicity by County/City of Residence, 2005

County & City	Total	Male	Female	White	African Amer.	Native Amer.	Japa-nese	Chi-nese	Fili-pino	Other Asian	Other	Unk	Hispanic[1]
Tukwila	81	47	34	68	5	1	0	0	1	6	0	0	3
Kitsap	1,799	872	927	1,686	26	25	6	6	26	22	0	2	17
Bainbridge Island	130	53	77	123	0	0	3	0	2	1	0	1	1
Bremerton	515	226	289	473	15	6	1	3	10	7	0	0	4
Kittitas	236	106	130	235	1	0	0	0	0	0	0	0	2
Ellensburg	99	31	68	98	1	0	0	0	0	0	0	0	0
Klickitat	175	91	84	171	0	3	0	0	0	1	0	0	1
Lewis	752	371	381	747	0	4	0	0	0	1	0	0	7
Centralia	257	101	156	253	0	3	0	0	0	1	0	0	3
Lincoln	132	66	66	131	1	0	0	0	0	0	0	0	1
Mason	592	326	266	572	1	16	1	0	1	1	0	0	9
Okanogan	365	174	191	328	0	36	0	0	1	0	0	0	4
Pacific	294	152	142	287	1	5	1	0	0	0	0	0	3
Pend Oreille	119	58	61	111	1	5	1	0	0	1	0	0	1
Pierce	5,502	2,794	2,708	4,920	301	61	31	11	33	134	0	11	86
Lakewood	526	274	252	439	44	2	2	2	14	22	0	1	16
Puyallup	418	186	232	397	8	7	2	0	1	3	0	0	4
Tacoma	1,888	926	962	1,604	171	32	10	4	11	51	0	5	43
University Place	249	118	131	228	12	1	2	0	0	5	0	1	1
San Juan	103	54	49	103	0	0	0	0	0	0	0	0	1
Skagit	1,024	521	503	1,004	2	12	1	1	0	3	0	1	27
Anacortes	162	86	76	161	0	0	0	0	0	0	0	1	2
Mount Vernon	266	115	151	261	1	0	0	1	0	3	0	0	12
Skamania	79	37	42	77	0	2	0	0	0	0	0	0	0
Snohomish	4,236	2,105	2,131	4,004	45	51	17	19	31	61	0	8	74
Edmonds	360	160	200	341	1	4	3	1	4	5	0	1	4
Everett	961	466	495	902	15	14	1	3	3	22	0	1	21
Lynnwood	376	185	191	341	10	4	3	5	6	7	0	0	9
Marysville	262	112	150	253	2	1	2	0	2	2	0	0	2
Monroe	103	61	42	100	1	0	0	0	0	1	0	1	2
Mountlake Terrace	140	71	69	128	1	1	1	0	5	3	0	1	3
Mukilteo	102	52	50	99	0	0	1	0	0	2	0	0	1
Spokane	3,637	1,733	1,904	3,522	34	46	12	3	3	16	0	1	31
Spokane (city)	2,055	972	1,083	1,973	31	27	8	2	3	10	0	1	17
Spokane Valley	699	318	381	680	1	12	2	1	0	3	0	0	6
Stevens	389	196	193	365	0	23	1	0	0	0	0	0	3
Thurston	1,738	864	874	1,660	25	15	0	3	6	26	0	3	22
Lacey	358	178	180	338	8	2	0	1	2	6	0	1	1
Olympia	542	245	297	522	6	2	0	1	1	9	0	1	9
Wahkiakum	43	17	26	43	0	0	0	0	0	0	0	0	0
Walla Walla	547	275	272	534	5	4	0	0	1	2	0	1	18
Walla Walla (city)	332	162	170	323	4	3	0	0	0	1	0	1	9
Whatcom	1,320	635	685	1,259	7	31	1	3	2	15	0	2	20
Bellingham	657	299	358	629	5	10	1	2	1	9	0	0	7
Whitman	225	115	110	219	0	2	0	0	1	2	0	1	0
Pullman	57	23	34	55	0	0	0	0	0	2	0	0	0
Yakima	1,855	935	920	1,751	16	75	3	0	7	1	0	2	210
Yakima (city)	928	439	489	904	11	11	0	0	1	0	0	1	60

[1] Persons of Hispanic Origin may be of any race. See Appendix A, "Hispanic Origin."

Mortality Table A8b. Sex and Multiple Race by County/City of Residence, 2005

					Single Race				More	
					African	Native		Pacific	than one	Race
County & City	Total	Male	Female	White	Amer.	Amer.	Asian	Islander	race given	Unk
State Total	**46,015**	**22,862**	**23,153**	**42,564**	**1,189**	**589**	**1,249**	**130**	**232**	**62**
Adams	112	69	43	110	1	0	0	0	1	0
Asotin	202	90	112	196	0	2	0	0	0	4
Benton	1,029	491	538	1,001	10	4	7	1	5	1
Kennewick	456	211	245	443	5	2	2	0	3	1
Richland	296	126	170	287	4	0	4	1	0	0
Chelan	607	290	317	595	3	4	3	0	2	0
Wenatchee	315	153	162	309	2	2	1	0	1	0
Clallam	826	449	377	799	2	20	4	0	0	1
Port Angeles	233	103	130	229	1	3	0	0	0	0
Clark	2,714	1,309	1,405	2,622	28	12	43	4	3	2
Camas	97	34	63	94	0	1	1	0	1	0
Vancouver	1,669	813	856	1,604	24	5	30	3	1	2
Columbia	38	20	18	38	0	0	0	0	0	0
Cowlitz	1,042	505	537	1,021	4	8	6	0	3	0
Longview	513	226	287	504	0	4	4	0	1	0
Douglas	258	141	117	254	0	2	0	1	0	1
Ferry	83	43	40	70	0	12	1	0	0	0
Franklin	276	159	117	254	12	4	5	0	0	1
Pasco	231	131	100	211	12	4	3	0	0	1
Garfield	25	10	15	25	0	0	0	0	0	0
Grant	573	306	267	549	6	9	7	0	2	0
Moses Lake	174	76	98	165	2	3	4	0	0	0
Grays Harbor	764	404	360	722	4	19	5	2	10	2
Aberdeen	184	97	87	172	2	5	3	1	0	1
Island	591	303	288	567	4	2	8	4	4	2
Oak Harbor	128	66	62	120	2	0	3	1	0	2
Jefferson	295	162	133	283	0	6	2	0	1	3
King	11,418	5,614	5,804	9,802	668	96	728	44	64	16
Auburn	418	182	236	387	11	6	9	2	3	0
Bellevue	747	367	380	677	12	3	51	0	4	0
Bothell part	129	60	69	119	3	1	5	0	1	0
Burien	216	102	114	193	13	1	6	0	3	0
Covington	39	26	13	39	0	0	0	0	0	0
Des Moines	269	105	164	249	7	0	11	0	1	1
Federal Way	534	265	269	456	30	3	37	7	1	0
Issaquah	187	85	102	175	2	0	9	0	1	0
Kenmore	113	56	57	105	2	1	4	0	1	0
Kent	470	249	221	387	37	6	28	6	6	0
Kirkland	347	147	200	320	5	1	18	1	2	0
Maple Valley	56	36	20	54	0	0	2	0	0	0
Mercer Island	163	66	97	154	1	0	8	0	0	0
Redmond	260	131	129	246	1	0	11	0	0	2
Renton	489	241	248	405	37	4	36	1	5	1
Sammamish	75	44	31	69	0	0	6	0	0	0
SeaTac	137	78	59	114	8	1	9	1	4	0
Seattle	4,426	2,217	2,209	3,459	467	43	406	19	22	10
Shoreline	487	205	282	450	6	3	22	2	2	2
Tukwila	81	47	34	68	5	1	4	3	0	0
Kitsap	1,799	872	927	1,682	25	23	42	13	12	2
Bainbridge Island	130	53	77	123	0	0	4	0	2	1

Mortality Table A8b. (Continued) Sex and Multiple Race by County/City of Residence, 2005

County & City	Total	Male	Female	Single Race					More than one race given	Race Unk
				White	African Amer.	Native Amer.	Asian	Pacific Islander		
Bremerton	515	226	289	472	14	6	16	4	3	0
Kittitas	236	106	130	234	1	0	0	0	1	0
Ellensburg	99	31	68	98	1	0	0	0	0	0
Klickitat	175	91	84	170	0	3	1	0	1	0
Lewis	752	371	381	743	0	3	1	0	5	0
Centralia	257	101	156	253	0	2	1	0	1	0
Lincoln	132	66	66	131	1	0	0	0	0	0
Mason	592	326	266	571	1	16	2	1	1	0
Okanogan	365	174	191	328	0	36	1	0	0	0
Pacific	294	152	142	285	1	5	1	0	2	0
Pend Oreille	119	58	61	111	1	5	1	1	0	0
Pierce	5,502	2,794	2,708	4,898	286	53	171	36	47	11
Lakewood	526	274	252	436	43	2	33	6	5	1
Puyallup	418	186	232	395	6	7	6	0	4	0
Tacoma	1,888	926	962	1,595	165	29	67	9	18	5
University Place	249	118	131	228	12	1	5	1	1	1
San Juan	103	54	49	103	0	0	0	0	0	0
Skagit	1,024	521	503	1,000	2	10	3	1	7	1
Anacortes	162	86	76	161	0	0	0	0	0	1
Mount Vernon	266	115	151	257	1	0	2	1	5	0
Skamania	79	37	42	77	0	2	0	0	0	0
Snohomish	4,236	2,105	2,131	3,995	44	45	121	3	22	6
Edmonds	360	160	200	340	1	3	13	0	2	1
Everett	961	466	495	898	15	12	26	2	8	0
Lynnwood	376	185	191	339	10	3	20	1	3	0
Marysville	262	112	150	253	2	1	6	0	0	0
Monroe	103	61	42	100	1	0	1	0	0	1
Mountlake Terrace	140	71	69	128	1	1	8	0	1	1
Mukilteo	102	52	50	99	0	0	3	0	0	0
Spokane	3,637	1,733	1,904	3,511	33	44	26	6	16	1
Spokane (city)	2,055	972	1,083	1,966	30	26	18	4	10	1
Spokane Valley	699	318	381	676	1	11	5	0	6	0
Stevens	389	196	193	364	0	20	1	0	4	0
Thurston	1,738	864	874	1,658	24	14	28	7	5	2
Lacey	358	178	180	338	8	2	6	3	0	1
Olympia	542	245	297	519	5	2	11	0	4	1
Wahkiakum	43	17	26	43	0	0	0	0	0	0
Walla Walla	547	275	272	532	5	4	1	1	3	1
Walla Walla (city)	332	162	170	322	4	3	1	0	1	1
Whatcom	1,320	635	685	1,258	7	30	17	4	2	2
Bellingham	657	299	358	629	5	9	13	0	1	0
Whitman	225	115	110	219	0	2	2	1	0	1
Pullman	57	23	34	55	0	0	1	1	0	0
Yakima	1,855	935	920	1,743	16	74	11	0	9	2
Yakima (city)	928	439	489	900	11	11	1	0	4	1

Mortality Table A9. Age Group by County of Residence, 2005

County	Total	< 1	1-4	5-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and Over	Age Unk
State Total	**46,015**	**420**	**76**	**104**	**237**	**362**	**737**	**1,392**	**3,453**	**5,078**	**7,137**	**13,027**	**13,992**	**0**
Adams	112	5	0	1	1	2	6	5	7	9	17	33	26	0
Asotin	202	0	0	1	2	1	1	6	18	16	25	53	79	0
Benton	1,029	12	4	2	6	5	12	37	57	105	170	306	313	0
Chelan	607	11	1	1	2	2	9	9	42	55	88	154	233	0
Clallam	826	1	1	0	4	6	7	16	46	74	114	261	296	0
Clark	2,714	28	2	2	16	18	54	70	238	305	425	749	807	0
Columbia	38	0	1	0	0	0	0	0	1	3	5	18	10	0
Cowlitz	1,042	2	1	3	6	7	18	33	84	122	181	305	280	0
Douglas	258	3	0	1	1	0	2	12	16	28	45	75	75	0
Ferry	83	2	0	0	3	4	1	4	3	8	20	24	14	0
Franklin	276	5	1	1	3	4	4	8	22	33	36	87	72	0
Garfield	25	0	0	0	1	0	1	3	1	1	5	7	6	0
Grant	573	8	3	3	9	8	15	14	47	53	106	166	141	0
Grays Harbor	764	3	3	1	3	7	6	27	57	89	156	223	189	0
Island	591	3	0	3	2	10	4	12	20	62	101	188	186	0
Jefferson	295	1	1	0	0	3	3	8	11	56	45	79	88	0
King	11,418	102	10	24	53	71	204	347	870	1,197	1,615	3,194	3,731	0
Kitsap	1,799	18	3	3	8	20	32	47	143	188	253	547	537	0
Kittitas	236	1	1	1	1	1	1	13	13	30	42	66	66	0
Klickitat	175	0	0	1	1	0	2	5	13	26	35	39	53	0
Lewis	752	6	1	5	4	2	5	23	58	93	133	207	215	0
Lincoln	132	0	0	2	0	0	0	6	7	14	27	38	38	0
Mason	592	5	2	2	4	3	10	15	50	65	115	169	152	0
Okanogan	365	2	2	0	4	6	6	15	24	44	65	89	108	0
Pacific	294	3	0	1	1	2	3	4	22	31	57	92	78	0
Pend Oreille	119	0	0	0	1	2	0	2	11	17	19	36	31	0
Pierce	5,502	64	9	20	31	52	95	194	434	671	937	1,536	1,459	0
San Juan	103	0	1	0	0	2	0	2	6	11	17	25	39	0
Skagit	1,024	4	4	0	2	5	12	25	64	102	149	322	335	0
Skamania	79	0	0	1	1	0	3	2	6	16	11	23	16	0
Snohomish	4,236	32	10	9	21	32	76	143	354	501	662	1,184	1,212	0
Spokane	3,637	34	1	5	19	25	49	115	281	365	540	1,027	1,176	0
Stevens	389	4	2	5	2	4	3	13	27	53	74	95	107	0
Thurston	1,738	16	3	2	5	17	28	41	131	207	271	508	509	0
Wahkiakum	43	0	0	0	1	0	1	1	4	9	3	11	13	0
Walla Walla	547	5	0	0	2	3	4	13	33	54	68	163	202	0
Whatcom	1,320	9	4	2	7	12	20	30	84	132	173	376	471	0
Whitman	225	1	0	0	0	0	4	6	16	20	36	65	77	0
Yakima	1,855	30	5	2	10	26	36	66	132	213	296	487	552	0

Mortality Table A10. Month of Death by County of Residence, 2005

County	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
State Total	**46,015**	**4,296**	**4,036**	**4,381**	**3,858**	**3,811**	**3,580**	**3,554**	**3,518**	**3,422**	**3,725**	**3,647**	**4,187**
Adams	112	11	12	9	7	15	9	3	9	10	13	10	4
Asotin	202	23	14	24	22	14	15	14	17	14	15	19	11
Benton	1,029	81	76	101	94	91	91	79	81	89	84	78	84
Chelan	607	60	42	57	44	47	54	45	45	54	58	45	56
Clallam	826	89	61	78	70	74	64	79	55	55	62	64	75
Clark	2,714	254	245	235	203	223	197	213	210	231	250	213	240
Columbia	38	1	8	6	3	3	0	2	2	6	3	2	2
Cowlitz	1,042	99	89	91	105	89	75	85	85	77	68	80	99
Douglas	258	29	28	26	18	25	15	25	21	15	23	13	20
Ferry	83	13	8	6	9	14	8	6	6	3	5	4	1
Franklin	276	25	20	25	24	25	25	22	28	17	22	26	17
Garfield	25	2	3	2	3	5	1	1	4	2	0	2	0
Grant	573	44	59	61	41	54	47	48	42	51	35	42	49
Grays Harbor	764	78	79	75	69	71	56	44	36	54	72	55	75
Island	591	59	55	48	53	42	39	60	46	41	43	48	57
Jefferson	295	23	23	27	22	26	28	29	29	15	24	19	30
King	11,418	1,081	1,012	1,050	969	935	924	917	815	851	922	858	1,084
Kitsap	1,799	155	144	194	171	142	135	136	134	127	145	149	167
Kittitas	236	9	24	23	24	20	15	23	20	19	26	15	18
Klickitat	175	19	13	18	15	16	11	12	15	13	15	18	10
Lewis	752	75	74	65	64	63	71	55	62	54	53	54	62
Lincoln	132	10	12	15	13	10	11	9	12	12	9	6	13
Mason	592	50	49	59	47	55	52	44	53	43	45	47	48
Okanogan	365	33	33	41	24	25	30	23	25	34	26	35	36
Pacific	294	39	21	31	32	21	18	25	21	22	22	15	27
Pend Oreille	119	11	12	13	10	8	14	9	8	8	8	13	5
Pierce	5,502	514	503	541	474	436	402	386	414	393	452	471	516
San Juan	103	11	5	10	12	7	9	7	7	5	8	15	7
Skagit	1,024	78	90	101	82	80	80	76	92	79	74	87	105
Skamania	79	9	11	8	6	7	6	8	4	5	8	3	4
Snohomish	4,236	403	345	396	341	368	357	327	333	320	338	328	380
Spokane	3,637	369	327	353	272	309	258	284	316	279	272	303	295
Stevens	389	30	39	37	38	33	33	21	23	31	31	34	39
Thurston	1,738	165	137	175	151	136	143	131	133	121	141	146	159
Wahkiakum	43	0	9	3	1	6	1	3	8	2	5	2	3
Walla Walla	547	39	38	62	46	58	41	40	37	37	53	55	41
Whatcom	1,320	134	129	117	105	86	96	101	117	86	113	100	136
Whitman	225	20	22	14	23	25	13	20	16	12	24	16	20
Yakima	1,855	151	165	184	151	147	136	142	137	135	158	157	192

Mortality Table A11. Place Where Death Occurred by County of Occurrence, 2005

County	Total	General Hospital	Nursing Home	Hospice Facility	Home	Federal Facility	Psychiatric Hospital	State Facility	Dead on Arrival	Other and Unk
State Total	**46,273**	**15,036**	**13,215**	**1,737**	**13,604**	**511**	**18**	**7**	**58**	**2,087**
Adams	106	27	30	0	32	0	0	0	0	17
Asotin	174	53	62	0	45	0	0	0	0	14
Benton	1,131	396	178	255	268	0	0	0	0	34
Chelan	718	347	193	0	150	0	0	0	1	27
Clallam	741	208	222	0	277	0	0	0	2	32
Clark	2,575	583	591	345	935	9	0	0	3	109
Columbia	32	12	11	0	7	0	0	0	0	2
Cowlitz	1,097	240	230	372	212	0	0	0	0	43
Douglas	165	0	80	1	74	0	0	0	0	10
Ferry	55	17	2	2	22	0	0	0	0	12
Franklin	187	49	48	0	78	0	0	0	3	9
Garfield	20	8	7	0	3	0	0	0	0	2
Grant	460	147	121	0	156	0	0	0	2	34
Grays Harbor	625	192	177	0	218	0	0	0	2	36
Island	460	73	154	8	198	1	0	0	0	26
Jefferson	224	53	41	0	112	0	0	0	1	17
King	12,819	4,921	3,486	386	3,291	233	0	0	9	493
Kitsap	1,721	578	597	0	470	9	0	0	5	62
Kittitas	207	32	60	0	93	0	0	0	0	22
Klickitat	138	41	4	0	76	0	0	0	0	17
Lewis	663	197	225	1	209	0	0	0	1	30
Lincoln	94	36	25	0	28	0	0	0	0	5
Mason	438	69	156	0	181	0	0	0	0	32
Okanogan	320	94	93	0	107	0	0	0	0	26
Pacific	213	61	59	0	80	0	0	0	0	13
Pend Oreille	100	22	31	0	39	0	0	0	0	8
Pierce	5,559	1,682	1,570	348	1,548	155	7	0	12	237
San Juan	84	0	34	0	44	0	0	0	0	6
Skagit	1,019	260	381	0	323	0	0	0	1	54
Skamania	51	0	5	0	29	0	0	0	0	17
Snohomish	3,868	1,112	1,230	4	1,311	0	0	3	6	202
Spokane	4,124	1,581	1,179	8	1,129	74	11	0	1	141
Stevens	287	76	70	0	118	0	0	0	0	23
Thurston	1,852	616	558	4	608	0	0	0	1	65
Wahkiakum	35	0	19	0	7	0	0	0	0	9
Walla Walla	584	224	175	0	136	30	0	4	1	14
Whatcom	1,313	294	495	2	447	0	0	0	2	73
Whitman	190	59	57	0	63	0	0	0	2	9
Yakima	1,824	676	559	1	480	0	0	0	3	105

B. Autopsy and Disposition

Death certificates collect information on whether or not an autopsy was performed and also collect information on the type of disposition. The use of an autopsy provides information about the quality of cause-of-death information on death certificates.

Mortality Table B1. Percent Autopsy and Cremation for Residents, 1996-2005

Year	Percent Autopsy	Percent Cremation
1996	10.7	52.0
1997	10.1	53.8
1998	10.0	55.0
1999	10.1	56.1
2000	9.9	57.6
2001	9.7	59.5
2002	9.8	60.6
2003	9.3	61.2
2004	9.9	62.6
2005	10.0	64.0

The percent of deaths with an autopsy has steadily decreased since 1990. Rates of autopsy vary by age and by manner of death. Table B2 provides more detailed information on autopsies for 2005. The percent of total deaths with cremation as a disposition type has increased substantially since 1990.

Mortality Table B2. Autopsy by Age and Manner of Death for Residents, 2005

	Total Deaths			Natural or Disease			External Causes (e.g., Accident, Suicide, Homicide, etc.)		
Age Group	**Total**	**Autopsy**	**Percent[1]**	**Total**	**Autopsy**	**Percent[1]**	**Total**	**Autopsy**	**Percent[1]**
State Total	**46,015**	**4,603**	**10.0**	**42,332**	**2,187**	**5.2**	**3,683**	**2,416**	**65.6**
Under 1	420	167	39.8	393	142	36.1	27	25	92.6
1-4	76	53	69.7	33	14	42.4	43	39	90.7
5-14	104	57	54.8	61	21	34.4	43	36	83.7
15-19	237	151	63.7	73	24	32.9	164	127	77.4
20-24	362	245	67.7	89	33	37.1	273	212	77.7
25-34	737	476	64.6	268	94	35.1	469	382	81.4
35-44	1,392	656	47.1	848	232	27.4	544	424	77.9
45-54	3,453	1,060	30.7	2,726	483	17.7	727	577	79.4
55-64	5,078	758	14.9	4,674	474	10.1	404	284	70.3
65-74	7,137	399	5.6	6,908	285	4.1	229	114	49.8
75-84	13,027	364	2.8	12,668	242	1.9	359	122	34.0
85 and over	13,992	217	1.6	13,591	143	1.1	401	74	18.5
Unknown	0	0	0.0	0	0	0.0	0	0	0.0

[1] Percents may not add to 100% due to rounding.

Note: Source for manner of death is the International Classification of Diseases (Tenth Revision):

Natural or Disease (A00-R99); External Causes (V00-Y99).

Mortality Table B3. Type of Disposition by County of Residence, 2005

County	Total	Burial	Cremation	Removal	Medical Research	Body Not Recovered	Entombment	Other	Unknown
State Total	**46,015**	**14,089**	**29,447**	**1,390**	**199**	**3**	**551**	**4**	**332**
Adams	112	51	47	13	0	0	0	0	1
Asotin	202	60	78	64	0	0	0	0	0
Benton	1,029	397	570	42	4	0	12	0	4
Chelan	607	234	358	8	1	0	6	0	0
Clallam	826	153	649	16	4	0	3	0	1
Clark	2,714	865	1,569	80	7	0	48	1	144
Columbia	38	13	24	0	0	0	0	0	1
Cowlitz	1,042	260	691	25	2	0	39	0	25
Douglas	258	100	147	7	0	0	4	0	0
Ferry	83	30	53	0	0	0	0	0	0
Franklin	276	126	125	21	0	0	2	0	2
Garfield	25	14	11	0	0	0	0	0	0
Grant	573	185	363	23	0	0	0	0	2
Grays Harbor	764	203	537	8	4	0	10	0	2
Island	591	114	450	17	2	0	6	0	2
Jefferson	295	31	255	7	1	1	0	0	0
King	11,418	3,232	7,477	416	82	1	178	1	31
Kitsap	1,799	410	1,301	62	6	0	17	0	3
Kittitas	236	80	148	4	1	0	2	0	1
Klickitat	175	42	99	8	1	0	0	0	25
Lewis	752	251	478	15	2	1	3	0	2
Lincoln	132	54	76	1	0	0	0	0	1
Mason	592	120	454	16	0	0	1	0	1
Okanogan	365	170	190	4	0	0	0	0	1
Pacific	294	73	196	1	1	0	2	0	21
Pend Oreille	119	40	77	1	1	0	0	0	0
Pierce	5,502	1,812	3,402	168	25	0	83	1	11
San Juan	103	16	85	1	0	0	0	0	1
Skagit	1,024	324	676	15	2	0	7	0	0
Skamania	79	18	42	3	0	0	0	0	16
Snohomish	4,236	1,114	2,912	129	32	0	40	0	9
Spokane	3,637	1,200	2,301	67	7	0	56	0	6
Stevens	389	142	237	9	0	0	0	0	1
Thurston	1,738	474	1,181	63	5	0	12	0	3
Wahkiakum	43	16	20	1	0	0	3	1	2
Walla Walla	547	211	314	8	2	0	4	0	8
Whatcom	1,320	450	830	25	6	0	9	0	0
Whitman	225	84	131	9	0	0	0	0	1
Yakima	1,855	920	893	33	1	0	4	0	4

C. Leading Causes of Death, Overview, and Selected Causes of Death

Leading causes of death are used to determine the relative ranking of specific causes of death. The rankings depend on how causes of death are categorized into groups. Leading causes of death for this report follow the guidelines established by the National Center for Health Statistics. See the first part of Appendix A for more information about how changes in the classification of diseases (from ICD-9 to ICD-10) affects trends.

Mortality Table C1. Age-Adjusted Rates[1] for 10 Leading Causes of Death for Residents, 1996-2005

Year	Heart Disease	Cancer	Strokes	COPD	Uninten- tional or Accident	Alzheimer's	Diabetes	Flu & Pneumonia	Inten- tional or Suicide	Liver Disease
1996	241.4	202.9	73.0	45.8	34.8	11.5	23.9	34.3	14.2	9.2
1997	221.2	196.6	67.6	46.5	34.0	11.6	21.8	33.0	13.0	9.6
1998	222.0	196.0	66.3	46.5	33.9	11.9	23.2	33.5	12.3	8.5
1998 Comparability Modified										
	218.7	197.8	69.6	48.4	34.7	18.9	23.7	23.4	12.3	8.7
1999	216.4	198.9	70.2	51.4	33.5	30.0	24.5	23.8	14.2	9.5
2000	209.3	195.6	68.6	49.3	35.5	33.4	24.5	18.6	12.4	8.7
2001	202.1	194.0	67.8	48.2	35.1	37.0	25.3	17.2	11.9	9.8
2002	194.8	190.6	66.1	48.5	36.5	39.2	26.4	15.8	13.4	8.9
2003	190.4	190.1	61.5	46.4	36.4	40.5	26.0	18.5	13.0	9.2
2004	177.1	184.9	54.3	43.6	37.6	37.0	25.2	12.2	13.2	8.9
2005	176.4	180.5	47.0	45.0	39.8	36.9	25.3	14.8	12.7	8.6

[1]Rate per 100,000 age-adjusted to U.S. 2000 population.

Note:

Causes of death were coded with International Classification of Diseases, Ninth Revision (ICD-9) in 1990-1998 and with the Tenth Revision (ICD-10) started in 1998. Rates during 1998 have been multiplied by a comparability ratio (CR).

ICD codes and comparability ratios are:

Heart Disease: ICD-9: 390-398,402,404,410-429; ICD-10: I00-I09,I11,I13,I20-I51; CR=0.9852

Cancer: ICD-9: 140-208; ICD-10: C00-C97; CR=1.0093

Strokes or Cerebrovascular Disease: ICD-9: 430-434,436-438; ICD-10: I60-I69; CR=1.0502

COPD or Chronic Lower Respiratory Disease: ICD-9: 490-494,496; ICD-10: J40-J47; CR=1.0411

Unintentional Injury or Accident: ICD-9: E800-E869,E880-E929; ICD-10: V01-X59,Y85-Y86; CR=1.0251

Alzheimer's Disease: ICD-9: 331.0; ICD-10: G30; CR=1.5812

Diabetes Mellitus: ICD-9: 250; ICD-10: E10-E14; CR=1.0193

Influenza and Pneumonia: ICD-9: 480-487; ICD-10: J10-J18; CR=0.6974

Intentional or Suicide: ICD-9: E950-E959; ICD-10: X60-X84,Y87.0; CR=1.0022

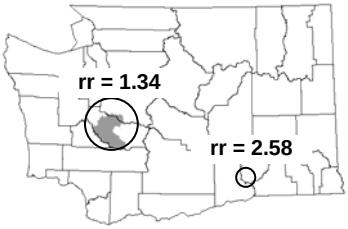
Chronic Liver Disease: ICD-9: 571; ICD-10: K70,K73-K74; CR=1.0321

The ten leading causes of death accounted for 78.6% of all deaths to residents of Washington State in 2005. Heart disease and cancer alone account for 47.6% of all deaths. Alzheimer's disease and heart disease have the largest changes over time with heart disease decreasing and Alzheimer's disease increasing. There have been smaller increases in mortality due to diabetes during the last decade.

Mortality Figure 6. Heart disease deaths

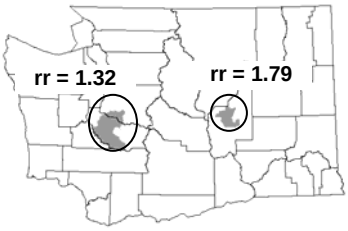
High relative risk (rr) regions by year

2000



2001

2002



2003

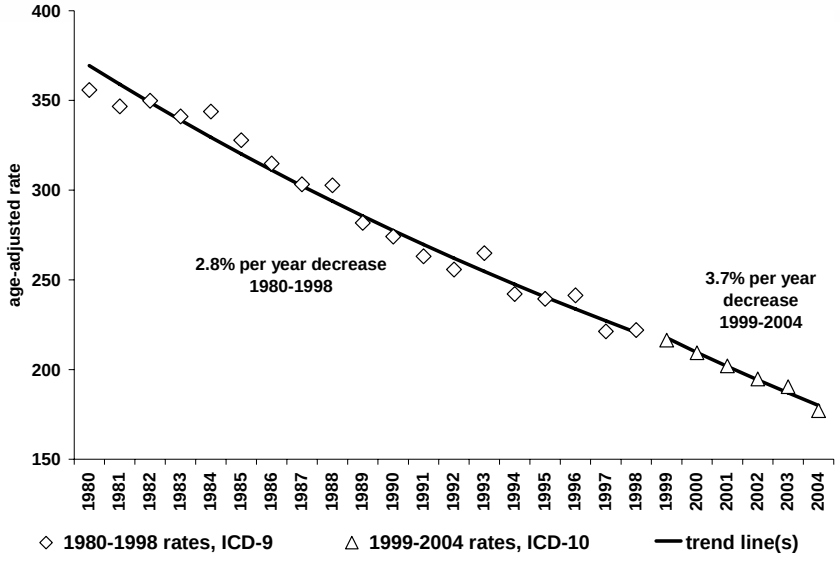
2004

Regions: Although varying in size, portions of Pierce County and southwest Washington are consistently found to have higher than expected heart disease deaths. For 2000-2004 combined this southwest region had a relative risk (rr) of 1.19, or 19% more heart disease deaths than expected. On average, this rr suggests that the area experienced approximately 420 more heart diseases deaths per year than would have been expected.

Trends: The statewide age-adjusted heart disease mortality rates have been decreasing. Between 1980 and 1998 the rates dropped by 2.8% per year; between 1999 and 2004 they decreased by 3.7% per year.

Heart disease deaths: High relative risk (rr) regions 2000-2004 combined

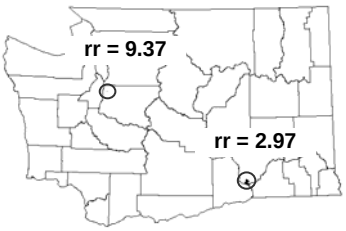
Heart disease death rates: Statewide tends, 1980-2004



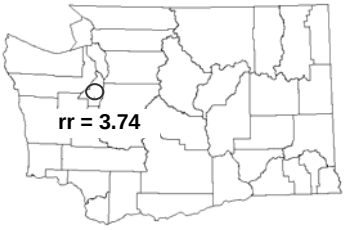
Mortality Figure 7. Stroke deaths

High relative risk (rr) regions by year

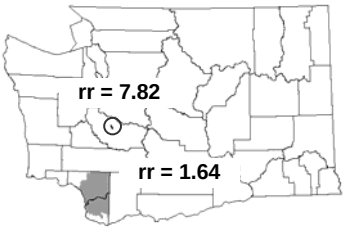
2000



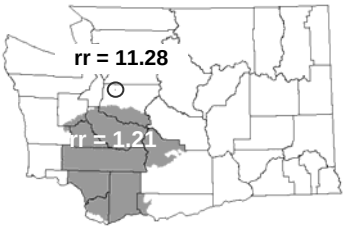
2001



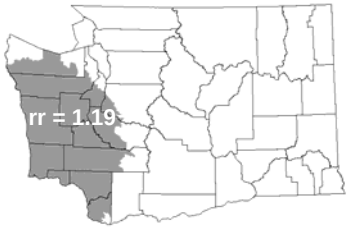
2002



2003



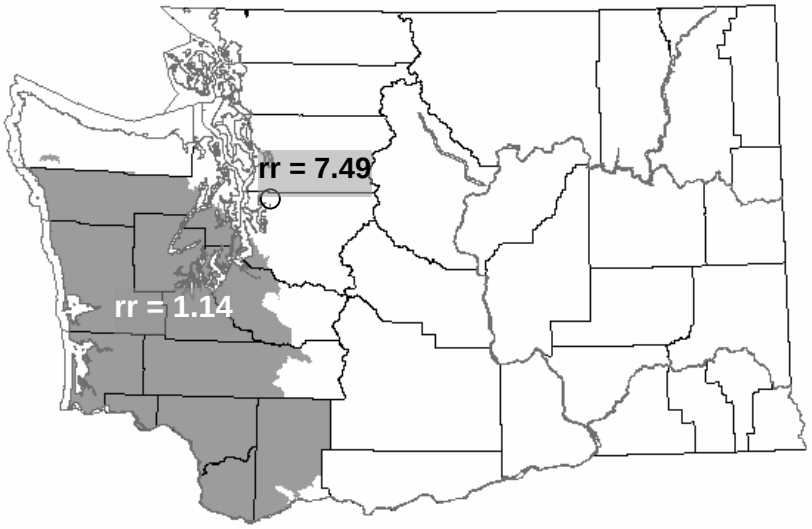
2004



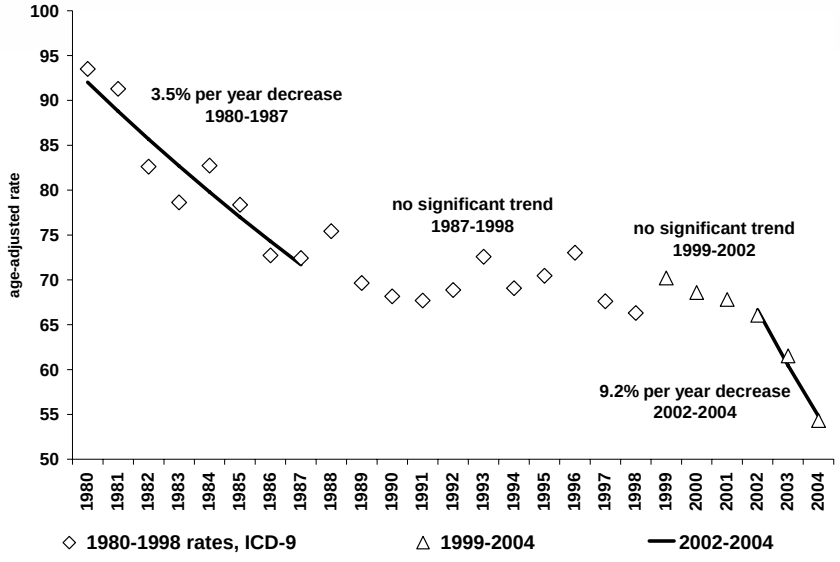
Regions: Very small regions varying year-to-year in location likely reflect one-time aberrations in excess stroke deaths. However, from 2002 to 2004 portions of southwest Washington appear to have higher than expected stroke deaths. For 2000-2004 combined, the southwest region has a relative risk of 1.14, or 14% more stroke death than expected. This equals about 100 more stroke deaths per year than expected. A very small region in King County also has a high rr for 2000-2004; this is the region identified in 2003, and essentially reflects that one time aberration.

Trends: The trends in age-adjusted stroke death rates statewide decreased by 3.5% per year from 1980 to 1987, and by 9.2% per year from 2002 to 2004; from 1987 to 2002 there was no significant change in stroke death rates.

Stroke deaths: High relative risk (rr) regions 2000-2004 combined



Stroke death rates: Statewide tends, 1980-2004

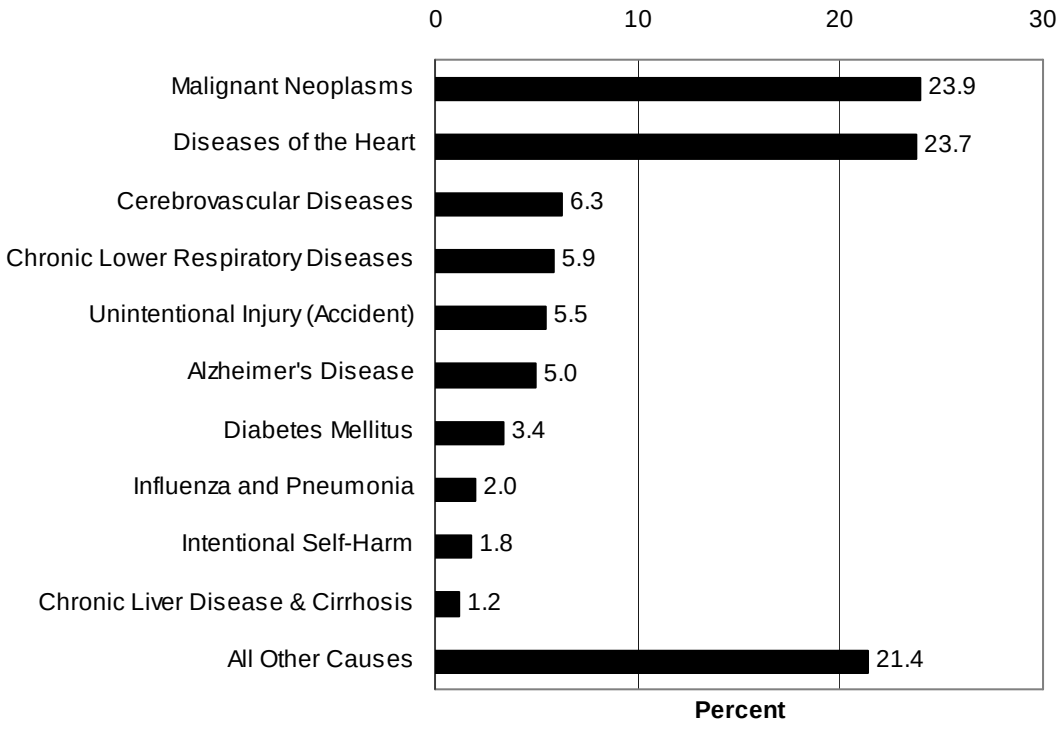


Mortality Table C2. Leading Causes of Death for Residents, 2005

Rank	Causes of Death and ICD-10 Codes	Number	Percent[1]	Cumulative Percent
	All Causes	**46,015**	**100.0**	
1	Malignant Neoplasms (C00-C97)	11,008	23.9	23.9
2	Diseases of the Heart (I00-I09,I11,I13,I20-I51)	10,913	23.7	47.6
3	Cerebrovascular Diseases (I60-I69)	2,883	6.3	53.9
4	Chronic Lower Respiratory Diseases (J40-J47)	2,692	5.9	59.8
5	Unintentional Injury (Accident) (V01-X59,Y85-Y86)	2,520	5.5	65.2
6	Alzheimer's Disease (G30)	2,308	5.0	70.2
7	Diabetes Mellitus (E10-E14)	1,549	3.4	73.6
8	Influenza and Pneumonia (J10-J18)	926	2.0	75.6
9	Intentional Self-Harm (Suicide) (X60-X84,Y87.0)	814	1.8	77.4
10	Chronic Liver Disease & Cirrhosis (K70,K73-K74)	556	1.2	78.6
	All Other Causes	9,846	21.4	100.0

[1] Percents may not add to 100% due to rounding.

Mortality Figure 8. Leading Causes of Death for Residents, 2005



Mortality Table C3. Leading Causes by Age Group and Sex for Residents, 2005

Age Group with Causes and ICD-10 Codes	Total			Male			Female		
	No.	Rate[1]	Pct[2]	No.	Rate[1]	Pct[2]	No.	Rate[1]	Pct[2]
All Ages									
All Causes	46,015	735.5	100.0	22,862	733.5	100.0	23,153	737.5	100.0
Malignant Neoplasms (C00-C97)	11,008	175.9	23.9	5,614	180.1	24.6	5,394	171.8	23.3
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	10,913	174.4	23.7	5,709	183.2	25.0	5,204	165.8	22.5
Cerebrovascular Diseases (I60-I69)	2,883	46.1	6.3	1,127	36.2	4.9	1,756	55.9	7.6
Chronic Lower Respiratory Diseases (J40-J47)	2,692	43.0	5.9	1,233	39.6	5.4	1,459	46.5	6.3
Unintentional Injury (Accident) (V01-X59,Y85-Y86)	2,520	40.3	5.5	1,628	52.2	7.1	892	28.4	3.9
Alzheimer's Disease (G30)	2,308	36.9	5.0	711	22.8	3.1	1,597	50.9	6.9
Diabetes Mellitus (E10-E14)	1,549	24.8	3.4	770	24.7	3.4	779	24.8	3.4
Influenza and Pneumonia (J10-J18)	926	14.8	2.0	409	13.1	1.8	517	16.5	2.2
Intentional Self-Harm (Suicide)(X60-X84,Y87.0)	814	13.0	1.8	650	20.9	2.8	164	5.2	0.7
Chronic Liver Disease & Cirrhosis (K70,K73-K74)	556	8.9	1.2	351	11.3	1.5	205	6.5	0.9
All Other Causes	9,846	157.4	21.4	4,660	149.5	20.4	5,186	165.2	22.4
Under 1									
All Causes	420	508.3	100.0	240	567.0	100.0	180	446.7	100.0
Congenital Malformations (Q00-Q99)	113	136.8	26.9	60	141.7	25.0	53	131.5	29.4
Sudden Infant Death Syndrome (R95)	42	50.8	10.0	32	75.6	13.3	10	24.8	5.6
Short Gestation & Low Birth Weight (P07)	31	37.5	7.4	14	33.1	5.8	17	42.2	9.4
Complic. of Placenta, Cord & Membranes (P02)	21	25.4	5.0	14	33.1	5.8	7	17.4	3.9
Maternal Complications of Pregnancy (P01)	21	25.4	5.0	14	33.1	5.8	7	17.4	3.9
All Other Causes	192	232.4	45.7	106	250.4	44.2	86	213.4	47.8
1-4									
All Causes	76	23.5	100.0	46	27.8	100.0	30	19.0	100.0
Unintentional Injury (Accident) (V01-X59,Y85-Y86)	36	11.1	47.4	25	15.1	54.3	11	7.0	36.7
Assault (Homicide) (X85-Y09,Y87.1)	7	2.2	9.2	2	.	4.3	5	3.2	16.7
Malignant Neoplasms (C00-C97)	6	1.9	7.9	3	.	6.5	3	.	10.0
Congenital Anomalies (Q00-Q99)	4	.	5.3	3	.	6.5	1	.	3.3
Acute Bronchitis & Bronchiolitis (J20-J21)	1	.	1.3	1	.	2.2	.	.	.
All Other Causes	22	6.8	28.9	12	7.2	26.1	.	.	.
5-14									
All Causes	104	12.2	100.0	61	13.9	100.0	43	10.3	100.0
Unintentional Injury (Accident) (V01-X59,Y85-Y86)	35	4.1	33.7	17	3.9	27.9	18	4.3	41.9
Malignant Neoplasms (C00-C97)	18	2.1	17.3	11	2.5	18.0	7	1.7	16.3
Congenital Anomalies (Q00-Q99)	11	1.3	10.6	7	1.6	11.5	4	.	9.3
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	5	0.6	4.8	1	.	1.6	4	.	9.3
Intentional Self-Harm (Suicide)(X60-X84,Y87.0)	4	.	3.8	4	.	6.6	.	.	.
All Other Causes	31	3.6	29.8	21	4.8	34.4	.	.	.
15 - 19									
All Causes	237	52.6	100.0	176	76.3	100.0	61	27.8	100.0
Unintentional Injury (Accident) (V01-X59,Y85-Y86)	96	21.3	40.5	76	32.9	43.2	20	9.1	32.8
Intentional Self-Harm (Suicide)(X60-X84,Y87.0)	41	9.1	17.3	36	15.6	20.5	5	2.3	8.2
Assault (Homicide) (X85-Y09,Y87.1)	23	5.1	9.7	17	7.4	9.7	6	2.7	9.8
Malignant Neoplasms (C00-C97)	21	4.7	8.9	11	4.8	6.3	10	4.6	16.4
Congenital Anomalies (Q00-Q99)	10	2.2	4.2	7	3.0	4.0	3	.	4.9
All Other Causes	46	10.2	19.4	29	12.6	16.5	17	7.7	27.9
20 - 24									
All Causes	362	80.7	100.0	271	117.5	100.0	91	41.8	100.0
Unintentional Injury (Accident) (V01-X59,Y85-Y86)	179	39.9	49.4	142	61.6	52.4	37	17.0	40.7
Intentional Self-Harm (Suicide)(X60-X84,Y87.0)	58	12.9	16.0	49	21.2	18.1	9	4.1	9.9
Assault (Homicide) (X85-Y09,Y87.1)	32	7.1	8.8	25	10.8	9.2	7	3.2	7.7
Malignant Neoplasms (C00-C97)	21	4.7	5.8	9	3.9	3.3	12	5.5	13.2
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	14	3.1	3.9	10	4.3	3.7	4	.	4.4
All Other Causes	58	12.9	16.0	36	15.6	13.3	22	10.1	24.2
25 - 34									
All Causes	737	88.3	100.0	511	119.5	100.0	226	55.6	100.0
Unintentional Injury (Accident) (V01-X59,Y85-Y86)	276	33.1	37.4	207	48.4	40.5	69	17.0	30.5
Intentional Self-Harm (Suicide)(X60-X84,Y87.0)	121	14.5	16.4	104	24.3	20.4	17	4.2	7.5
Assault (Homicide) (X85-Y09,Y87.1)	62	7.4	8.4	44	10.3	8.6	18	4.4	8.0
Malignant Neoplasms (C00-C97)	52	6.2	7.1	33	7.7	6.5	19	4.7	8.4
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	43	5.2	5.8	25	5.8	4.9	18	4.4	8.0
All Other Causes	183	21.9	24.8	98	22.9	19.2	85	20.9	37.6

Mortality Table C3. (Continued) Leading Causes by Age Group and Sex for Residents, 2005

Age Group with Causes and ICD-10 Codes	Total			Male			Female		
	No.	Rate[1]	Pct[2]	No.	Rate[1]	Pct[2]	No.	Rate[1]	Pct[2]
35 - 44									
All Causes	1,392	148.0	100.0	897	188.3	100.0	495	106.6	100.0
Unintentional Injury (Accident) (V01-X59,Y85-Y86)	344	36.6	24.7	247	51.9	27.5	97	20.9	19.6
Malignant Neoplasms (C00-C97)	251	26.7	18.0	113	23.7	12.6	138	29.7	27.9
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	168	17.9	12.1	121	25.4	13.5	47	10.1	9.5
Intentional Self-Harm (Suicide)(X60-X84,Y87.0)	142	15.1	10.2	113	23.7	12.6	29	6.2	5.9
Chronic Liver Disease & Cirrhosis (K70,K73-K74)	54	5.7	3.9	33	6.9	3.7	21	4.5	4.2
All Other Causes	433	46.0	31.1	270	56.7	30.1	163	35.1	32.9
45 - 54									
All Causes	3,453	364.5	100.0	2,144	454.8	100.0	1,309	275.0	100.0
Malignant Neoplasms (C00-C97)	1,003	105.9	29.0	518	109.9	24.2	485	101.9	37.1
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	571	60.3	16.5	402	85.3	18.8	169	35.5	12.9
Unintentional Injury (Accident) (V01-X59,Y85-Y86)	450	47.5	13.0	322	68.3	15.0	128	26.9	9.8
Intentional Self-Harm (Suicide)(X60-X84,Y87.0)	209	22.1	6.1	161	34.2	7.5	48	10.1	3.7
Chronic Liver Disease & Cirrhosis (K70,K73-K74)	137	14.5	4.0	93	19.7	4.3	44	9.2	3.4
All Other Causes	1,083	114.3	31.4	648	137.5	30.2	435	91.4	33.2
55 - 64									
All Causes	5,078	765.3	100.0	3,060	932.9	100.0	2,018	601.4	100.0
Malignant Neoplasms (C00-C97)	1,891	285.0	37.2	1,000	304.9	32.7	891	265.6	44.2
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	1,041	156.9	20.5	792	241.4	25.9	249	74.2	12.3
Chronic Lower Respiratory Diseases (J40-J47)	280	42.2	5.5	140	42.7	4.6	140	41.7	6.9
Unintentional Injury (Accident) (V01-X59,Y85-Y86)	254	38.3	5.0	171	52.1	5.6	83	24.7	4.1
Diabetes Mellitus (E10-E14)	232	35.0	4.6	131	39.9	4.3	101	30.1	5.0
All Other Causes	1,380	208.0	27.2	826	251.8	27.0	554	165.1	27.5
65 - 74									
All Causes	7,137	1,982.3	100.0	3,962	2,316.9	100.0	3,175	1,679.6	100.0
Malignant Neoplasms (C00-C97)	2,588	718.8	36.3	1,379	806.4	34.8	1,209	639.6	38.1
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	1,544	428.9	21.6	1,005	587.7	25.4	539	285.1	17.0
Chronic Lower Respiratory Diseases (J40-J47)	601	166.9	8.4	291	170.2	7.3	310	164.0	9.8
Cerebrovascular Diseases (I60-I69)	356	98.9	5.0	197	115.2	5.0	159	84.1	5.0
Diabetes Mellitus (E10-E14)	287	79.7	4.0	168	98.2	4.2	119	63.0	3.7
All Other Causes	1,761	489.1	24.7	922	539.2	23.3	839	443.8	26.4
75-84									
All Causes	13,027	5,266.4	100.0	6,442	6,301.0	100.0	6,585	4,537.6	100.0
Malignant Neoplasms (C00-C97)	3,363	1,359.6	25.8	1,714	1,676.5	26.6	1,649	1,136.3	25.0
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	3,216	1,300.1	24.7	1,758	1,719.5	27.3	1,458	1,004.7	22.1
Chronic Lower Respiratory Diseases (J40-J47)	1,040	420.4	8.0	492	481.2	7.6	548	377.6	8.3
Cerebrovascular Diseases (I60-I69)	963	389.3	7.4	401	392.2	6.2	562	387.3	8.5
Alzheimer's Disease (G30)	698	282.2	5.4	276	270.0	4.3	422	290.8	6.4
All Other Causes	3,747	1,514.8	28.8	1,801	1,761.6	28.0	1,946	1,340.9	29.6
85 and Over									
All Causes	13,992	13,399.0	100.0	5,052	15,011.0	100.0	8,940	12,633.0	100.0
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	4,303	4,120.8	30.8	1,592	4,730.4	31.5	2,711	3,830.9	30.3
Malignant Neoplasms (C00-C97)	1,793	1,717.1	12.8	823	2,445.4	16.3	970	1,370.7	10.9
Alzheimer's Disease (G30)	1,472	1,409.7	10.5	380	1,129.1	7.5	1,092	1,543.1	12.2
Cerebrovascular Diseases (I60-I69)	1,259	1,205.7	9.0	358	1,063.7	7.1	901	1,273.2	10.1
Chronic Lower Respiratory Diseases (J40-J47)	677	648.3	4.8	264	784.4	5.2	413	583.6	4.6
All Other Causes	4,488	4,297.9	32.1	1,635	4,858.1	32.4	2,853	4,031.5	31.9

[1] Rate per 100,000 population in each age-sex group.

[2] Percent of total deaths in each age-sex group. Percents may not add to 100% due to rounding.

[*] Rate not calculated because number of deaths was less than 5.

Mortality Table C4. Crude Rates for Selected Causes by Sex for Residents, 2005

Cause with ICD-10 Code	Total		Male		Female	
	Number	Crude Rate[2]	Number	Crude Rate[2]	Number	Crude Rate[2]
All Causes[1]	(46,015)	(735.5)	(22,862)	(733.5)	(23,153)	(737.5)
Certain Infectious & Parasitic Disease (A00-B99)	(954)	(15.2)	(537)	(17.2)	(417)	(13.3)
Tuberculosis (A16-A19)	9	0.1	8	0.3	1	*
Septicemia (A40-A41)	360	5.8	176	5.6	184	5.9
Viral Hepatitis (B15-B19)	158	2.5	94	3.0	64	2.0
HIV (B20-B24)	136	2.2	112	3.6	24	0.8
Other (A00-A15,A20-A39,A42-B14,B25-B99)	291	4.7	147	4.7	144	4.6
Neoplasms (C00-D48)	(11,226)	(179.4)	(5,723)	(183.6)	(5,503)	(175.3)
Malignant Neoplasms (C00-C97)	11,008	175.9	5,614	180.1	5,394	171.8
In Situ & Benign Neoplasms (D00-D48)	218	3.5	109	3.5	109	3.5
Diseases of Blood & Blood-Forming Organs (D50-D89)	(137)	(2.2)	(62)	(2.0)	(75)	(2.4)
Anemias (D50-D64)	66	1.1	25	0.8	41	1.3
Other (D65-D89)	71	1.1	37	1.2	34	1.1
Endocrine, Nutritional & Metabolic Diseases (E00-E90)	(2,138)	(34.2)	(1,038)	(33.3)	(1,100)	(35.0)
Diabetes Mellitus (E10-E14)	1,549	24.8	770	24.7	779	24.8
Nutritional Diseases (E40-E64)	42	0.7	11	0.4	31	1.0
Other (E00-E09,E15-E39,E65-E90)	547	8.7	257	8.2	290	9.2
Mental & Behavioral Disorders (F01-F99)	(1,079)	(17.2)	(444)	(14.2)	(635)	(20.2)
Diseases of the Nervous System (G00-G98)	(3,439)	(55.0)	(1,306)	(41.9)	(2,133)	(67.9)
Meningitis (G00-G03)	18	0.3	11	0.4	7	0.2
Amyotrophic Lateral Sclerosis (G12.2)	169	2.7	96	3.1	73	2.3
Parkinson's Disease (G20-G21)	526	8.4	299	9.6	227	7.2
Alzheimer's Disease (G30)	2,308	36.9	711	22.8	1,597	50.9
Multiple Sclerosis (G35)	98	1.6	36	1.2	62	2.0
Other (G04-G12.1,G12.3-G19,G22-G29,G31-G34,G36-G98)	320	5.1	153	4.9	167	5.3
Diseases of the Eye & Ear (H00-H93)	(3)	(*)	(1)	(*)	(2)	(*)
Diseases of the Circulatory System (I00-I99)	(15,180)	(242.6)	(7,449)	(239.0)	(7,731)	(246.3)
Major Cardiovascular Diseases (I00-I78)	(15,082)	(241.1)	(7,405)	(237.6)	(7,677)	(244.5)
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	(10,913)	(174.4)	(5,709)	(183.2)	(5,204)	(165.8)
Acute & Chronic Rheumatic Disease (I00-I09)	88	1.4	19	0.6	69	2.2
Hypertensive Heart Disease (I11)	562	9.0	226	7.3	336	10.7
Hypertensive Heart & Renal Disease (I13)	71	1.1	31	1.0	40	1.3
Ischemic Heart Diseases (I20-I25)	(7,734)	(123.6)	(4,334)	(139.0)	(3,400)	(108.3)
Acute Myocardial Infarction (I21-I22)	2,428	38.8	1,352	43.4	1,076	34.3
Other Acute Ischemic Heart Disease (I24)	29	0.5	16	0.5	13	0.4
Other Chronic Ischemic Heart Disease (I20,I25)	(5,277)	(84.3)	(2,966)	(95.2)	(2,311)	(73.6)
Atherosclerotic Cardiovascular Disease (I25.0)	1,549	24.8	876	28.1	673	21.4
All Other Chronic Disease (I20,I25.1-I25.9)	3,728	59.6	2,090	67.1	1,638	52.2
Other Heart Diseases (I26-I51)	(2,458)	(39.3)	(1,099)	(35.3)	(1,359)	(43.3)
Acute & Subacute Endocarditis (I33)	30	0.5	15	0.5	15	0.5
Disease Pericardium & Acute Myocarditis (I30-I31,I40)	18	0.3	6	0.2	12	0.4
Heart Failure (I50)	555	8.9	219	7.0	336	10.7
All Other Heart disease (I26-I28,I34-I38,I42-I49,I51)	1,855	29.6	859	27.6	996	31.7
Hypertension & Hypertensive Renal Disease (I10,I12)	449	7.2	160	5.1	289	9.2
Cerebrovascular Diseases (I60-I69)	2,883	46.1	1,127	36.2	1,756	55.9
Atherosclerosis (I70)	311	5.0	123	3.9	188	6.0
Other Diseases of Circulatory System (I71-I78)	(526)	(8.4)	(286)	(9.2)	(240)	(7.6)
Aortic Aneurysm & Dissection (I71)	313	5.0	200	6.4	113	3.6
Other Disease of Arteries (I72-I78)	213	3.4	86	2.8	127	4.0
Other (I80-I99)	98	1.6	44	1.4	54	1.7

Mortality Table C4. (Continued) Crude Rates for Selected Causes by Sex for Residents, 2005

Cause with ICD-10 Code	Total		Male		Female	
	Number	Crude Rate[2]	Number	Crude Rate[2]	Number	Crude Rate[2]
Diseases of the Respiratory System (J00-J98)	(4,585)	(73.3)	(2,148)	(68.9)	(2,437)	(77.6)
Influenza and Pneumonia (J10-J18)	(926)	(14.8)	(409)	(13.1)	(517)	(16.5)
Influenza (J10-J11)	55	0.9	25	0.8	30	1.0
Pneumonia (J12-J18)	871	13.9	384	12.3	487	15.5
Other Acute Lower Respiratory Infections (J20-J22)	3	*	3	*	0	*
Chronic Lower Respiratory Disease (J40-J47)	(2,692)	(43.0)	(1,233)	(39.6)	(1,459)	(46.5)
Bronchitis, Chronic and Unspecified (J40-J42)	14	0.2	6	0.2	8	0.3
Emphysema (J43)	233	3.7	114	3.7	119	3.8
Asthma (J45-J46)	83	1.3	34	1.1	49	1.6
Other Chronic Lower Respiratory Disease (J44,J47)	2,362	37.8	1,079	34.6	1,283	40.9
Pneumoconioses & Chemical Effects (J60-J66,J68)	28	0.4	26	0.8	2	*
Pneumonitis Due to Solids & Liquids (J69)	408	6.5	209	6.7	199	6.3
Other (J00-J06,J30-J39,J67,J70-J98)	528	8.4	268	8.6	260	8.3
Diseases of the Digestive System (K00-K92)	(1,658)	(26.5)	(809)	(26.0)	(849)	(27.0)
Peptic Ulcer (K25-K28)	59	0.9	35	1.1	24	0.8
Diseases of Appendix (K35-K38)	10	0.2	5	0.2	5	0.2
Hernia (K40-K46)	37	0.6	14	0.4	23	0.7
Chronic Liver Disease & Cirrhosis (K70,K73-K74)	(556)	(8.9)	(351)	(11.3)	(205)	(6.5)
Alcoholic Liver Disease (K70)	444	7.1	293	9.4	151	4.8
Other (K73-K74)	112	1.8	58	1.9	54	1.7
Cholelithiasis & Other Gallbladder Disease (K80-K82)	75	1.2	33	1.1	42	1.3
Other (K00-K24,K29-K34,K39,K47-K69,K71-K72,K75-K79,K83-K92)	921	14.7	371	11.9	550	17.5
Diseases of Skin & Subcutaneous Tissue (L00-L98)	(72)	(1.2)	(25)	(0.8)	(47)	(1.5)
Diseases Musculoskeletal & Connective Tissue (M00-M99)	(338)	(5.4)	(108)	(3.5)	(230)	(7.3)
Diseases of the Genitourinary System (N00-N98)	(862)	(13.8)	(357)	(11.5)	(505)	(16.1)
Nephritis (N00-N07,N17-N19,N25-N27)	(448)	(7.2)	(198)	(6.4)	(250)	(8.0)
Acute Nephrotic Syndrome (N00-N01,N04)	5	0.1	5	0.2	0	*
Chronic Nephritis & Unsp. Nephritis(N02-N03,N05-N07,N26)	14	0.2	7	0.2	7	0.2
Renal Failure (N17-N19)	429	6.9	186	6.0	243	7.7
Other Disorders of Kidney (N25,N27)	0	*	0	*	0	*
Infections of Kidney (N10-N12,N13.6,N15.1)	21	0.3	10	0.3	11	0.4
Hyperplasia of Prostate (N40)	n/a	n/a	14	0.4	n/a	n/a
Other(N13.0-N13.5,N13.7-N15.0,N15.8-N16,N20-N23,N28-N39,N41-N99)	379	6.1	135	4.3	244	7.8
Pregnancy, Childbirth & Puerperium (O00-O99)	n/a	n/a	n/a	n/a	(13)	(0.4)
Conditions Originating in Perinatal Period (P00-P96)	(176)	(2.8)	(98)	(3.1)	(78)	(2.5)
Congenital Anomalies (Q00-Q99)	(232)	(3.7)	(123)	(3.9)	(109)	(3.5)
Symptoms & Signs Not Elsewhere Classified (R00-R99)	(240)	(3.8)	(108)	(3.5)	(132)	(4.2)
Sudden Infant Death Syndrome (R95)	42	0.7	32	1.0	10	0.3
Other (R00-R94,R96-R99)	198	3.2	76	2.4	122	3.9
External Causes of Mortality (V01-Y89)	(3,683)	(58.9)	(2,526)	(81.0)	(1,157)	(36.9)
Unintentional Injury or Accident (V01-X59,Y85-Y86)	(2,520)	(40.3)	(1,628)	(52.2)	(892)	(28.4)
Transport Accidents (V01-V99,Y85)	850	13.6	629	20.2	221	7.0
Nontransport Accidents (W00-X59,Y86)	1,670	26.7	999	32.0	671	21.4
Intentional Self-Harm (Suicide) (X60-X84,Y87.0)	814	13.0	650	20.9	164	5.2
Assault (Homicide) (X85-Y09,Y87.1)	232	3.7	171	5.5	61	1.9
Legal Intervention (Y35,Y89.0)	12	0.2	12	0.4	0	*
Events of Undetermined Intent (Y10-Y34,Y87.2,Y89.9)	83	1.3	52	1.7	31	1.0
Operations of War & Sequelae (Y36,Y89.1)	1	*	1	*	0	*
Complications of Medical & Surgical Care (Y40-Y84,Y88)	21	0.3	12	0.4	9	0.3

[1] Group totals are shown in parentheses.

[2] Rates per 100,000 population.

* Rate not calculated because number of deaths was less than 5.

Note: Rates based on fewer than 20 deaths are likely to be unstable and imprecise.

Mortality Table C5. Age-Adjusted Rates for Selected Causes by Sex for Residents, 2005

Cause with ICD-10 Code	Total		Male		Female	
	Number	Age-Adj Rate[2]	Number	Age-Adj Rate[2]	Number	Age-Adj Rate[2]
All Causes[1]	(46,015)	(746.1)	(22,862)	(882.7)	(23,153)	(638.3)
Certain Infectious & Parasitic Disease (A00-B99)	(954)	(15.1)	(537)	(19.0)	(417)	(11.8)
Tuberculosis (A16-A19)	9	0.2	8	0.3	1	*
Septicemia (A40-A41)	360	5.8	176	7.0	184	5.1
Viral Hepatitis (B15-B19)	158	2.3	94	2.8	64	1.8
HIV (B20-B24)	136	2.1	112	3.5	24	0.7
Other (A00-A15,A20-A39,A42-B14,B25-B99)	291	4.7	147	5.4	144	4.1
Neoplasms (C00-D48)	(11,226)	(184.0)	(5,723)	(218.1)	(5,503)	(160.9)
Malignant Neoplasms (C00-C97)	11,008	180.5	5,614	213.7	5,394	157.9
In Situ & Benign Neoplasms (D00-D48)	218	3.6	109	4.4	109	3.0
Diseases of Blood & Blood-Forming Organs (D50-D89)	(137)	(2.2)	(62)	(2.4)	(75)	(2.1)
Anemias (D50-D64)	66	1.1	25	1.0	41	1.1
Other (D65-D89)	71	1.2	37	1.4	34	1.0
Endocrine, Nutritional & Metabolic Diseases (E00-E90)	(2,138)	(34.8)	(1,038)	(39.6)	(1,100)	(31.0)
Diabetes Mellitus (E10-E14)	1,549	25.3	770	29.6	779	22.1
Nutritional Diseases (E40-E64)	42	0.7	11	0.5	31	0.8
Other (E00-E09,E15-E39,E65-E90)	547	8.8	257	9.5	290	8.2
Mental & Behavioral Disorders (F01-F99)	(1,079)	(17.2)	(444)	(17.9)	(635)	(16.3)
Diseases of the Nervous System (G00-G98)	(3,439)	(55.5)	(1,306)	(55.1)	(2,133)	(54.9)
Meningitis (G00-G03)	18	0.3	11	0.4	7	0.2
Amyotrophic Lateral Sclerosis (G12.2)	169	2.8	96	3.5	73	2.2
Parkinson's Disease (G20-G21)	526	8.8	299	12.9	227	6.1
Alzheimer's Disease (G30)	2,308	36.9	711	31.6	1,597	39.7
Multiple Sclerosis (G35)	98	1.5	36	1.2	62	1.8
Other (G04-G12.1,G12.3-G19,G22-G29,G31-G34,G36-G98)	320	5.1	153	5.4	167	4.9
Diseases of the Eye & Ear (H00-H93)	(3)	(*)	(1)	(*)	(2)	(*)
Diseases of the Circulatory System (I00-I99)	(15,180)	(245.8)	(7,449)	(298.5)	(7,731)	(204.1)
Major Cardiovascular Diseases (I00-I78)	(15,082)	(244.2)	(7,405)	(296.9)	(7,677)	(202.6)
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	(10,913)	(176.4)	(5,709)	(227.2)	(5,204)	(137.2)
Acute & Chronic Rheumatic Disease (I00-I09)	88	1.4	19	0.8	69	1.9
Hypertensive Heart Disease (I11)	562	8.9	226	8.6	336	8.6
Hypertensive Heart & Renal Disease (I13)	71	1.2	31	1.3	40	1.0
Ischemic Heart Diseases (I20-I25)	(7,734)	(125.3)	(4,334)	(171.8)	(3,400)	(89.9)
Acute Myocardial Infarction (I21-I22)	2,428	39.4	1,352	52.7	1,076	29.0
Other Acute Ischemic Heart Disease (I24)	29	0.5	16	0.6	13	0.3
Other Chronic Ischemic Heart Disease (I20,I25)	(5,277)	(85.4)	(2,966)	(118.5)	(2,311)	(60.6)
Atherosclerotic Cardiovascular Disease (I25.0)	1,549	24.7	876	32.6	673	17.9
All Other Chronic Disease (I20,I25.1-I25.9)	3,728	60.8	2,090	85.9	1,638	42.7
Other Heart Diseases (I26-I51)	(2,458)	(39.6)	(1,099)	(44.7)	(1,359)	(35.8)
Acute & Subacute Endocarditis (I33)	30	0.5	15	0.6	15	0.5
Disease Pericardium & Acute Myocarditis (I30-I31,I40)	18	0.3	6	0.2	12	0.4
Heart Failure (I50)	555	8.9	219	9.4	336	8.5
All Other Heart disease (I26-I28,I34-I38,I42-I49,I51)	1,855	29.9	859	34.5	996	26.5
Hypertension & Hypertensive Renal Disease (I10,I12)	449	7.3	160	6.6	289	7.5
Cerebrovascular Diseases (I60-I69)	2,883	47.0	1,127	46.5	1,756	46.4
Atherosclerosis (I70)	311	5.0	123	5.3	188	4.7
Other Diseases of Circulatory System (I71-I78)	(526)	(8.6)	(286)	(11.3)	(240)	(6.7)
Aortic Aneurysm & Dissection (I71)	313	5.2	200	7.8	113	3.2
Other Disease of Arteries (I72-I78)	213	3.5	86	3.5	127	3.5
Other (I80-I99)	98	1.6	44	1.6	54	1.5

Mortality Table C5. (Continued) Age-Adjusted Rates for Selected Causes by Sex for Residents, 2005

Cause with ICD-10 Code	Total		Male		Female	
	Number	Age-Adj Rate[2]	Number	Age-Adj Rate[2]	Number	Age-Adj Rate[2]
Diseases of the Respiratory System (J00-J98)	(4,585)	(75.7)	(2,148)	(88.0)	(2,437)	(68.0)
Influenza and Pneumonia (J10-J18)	(926)	(14.8)	(409)	(17.0)	(517)	(13.6)
Influenza (J10-J11)	55	0.9	25	1.1	30	0.8
Pneumonia (J12-J18)	871	13.9	384	16.0	487	12.8
Other Acute Lower Respiratory Infections (J20-J22)	3	*	3	*	0	*
Chronic Lower Respiratory Disease (J40-J47)	(2,692)	(45.0)	(1,233)	(50.1)	(1,459)	(41.9)
Bronchitis, Chronic and Unspecified (J40-J42)	14	0.2	6	0.2	8	0.2
Emphysema (J43)	233	4.0	114	4.7	119	3.6
Asthma (J45-J46)	83	1.3	34	1.2	49	1.4
Other Chronic Lower Respiratory Disease (J44,J47)	2,362	39.5	1,079	43.9	1,283	36.7
Pneumoconioses & Chemical Effects (J60-J66,J68)	28	0.5	26	1.1	2	*
Pneumonitis Due to Solids & Liquids (J69)	408	6.6	209	9.1	199	5.1
Other (J00-J06,J30-J39,J67,J70-J98)	528	8.8	268	10.6	260	7.3
Diseases of the Digestive System (K00-K92)	(1,658)	(26.5)	(809)	(29.4)	(849)	(23.8)
Peptic Ulcer (K25-K28)	59	0.9	35	1.3	24	0.6
Diseases of Appendix (K35-K38)	10	0.2	5	0.2	5	0.1
Hernia (K40-K46)	37	0.6	14	0.5	23	0.6
Chronic Liver Disease & Cirrhosis (K70,K73-K74)	(556)	(8.6)	(351)	(11.4)	(205)	(6.2)
Alcoholic Liver Disease (K70)	444	6.8	293	9.3	151	4.6
Other (K73-K74)	112	1.8	58	2.1	54	1.6
Cholelithiasis & Other Gallbladder Disease (K80-K82)	75	1.2	33	1.4	42	1.2
Other (K00-K24,K29-K34,K39,K47-K69,K71-K72,K75-K79,K83-K92)	921	15.0	371	14.6	550	15.2
Diseases of Skin & Subcutaneous Tissue (L00-L98)	(72)	(1.1)	(25)	(0.9)	(47)	(1.2)
Diseases Musculoskeletal & Connective Tissue (M00-M99)	(338)	(5.4)	(108)	(4.3)	(230)	(6.3)
Diseases of the Genitourinary System (N00-N98)	(862)	(14.0)	(357)	(15.0)	(505)	(13.6)
Nephritis (N00-N07,N17-N19,N25-N27)	(448)	(7.3)	(198)	(8.2)	(250)	(6.9)
Acute Nephrotic Syndrome (N00-N01,N04)	5	0.1	5	0.2	0	*
Chronic Nephritis & Unsp. Nephritis(N02-N03,N05-N07,N26)	14	0.2	7	0.3	7	0.2
Renal Failure (N17-N19)	429	7.0	186	7.7	243	6.7
Other Disorders of Kidney (N25,N27)	0	*	0	*	0	*
Infections of Kidney (N10-N12,N13.6,N15.1)	21	0.3	10	0.4	11	0.3
Hyperplasia of Prostate (N40)	n/a	n/a	14	0.6	n/a	n/a
Other(N13.0-N13.5,N13.7-N15.0,N15.8-N16,N20-N23,N28-N39,N41-N99)	379	6.1	135	5.8	244	6.3
Pregnancy, Childbirth & Puerperium (O00-O99)	n/a	n/a	n/a	n/a	(13)	(0.4)
Conditions Originating in Perinatal Period (P00-P96)	(176)	(2.9)	(98)	(3.2)	(78)	(2.7)
Congenital Anomalies (Q00-Q99)	(232)	(3.7)	(123)	(4.0)	(109)	(3.5)
Symptoms & Signs Not Elsewhere Classified (R00-R99)	(240)	(3.8)	(108)	(3.8)	(132)	(3.5)
Sudden Infant Death Syndrome (R95)	42	0.7	32	1.0	10	0.3
Other (R00-R94,R96-R99)	198	3.1	76	2.8	122	3.2
External Causes of Mortality (V01-Y89)	(3,683)	(58.0)	(2,526)	(83.5)	(1,157)	(34.0)
Unintentional Injury or Accident (V01-X59,Y85-Y86)	(2,520)	(39.8)	(1,628)	(54.9)	(892)	(25.9)
Transport Accidents (V01-V99,Y85)	850	13.5	629	20.3	221	6.9
Nontransport Accidents (W00-X59,Y86)	1,670	26.4	999	34.5	671	19.0
Intentional Self-Harm (Suicide) (X60-X84,Y87.0)	814	12.7	650	20.9	164	4.9
Assault (Homicide) (X85-Y09,Y87.1)	232	3.7	171	5.3	61	1.9
Legal Intervention (Y35,Y89.0)	12	0.2	12	0.4	0	*
Events of Undetermined Intent (Y10-Y34,Y87.2,Y89.9)	83	1.3	52	1.6	31	1.0
Operations of War & Sequelae (Y36,Y89.1)	1	*	1	*	0	*
Complications of Medical & Surgical Care (Y40-Y84,Y88)	21	0.3	12	0.4	9	0.3

[1] Group totals are shown in parentheses.

[2] Rates per 100,000 age-adjusted to U.S. 2000 population. Does not include deaths where age is unknown

* Rate not calculated because number of deaths was less than 5.

Note: Rates based on fewer than 20 deaths are likely to be unstable and imprecise.

Mortality Table C6. Diabetes, Alzheimer's Disease, and Major Cardiovascular Disease by County of Residence, 2005

County	Diabetes (E10-E14)			Alzheimer's Disease (G30)			Major Cardiovascular Disease (I00-I78)		
	Number	Crude Rate[1]	Age-Adj Rate[2]	Number	Crude Rate[1]	Age-Adj Rate[2]	Number	Crude Rate[1]	Age-Adj Rate[2]
State Total	**1,549**	**24.8**	**25.3**	**2,308**	**36.9**	**36.9**	**15,082**	**241.1**	**244.2**
Adams	7	41.2	45.3	2	*	*	32	188.2	223.8
Asotin	1	*	*	5	23.9	15.5	60	287.1	188.7
Benton	41	25.9	29.8	38	24.0	28.9	374	236.6	278.2
Chelan	17	24.6	20.4	40	57.8	43.9	215	310.7	249.5
Clallam	22	32.9	18.9	37	55.4	31.0	297	444.6	262.7
Clark	101	25.8	31.4	138	35.2	43.2	851	217.4	261.4
Columbia	0	*	*	1	*	*	9	219.5	143.9
Cowlitz	41	42.8	38.6	52	54.2	45.5	301	313.9	274.6
Douglas	4	*	*	13	37.5	35.3	94	270.9	261.3
Ferry	4	*	*	0	*	*	20	270.2	287.3
Franklin	16	26.4	39.4	14	23.1	36.2	107	176.9	253.6
Garfield	1	*	*	1	*	*	7	291.7	168.8
Grant	24	30.3	31.9	17	21.5	23.9	186	235.2	256.1
Grays Harbor	25	35.8	28.8	33	47.3	37.3	255	365.3	291.2
Island	15	19.7	18.5	37	48.7	46.5	187	246.1	224.8
Jefferson	10	36.2	27.0	12	43.5	28.1	104	376.8	236.9
King	354	19.6	20.6	605	33.5	34.0	3,603	199.2	206.7
Kitsap	55	22.9	24.8	113	47.0	50.6	560	232.9	249.3
Kittitas	1	*	*	9	24.6	23.9	86	235.0	233.3
Klickitat	10	51.3	44.8	3	*	*	71	364.1	310.2
Lewis	49	68.4	52.7	45	62.8	44.3	227	317.0	240.2
Lincoln	4	*	*	4	*	*	53	524.7	313.4
Mason	23	44.3	35.6	21	40.5	34.6	203	391.1	320.6
Okanogan	19	48.0	39.3	17	42.9	37.2	102	257.6	220.8
Pacific	6	28.2	18.0	11	51.6	29.7	108	507.0	295.9
Pend Oreille	2	*	*	7	57.4	61.5	32	262.3	247.2
Pierce	191	25.3	28.3	286	37.8	44.2	1,860	246.1	280.8
San Juan	3	*	*	8	51.6	34.7	30	193.6	128.6
Skagit	44	39.7	32.3	79	71.2	54.7	303	273.2	216.5
Skamania	1	*	*	2	*	*	24	233.1	264.9
Snohomish	114	17.4	20.4	189	28.8	36.1	1,376	209.8	257.8
Spokane	125	28.7	26.5	174	39.9	33.2	1,220	279.6	246.5
Stevens	5	12.1	9.9	8	19.4	18.9	141	342.2	312.7
Thurston	71	31.7	32.8	96	42.8	42.7	545	243.2	241.8
Wahkiakum	5	128.3	114.2	2	*	*	10	256.5	178.3
Walla Walla	14	24.3	20.9	23	40.0	25.3	211	367.0	270.4
Whatcom	45	24.9	24.4	85	47.0	44.3	441	243.9	236.0
Whitman	6	14.2	18.4	14	33.0	38.1	69	162.7	195.8
Yakima	73	31.8	33.2	67	29.2	27.0	708	308.8	307.1

[1] Rate per 100,000 population.

[2] Rate per 100,000 age-adjusted to U.S. 2000 population. Does not include deaths where age is unknown.

* Rate not calculated because number of deaths was less than 5.

Note: Codes for International Classification of Diseases, Tenth Revision (ICD-10) are in parentheses after each group heading.

Rates based on fewer than 20 deaths are likely to be unstable and imprecise.

Mortality Table C7. Diseases of the Heart, Ischemic Heart Diseases, and Cerebrovascular Diseases by County of Residence, 2005

County	Diseases of the Heart (I00-I09,I11,I13,I20-I51)			Ischemic Heart Disease (I20-I25)			Cerebrovascular Disease (I60-I69)		
	Number	Crude Rate[1]	Age-Adj Rate[2]	Number	Crude Rate[1]	Age-Adj Rate[2]	Number	Crude Rate[1]	Age-Adj Rate[2]
State Total	**10,913**	**174.4**	**176.4**	**7,734**	**123.6**	**125.3**	**2,883**	**46.1**	**47.0**
Adams	27	158.8	186.1	14	82.3	97.9	4	*	*
Asotin	45	215.3	142.7	26	124.4	81.6	9	43.1	25.8
Benton	273	172.7	202.6	193	122.1	143.2	74	46.8	55.8
Chelan	144	208.1	168.1	109	157.5	128.5	58	83.8	66.3
Clallam	192	287.4	171.4	129	193.1	114.6	81	121.3	69.6
Clark	612	156.3	187.2	416	106.3	127.7	155	39.6	48.7
Columbia	9	219.5	143.9	9	219.5	143.9	0	*	*
Cowlitz	211	220.0	190.8	167	174.1	151.8	62	64.7	57.1
Douglas	66	190.2	183.6	51	147.0	141.7	19	54.8	51.8
Ferry	16	216.2	232.7	8	108.1	111.2	3	*	*
Franklin	84	138.8	200.2	63	104.1	154.0	14	23.1	32.2
Garfield	5	208.3	122.7	4	*	*	2	*	*
Grant	138	174.5	189.3	103	130.2	141.4	32	40.5	44.7
Grays Harbor	186	266.5	212.4	121	173.4	138.3	44	63.0	51.0
Island	134	176.3	161.0	88	115.8	104.3	28	36.8	33.9
Jefferson	68	246.4	155.5	48	173.9	110.3	29	105.1	66.4
King	2,608	144.2	149.5	1,774	98.1	102.0	698	38.6	40.0
Kitsap	404	168.1	178.2	268	111.5	118.2	114	47.4	52.2
Kittitas	63	172.1	173.8	47	128.4	125.4	17	46.4	44.4
Klickitat	56	287.2	245.2	44	225.7	192.6	9	46.2	38.6
Lewis	178	248.6	189.0	140	195.5	149.0	40	55.9	41.6
Lincoln	33	326.7	207.8	21	207.9	128.0	8	79.2	41.9
Mason	154	296.7	240.4	101	194.6	156.8	36	69.4	59.1
Okanogan	69	174.2	148.7	39	98.5	84.3	24	60.6	52.0
Pacific	86	403.7	236.6	68	319.2	188.3	17	79.8	45.6
Pend Oreille	21	172.1	156.8	15	123.0	106.9	8	65.6	68.2
Pierce	1,380	182.6	206.9	1,032	136.5	155.0	334	44.2	51.5
San Juan	23	148.4	98.4	12	77.4	50.7	6	38.7	25.9
Skagit	211	190.3	151.1	137	123.5	97.9	70	63.1	49.8
Skamania	16	155.4	170.2	11	106.8	112.3	6	58.3	73.4
Snohomish	1,036	158.0	193.1	758	115.6	142.1	246	37.5	46.8
Spokane	801	183.6	162.5	577	132.2	117.8	238	54.5	48.8
Stevens	99	240.3	216.8	82	199.0	179.8	32	77.7	72.3
Thurston	395	176.3	175.7	258	115.1	115.2	98	43.7	43.6
Wahkiakum	7	179.6	124.2	5	128.3	88.9	2	*	*
Walla Walla	137	238.3	176.4	87	151.3	111.8	58	100.9	71.8
Whatcom	314	173.7	168.3	223	123.3	120.4	86	47.6	46.0
Whitman	55	129.7	156.4	40	94.3	115.5	13	30.7	36.2
Yakima	557	242.9	242.1	446	194.5	195.0	109	47.5	47.4

[1] Rate per 100,000 population.

[2] Rate per 100,000 age-adjusted to U.S. 2000 population. Does not include deaths where age is unknown.

* Rate not calculated because number of deaths was less than 5.

Note: Codes for International Classification of Diseases, Tenth Revision (ICD-10) are in parentheses after each group heading.

Rates based on fewer than 20 deaths are likely to be unstable and imprecise.

Mortality Table C8. Influenza & Pneumonia, Chronic Lower Respiratory Disease, and Chronic Liver Disease & Cirrhosis by County of Residence, 2005

	Pneumonia and Influenza (J10-J18)			Chronic Lower Resp. Dis. (J40-J47)			Chronic Liver Disease & Cirrhosis (K70,K73-K74)		
County	Number	Crude Rate[1]	Age-Adj Rate[2]	Number	Crude Rate[1]	Age-Adj Rate[2]	Number	Crude Rate[1]	Age-Adj Rate[2]
State Total	**926**	**14.8**	**14.8**	**2,692**	**43.0**	**45.0**	**556**	**8.9**	**8.6**
Adams	2	*	*	5	29.4	33.5	0	*	*
Asotin	11	52.6	35.4	14	67.0	51.4	5	23.9	19.4
Benton	14	8.9	10.1	70	44.3	53.4	10	6.3	6.1
Chelan	12	17.3	13.7	30	43.4	36.5	7	10.1	9.6
Clallam	12	18.0	10.5	45	67.4	40.0	2	*	*
Clark	37	9.5	11.5	154	39.3	48.2	23	5.9	6.0
Columbia	1	*	*	4	*	*	0	*	*
Cowlitz	13	13.6	11.4	86	89.7	80.9	9	9.4	8.3
Douglas	7	20.2	19.6	22	63.4	60.6	7	20.2	18.4
Ferry	5	67.5	82.3	7	94.6	109.0	0	*	*
Franklin	3	*	*	9	14.9	21.7	3	*	*
Garfield	1	*	*	1	*	*	0	*	*
Grant	11	13.9	14.9	27	34.1	36.5	7	8.9	9.2
Grays Harbor	16	22.9	18.3	52	74.5	60.5	11	15.8	12.6
Island	13	17.1	16.3	29	38.2	34.9	5	6.6	5.4
Jefferson	7	25.4	16.6	19	68.8	42.6	4	*	*
King	238	13.2	13.2	566	31.3	33.9	134	7.4	7.5
Kitsap	46	19.1	20.6	116	48.3	52.9	25	10.4	9.5
Kittitas	9	24.6	21.6	15	41.0	41.2	5	13.7	15.4
Klickitat	1	*	*	11	56.4	45.8	4	*	*
Lewis	16	22.3	15.2	49	68.4	53.3	5	7.0	5.7
Lincoln	2	*	*	17	168.3	112.6	0	*	*
Mason	9	17.3	14.7	26	50.1	39.0	8	15.4	13.1
Okanogan	5	12.6	10.2	23	58.1	51.5	7	17.7	13.9
Pacific	6	28.2	17.4	17	79.8	46.6	3	*	*
Pend Oreille	3	*	*	17	139.4	125.3	3	*	*
Pierce	83	11.0	12.6	358	47.4	55.2	66	8.7	8.9
San Juan	2	*	*	0	*	*	3	*	*
Skagit	28	25.2	20.1	46	41.5	33.9	15	13.5	11.4
Skamania	0	*	*	3	*	*	0	*	*
Snohomish	99	15.1	18.3	248	37.8	47.9	58	8.8	9.6
Spokane	86	19.7	17.5	275	63.0	59.4	42	9.6	9.4
Stevens	7	17.0	15.0	23	55.8	49.4	10	24.3	22.9
Thurston	31	13.8	14.1	107	47.7	49.0	30	13.4	12.2
Wahkiakum	3	*	*	4	*	*	0	*	*
Walla Walla	19	33.0	22.8	24	41.7	30.9	2	*	*
Whatcom	28	15.5	15.4	65	36.0	36.2	16	8.8	8.5
Whitman	6	14.2	16.2	17	40.1	53.4	2	*	*
Yakima	34	14.8	14.1	91	39.7	41.5	25	10.9	11.1

[1] Rate per 100,000 population.

[2] Rate per 100,000 age-adjusted to U.S. 2000 population. Does not include deaths where age is unknown.

* Rate not calculated because number of deaths was less than 5.

Note: Codes for International Classification of Diseases, Tenth Revision (ICD-10) are in parentheses after each group heading.

Rates based on fewer than 20 deaths are likely to be unstable and imprecise.

D. Cancer

Cancer is the now the leading cause of death for residents of Washington State and comprised 24.6% of all deaths in 2004. Cancer may occur in many different sites and has many different risk factors, some of which include smoking, diet, exercise, and sun exposure.

Mortality Table D1. Age-Adjusted Rates[1] for Leading Causes of Cancer for Residents, 1996-2005

Year	All Sites	Lung[2]	Colo-Rectal[2]	Breast	Prostate	Pancreas
1996	202.9	58.6	20.7	28.3	33.8	11.3
1997	196.6	56.1	18.8	27.9	30.9	10.6
1998	196.0	58.1	18.6	25.8	29.1	11.1
1998 Comparability Modified						
	197.8	57.2	18.6	26.0	29.5	11.1
1999	198.9	57.4	18.6	24.0	29.8	10.5
2000	195.6	57.4	18.3	24.4	27.5	10.9
2001	194.0	55.4	18.5	24.2	27.9	11.6
2002	190.6	54.8	16.9	23.8	28.7	10.7
2003	190.1	55.4	17.7	24.0	27.4	11.0
2004	184.9	52.3	16.5	23.4	25.8	11.4
2005	180.5	51.7	15.4	23.1	26.2	10.5

[1]Rate per 100,000 age-adjusted to U.S. 2000 population.

[2]The ICD-10 codes selected for these groups differ slightly from Cancer Registry groups. See http://www3.doh.wa.gov/WSCR/ to obtain reports of the Washington State Cancer Registry or to obtain information about other cancer sites.

Note:

Causes of death were coded with ICD-9 in 1990-1998 and with ICD-10 started in 1998. Rates during 1998 have been multiplied by a comparability ratio (CR). ICD codes and comparability ratios are:

All Sites: ICD-9: 140-208; ICD-10: C00-C97; CR=1.0093

Lung: ICD-9: 162; ICD-10: C33-C34; CR=0.9844

Colorectal: ICD-9: 153-154; ICD-10: C18-C21; CR=0.9988

Female Breast: ICD-9: 174; ICD-10: C50; CR=1.0073

Prostate: ICD-9: 185; ICD-10: C61; CR=1.0144

Pancreas: ICD-9: 157; ICD-10: C25; CR=0.9971

Mortality rates for all sites observed in Mortality Table D1 were lower in 2005 than 1996. Deaths due to female breast cancer and prostate cancer have had the largest decreases over time.

Mortality Figure 9. All cancer deaths

High relative risk (rr) regions by year

2000

2001

2002

2003

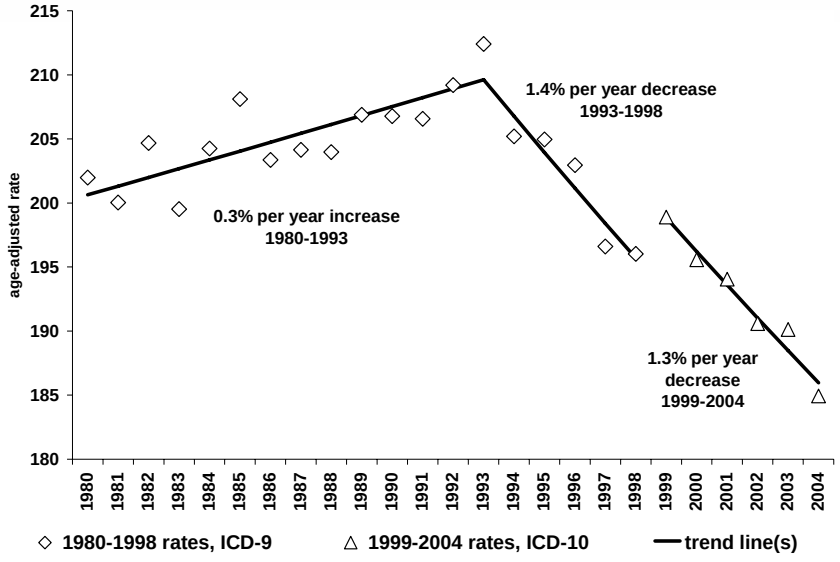
2004

Regions: Most of southwest Washington has had higher than expected total cancer deaths for each year individually and for all years combined. For 2000-2004 combined, the relative risk (rr) was 1.14, or 14% more cancer deaths than expected; this equals about 290 excess deaths per year. While not seen for individual years, a small region in Spokane has an rr of 1.31 for 2000-2004 combined. This finding is not as robust as that for southwest Washington and likely represents the cumulative effect of elevated but not statistically significant cancer mortalities over time. On average there were about 25 excess cancer deaths per year in this area.

Trends: Age-adjusted statewide cancer death rates increased by 0.3% per year from 1980 to 1993. Since 1993, they have been declining by 1.4% per year from 1993-1998, and by 1.3% per year from 1998 to 2004.

Cancer deaths: High relative risk (rr) regions 2000-2004 combined

Cancer death rates: Statewide tends, 1980-2004



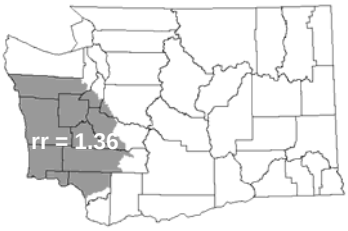
Mortality Figure 10. Lung cancer deaths

High relative risk (rr) regions by year

2000

2001

2002



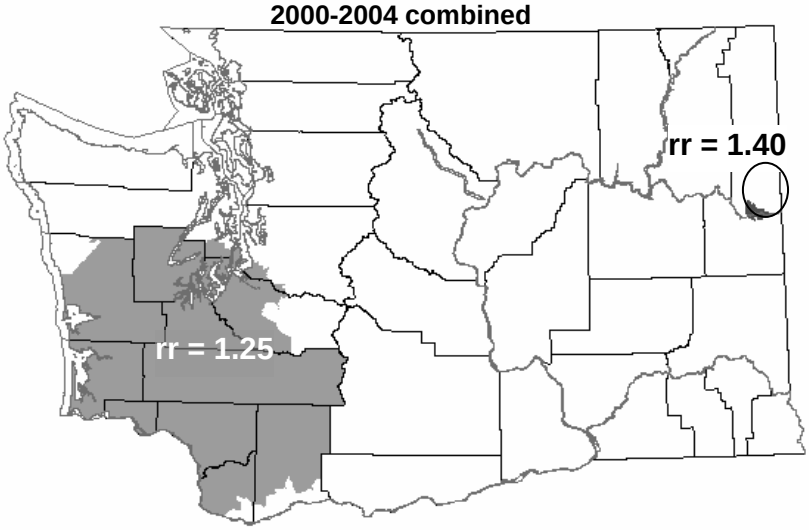
2003

2004

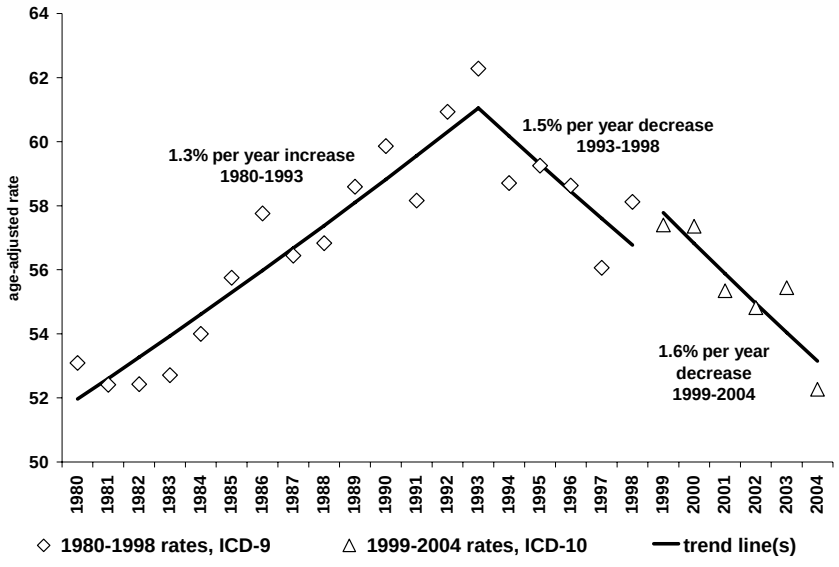
Regions: For each year individually and for all years combined most of southwest Washington has had higher than expected lung cancer deaths. For 2000-2004 combined the relative risk (rr) within this region was 1.25, or 25% more lung cancer deaths than expected. On average this means there were 146 more lung cancer deaths per year than expected. A small region within the Spokane area was also seen to have higher than expected lung cancer deaths for 2000-2004 combined; the rr was 1.40, or 40% more than expected. On average this equals about 9 more lung cancer deaths per year than would be expected.

Trends: Statewide age-adjusted lung cancer mortality rates had been increasing by 1.3% per year from 1980 to 1993; however, since 1993 they have been declining, by 1.5% per year from 1993 to 1998, and by 1.6% per year from 1999 to 2004.

Lung cancer deaths: High relative risk (rr) regions 2000-2004 combined



Lung cancer death rates: Statewide tends, 1980-2004



Mortality Table D2. Cancer by Primary Site by Sex for Residents, 2005

Cause with ICD-10 Codes	Total			Male			Female		
	No.	Crude Rate[1]	Age-Adj. Rate[2]	No.	Crude Rate[1]	Age-Adj. Rate[2]	No.	Crude Rate[1]	Age-Adj. Rate[2]
All Sites Combined (C00-C97)	**11,008**	**175.9**	**180.5**	**5,614**	**180.1**	**213.7**	**5,394**	**171.8**	**157.9**
Bladder (C67)	284	4.5	4.8	211	6.8	8.5	73	2.3	2.1
Brain, Meninges, & CNS (C70-C72)[3]	345	5.5	5.5	202	6.5	6.9	143	4.6	4.3
Brain (C71)	339	5.4	5.4	200	6.4	6.8	139	4.4	4.1
Breast (C50)	799	12.8	12.8	8	0.3	0.3	791	25.2	23.1
Cervix (C53)	n/a	n/a	n/a	n/a	n/a	n/a	63	2.0	1.9
Colorectal (C18-C21)[3]	946	15.1	15.4	496	15.9	18.9	450	14.3	12.7
Colorectal (C18-C20,C26.0)	942	15.1	15.3	496	15.9	19.0	446	14.2	12.6
Endometrium & Uterus (C54-C55)[3]	n/a	n/a	n/a	n/a	n/a	n/a	130	4.1	3.8
Endometrium (C54)	n/a	n/a	n/a	n/a	n/a	n/a	54	1.7	1.6
Esophagus (C15)	274	4.4	4.5	218	7.0	8.2	56	1.8	1.7
Hodgkin's Disease (C81)	27	0.4	0.4	15	0.5	0.5	12	0.4	0.4
Kidney & Renal Pelvis (C64-C65)	261	4.2	4.2	162	5.2	6.0	99	3.2	2.9
Larynx (C32)	60	1.0	1.0	45	1.4	1.6	15	0.5	0.5
Leukemia (C91-C95)[3]	421	6.7	7.0	247	7.9	9.6	174	5.5	5.1
Leukemia (C90.1,C91-C95)	422	6.7	7.0	247	7.9	9.6	175	5.6	5.1
Liver (C22)[3]	316	5.1	5.0	196	6.3	6.7	120	3.8	3.5
Liver (C22.0,C22.2-C22.4,C22.7,C22.9)	225	3.6	3.5	149	4.8	5.0	76	2.4	2.2
Lung, Bronchus & Trachea (C33-C34)[3]	3,118	49.8	51.7	1,642	52.7	62.4	1,476	47.0	44.0
Lung & Bronchus (C34)	3,117	49.8	51.7	1,641	52.6	62.4	1,476	47.0	44.0
Melanoma of Skin (C43)	170	2.7	2.7	105	3.4	3.9	65	2.1	1.9
Multiple Myeloma & Immunoproliferative (C88,C90)[3]	230	3.7	3.8	137	4.4	5.3	93	3.0	2.7
Multiple Myeloma (C90.0,C90.2)	218	3.5	3.6	129	4.1	5.0	89	2.8	2.6
Non-Hodgkin's Lymphoma (C82-C85)	432	6.9	7.1	214	6.9	8.1	218	6.9	6.2
Oral Cavity & Pharynx (C00-C14)	191	3.1	3.1	120	3.8	4.2	71	2.3	2.1
Ovary (C56)	n/a	n/a	n/a	n/a	n/a	n/a	331	10.5	9.7
Pancreas (C25)	640	10.2	10.5	320	10.3	11.7	320	10.2	9.4
Prostate (C61)	n/a	n/a	n/a	620	19.9	26.2	n/a	n/a	n/a
Stomach (C16)	187	3.0	3.1	103	3.3	3.9	84	2.7	2.4
Testis (C62)	n/a	n/a	n/a	4	*	*	n/a	n/a	n/a
Thyroid & Endocrine Glands (C73-C75)[3]	42	0.7	0.7	13	0.4	0.5	29	0.9	0.9
Thyroid (C73)	31	0.5	0.5	8	0.3	0.3	23	0.7	0.7
Site Unspecified (C80)	450	7.2	7.4	188	6.0	7.0	262	8.3	7.5
All Other Sites[4]	652	10.4	10.7	342	11.0	13.0	310	9.9	9.1

[1] Rate per 100,000 population.

[2] Rate per 100,000 age-adjusted to U.S. 2000 population. Does not include deaths where age is unknown.

[3] The ICD-10 codes selected for these groups differ slightly from Cancer Registry groups. See http://www3.doh.wa.gov/WSCR/ to obtain reports of the Washington State Cancer Registry or to obtain information about other cancer sites.

[4] ICD-10 Codes:C17,C23-C24,C26.1-C31,C37-C42,C44-C49,C51-C52,C57-C60,C63,C66,C68-C69,C76-C79,C88,C96-C97.

Note: Rates based on fewer than 20 deaths are likely to be unstable and imprecise.

Mortality Table D3. Cancer for Total All Sites, Lung, and Colo-Rectal by County of Residence, 2005

County	All Sites (C00-C97)			Lung[1] (C33-C34)			Colo-Rectal[1] (C18-C21)		
	Number	Crude Rate[2]	Age-Adj Rate[3]	Number	Crude Rate[2]	Age-Adj Rate[3]	Number	Crude Rate[2]	Age-Adj Rate[3]
State Total	**11,008**	**175.9**	**180.5**	**3,118**	**49.8**	**51.7**	**946**	**15.1**	**15.4**
Adams	30	176.5	201.7	7	41.2	43.8	3	*	*
Asotin	58	277.5	209.9	19	90.9	69.8	2	*	*
Benton	238	150.5	166.3	82	51.9	58.3	20	12.7	14.4
Chelan	148	213.9	186.2	25	36.1	32.4	12	17.3	14.6
Clallam	189	282.9	174.0	55	82.3	50.3	21	31.4	18.7
Clark	700	178.8	207.8	183	46.7	56.4	58	14.8	16.7
Columbia	12	292.6	190.1	4	*	*	0	*	*
Cowlitz	238	248.2	221.8	76	79.3	71.1	21	21.9	19.3
Douglas	60	172.9	163.4	12	34.6	32.0	9	25.9	25.2
Ferry	19	256.7	235.0	5	67.5	57.1	1	*	*
Franklin	58	95.9	130.0	15	24.8	33.1	5	8.3	11.2
Garfield	6	250.0	184.6	1	*	*	1	*	*
Grant	132	166.9	177.9	49	62.0	63.5	12	15.2	16.2
Grays Harbor	182	260.7	211.7	69	98.9	79.1	19	27.2	21.6
Island	158	207.9	181.7	45	59.2	51.6	14	18.4	16.7
Jefferson	69	250.0	157.4	17	61.6	42.2	3	*	*
King	2,818	155.8	165.5	752	41.6	45.3	239	13.2	13.7
Kitsap	415	172.6	183.7	104	43.3	47.5	39	16.2	17.0
Kittitas	58	158.5	157.1	17	46.4	48.2	5	13.7	14.8
Klickitat	38	194.9	163.1	11	56.4	46.5	3	*	*
Lewis	206	287.7	230.7	60	83.8	67.2	25	34.9	30.7
Lincoln	23	227.7	166.5	7	69.3	50.8	3	*	*
Mason	138	265.9	206.6	52	100.2	76.4	4	*	*
Okanogan	79	199.5	171.8	22	55.6	45.6	9	22.7	19.8
Pacific	69	323.9	190.9	25	117.4	68.5	3	*	*
Pend Oreille	21	172.1	143.7	8	65.6	51.1	2	*	*
Pierce	1,292	170.9	191.2	373	49.3	55.7	104	13.8	15.1
San Juan	29	187.1	115.4	4	*	*	6	38.7	23.3
Skagit	249	224.5	187.5	72	64.9	54.0	17	15.3	12.5
Skamania	20	194.2	199.9	7	68.0	73.4	2	*	*
Snohomish	1,036	158.0	190.3	294	44.8	54.9	121	18.5	22.6
Spokane	818	187.5	176.9	260	59.6	56.7	66	15.1	14.3
Stevens	88	213.6	193.0	22	53.4	46.8	8	19.4	16.7
Thurston	436	194.6	194.3	121	54.0	55.1	29	12.9	12.8
Wahkiakum	12	307.9	192.7	3	*	*	0	*	*
Walla Walla	114	198.3	162.6	31	53.9	45.3	10	17.4	14.5
Whatcom	308	170.4	171.6	77	42.6	43.9	17	9.4	9.4
Whitman	59	139.2	182.5	17	40.1	53.3	5	11.8	14.1
Yakima	385	167.9	175.6	115	50.2	52.9	28	12.2	12.6

[1] The ICD-10 codes selected for these groups differ slightly from Cancer Registry groups. See http://www3.doh.wa.gov/WSCR/ to obtain reports of the Washington State Cancer Registry or to obtain information about other cancer sites.

[2] Rate per 100,000 population.

[3] Rate per 100,000 age-adjusted to U.S. 2000 population. Does not include deaths where age is unknown.

* Rate not calculated because number of deaths was less than 5.

Note: Codes for International Classification of Diseases, Tenth Revision (ICD-10) are in parentheses after each group heading.

Rates based on fewer than 20 deaths are likely to be unstable and imprecise.

Mortality Table D4. Cancer for Female Breast, Prostate, and Pancreas by County of Residence, 2005

County	Female Breast (C50)			Prostate (C61)			Pancreas (C25)		
	Number	Crude Rate[2]	Age-Adj Rate[3]	Number	Crude Rate[2]	Age-Adj Rate[3]	Number	Crude Rate[2]	Age-Adj Rate[3]
State Total	**791**	**25.2**	**23.1**	**620**	**19.9**	**26.2**	**640**	**10.2**	**10.5**
Adams	2	*	*	1	*	*	2	*	*
Asotin	2	*	*	4	*	*	4	*	*
Benton	21	26.4	24.8	12	15.3	23.3	15	9.5	10.6
Chelan	8	23.0	20.3	14	40.6	40.6	9	13.0	11.2
Clallam	8	23.7	13.9	16	48.4	32.8	9	13.5	8.0
Clark	45	22.8	23.7	45	23.1	34.7	46	11.7	14.3
Columbia	1	*	*	0	*	*	0	*	*
Cowlitz	15	31.0	23.7	10	21.0	23.8	9	9.4	8.1
Douglas	4	*	*	3	*	*	5	14.4	14.0
Ferry	3	*	*	1	*	*	1	*	*
Franklin	5	17.3	21.0	3	*	*	2	*	*
Garfield	1	*	*	0	*	*	0	*	*
Grant	5	12.9	12.9	8	19.8	24.8	5	6.3	6.7
Grays Harbor	6	17.1	11.5	8	23.0	21.5	5	7.2	5.3
Island	13	34.3	27.7	6	15.8	17.5	5	6.6	6.2
Jefferson	5	36.0	21.6	4	*	*	5	18.1	10.3
King	230	25.3	23.7	179	19.9	27.9	181	10.0	10.4
Kitsap	31	26.2	24.1	27	22.1	33.6	20	8.3	8.6
Kittitas	8	43.5	41.2	2	*	*	4	*	*
Klickitat	3	*	*	1	*	*	3	*	*
Lewis	17	47.1	37.9	10	28.1	27.4	12	16.8	14.0
Lincoln	0	*	*	1	*	*	2	*	*
Mason	6	23.9	17.5	11	41.0	34.1	4	*	*
Okanogan	8	40.4	37.7	2	*	*	2	*	*
Pacific	11	102.5	60.7	1	*	*	6	28.2	15.9
Pend Oreille	0	*	*	2	*	*	1	*	*
Pierce	98	25.8	25.7	58	15.4	22.4	67	8.9	10.0
San Juan	1	*	*	2	*	*	4	*	*
Skagit	15	26.8	20.8	14	25.5	24.1	16	14.4	12.3
Skamania	1	*	*	2	*	*	2	*	*
Snohomish	48	14.7	15.6	46	14.0	21.6	57	8.7	10.7
Spokane	72	32.4	25.9	43	20.1	24.1	47	10.8	10.6
Stevens	3	*	*	3	*	*	8	19.4	15.9
Thurston	35	30.6	27.1	21	19.1	25.1	28	12.5	12.9
Wahkiakum	0	*	*	2	*	*	1	*	*
Walla Walla	5	17.7	13.4	12	41.0	38.2	2	*	*
Whatcom	23	25.1	23.3	21	23.5	29.1	23	12.7	12.5
Whitman	4	*	*	2	*	*	1	*	*
Yakima	28	24.4	21.9	23	20.1	26.0	27	11.8	11.9

[1] Rate per 100,000 population.

[2] Rate per 100,000 age-adjusted to U.S. 2000 population. Does not include deaths where age is unknown.

[*] Rate not calculated because number of deaths was less than 5.

Note: Codes for International Classification of Diseases, Tenth Revision (ICD-10) are in parentheses after each group heading.

Rates based on fewer than 20 deaths are likely to be unstable and imprecise.

E. External Causes or Injuries

A single event that causes a large number of deaths, such as the Alaska Airlines plane crash in 2000 or the 1980 eruption of Mt. Saint Helens may generate large annual variations in mortality due to unintentional injury.

Injuries do not "just happen" because of bad luck - many can be prevented. Information about the distribution of deaths due to injuries can be used to plan prevention strategies. External causes of death can be categorized by the intent (e.g., unintentional, suicide, homicide, undetermined) and by the mechanism (e.g., drowning, poisoning, cut/pierce, etc.).

The Injury and Violence Prevention Program (http://www.doh.wa.gov/hsqa/emstrauma/injury.htm) develops and maintains programs designed to reduce injuries in Washington State. There are three programmatic areas of focus: Unintentional Injury, Intentional Injury, and Data Analysis. The focus areas in unintentional injury are injuries among children; fire injury prevention; motor vehicle-related injuries, with a specific focus on DUI; drowning; and falls among older adults. Intentional injury prevention focuses on youth suicide prevention, sexual assault and family violence prevention, and promoting the safe storage of firearms. The data analysis section provides injury data and prepares reports on leading injury issues. Injury death and hospitalization data are provided by age group, county, year (for the past 10 years), and emergency medical service region for all mechanisms and intent of injury.

Mortality Table E1. Age-Adjusted Rates[1] for External Causes for Residents, 1996-2005

Year	Uninten-tional Injury (Accident)	Intentional Self-Harm (Suicide)	Assault (Homicide)	Undeter-mined	Drug-Induced[2]	Alcohol-Induced[2]	Motor Vehicle Traffic Accidents	Falls	Drowning, Accidental
1996	34.8	14.2	4.5	1.9	8.8	11.0	13.7	7.2	1.8
1997	34.0	13.0	4.6	1.7	7.8	10.8	13.0	5.9	2.1
1998	34.7	12.3	4.0	1.7	8.4	9.2	12.8	6.4	1.9
*** 1998 Comparability Modified ***									
*** 1998	35.6	12.3	4.0	1.6	8.8	8.5	12.2	5.0	1.9
1999	33.5	14.2	3.2	1.7	10.0	9.9	12.2	6.2	2.0
2000	35.5	12.4	3.4	2.2	9.9	9.0	11.8	8.4	1.6
2001	35.1	11.9	3.2	1.8	9.0	10.3	12.0	8.4	1.8
2002	36.5	13.4	3.5	1.7	11.1	9.6	12.0	8.4	2.0
2003	36.4	13.0	3.4	1.7	11.7	10.0	11.1	8.9	1.7
2004	37.6	13.2	3.5	1.8	13.8	9.7	10.4	9.0	1.6
2005	39.8	12.7	3.7	1.3	14.2	9.5	11.4	9.1	1.7

[1]Rate per 100,000 age-adjusted to U.S. 2000 population.

[2]These categories include some causes that are classified as "natural" deaths (e.g., alcoholic cirrhosis of the liver).

na: Comparability ratio not available.

Note:

Causes of death were coded with ICD-9 in 1990-1998 and with ICD-10 started in 1998. Rates during 1998 have been multiplied by a comparability ratio (CR). ICD codes and comparability ratios are:

Unintentional Injury (Accident): ICD-9: E800-E869,E880-E929; ICD-10: V01-X59,Y85-Y86; CR=1.0251

Intentional Self-Harm (Suicide): ICD-9: E950-E959; ICD-10: X60-X84,Y87.0; CR=1.0022

Assault (Homicide): ICD-9: E960-E969; ICD-10: X85-Y09,Y87.1; CR=1.0020

Undetermined: ICD-9: E980-E989; ICD-10: Y10-Y34,Y87.2,Y89.9; CR = .9867

Drug-Induced: ICD-9: 292,304,305.2-305.9,E850-E858,E950.0-E950.5,E962.0,E980.0-E980; ICD-10: F11.0-11.5, F11.7-F11.9,F12.0-F12.5,F12.7-F12.9,F13.0-F13.5,F13.7-F13.9,F14.0-F14.5,F14.7-F14.9,F15.0-F15.5,F15.7-F15.9, F16.0-F16.5,F16.7-F16.9,F17.0,F17.3-F17.5,F17.7-F17.9,F18.0-F18.5,F18.7-F18.9,F19.0-F19.5,F19.7-F19.9, X40-X44,X60-X64,X85,Y10-Y14; CR=1.0434

Alcohol-Induced: ICD-9: 291,303,305.0,357.5,425.5,535.3,571.0-571.3,790.3,E860; ICD-10: F10,G31.2,G62.1, I42.6,K29.2,K70,R78.0,X45,X65,Y15; CR=0.9222

Motor Vehicle Traffic Accidents: ICD-9: E810-E819; ICD-10: V02-V04(.1,.9),V09.2,V12-V14(.3-.9), V19(.4-.6), V20-V28(.3-.9),V29-V79(.4-.9),V80(.3-.5),V81.1,V82.1,V83-V86(.0-.3),V87(.0-.8),V89.2; CR = .9527

Falls: ICD-9 E880-E886,E888; ICD-10 W00-W19; CR = .7720

Drowning, Accidental: ICD-9 E830,E832,E910; ICD-10 V90,V92,W65-W74; CR = 1.0297

Mortality from drug-induced causes has increased during the past decade while assaults and motor vehicle traffic accidents have declined overall during this time period.

Mortality Table E2-a. External Causes of Injury With Crude Rates for Residents, 2005

Cause	Total		Unintentional or Accident		Suicide		Homicide		Undeter- mined		Legal Intervention & War[1]	
	No.	Rate[2]	No.	Rate[2]	No.	Rate[2]	No.	Rate[2]	No.	Rate[2]	No.	Rate[2]
All Injuries[3]	**(3,662)**	**(58.5)**	**(2,520)**	**(40.3)**	**(814)**	**(13.0)**	**(232)**	**(3.7)**	**(83)**	**(1.3)**	**(13)**	**(0.2)**
Cut/Pierce	60	1.0	2	*	20	0.3	37	0.6	1	*	0	*
Drowning	(123)	(2.0)	(104)	(1.7)	(11)	(0.2)	(0)	(*)	(8)	(0.1)	--	--
Boating-Related	16	0.3	16	0.3	--	--	--	--	--	--	--	--
Other	107	1.7	88	1.4	11	0.2	0	*	8	0.1	--	--
Fall/Jump/Push	594	9.5	566	9.0	27	0.4	0	*	1	*	--	--
Fire/Hot Object or Substance	(57)	(0.9)	(52)	(0.8)	(4)	(*)	(0)	(*)	(1)	(*)	(0)	(*)
Fire/Flame	57	0.9	52	0.8	4	*	0	*	1	*	--	--
Hot Object/Substance	0	*	0	*	0	*	0	*	0	*	--	--
Firearm	563	9.0	8	0.1	396	6.3	141	2.3	6	0.1	12	0.2
Machinery	17	0.3	17	0.3	--	--	--	--	--	--	--	--
All Transport	(816)	(13.0)	(809)	(12.9)	(5)	(0.1)	(1)	(*)	(1)	(*)	(0)	(*)
Motor Vehicle Traffic	(721)	(11.5)	(721)	(11.5)	--	--	--	--	--	--	--	--
Occupant	500	8.0	500	8.0	--	--	--	--	--	--	--	--
Motorcyclist	84	1.3	84	1.3	--	--	--	--	--	--	--	--
Pedal Cyclist	15	0.2	15	0.2	--	--	--	--	--	--	--	--
Pedestrian	76	1.2	76	1.2	--	--	--	--	--	--	--	--
Other	0	*	0	*	--	--	--	--	--	--	--	--
Unspecified	46	0.7	46	0.7	--	--	--	--	--	--	--	--
Pedal Cyclist, Other	5	0.1	5	0.1	--	--	--	--	--	--	--	--
Pedestrian, Other	25	0.4	25	0.4	--	--	--	--	--	--	--	--
Other Land Transport	34	0.5	27	0.4	5	0.1	1	*	1	*	--	--
Watercraft/Air/Space	31	0.5	31	0.5	--	--	--	--	--	--	0	*
Natural/Environmental	(36)	(0.6)	(36)	(0.6)	--	--	--	--	--	--	--	--
Bites/Stings	6	0.1	6	0.1	--	--	--	--	--	--	--	--
Other	30	0.5	30	0.5	--	--	--	--	--	--	--	--
Overexertion	0	*	0	*	--	--	--	--	--	--	--	--
Poisoning	923	14.8	679	10.9	194	3.1	1	*	49	0.8	0	*
Struck By or Against	32	0.5	28	0.4	0	*	4	*	0	*	0	*
Suffocation	267	4.3	111	1.8	144	2.3	8	0.1	4	*	--	--
Other Specified, Classifiable	(45)	(0.7)	(34)	(0.5)	(8)	(0.1)	(1)	(*)	(1)	(*)	(1)	(*)
Sequelae (Late Effects)	25	0.4	25	0.4	--	--	--	--	--	--	--	--
Other	19	0.3	9	0.1	8	0.1	1	*	1	*	0	*
Other Specified, NEC[4]	(43)	(0.7)	(30)	(0.5)	(3)	(*)	(7)	(0.1)	(3)	(*)	(0)	(*)
Sequelae (Late Effects)	38	0.6	30	0.5	2	*	5	0.1	1	*	--	--
Other	5	0.1	0	*	1	*	2	*	2	*	0	*
Unspecified	86	1.4	44	0.7	2	*	32	0.5	8	0.1	0	*
Adverse Effects[3]	(21)	(0.3)	--	--	--	--	--	--	--	--	--	--
Drugs	4	*	--	--	--	--	--	--	--	--	--	--
Medical Care	17	0.3	--	--	--	--	--	--	--	--	--	--

[1] The war-related categories include deaths due to late effects of injuries from war. Deaths occurring overseas during military activities are registered with the U.S. Department of State and are not reported to the Center for Health Statistics.

[2] Rate per 100,000 population.

[3] Group totals are shown in parentheses. Adverse Effects are not included in the total of All Injuries.

[4] NEC: Not elsewhere classified.

[*] Rate not calculated because number of deaths was less than 5.

-- No ICD-10 codes available for this category.

Note: Rates based on fewer than 20 deaths are likely to be unstable and imprecise.

With the exception of drowning, bites/stings, all transport, and sequelae, cause-of-death categories for this table follow the guidelines of National Center for Health Statistics (NCHS) International Collaborative Effort (ICE) on Injury Statistics. These groupings differ from previously published Vital Statistics reports and from other NCHS groupings.

More injury tables can be obtained from Injury Prevention Program, Washington State Department of Health web site:

Refer to the previous page under External Causes or Injuries for the website address.

Mortality Table E2-b. External Causes of Injury With Age-Adjusted Rates for Residents, 2005

Cause	Total		Unintentional or Accident		Suicide		Homicide		Undeter- mined		Legal Intervention & War[1]	
	No.	Rate[2]	No.	Rate[2]	No.	Rate[2]	No.	Rate[2]	No.	Rate[2]	No.	Rate[2]
All Injuries[3]	**(3,662)**	**(57.7)**	**(2,520)**	**(39.8)**	**(814)**	**(12.7)**	**(232)**	**(3.7)**	**(83)**	**(1.3)**	**(13)**	**(0.2)**
Cut/Pierce	60	1.0	2	*	20	0.3	37	0.6	1	*	0	*
Drowning	(123)	(2.0)	(104)	(1.7)	(11)	(0.2)	(0)	(*)	(8)	(0.1)	--	--
Boating-Related	16	0.2	16	0.2	--	--	--	--	--	--	--	--
Other	107	1.7	88	1.4	11	0.2	0	*	8	0.1	--	--
Fall/Jump/Push	594	9.5	566	9.1	27	0.4	0	*	1	*	--	--
Fire/Hot Object or Substance	(57)	(0.9)	(52)	(0.9)	(4)	(*)	(0)	(*)	(1)	(*)	(0)	(*)
Fire/Flame	57	0.9	52	0.9	4	*	0	*	1	*	--	--
Hot Object/Substance	0	*	0	*	0	*	0	*	0	*	--	--
Firearm	563	8.8	8	0.1	396	6.2	141	2.2	6	0.1	12	0.2
Machinery	17	0.3	17	0.3	--	--	--	--	--	--	--	--
All Transport	(816)	(12.9)	(809)	(12.8)	(5)	(0.1)	(1)	(*)	(1)	(*)	(0)	(*)
Motor Vehicle Traffic	(721)	(11.4)	(721)	(11.4)	--	--	--	--	--	--	--	--
Occupant	500	7.9	500	7.9	--	--	--	--	--	--	--	--
Motorcyclist	84	1.3	84	1.3	--	--	--	--	--	--	--	--
Pedal Cyclist	15	0.2	15	0.2	--	--	--	--	--	--	--	--
Other	76	1.3	76	1.3	--	--	--	--	--	--	--	--
Pedestrian	0	*	0	*	--	--	--	--	--	--	--	--
Unspecified	46	0.7	46	0.7	--	--	--	--	--	--	--	--
Pedal Cyclist, Other	5	0.1	5	0.1	--	--	--	--	--	--	--	--
Pedestrian, Other	25	0.4	25	0.4	--	--	--	--	--	--	--	--
Other Land Transport	34	0.5	27	0.4	5	0.1	1	*	1	*	--	--
Watercraft/Air/Space	31	0.5	31	0.5	--	--	--	--	--	--	0	*
Natural/Environmental	(36)	(0.6)	(36)	(0.6)	--	--	--	--	--	--	--	--
Bites/Stings	6	0.1	6	0.1	--	--	--	--	--	--	--	--
Other	30	0.5	30	0.5	--	--	--	--	--	--	--	--
Overexertion	0	*	0	*	--	--	--	--	--	--	--	--
Poisoning	923	14.2	679	10.4	194	3.0	1	*	49	0.7	0	*
Struck By or Against	32	0.5	28	0.4	0	*	4	*	0	*	0	*
Suffocation	267	4.3	111	1.8	144	2.3	8	0.1	4	*	--	--
Other Specified, Classifiable	(45)	(0.7)	(34)	(0.5)	(8)	(0.1)	(1)	(*)	(1)	(*)	(1)	(*)
Sequelae (Late Effects)	25	0.4	25	0.4	--	--	--	--	--	--	--	--
Other	19	0.3	9	0.1	8	0.1	1	*	1	*	0	*
Other Specified, NEC[4]	(43)	(0.7)	(30)	(0.5)	(3)	(*)	(7)	(0.1)	(3)	(*)	(0)	(*)
Sequelae (Late Effects)	38	0.6	30	0.5	2	*	5	0.1	1	*	--	--
Other	5	0.1	0	*	1	*	2	*	2	*	0	*
Unspecified	86	1.4	44	0.7	2	*	32	0.5	8	0.1	0	*
Adverse Effects[3]	(21)	(0.3)	--	--	--	--	--	--	--	--	--	--
Drugs	4	*	--	--	--	--	--	--	--	--	--	--
Medical Care	17	0.3	--	--	--	--	--	--	--	--	--	--

[1] The war-related categories include deaths due to late effects of injuries from war. Deaths occurring overseas during military activities are registered with the U.S. Department of State and are not reported to the Center for Health Statistics.

[2] Rate per 100,000 population age-adjusted to U.S. 2000 population.

[3] Group totals are shown in parentheses. Adverse Effects are not included in the total of All Injuries.

[4] NEC: Not elsewhere classified.

[*] Rate not calculated because number of deaths was less than 5.

-- No ICD-10 codes available for this category.

Note: Rates based on fewer than 20 deaths are likely to be unstable and imprecise.

With the exception of drowning, bites/stings, all transport, and sequelae, cause-of-death categories for this table follow the guidelines of National Center for Health Statistics (NCHS) International Collaborative Effort (ICE) on Injury Statistics. These groupings differ from previously published Vital Statistics reports and from other NCHS groupings.

More injury tables can be obtained from Injury Prevention Program, Washington State Department of Health web site:
Refer to the previous page under External Causes or Injuries for the website address.

Mortality Table E2-c. ICD-10 Codes for External Causes

Cause	Unintentional or Accident	Suicide	Homicide	Undeter-mined	Legal Intervention & War
All Injuries	V01-X59,Y85-Y86	X60-X84,Y87.0	X85-Y09, Y87.1	Y10-Y34, Y87.2,Y89.9	Y35-Y36, Y89(.0,.1)
Cut/Pierce	W25-W29,W45	X78	X99	Y28	Y35.4
Drowning	W65-W74,V90,V92	X71	X92	Y21	
Boating-Related	V90,V92				
Other	W65-W74	X71	X92	Y21	
Fall/Jump/Push	W00-W19	X80	Y01	Y30	
Fire/Hot Object or Substance	X00-X19	X76-X77	X97-X98	Y26-Y27	Y36.3
Fire/Flame	X00-X09	X76	X97	Y26	
Hot Object/Substance	X10-X19	X77	X98	Y27	
Firearm	W32-W34	X72-X74	X93-X95	Y22-Y24	Y35.0
Machinery	W24,W30-W31				
All Transport	V01-V89,V91,V93-V99	X82	Y03	Y32	Y36.1
Motor Vehicle Traffic	Codes from 5 groups below				
Occupant	V30-V39(.4-.9),V40-V49(.4-.9), V50-V59(.4-.9),V60-V69(.4-.9), V70-V79(.4-.9), V81.1,V82.1, V83-V86(.0-.3)				
Motorcyclist	V20-V28(.3-.9), V29(.4-.9)				
Pedal Cyclist	V12-V14(.3-.9), V19(.4-.6)				
Pedestrian	V02-V04(.1,.9), V09.2				
Other	V80(.3-.5)				
Unspecified	V87(.0-.8), V89.2				
Pedal Cyclist, Other	V10-V11,V12-V14(.0-.2), V15-V18,V19(.0-.3,.8,.9)				
Pedestrian, Other	V01,V02-V04(.0),V05,V06, V09(.0,.1,.3,.9)				
Other Land Transport	V20-V28 (.0-.2), V29(.0-.3), V30-V39(.0-.3), V40-V49(.0-.3), V50-V59(.0-.3), V60-V69(.0-.3), V70-V79(.0-.3), V80(.0-.2,.6-.9), V81-V82(.0,.2-.9),V83-V86(.4-.9) V83-V86(.4-.9),V87.9,V88(.0-.9), V89(.0,.1,.3,.9)	X82	Y03	Y32	Y36.1
Water/Air/Space	V91,V93-V99				
Natural/Environmental	W42,W43,W53-W64, W92-W99,X20-X39,X51-X57				
Bites/Stings	W53-W59, X20-X29				
Other	Residual, Natural/Environmental				
Overexertion	X50				
Poisoning	X40-X49	X60-X69	X85-X90	Y10-Y19	Y35.2
Struck By or Against	W20-W22,W50-W52	X79	Y00,Y04	Y29	Y35.3
Suffocation	W75-W84	X70	X91	Y20	
Other Specified, Classifiable	W23,W35-W41,W44, W49,W85-W91,Y85	X75,X81	X96,Y02, Y05-Y07	Y25,Y31	Y35(.1,.5), Y36(.0,.2,.4-.8)
Sequelae (Late Effects)	Y85				
Other	W49,W85-W91	X75,X81	X86,Y02 Y05-Y07	Y25,Y31	Y35(.1,.5), Y36(.0,.2,.4-.8)
Other Specified, NEC	X58,Y86	X83,Y87.0	Y08,Y87.1	Y33,Y87.2	Y35.6, Y89(.0,.1)
Sequelae (Late Effects)	Y86	Y87.0	Y87.1	Y87.2	
Other	X58	X83	Y08	Y33	Y35.6,Y89(.0,.1)
Unspecified	X59	X84	Y09	Y34,Y89.9	Y35.7,Y36.9
Adverse Effects: Y40-Y59,Y60-Y84,Y88					
Drugs: Y40-Y59,Y88.0					
Medical Care: Y60-Y84,Y88(.1-.3)					

Mortality Table E3. External Causes by Place of Injury for Residents, 2005

Place of Injury[1]	Total	Unintentional Injury (Accident), Non-Transport	Unintentional Injury (Accident), Transport	Intentional Self-Harm (Suicide)	Assault (Homicide)	Undetermined	Other
State Total	**3,683**	**1,670**	**850**	**814**	**232**	**83**	**34**
Home	1,762	982	9	584	126	50	11
Nursing Home	167	159	0	5	2	1	0
Agriculture	9	7	1	0	1	0	0
Industry	104	65	3	25	9	2	0
Prison	11	0	0	11	0	0	0
Public	1,329	256	807	165	77	19	5
Unknown	301	201	30	24	17	11	18

[1] National Safety Council place of injury category definitions.

Note:

Source for groups is the International Classification of Diseases, Tenth Revision (ICD-10): Unintentional Injury (Accident), Non-Transport (ICD-10: W00-X59,Y86); Unintentional Injury (Accident), Transport (ICD-10: V01-V99,Y85); Intentional Self-Harm (Suicide) (ICD-10: X60-X84,Y87.0); Assault (Homicide) (ICD-10: X85-Y09,Y87.1); Undetermined (ICD-10: Y10-Y34,Y87.2,Y89.9); Other (ICD-10: Y35,Y36,Y40-Y84,Y88, Y89.0,Y89.1)..

Mortality Table E4. Type of Firearm by Intent for Residents, 2005

	Total			Handgun			Rifle or Shotgun			Other & Unspecified		
Intent	No.	Crude Rate[1]	Age-Adj Rate[2]	No.	Crude Rate[1]	Age-Adj Rate[2]	No.	Crude Rate[1]	Age-Adj Rate[2]	No.	Crude Rate[1]	Age-Adj Rate[2]
Total	**563**	**9.0**	**8.8**	**293**	**4.7**	**4.6**	**133**	**2.1**	**2.1**	**137**	**2.2**	**2.2**
Unintentional Injury (Accident)	8	0.1	0.1	4	*	*	3	*	*	1	*	*
Self-Harm (Suicide)	396	6.3	6.2	245	3.9	3.8	111	1.8	1.7	40	0.6	0.6
Assault (Homicide)	141	2.3	2.2	42	0.7	0.7	17	0.3	0.3	82	1.3	1.3
Undetermined	6	0.1	0.1	2	*	*	2	*	*	2	*	*
Legal Intervention	12	0.2	0.2	0	*	*	0	*	*	12	0.2	0.2

[1] Rate per 100,000 population.

[2] Rate per 100,000 age-adjusted to U.S. 2000 population. Does not include deaths where age is unknown.

[*] Rate not calculated because number of deaths was less than 5.

Note:

Source for groups is the International Classification of Diseases, Tenth Revision (ICD-10): Unintentional Injury (Accident), (Accident) (ICD-10: W32-W34); Self-Harm (Suicide) (ICD-10: X72-X74); Assault (Homicide) (ICD-10: X93-X95); Undetermined (ICD-10: Y22-Y24); Legal Intervention (ICD-10: Y35.0).

Rates based on fewer than 20 deaths are likely to be unstable and imprecise.

Mortality Table E5. Poisoning by Intent and Substance for Residents, 2005

Substance and ICD-10 Code	Total			Unintentional Injury (Accident)			Self-Harm (Suicide)			Undetermined		
	No.	Crude Rate[1]	Age-Adj Rate[2]	No.	Crude Rate[1]	Age-Adj Rate[2]	No.	Crude Rate[1]	Age-Adj Rate[2]	No.	Crude Rate[1]	Age-Adj Rate[2]
Total	**922**	**14.7**	**14.2**	**679**	**10.9**	**10.4**	**194**	**3.1**	**3.0**	**49**	**0.8**	**0.7**
Drugs (X40-X44,X60-X64,Y10-Y14)[3]	(841)	(13.4)	(12.9)	(655)	(10.5)	(10.1)	(139)	(2.2)	(2.1)	(47)	(0.8)	(0.7)
Non-Opioid Analgesics, Anti-Pyretics & Anti-Rheumatics (e.g., nonsteroidal anti-inflammatory drugs, salicylates, etc.) (X40, X60, Y10)	12	0.2	0.2	1	*	*	7	0.1	0.1	4	*	*
Anti-Epileptic, Sedative-Hypnotic, Anti-Parkinson & Psychotropic (e.g., antidepressants, barbiturates, psychostimulants, etc.) (X41, X61, Y11)	85	1.4	1.3	48	0.8	0.7	31	0.5	0.5	6	0.1	0.1
Narcotics & Psychodysleptics (e.g., cannabis, cocaine, heroin, etc.) (X42, X62, Y12)	298	4.8	4.6	261	4.2	4.0	24	0.4	0.4	13	0.2	0.2
Other Drugs Acting on Autonomic Nervous System (e.g., anticholinergics, cholinergics, antiadrenergics, etc.) (X43, X63, Y13)	1	*	*	1	*	*	0	*	*	0	*	*
Other, Unspecified, or Mixtures of Any of the Above (e.g., anaesthetics, hormones, antibiotics, etc.) (X44, X64, Y14)	445	7.1	6.8	344	5.5	5.3	77	1.2	1.2	24	0.4	0.4
Alcohol (X45, X65, Y15)	5	0.1	0.1	3	*	*	1	*	*	1	*	*
Organic Solvents, Halogenated Hydrocarbons, Vapors (e.g., benzene, petroleum, etc.) (X46, X66, Y16)	3	*	*	1	*	*	2	*	*	0	*	*
Other Gases & Vapors(e.g., carbon monoxide, nitrogen oxides, etc.) (X47, X67, Y17)	68	1.1	1.0	20	0.3	0.3	48	0.8	0.7	0	*	*
Pesticides (e.g., fumigants, herbicides, insecticides, wood preservatives, etc.) (X48, X68, Y18)	1	*	*	0	*	*	1	*	*	0	*	*
Other & Unspecified Chemicals & Noxious Substances (e.g., acids, glues, paints, soaps, etc.) (X49, X69, Y19)	4	*	*	0	*	*	3	*	*	1	*	*

[1] Rate per 100,000 population.

[2] Rate per 100,000 age-adjusted to U.S. 2000 population. Does not include deaths where age is unknown.

[3] Group totals are shown in parentheses.

* Rate not calculated because number of deaths was less than 5.

Note: Rates based on fewer than 20 deaths are likely to be unstable and imprecise.

Poisoning due to homicides are not included in this table.

Mortality Table E6. Suicide, Homicide, and Undetermined by County of Residence, 2005

County	Intentional Self-Harm (Suicide) (X60-X84,Y87.0)			Assault (Homicide) (X85-Y09,Y87.1)			Undetermined (Y10-Y34,Y87.2,Y89.9)		
	Number	Crude Rate[1]	Age-Adj Rate[2]	Number	Crude Rate[1]	Age-Adj Rate[2]	Number	Crude Rate[1]	Age-Adj Rate[2]
State Total	**814**	**13.0**	**12.7**	**232**	**3.7**	**3.7**	**83**	**1.3**	**1.3**
Adams	4	*	*	1	*	*	0	*	*
Asotin	4	*	*	1	*	*	0	*	*
Benton	10	6.3	7.3	9	5.7	5.7	1	*	*
Chelan	11	15.9	15.2	3	*	*	4	*	*
Clallam	15	22.5	22.0	0	*	*	0	*	*
Clark	50	12.8	12.6	17	4.3	4.6	4	*	*
Columbia	1	*	*	0	*	*	0	*	*
Cowlitz	19	19.8	19.5	3	*	*	5	5.2	4.3
Douglas	3	*	*	0	*	*	2	*	*
Ferry	1	*	*	0	*	*	1	*	*
Franklin	3	*	*	2	*	*	0	*	*
Garfield	1	*	*	0	*	*	0	*	*
Grant	4	*	*	3	*	*	3	*	*
Grays Harbor	13	18.6	18.4	4	*	*	5	7.2	5.9
Island	7	9.2	9.0	0	*	*	0	*	*
Jefferson	6	21.7	16.2	1	*	*	2	*	*
King	215	11.9	11.3	66	3.6	3.4	17	0.9	0.9
Kitsap	39	16.2	16.4	10	4.2	4.1	5	2.1	1.7
Kittitas	3	*	*	0	*	*	0	*	*
Klickitat	3	*	*	0	*	*	1	*	*
Lewis	13	18.2	17.0	2	*	*	1	*	*
Lincoln	2	*	*	0	*	*	0	*	*
Mason	13	25.0	20.9	5	9.6	9.2	0	*	*
Okanogan	11	27.8	28.8	4	*	*	0	*	*
Pacific	3	*	*	2	*	*	2	*	*
Pend Oreille	1	*	*	0	*	*	0	*	*
Pierce	92	12.2	12.1	33	4.4	4.3	13	1.7	1.8
San Juan	4	*	*	1	*	*	0	*	*
Skagit	14	12.6	13.2	3	*	*	2	*	*
Skamania	4	*	*	1	*	*	0	*	*
Snohomish	82	12.5	12.6	17	2.6	2.5	4	*	*
Spokane	63	14.4	13.9	15	3.4	3.4	4	*	*
Stevens	7	17.0	16.1	0	*	*	0	*	*
Thurston	27	12.0	11.3	3	*	*	3	*	*
Wahkiakum	2	*	*	0	*	*	0	*	*
Walla Walla	9	15.7	15.6	0	*	*	2	*	*
Whatcom	30	16.6	16.0	5	2.8	2.7	2	*	*
Whitman	1	*	*	3	*	*	0	*	*
Yakima	24	10.5	11.1	18	7.8	7.6	0	*	*

[1] Rate per 100,000 population.

[2] Rate per 100,000 age-adjusted to U.S. 2000 population. Does not include deaths where age is unknown.

[*] Rate not calculated because number of deaths was less than 5.

Note: Codes for International Classification of Diseases, Tenth Revision (ICD-10) are in parentheses after each group heading.

Rates based on fewer than 20 deaths are likely to be unstable and imprecise.

Mortality Table E7. Drug and Alcohol-Induced Causes for Residents, 2005

County	Drug-Induced			Alcohol-Induced		
	Number	Crude Rate[1]	Age-Adj Rate[2]	Number	Crude Rate[1]	Age-Adj Rate[2]
State Total	**921**	**14.7**	**14.2**	**616**	**9.8**	**9.5**
Adams	1	*	*	0	*	*
Asotin	1	*	*	4	*	*
Benton	16	10.1	10.2	10	6.3	6.1
Chelan	7	10.1	11.1	5	7.2	7.1
Clallam	15	22.5	23.3	7	10.5	7.0
Clark	46	11.7	11.3	32	8.2	8.1
Columbia	0	*	*	0	*	*
Cowlitz	34	35.5	35.7	13	13.6	12.4
Douglas	7	20.2	19.8	7	20.2	18.4
Ferry	2	*	*	1	*	*
Franklin	4	*	*	4	*	*
Garfield	2	*	*	1	*	*
Grant	13	16.4	18.1	7	8.9	9.3
Grays Harbor	17	24.4	24.4	15	21.5	17.1
Island	4	*	*	4	*	*
Jefferson	9	32.6	27.1	6	21.7	13.3
King	249	13.8	12.5	149	8.2	8.2
Kitsap	33	13.7	12.6	27	11.2	10.1
Kittitas	0	*	*	6	16.4	17.3
Klickitat	2	*	*	3	*	*
Lewis	16	22.3	23.4	6	8.4	7.0
Lincoln	0	*	*	1	*	*
Mason	12	23.1	21.1	10	19.3	16.5
Okanogan	10	25.3	25.2	7	17.7	15.0
Pacific	1	*	*	4	*	*
Pend Oreille	4	*	*	3	*	*
Pierce	99	13.1	12.8	75	9.9	9.9
San Juan	0	*	*	2	*	*
Skagit	18	16.2	15.8	15	13.5	11.2
Skamania	2	*	*	0	*	*
Snohomish	98	14.9	14.1	56	8.5	8.9
Spokane	101	23.1	22.7	45	10.3	10.2
Stevens	10	24.3	25.3	8	19.4	18.0
Thurston	36	16.1	15.3	31	13.8	12.5
Wahkiakum	0	*	*	0	*	*
Walla Walla	6	10.4	11.2	2	*	*
Whatcom	25	13.8	14.3	25	13.8	13.5
Whitman	1	*	*	1	*	*
Yakima	20	8.7	9.7	24	10.5	10.6

[1] Rate per 100,000 population.

[2] Rate per 100,000 age-adjusted to U.S. 2000 population. Does not include deaths where age is unknown.

[*] Rate not calculated because number of deaths was less than 5.

Note: Source for Selected Disease Conditions is International Classification of Diseases, Tenth Revision, (ICD-10): Drug-Induced:
F11.0-11.5,F11.7-F11.9,F12.0-F12.5,F12.7-F12.9,F13.0-F13.5,F13.7-F13.9,F14.0-F14.5,F14.7-F14.9,F15.0-F15.5,F15.7-F15.9,F16.0-F16.5,F16.7-F16.9,
F17.0,F17.3,F16.9,F17.0,F17.3-F17.5,F17.7-F17.9,F18.0-F18.5,F18.7-F18.9,F19.0-F19.5,F19.7-F19.9,X40-X44,X60-X64,X85,Y10-Y14;
D52.1,D59.0,D59.2,D61.1,D64.2,E06.4,E16.0,E23.1,E24.2,E27.3,E66.1,G21.1,G24.0,G25.1,G25.4,G25.6,G44.4,G62.0,
G72.0,I95.2,J70.2,J70.3,J70.4,L10.5,L27.0,L27.1,M10.2,M32.0,M80.4,M81.4,M83.5,M87.1,R78.1,R78.2,R78.3,R78.4,R78.5.
Alcohol-Induced: F10,G31.2,G62.1,I42.6, K29.2,K70, R78.0,X45,X65,Y15, E24.4, G72.1, K86.0.
Rates based on fewer than 20 deaths are likely to be unstable and imprecise.

Mortality Table E8. Unintentional Injury (Accident), Motor Vehicle Traffic, and Falls by County of Residence, 2005

County	Unintentional Injury (Accident)(V01-X59,Y85-Y86)			Motor Vehicle Traffic[1]			Falls (W00-W19)		
	Number	Crude Rate[2]	Age-Adj Rate[3]	Number	Crude Rate[2]	Age-Adj Rate[3]	Number	Crude Rate[2]	Age-Adj Rate[3]
State Total	**2,520**	**40.3**	**39.8**	**721**	**11.5**	**11.4**	**566**	**9.0**	**9.1**
Adams	9	52.9	58.4	7	41.2	45.2	0	*	*
Asotin	6	28.7	28.3	2	*	*	1	*	*
Benton	45	28.5	30.6	12	7.6	7.8	8	5.1	6.1
Chelan	24	34.7	30.1	7	10.1	9.4	7	10.1	7.2
Clallam	47	70.4	65.1	13	19.5	23.6	15	22.5	16.6
Clark	127	32.4	34.3	42	10.7	11.1	24	6.1	7.4
Columbia	2	*	*	0	*	*	1	*	*
Cowlitz	76	79.3	76.3	13	13.6	13.8	20	20.9	17.5
Douglas	8	23.1	22.8	2	*	*	2	*	*
Ferry	11	148.6	172.6	8	108.1	121.0	2	*	*
Franklin	14	23.1	27.2	7	11.6	10.9	3	*	*
Garfield	3	*	*	0	*	*	0	*	*
Grant	60	75.9	77.6	31	39.2	38.2	9	11.4	12.1
Grays Harbor	41	58.7	57.4	12	17.2	16.9	9	12.9	10.2
Island	37	48.7	47.5	14	18.4	18.7	11	14.5	13.7
Jefferson	18	65.2	59.0	4	*	*	3	*	*
King	624	34.5	33.6	152	8.4	8.4	139	7.7	8.0
Kitsap	84	34.9	35.0	28	11.6	11.7	25	10.4	10.7
Kittitas	14	38.3	47.7	7	19.1	23.3	1	*	*
Klickitat	10	51.3	49.3	5	25.6	25.8	1	*	*
Lewis	37	51.7	49.1	10	14.0	13.0	9	12.6	10.0
Lincoln	6	59.4	55.8	3	*	*	2	*	*
Mason	38	73.2	74.0	15	28.9	33.7	8	15.4	12.3
Okanogan	29	73.2	75.8	12	30.3	32.7	3	*	*
Pacific	14	65.7	63.3	7	32.9	34.2	3	*	*
Pend Oreille	10	82.0	84.8	1	*	*	2	*	*
Pierce	259	34.3	35.9	68	9.0	9.1	57	7.5	8.9
San Juan	4	*	*	1	*	*	1	*	*
Skagit	68	61.3	56.3	20	18.0	17.6	19	17.1	13.8
Skamania	9	87.4	84.5	2	*	*	1	*	*
Snohomish	251	38.3	39.4	72	11.0	11.1	54	8.2	9.7
Spokane	213	48.8	45.7	30	6.9	6.4	63	14.4	12.8
Stevens	35	85.0	84.3	11	26.7	27.2	8	19.4	17.3
Thurston	94	41.9	41.7	27	12.0	11.9	22	9.8	10.1
Wahkiakum	1	*	*	0	*	*	1	*	*
Walla Walla	23	40.0	31.1	6	10.4	9.1	6	10.4	6.1
Whatcom	60	33.2	32.4	20	11.1	10.0	11	6.1	5.8
Whitman	9	21.2	24.5	2	*	*	5	11.8	13.8
Yakima	100	43.6	45.1	48	20.9	21.4	10	4.4	4.4

[1] ICD-10 codes are V02-V04(.1,.9),V09.2,V12-V14(.3-.9), V19(.4-.6),V20-V28(.3-.9),V29-V79(.4-.9),V80(.3-.5),V81.1,V82.1, V83-V86(.0-.3),V87(.0-.8),V89.2

[2] Rate per 100,000 population.

[3] Rate per 100,000 age-adjusted to U.S. 2000 population. Does not include deaths where age is unknown.

* Rate not calculated because number of deaths was less than 5.

Note: Codes for International Classification of Diseases, Tenth Revision (ICD-10) are in parentheses after each group heading unless otherwise noted.

Rates based on fewer than 20 deaths are likely to be unstable and imprecise.

Mortality Table E9. Drowning, Fires, and Other Unintentional Injury (Accident) by County of Residence, 2005

County	Drownings (V90,V92,W65-W74)			Fires (X00-X09)			Other Unintentional Injury (Accident) (remainder)		
	Number	Crude Rate[1]	Age-Adj Rate[2]	Number	Crude Rate[1]	Age-Adj Rate[2]	Number	Crude Rate[1]	Age-Adj Rate[2]
State Total	**104**	**1.7**	**1.7**	**52**	**0.8**	**0.9**	**1,077**	**17.2**	**16.7**
Adams	0	*	*	1	*	*	1	*	*
Asotin	1	*	*	0	*	*	2	*	*
Benton	3	*	*	1	*	*	21	13.3	13.9
Chelan	2	*	*	0	*	*	8	11.6	11.0
Clallam	1	*	*	0	*	*	18	26.9	23.5
Clark	1	*	*	1	*	*	59	15.1	15.2
Columbia	0	*	*	0	*	*	1	*	*
Cowlitz	5	5.2	5.5	5	5.2	5.1	33	34.4	34.3
Douglas	0	*	*	0	*	*	4	*	*
Ferry	0	*	*	0	*	*	1	*	*
Franklin	0	*	*	0	*	*	4	*	*
Garfield	0	*	*	0	*	*	3	*	*
Grant	1	*	*	0	*	*	19	24.0	25.8
Grays Harbor	5	7.2	7.4	2	*	*	13	18.6	19.5
Island	2	*	*	0	*	*	10	13.2	12.2
Jefferson	1	*	*	0	*	*	10	36.2	35.7
King	27	1.5	1.4	7	0.4	0.4	299	16.5	15.5
Kitsap	0	*	*	3	*	*	28	11.6	11.2
Kittitas	3	*	*	0	*	*	3	*	*
Klickitat	0	*	*	0	*	*	4	*	*
Lewis	2	*	*	1	*	*	15	20.9	21.9
Lincoln	0	*	*	0	*	*	1	*	*
Mason	1	*	*	1	*	*	13	25.0	23.6
Okanogan	1	*	*	1	*	*	12	30.3	31.9
Pacific	1	*	*	1	*	*	2	*	*
Pend Oreille	1	*	*	0	*	*	6	49.2	44.8
Pierce	7	0.9	0.9	9	1.2	1.4	118	15.6	15.6
San Juan	1	*	*	0	*	*	1	*	*
Skagit	1	*	*	4	*	*	24	21.6	20.6
Skamania	0	*	*	0	*	*	6	58.3	56.7
Snohomish	13	2.0	2.0	6	0.9	1.1	106	16.2	15.5
Spokane	3	*	*	0	*	*	117	26.8	25.9
Stevens	1	*	*	1	*	*	14	34.0	35.6
Thurston	6	2.7	2.9	0	*	*	39	17.4	16.8
Wahkiakum	0	*	*	0	*	*	0	*	*
Walla Walla	2	*	*	2	*	*	7	12.2	10.5
Whatcom	4	*	*	3	*	*	22	12.2	12.6
Whitman	1	*	*	0	*	*	1	*	*
Yakima	7	3.1	3.1	3	*	*	32	14.0	14.6

[1] Rate per 100,000 population.

[2] Rate per 100,000 age-adjusted to U.S. 2000 population. Does not include deaths where age is unknown.

[*] Rate not calculated because number of deaths was less than 5.

Note: Codes for International Classification of Diseases, Tenth Revision (ICD-10) are in parentheses after each group heading.

Rates based on fewer than 20 deaths are likely to be unstable and imprecise.

Mortality Table E10. Suicide, Homicide, and Undetermined to Residents by County of Injury, 2005

County of Injury	Intentional Self-Harm (Suicide) (X60-X84, Y87.0)	Assault (Homicide) (X85-Y09,Y87.1)	Undetermined (Y10-Y34, Y87.2, Y89.9)
State Total	**814**	**232**	**83**
Adams	4	1	0
Asotin	3	1	0
Benton	10	7	0
Chelan	13	2	3
Clallam	16	0	0
Clark	39	12	1
Columbia	1	0	0
Cowlitz	16	2	3
Douglas	2	0	2
Ferry	1	0	0
Franklin	3	0	0
Garfield	1	0	0
Grant	5	3	1
Grays Harbor	14	2	5
Island	9	1	0
Jefferson	6	1	1
King	205	60	19
Kitsap	35	8	5
Kittitas	3	0	0
Klickitat	2	1	1
Lewis	14	2	0
Lincoln	2	0	0
Mason	14	7	0
Okanogan	12	4	1
Pacific	3	1	1
Pend Oreille	1	0	0
Pierce	91	29	11
San Juan	4	0	0
Skagit	16	3	2
Skamania	5	1	0
Snohomish	76	15	2
Spokane	57	13	1
Stevens	6	0	0
Thurston	23	2	3
Wahkiakum	2	0	0
Walla Walla	6	1	1
Whatcom	28	6	2
Whitman	2	3	0
Yakima	21	21	0
Unknown	13	11	1
Out of State	30	12	17

Note: Codes for International Classification of Diseases, Tenth Revision (ICD-10) are in parentheses after each group heading.

Mortality Table E11. Unintentional Injury (Accident) to Residents by County of Injury, 2005

County of Injury	All Unintentional Injury (Accident)	Motor Vehicle Traffic	Falls	Drownings	Fires	Other Accidents
State Total	**2,520**	**721**	**566**	**104**	**52**	**1,077**
Adams	14	12	0	0	1	1
Asotin	3	1	0	1	0	1
Benton	32	10	7	2	1	12
Chelan	27	4	8	5	0	10
Clallam	33	9	10	2	0	12
Clark	74	27	20	0	0	27
Columbia	3	0	2	0	0	1
Cowlitz	54	10	11	3	5	25
Douglas	10	6	1	0	0	3
Ferry	11	9	2	0	0	0
Franklin	12	4	4	1	0	3
Garfield	0	0	0	0	0	0
Grant	48	20	7	2	0	19
Grays Harbor	38	15	7	6	2	8
Island	29	8	11	1	0	9
Jefferson	15	4	3	1	0	7
King	534	135	133	15	6	245
Kitsap	69	22	26	0	3	18
Kittitas	20	11	0	5	0	4
Klickitat	5	3	0	0	0	2
Lewis	40	10	10	3	1	16
Lincoln	5	4	1	0	0	0
Mason	34	15	7	1	1	10
Okanogan	27	11	4	1	1	10
Pacific	9	3	2	1	1	2
Pend Oreille	6	0	1	0	0	5
Pierce	222	60	56	7	7	92
San Juan	2	1	0	0	0	1
Skagit	67	20	20	2	4	21
Skamania	6	1	0	0	0	5
Snohomish	214	56	48	15	7	88
Spokane	180	30	62	3	0	85
Stevens	25	5	9	1	1	9
Thurston	81	27	15	6	0	33
Wahkiakum	6	5	1	0	0	0
Walla Walla	14	5	5	1	2	1
Whatcom	55	20	9	3	3	20
Whitman	4	1	3	0	0	0
Yakima	86	47	9	3	3	24
Unknown	89	47	13	7	0	22
Out of State	317	43	39	6	3	226

Note: Source for Selected Accidents is International Classification of Diseases (Tenth): All Unintentional Injury (Accident) (ICD-10: V01-X59,Y85-Y86); Motor Vehicle Traffic (ICD-10: V02-V04(.1,.9),V09.2,V12-V14(.3-.9), V19(.4-.6),V20-V28(.3-.9),V29-V79(.4-.9),V80(.3-.5),V81.1,V82.1,V83-V86(.0-.3),V87(.0-.8),V89.2; Falls (ICD-10: W00-W19); Drownings (ICD-10: V90,V92,W65-W74); Fires (ICD-10: X00-X09); Other Accidents (remainder).* *

F. Infant Mortality

Infant mortality data include all infants who died at less than one year of age. Information on the causes of infant death helps identify areas where special care or preventive measures may be needed.

To provide more information about infant death, the death data are linked to data about the infant's birth. This linkage provides demographic data such as the mother's age and race/ethnicity, behavioral data such as smoking during pregnancy, health service data such as prenatal care, and outcome data such as birth weight. Using this linked file, analysts can compare birth characteristics of infants who died to those of infants who survived to identify risk factors for infant mortality. Health care providers use this knowledge to help their patients have a healthy baby.

Mortality Table F1. Selected Causes for Infants (< 1 Year) Residents, 1996-2005

	Total All Causes		Perinatal Conditions		Congenital Malformations		SIDS		External Causes	
Year	Number	Rate[1]	Number	Rate[1]	Number	Rate[1]	Number	Rate[1]	Number	Rate[1]
1996	467	6.0	175	2.2	144	1.8	80	1.0	9	0.1
1997	440	5.6	156	2.0	117	1.5	84	1.1	18	0.2
1998	452	5.7	175	2.2	120	1.5	91	1.1	13	0.2
1998 Comparability Modified										
	452	5.7	188	2.4	111	1.4	96	1.2	13	0.2
1999	401	5.0	172	2.2	102	1.3	69	0.9	13	0.2
2000	423	5.2	172	2.1	92	1.1	76	0.9	27	0.3
2001	461	5.8	200	2.5	119	1.5	60	0.8	32	0.4
2002	452	5.7	200	2.5	105	1.3	70	0.9	24	0.3
2003	447	5.6	200	2.5	116	1.4	48	0.6	20	0.2
2004	451	5.5	189	2.3	120	1.5	53	0.6	29	0.4
2005	420	5.1	170	2.1	113	1.4	42	0.5	27	0.3

[1]Rate per 1,000 live births.

Note:

Causes of death were coded with ICD-9 in 1990-1998 and with ICD-10 started in 1998. Rates during 1998 have been multiplied by a comparability ratio (CR). ICD codes and comparability ratios are:

Perinatal Conditions: ICD-9: 760-771.2,771.4-779; ICD-10: P00-P96; CR=1.0732

Congenital Mallformations: ICD-9: 740-759; ICD-10: Q00-Q99; CR=0.9280

SIDS: ICD-9: 798.0; ICD-10: R95; CR=1.0570

External Causes: ICD-9: E800-E999; ICD-10: V01-Y89; CR=0.9981

Total infant mortality has dramatically decreased since 1990. During this time period, SIDS deaths have declined and deaths from other causes have also decreased. Possible reasons for the change include emphasis on preventive measures such as proper sleep position (the 'Back to Sleep' campaign), use of folic acid before and during pregnancy to prevent neural tube defects, and smoking cessation.

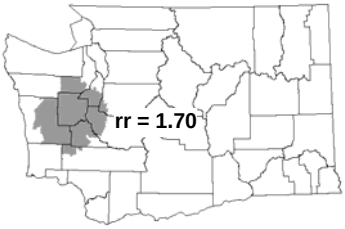
However, when interpreting this table if a sudden change in the SIDS number or rate is evident, the category "unexplained infant death" should be considered to see if that has also changed. Since neither of these conditions is very well-defined, the designation of a particular infant death as SIDS (ICD-10 R95) vs. unexplained death (ICD-10 R99) may be a matter of personal preference on the part of the coroner/ME.

Mortality Figure 11. Infant Mortality

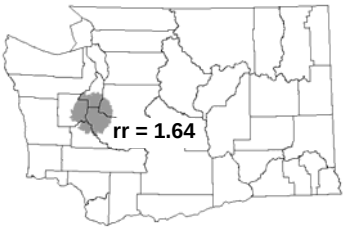
High relative risk (rr) regions by year

2000

2001



2002



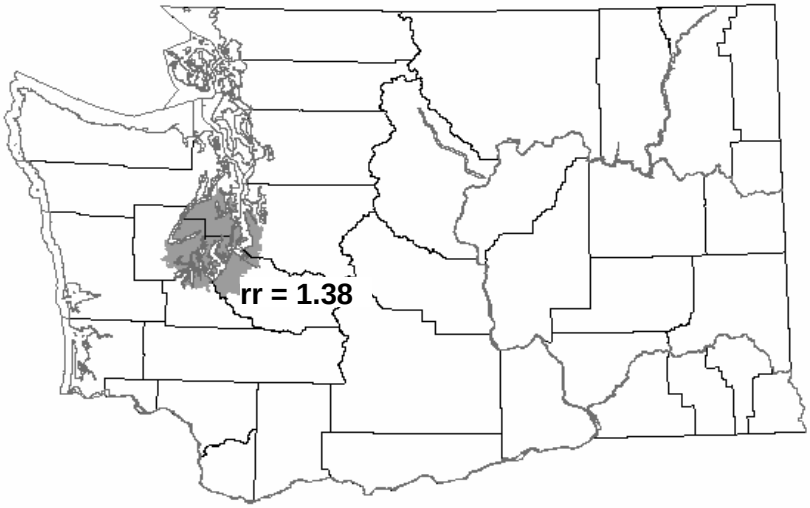
2003

2004

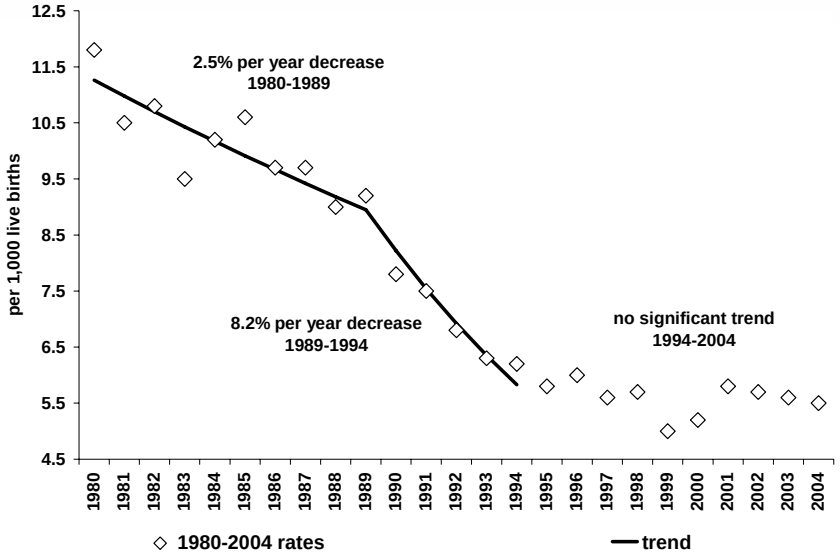
Regions: In 2001 and 2002 infant mortality rates in the south Puget Sound region were significantly higher than expected; in 2000, 2003 and 2004 no such pattern was observed. For 2000-2004 combined the south Puget Sound region was identified as having a relative risk (rr) of 1.38, or 38% higher than expected. On average this means that within this region there were approximately 25 more infant deaths per year than expected.

Trends: Statewide infant mortality rates decreased by 2.5% per year from 1980 to 1989 and by 8.2% per year from 1989 to 1994. From 1994 to 2004 there has been no significant change in these rates.

Infant mortality: High relative risk (rr) regions 2000-2004 combined



Infant mortality: Statewide trends, 1983-2004

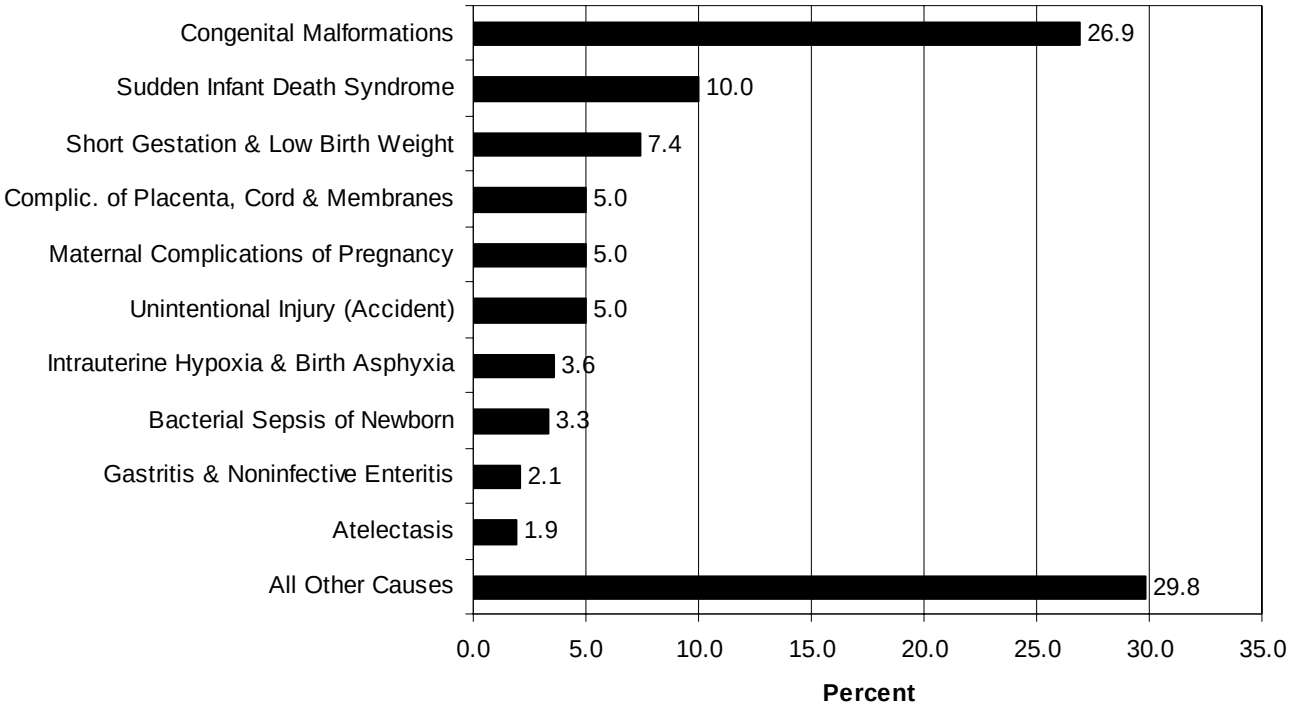


Mortality Table F2. Leading Causes of Infant (Age < 1 Year) Death for Residents, 2005

Rank	Causes of Death and ICD-10 Codes	Number	Percent[1]	Cumulative Percent
	State Total	**420**	**100.0**	.
1	Congenital Malformations (Q00-Q99)	113	26.9	26.9
2	Sudden Infant Death Syndrome (R95)	42	10.0	36.9
3	Short Gestation & Low Birth Weight (P07)	31	7.4	44.3
4	Complic. of Placenta, Cord & Membranes (P02)	21	5.0	49.3
5	Maternal Complications of Pregnancy (P01)	21	5.0	54.3
6	Unintentional Injury (Accident) (V01-X59,Y85-Y86)	21	5.0	59.3
7	Intrauterine Hypoxia & Birth Asphyxia (P20-P21)	15	3.6	62.9
8	Bacterial Sepsis of Newborn (P36)	14	3.3	66.2
9	Gastritis & Noninfective Enteritis (K29, K50-K55)	9	2.1	68.3
10	Atelectasis (P28.0-P28.1)	8	1.9	70.2
	All Other Causes	125	29.8	100.0

[1] Percents may not add to 100% due to rounding.

Mortality Figure 12. Leading Causes of Infant (Age <1 Year) Death for Residents, 2005



Mortality Table F3. Birth Weight and Age for Infant (Age < 1 Year) Residents, 2005

Birth Weight in Grams	Total			1 Day to	7 Days to	28 Days to	6 Months to
	Number	Rate[1]	< 1 Day	< 7 Days	<28 Days	< 6 Months	< 12 Months
State Totals	**420**	**5.1**	**138**	**46**	**67**	**126**	**43**
Under 500	50	862.1	45	0	3	0	2
500 - 749	71	503.5	39	6	11	13	2
750 - 999	26	171.1	9	1	7	6	3
1,000 - 1,499	26	65.2	8	8	6	4	0
1,500 - 1,999	30	30.6	7	5	6	8	4
2,000 - 2,499	40	12.1	9	7	4	14	6
2,500 - 2,999	55	4.6	8	6	5	29	7
3,000 - 3,499	60	2.0	4	8	10	30	8
3,500 - 3,999	35	1.4	1	4	7	16	7
4,000 - 4,499	10	1.3	2	1	2	4	1
4,500 and over	3	*	0	0	0	0	3
Unknown	14	46.8	6	0	6	2	0

[1] Rate per 1,000 live births.

* Rate not calculated because number of deaths was less than 5.

Mortality Table F4-a. Selected Causes by Age and Sex for Infant (Age < 1 Year) Residents, 2005

Cause and ICD-10 Code	Total			Under 1 Day			1 Day to Under 7 Days		
	Total	Male	Fem.	Total	Male	Fem.	Total	Male	Fem.
Total All Causes[1]	**(420)**	**(240)**	**(180)**	**(138)**	**(77)**	**(61)**	**(46)**	**(21)**	**(25)**
Infectious & Parasitic Diseases (A00-B99)	10	8	2	0	0	0	0	0	0
Diseases of the Nervous System (G00-G98)	6	4	2	0	0	0	0	0	0
Diseases of the Circulatory System (I00-I99)	7	3	4	0	0	0	0	0	0
Diseases of the Respiratory System (J00-J98)	11	9	2	0	0	0	0	0	0
Conditions Originating in Perinatal Period(P00-P96)	(170)	(93)	(77)	(98)	(53)	(45)	(26)	(14)	(12)
Newborn Affected by Maternal Factors (P00-P04)	(49)	(33)	(16)	(41)	(26)	(15)	(5)	(4)	(1)
Incompetent Cervix (P01.0)	11	6	5	11	6	5	0	0	0
Premature Rupture of Membranes (P01.1)	9	7	2	9	7	2	0	0	0
Other Maternal Complic. of Pregnancy (P01.2-P01.9)	1	1	0	1	1	0	0	0	0
Complications Involving Placenta (P02.0-P02.3)	15	9	6	11	6	5	4	3	1
Complications of Cord & Membranes (P02.4-P02.9)	6	5	1	4	3	1	0	0	0
Other (P00,P03,P04)	7	5	2	5	3	2	1	1	0
Short Gestation & Low Birth Weight (P07)	31	14	17	27	13	14	1	0	1
Intrauterine Hypoxia & Birth Asphyxia (P20-P21)	15	6	9	3	1	2	5	2	3
Respiratory Distress of Newborn (P22)	5	3	2	2	1	1	3	2	1
Other Respiratory Conditions (P23-P28)	23	14	9	11	4	7	3	3	0
Infections Specific to Perinatal Period (P35-P39)	16	12	4	3	3	0	2	1	1
Neonatal Hemorrhage (P50-P52,P54)	5	3	2	2	1	1	1	0	1
Necrotizing Enterocolitis of Newborn (P77)	7	2	5	0	0	0	1	1	0
Hydrops Fetalis Not Due to Hemolytic Disease (P83.2)	5	2	3	3	2	1	2	0	2
Other (Residual)	14	4	10	6	2	4	3	1	2
Congenital Malformations (Q00-Q99)	(113)	(60)	(53)	(38)	(22)	(16)	(18)	(5)	(13)
Anencephaly and Similar Malformations (Q00)	3	0	3	1	0	1	2	0	2
Malformations of Heart (Q20-Q24)	32	15	17	4	2	2	3	0	3
Other Malformations of Circulatory System (Q25-Q28)	8	5	3	1	0	1	1	1	0
Malformations of Respiratory System (Q30-Q34)	4	3	1	2	1	1	1	1	0
Malformations of Genitourinary System (Q50-Q64)	4	4	0	4	4	0	0	0	0
Malform. of Musculoskeletal Sys. & Skin (Q65-Q85)	16	9	7	7	4	3	3	0	3
Down's Syndrome (Q90)	4	1	3	2	0	2	0	0	0
Edward's Syndrome (Q91.0-Q91.3)	9	4	5	3	2	1	3	0	3
Patau's Syndrome (Q91.4-Q91.7)	9	4	5	3	1	2	3	1	2
Other (Q01-Q18,Q35-Q45,Q86-Q89)	20	13	7	10	8	2	1	1	0
Other Chromosomal Abnormalities (Q92-Q99)	4	2	2	1	0	1	1	1	0
Sudden Infant Death Syndrome (R95)	42	32	10	0	0	0	2	2	0
Other(C00-F99,H00-H99,K00-N99,R00-R94,R96-R99)	34	17	17	2	2	0	0	0	0
External Causes of Mortality (V01-Y89)	(27)	(14)	(13)	(0)	(0)	(0)	(0)	(0)	(0)
Accidents (V01-X59, Y85-Y86)	(21)	(11)	(10)	(0)	(0)	(0)	(0)	(0)	(0)
Suffocation & Strangulation (W75-W77,W81-W84)	11	6	5	0	0	0	0	0	0
Other (V00-W74,W78-W80,W85-X59,Y85-Y86)	10	5	5	0	0	0	0	0	0
Assault (homicide) (X85-Y09, Y87.1)	2	1	1	0	0	0	0	0	0
Other (X60-X84,Y10-Y84,Y87.0,Y87.2-Y89)	4	2	2	0	0	0	0	0	0

[1] Group totals are shown in parentheses.

Total includes 1 death for which sex is unknown.

Mortality Table F4-b. Selected Causes by Age and Sex for Infant (Age < 1 Year) Residents, 2005

Cause and ICD-10 Code	7 Days to Under 28 Days			28 Days to Under 6 Months			6 Months to Under 12 Months		
	Total	Male	Fem.	Total	Male	Fem.	Total	Male	Fem.
Total All Causes[1]	**(67)**	**(40)**	**(27)**	**(126)**	**(78)**	**(48)**	**(43)**	**(24)**	**(19)**
Infectious & Parasitic Diseases (A00-B99)	1	1	0	5	5	0	4	2	2
Diseases of the Nervous System (G00-G98)	2	1	1	3	2	1	1	1	0
Diseases of the Circulatory System (I00-I99)	1	0	1	5	2	3	1	1	0
Diseases of the Respiratory System (J00-J98)	0	0	0	10	8	2	1	1	0
Conditions Originating in Perinatal Period(P00-P96)	(36)	(21)	(15)	(6)	(3)	(3)	(4)	(2)	(2)
Newborn Affected by Maternal Factors (P00-P04)	(2)	(2)	(0)	(1)	(1)	(0)	(0)	(0)	(0)
Incompetent Cervix (P01.0)	0	0	0	0	0	0	0	0	0
Premature Rupture of Membranes (P01.1)	0	0	0	0	0	0	0	0	0
Other Maternal Complic. of Pregnancy (P01.2-P01.9)	0	0	0	0	0	0	0	0	0
Complications Involving Placenta (P02.0-P02.3)	0	0	0	0	0	0	0	0	0
Complications of Cord & Membranes (P02.4-P02.9)	2	2	0	0	0	0	0	0	0
Other (P00,P03,P04)	0	0	0	1	1	0	0	0	0
Short Gestation & Low Birth Weight (P07)	1	0	1	1	1	0	1	0	1
Intrauterine Hypoxia & Birth Asphyxia (P20-P21)	5	3	2	1	0	1	1	0	1
Respiratory Distress of Newborn (P22)	0	0	0	0	0	0	0	0	0
Other Respiratory Conditions (P23-P28)	6	5	1	1	0	1	2	2	0
Infections Specific to Perinatal Period (P35-P39)	10	7	3	1	1	0	0	0	0
Neonatal Hemorrhage (P50-P52,P54)	2	2	0	0	0	0	0	0	0
Necrotizing Enterocolitis of Newborn (P77)	6	1	5	0	0	0	0	0	0
Hydrops Fetalis Not Due to Hemolytic Disease (P83.2)	0	0	0	0	0	0	0	0	0
Other (Residual)	4	1	3	1	0	1	0	0	0
Congenital Malformations (Q00-Q99)	(19)	(12)	(7)	(27)	(15)	(12)	(11)	(6)	(5)
Anencephaly and Similar Malformations (Q00)	0	0	0	0	0	0	0	0	0
Malformations of Heart (Q20-Q24)	7	4	3	14	6	8	4	3	1
Other Malformations of Circulatory System (Q25-Q28)	1	1	0	4	2	2	1	1	0
Malformations of Respiratory System (Q30-Q34)	1	1	0	0	0	0	0	0	0
Malformations of Genitourinary System (Q50-Q64)	0	0	0	0	0	0	0	0	0
Malform. of Musculoskeletal Sys. & Skin (Q65-Q85)	3	2	1	2	2	0	1	1	0
Down's Syndrome (Q90)	0	0	0	1	1	0	1	0	1
Edward's Syndrome (Q91.0-Q91.3)	1	1	0	2	1	1	0	0	0
Patau's Syndrome (Q91.4-Q91.7)	1	1	0	2	1	1	0	0	0
Other (Q01-Q18,Q35-Q45,Q86-Q89)	3	1	2	2	2	0	4	1	3
Other Chromosomal Abnormalities (Q92-Q99)	2	1	1	0	0	0	0	0	0
Sudden Infant Death Syndrome (R95)	1	1	0	35	26	9	4	3	1
Other(C00-F99,H00-H99,K00-N99,R00-R94,R96-R99)	3	2	1	21	9	12	8	4	4
External Causes of Mortality (V01-Y89)	(4)	(2)	(2)	(14)	(8)	(6)	(9)	(4)	(5)
Accidents (V01-X59, Y85-Y86)	(3)	(1)	(2)	(11)	(7)	(4)	(7)	(3)	(4)
Suffocation & Strangulation (W75-W77,W81-W84)	2	0	2	8	5	3	1	1	0
Other (V00-W74,W78-W80,W85-X59,Y85-Y86)	1	1	0	3	2	1	6	2	4
Assault (homicide) (X85-Y09, Y87.1)	0	0	0	1	0	1	1	1	0
Other (X60-X84,Y10-Y84,Y87.0,Y87.2-Y89)	1	1	0	2	1	1	1	0	1

[1] Group totals are shown in parentheses.

Total includes 1 death for which sex is unknown.

Mortality Table F5. Selected Causes for Infant (Age < 1 Year) County of Residence, 2005

County	Total All Causes	Maternal Factors	Hypoxia & Respiratory Conditions	Other Perinatal Conditions	Congenital Malforma-tions	Sudden Infant Death	External Causes	All Other Causes
State Total	**420**	**49**	**43**	**78**	**113**	**42**	**27**	**68**
Adams	5	1	1	1	2	0	0	0
Asotin	0	0	0	0	0	0	0	0
Benton	12	0	1	2	3	5	0	1
Chelan	11	0	2	2	4	2	0	1
Clallam	1	1	0	0	0	0	0	0
Clark	28	2	5	9	5	2	4	1
Columbia	0	0	0	0	0	0	0	0
Cowlitz	2	0	0	0	0	0	1	1
Douglas	3	0	0	0	2	0	1	0
Ferry	2	0	0	1	1	0	0	0
Franklin	5	1	0	0	3	0	0	1
Garfield	0	0	0	0	0	0	0	0
Grant	8	1	1	0	1	0	3	2
Grays Harbor	3	0	1	2	0	0	0	0
Island	3	2	0	0	1	0	0	0
Jefferson	1	0	0	0	0	0	1	0
King	102	11	8	19	34	11	4	15
Kitsap	18	4	2	2	5	3	1	1
Kittitas	1	0	0	0	0	0	0	1
Klickitat	0	0	0	0	0	0	0	0
Lewis	6	1	1	1	0	1	0	2
Lincoln	0	0	0	0	0	0	0	0
Mason	5	1	0	0	2	1	0	1
Okanogan	2	0	0	0	0	0	1	1
Pacific	3	0	1	0	0	0	2	0
Pend Oreille	0	0	0	0	0	0	0	0
Pierce	64	5	9	15	11	2	2	20
San Juan	0	0	0	0	0	0	0	0
Skagit	4	0	0	1	0	1	1	1
Skamania	0	0	0	0	0	0	0	0
Snohomish	32	5	4	8	10	3	0	2
Spokane	34	3	0	8	11	5	2	5
Stevens	4	0	0	0	3	0	0	1
Thurston	16	2	2	1	6	1	1	3
Wahkiakum	0	0	0	0	0	0	0	0
Walla Walla	5	1	1	1	1	1	0	0
Whatcom	9	3	0	0	3	1	1	1
Whitman	1	0	0	0	0	0	0	1
Yakima	30	5	4	5	5	3	2	6

Note: Source for Selected Causes is International Classification of Diseases, Tenth Revision (ICD-10):
Maternal Factors (ICD-10: P00-P04); Hypoxia, and Respiratory Conditions (ICD-10: P20-P28);
Other Perinatal Conditions (ICD-10: P05-P15, P29-P96); Congenital Malformations (ICD-10: Q00-Q99);
Sudden Infant Death Syndrome (ICD-10: R95); External Causes (ICD-10: V01-Y89)

Mortality Table F6. Mother's Race/Ethnicity[1] by Infant (Age < 1 Year) County of Residence[2], 2005

County	Total	White	African American	Native American	Asian	Pacific Islander	More Than One Race Given	Race Unknown
State Total	**420**	**320**	**29**	**14**	**22**	**3**	**12**	**20**
State Rate[3]	**5.1**	**4.7**	**9.3**	**8.9**	**3.5**	*****	**n/a**	22.4
Adams	5	5	0	0	0	0	0	0
Asotin	0	0	0	0	0	0	0	0
Benton	12	11	0	0	0	0	0	1
Chelan	11	11	0	0	0	0	0	0
Clallam	1	1	0	0	0	0	0	0
Clark	28	25	0	0	1	0	0	2
Columbia	0	0	0	0	0	0	0	0
Cowlitz	2	2	0	0	0	0	0	0
Douglas	3	3	0	0	0	0	0	0
Ferry	2	0	0	2	0	0	0	0
Franklin	5	4	0	0	0	0	0	1
Garfield	0	0	0	0	0	0	0	0
Grant	8	7	0	1	0	0	0	0
Grays Harbor	3	1	0	2	0	0	0	0
Island	3	3	0	0	0	0	0	0
Jefferson	1	1	0	0	0	0	0	0
King	102	62	14	0	17	1	1	7
Kitsap	18	14	2	0	0	0	2	0
Kittitas	1	1	0	0	0	0	0	0
Klickitat	0	0	0	0	0	0	0	0
Lewis	6	5	0	0	0	0	0	1
Lincoln	0	0	0	0	0	0	0	0
Mason	5	5	0	0	0	0	0	0
Okanogan	2	1	0	0	0	0	0	1
Pacific	3	3	0	0	0	0	0	0
Pend Oreille	0	0	0	0	0	0	0	0
Pierce	64	45	9	1	2	2	3	2
San Juan	0	0	0	0	0	0	0	0
Skagit	4	3	0	0	0	0	1	0
Skamania	0	0	0	0	0	0	0	0
Snohomish	32	27	1	2	1	0	0	1
Spokane	34	28	2	3	0	0	1	0
Stevens	4	4	0	0	0	0	0	0
Thurston	16	13	0	0	1	0	1	1
Wahkiakum	0	0	0	0	0	0	0	0
Walla Walla	5	5	0	0	0	0	0	0
Whatcom	9	6	1	0	0	0	0	2
Whitman	1	1	0	0	0	0	0	0
Yakima	30	23	0	3	0	0	3	1

[1] Infant deaths are matched with births to find mother's race/ethnicity.

[2] Residence is the infant's at the time of death.

[3] Rate per 1,000 live births.

[4] Persons of Hispanic Origin may be of any race. See Appendix A, "Hispanic Origin."

[*] Rate not calculated because number of deaths was less than 5.

Mortality Table F7. Mother's Age Group[1] by Infant (Age < 1 Year) by Place of Residence[2], 2005

County	All Ages	Under 15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45 and Over	Age Unk
State Total	**420**	**1**	**23**	**40**	**108**	**101**	**77**	**44**	**15**	**1**	**10**
State Rate[3]	**5.1**	*****	**11.7**	**8.4**	**5.4**	**4.4**	**3.9**	**4.2**	**6.7**	*****	**n/a**
Adams	5	0	0	1	1	2	0	0	1	0	0
Asotin	0	0	0	0	0	0	0	0	0	0	0
Benton	12	0	1	1	3	4	1	1	1	0	0
Chelan	11	0	1	2	3	1	3	0	1	0	0
Clallam	1	0	0	0	0	0	1	0	0	0	0
Clark	28	0	3	2	6	9	4	3	0	1	0
Columbia	0	0	0	0	0	0	0	0	0	0	0
Cowlitz	2	0	1	0	0	0	1	0	0	0	0
Douglas	3	0	0	0	0	1	1	1	0	0	0
Ferry	2	0	0	1	1	0	0	0	0	0	0
Franklin	5	0	1	0	0	1	1	1	0	0	1
Garfield	0	0	0	0	0	0	0	0	0	0	0
Grant	8	0	2	1	2	1	1	1	0	0	0
Grays Harbor	3	0	1	0	0	1	1	0	0	0	0
Island	3	0	0	1	0	1	1	0	0	0	0
Jefferson	1	0	0	0	1	0	0	0	0	0	0
King	102	0	4	7	23	22	19	16	9	0	2
Kitsap	18	0	0	3	6	5	4	0	0	0	0
Kittitas	1	0	0	0	0	0	1	0	0	0	0
Klickitat	0	0	0	0	0	0	0	0	0	0	0
Lewis	6	0	1	0	2	1	1	0	0	0	1
Lincoln	0	0	0	0	0	0	0	0	0	0	0
Mason	5	0	0	0	3	1	0	1	0	0	0
Okanogan	2	0	0	1	0	1	0	0	0	0	0
Pacific	3	0	1	0	1	1	0	0	0	0	0
Pend Oreille	0	0	0	0	0	0	0	0	0	0	0
Pierce	64	0	2	7	21	14	10	8	1	0	1
San Juan	0	0	0	0	0	0	0	0	0	0	0
Skagit	4	0	1	1	0	2	0	0	0	0	0
Skamania	0	0	0	0	0	0	0	0	0	0	0
Snohomish	32	0	0	2	10	7	9	2	1	0	1
Spokane	34	0	1	4	8	10	8	2	0	0	1
Stevens	4	0	0	0	1	2	1	0	0	0	0
Thurston	16	0	0	1	5	3	3	2	1	0	1
Wahkiakum	0	0	0	0	0	0	0	0	0	0	0
Walla Walla	5	0	1	0	3	0	0	1	0	0	0
Whatcom	9	0	0	2	2	2	2	0	0	0	1
Whitman	1	0	0	0	0	1	0	0	0	0	0
Yakima	30	1	2	3	6	8	4	5	0	0	1

[1] Infant deaths are matched with births to find mother's age.

[2] Residence is the infant's at the time of death.

[3] Rate per 1,000 live births.

[*] Rate not calculated because number of deaths was less than 5.

Mortality Table F8. Fetal Deaths, Perinatal, Neonatal, and Infant Mortality by County/City of Residence, 2005

County and City	Fetal Deaths		Perinatal Mortality		Neonatal Mortality		Infant Mortality	
	Number	Ratio[1]	Number	Rate[2]	Number	Rate[3]	Number	Rate[4]
State Total	**519**	**6.3**	**703**	**8.5**	**251**	**3.0**	**420**	**5.1**
Adams	5	11.8	7	16.3	3	*	5	11.8
Asotin	1	*	1	*	0	*	0	*
Benton	14	6.5	20	9.2	7	3.2	12	5.5
Kennewick	7	6.2	9	8.0	3	*	6	5.4
Richland	3	*	5	9.7	2	*	3	*
Chelan	7	7.8	9	9.9	5	5.5	11	12.2
Wenatchee	5	8.9	6	10.6	2	*	7	12.5
Clallam	3	*	4	*	1	*	1	*
Port Angeles	2	*	3	*	1	*	1	*
Clark	32	5.7	50	8.8	19	3.4	28	5.0
Camas	2	*	3	*	2	*	3	*
Vancouver	19	5.2	34	9.2	15	4.1	21	5.7
Columbia	0	*	0	*	0	*	0	*
Cowlitz	5	4.0	5	4.0	1	*	2	*
Longview	0	*	0	*	0	*	1	*
Douglas	2	*	3	*	1	*	3	*
Ferry	0	*	2	*	2	*	2	*
Franklin	6	4.0	9	6.0	4	*	5	3.4
Pasco	4	*	6	4.9	3	*	4	*
Garfield	0	*	0	*	0	*	0	*
Grant	9	6.2	13	8.9	4	*	8	5.5
Moses Lake	1	*	2	*	1	*	2	*
Grays Harbor	8	9.3	9	10.4	3	*	3	*
Aberdeen	2	*	2	*	0	*	0	*
Island	5	5.0	7	7.0	2	*	3	*
Oak Harbor	3	*	4	*	1	*	1	*
Jefferson	1	*	1	*	0	*	1	*
King	142	6.3	183	8.0	58	2.6	102	4.5
Auburn	3	*	4	*	4	*	6	6.0
Bellevue	13	10.1	13	10.0	0	*	1	*
Bothell part	2	*	2	*	0	*	0	*
Burien	1	*	1	*	0	*	2	*
Covington	0	*	0	*	0	*	1	*
Des Moines	2	*	3	*	2	*	2	*
Federal Way	11	9.0	12	9.7	2	*	8	6.5
Issaquah	1	*	2	*	1	*	2	*
Kenmore	3	*	5	21.0	2	*	2	*
Kent	11	6.7	15	9.1	4	*	8	4.9
Kirkland	2	*	4	*	2	*	3	*
Maple Valley	5	14.1	5	13.9	0	*	1	*
Mercer Island	0	*	0	*	0	*	0	*
Redmond	5	5.5	8	8.8	4	*	5	5.5
Renton	4	*	5	3.4	2	*	8	5.5
Sammamish	1	*	2	*	1	*	1	*
SeaTac	2	*	4	*	2	*	3	*
Seattle	55	7.8	70	9.9	21	3.0	32	4.6
Shoreline	4	*	4	*	0	*	0	*

Mortality Table F8. (Continued) Fetal Deaths, Perinatal, Neonatal, and Infant Mortality by County/City of Residence, 2005

County and City	Fetal Deaths		Perinatal Mortality		Neonatal Mortality		Infant Mortality	
	Number	Ratio[1]	Number	Rate[2]	Number	Rate[3]	Number	Rate[4]
Tukwila	1	*	1	*	0	*	2	*
Kitsap	18	6.2	27	9.2	14	4.8	18	6.2
Bainbridge Island	0	*	0	*	0	*	0	*
Bremerton	6	6.2	6	6.1	1	*	4	*
Kittitas	5	15.0	5	14.8	0	*	1	*
Ellensburg	4	*	4	*	0	*	0	*
Klickitat	1	*	1	*	0	*	0	*
Lewis	8	9.2	11	12.5	3	*	6	6.9
Centralia	1	*	2	*	1	*	2	*
Lincoln	0	*	0	*	0	*	0	*
Mason	0	*	3	*	3	*	5	8.1
Okanogan	4	*	4	*	1	*	2	*
Pacific	1	*	2	*	1	*	3	*
Pend Oreille	1	*	1	*	0	*	0	*
Pierce	65	6.2	93	8.8	39	3.7	64	6.1
Lakewood	6	6.2	8	8.3	3	*	6	6.2
Puyallup	5	4.3	7	6.0	5	4.3	8	6.9
Tacoma	25	6.6	35	9.2	13	3.4	24	6.3
University Place	3	*	3	*	0	*	0	*
San Juan	1	*	1	*	0	*	0	*
Skagit	14	9.6	14	9.6	1	*	4	*
Anacortes	1	*	1	*	0	*	1	*
Mount Vernon	5	9.0	5	9.0	1	*	2	*
Skamania	0	*	0	*	0	*	0	*
Snohomish	56	6.3	72	8.0	22	2.5	32	3.6
Edmonds	0	*	1	*	1	*	1	*
Everett	17	7.5	19	8.3	3	*	7	3.1
Lynnwood	10	9.7	12	11.6	3	*	3	*
Marysville	6	8.4	7	9.7	3	*	4	*
Monroe	4	*	4	*	0	*	0	*
Mountlake Terrace	2	*	3	*	1	*	1	*
Mukilteo	0	*	1	*	1	*	2	*
Spokane	37	6.6	52	9.2	17	3.0	34	6.1
Spokane (city)	25	7.3	36	10.4	11	3.2	19	5.5
Spokane Valley	2	*	3	*	1	*	5	8.4
Stevens	4	*	6	13.2	3	*	4	*
Thurston	16	6.1	20	7.6	8	3.1	16	6.1
Lacey	3	*	3	*	0	*	2	*
Olympia	4	*	5	5.2	3	*	7	7.3
Wahkiakum	0	*	0	*	0	*	0	*
Walla Walla	6	8.3	8	11	2	*	5	6.9
Walla Walla (city)	3	*	4	*	1	*	2	*
Whatcom	8	3.8	11	5.2	7	3.3	9	4.2
Bellingham	5	5.4	7	7.5	5	5.4	6	6.5
Whitman	3	*	3	*	0	*	1	*
Pullman	1	*	1	*	0	*	1	*
Yakima	31	7.4	46	10.9	20	4.8	30	7.2
Yakima (city)	11	6.5	19	11.2	10	5.9	14	8.3

[1] Fetal death ratio = fetal deaths per 1,000 live births.

[2] Perinatal mortality rate = fetal deaths plus deaths to infants within first 6 days of life per 1,000 live births plus fetal deaths.

[3] Neonatal mortality rate = deaths to infants within first 27 days of life per 1,000 live births.

[4] Infant mortality rate = deaths to infants under one year of age per 1,000 live births.

[*] Rate or ratio not calculated because number of deaths was less than 5.

G. Fetal Death

Fetal death data includes cases where the fetus shows no sign of life at delivery. Fetal death has also been called 'stillbirth.' Only fetal deaths of 20 or more weeks' gestation are required to be reported to the state. Thus, data for early fetal losses are not included in this report. Fetal deaths complete the picture: together with births and early infant deaths they are used to describe the perinatal period (i.e., the period surrounding the delivery).

Mortality Table G1. Selected Causes of Fetal Deaths for Residents, 1996-2005

	Total All Causes		Fetus Affected by Maternal Complications of Pregnancy		Complications of Placenta, Cord, & Membrane		Other Perinatal Conditions		Congenital Anomalies	
Year	Number	Ratio[1]	Number	Ratio[1]	Number	Ratio[1]	Number	Ratio[1]	Number	Ratio[1]
1996	462	5.9	51	0.7	142	1.8	208	2.7	58	0.7
1997	457	5.8	43	0.6	144	1.8	186	2.4	80	1.0
1998	471	5.9	57	0.7	148	1.9	209	2.6	55	0.7
1999	468	5.9	52	0.7	125	1.6	213	2.7	77	1.0
2000	437	5.4	53	0.7	141	1.7	191	2.4	51	0.6
2001	418	5.3	52	0.7	116	1.5	185	2.3	62	0.8
2002	434	5.5	56	0.7	134	1.7	180	2.3	63	0.8
2003	498	6.2	74	0.9	149	1.9	184	2.3	84	1.0
2004	432	5.3	74	0.9	114	1.4	151	1.8	85	1.0
2005	519	6.3	59	0.7	171	2.1	191	2.3	94	1.1

[1]Ratio per 1,000 live births.

Note:

Causes of death were coded with ICD-9 through 1998 and with ICD-10 beginning 1999. Comparabiliy ratios to adjust for the change in classification are not available for fetal death causes. ICD codes are:

Maternal Complications of Pregnancy: ICD-9: 761; ICD-10: P01

Complications of Placenta, Cord, & Membranes: ICD-9: 762; ICD-10: P02

Other Perinatal Conditions: ICD-9: 760,763-771.2,771.4-779; ICD-10: P00,P03-P96

Congenital Anomalies: ICD-9: 740-759; ICD-10: Q00-Q99

Fetal death ratios have fluctuated overtime. The 2005 ratio (6.3) is higher than in the past decade; however the 2004 ratio (5.3) is consistent with previous levels. Data for future years will show if this is just another fluctuation or part of an overall trend. Trends in *cause-specific* fetal death ratios generally parallel the *all-cause* trend.

Mortality Table G2. Fetal Deaths by Mother's Age Group by Place of Residence, 2005

County	All Ages	Under 15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45 and Over	Unk
State Total	**519**	**0**	**26**	**36**	**101**	**135**	**114**	**64**	**26**	**3**	**14**
State Ratio[1]	**6.3**	**.**	**13.2**	**7.5**	**5.1**	**5.8**	**5.8**	**6.1**	**11.6**	**.**	**n/a**
Adams	5	0	0	0	1	2	1	0	0	0	1
Asotin	1	0	0	0	1	0	0	0	0	0	0
Benton	14	0	2	0	2	3	4	2	1	0	0
Chelan	7	0	0	1	0	1	2	1	2	0	0
Clallam	3	0	0	1	1	1	0	0	0	0	0
Clark	32	0	1	2	8	9	8	4	0	0	0
Columbia	0	0	0	0	0	0	0	0	0	0	0
Cowlitz	5	0	0	1	1	2	0	1	0	0	0
Douglas	2	0	0	1	0	0	0	0	1	0	0
Ferry	0	0	0	0	0	0	0	0	0	0	0
Franklin	6	0	0	1	3	2	0	0	0	0	0
Garfield	0	0	0	0	0	0	0	0	0	0	0
Grant	9	0	0	4	3	0	1	1	0	0	0
Grays Harbor	8	0	2	0	0	4	1	1	0	0	0
Island	5	0	0	1	0	1	1	2	0	0	0
Jefferson	1	0	0	1	0	0	0	0	0	0	0
King	142	0	4	3	28	32	37	23	8	0	7
Kitsap	18	0	2	1	4	6	1	1	1	1	1
Kittitas	5	0	0	0	1	2	1	0	0	0	1
Klickitat	1	0	0	0	0	0	0	0	1	0	0
Lewis	8	0	1	0	1	2	2	1	1	0	0
Lincoln	0	0	0	0	0	0	0	0	0	0	0
Mason	0	0	0	0	0	0	0	0	0	0	0
Okanogan	4	0	0	0	2	0	1	1	0	0	0
Pacific	1	0	0	0	0	1	0	0	0	0	0
Pend Oreille	1	0	0	0	1	0	0	0	0	0	0
Pierce	65	0	1	11	13	14	14	7	2	1	2
San Juan	1	0	0	1	0	0	0	0	0	0	0
Skagit	14	0	3	2	3	3	2	0	0	0	1
Skamania	0	0	0	0	0	0	0	0	0	0	0
Snohomish	56	0	5	2	13	13	13	5	4	1	0
Spokane	37	0	2	2	9	14	6	1	3	0	0
Stevens	4	0	0	0	0	1	2	1	0	0	0
Thurston	16	0	0	0	3	3	6	3	0	0	1
Wahkiakum	0	0	0	0	0	0	0	0	0	0	0
Walla Walla	6	0	1	0	1	3	1	0	0	0	0
Whatcom	8	0	0	0	0	2	1	5	0	0	0
Whitman	3	0	0	0	0	2	1	0	0	0	0
Yakima	31	0	2	1	2	12	8	4	2	0	0

[1] Ratio of fetal deaths per 1,000 live births.

[*] Ratio not calculated because number of deaths was less than 5.

Mortality Table G3. Fetal Deaths for Residents by Cause, 2005

Cause with ICD-10 Code	Number
All causes[1]	**519**
Perinatal conditions (P00-P96)	**421**
Fetus Affected by Maternal Conditions (P00)[2]	(33)
Maternal Hypertensive Disorders (P00.0)	17
Maternal Injury (P00.5)	2
Other Maternal Conditions (P00.1-P00.4,P00.6-P00.9)	14
Fetus Affected by Maternal Complications of Pregnancy (P01)	(59)
Incompetent Cervix (P01.0)	8
Premature Rupture of Membranes (P01.1)	44
Multiple Pregnancy (P01.5)	2
Other (P01.2-P01.4,P01.6-P01.9)	5
Fetus Affected by Complications of Placenta, Cord & Membrane (P02)	(171)
Other Forms of Placental Separation & Hemorrhage (P02.1)	37
Other Morphological & Functional Abnormalities of Placenta (P02.2)	25
Placental Transfusion Syndrome (P02.3)	14
Other Compression of Umbilical Cord (P02.5)	44
Other & Unspecified Conditions of Umbilical Cord (P02.6)	21
Chorioamnionitis (P02.7)	21
Other (P02.0,P02.4,P02.8-P02.9)	9
Fetus Affected by Complications of Labor & Delivery (P03)	2
Fetus Affected by Noxious Influences Via Placenta (P04)	8
Slow Fetal Growth & Fetal Malnutrition (P05)	2
Disorders Related to Short Gestation, Low Birth Weight (P07)	12
Disorders Related to Long Gestation & High Birth Weight (P08)	1
Birth Trauma (P10-P15)	0
Intrauterine Hypoxia and Birth Asphyxia (P20-P21)	0
Fetal Hemorrhage (P50-P54)	3
Hydrops Fetalis Due to Hemolytic Disease (P56)	0
Transitory Endocrine & Metabolic Disorders (P70-P74)	13
Fetal Death of Unspecified Cause (P95)	108
All other (P22-P26,P28,P30-P49,P55,P57-P69,P75-P94,P96)	9
Congenital Malformations & Chromosomal Abnormalities (Q00-Q99)	**94**
Congenital Malformations of Nervous System (Q00-Q07)	(25)
Anencephaly & Similar Malformations (Q00)	8
Other (Q01-Q07)	17
Congenital Malformations of Heart (Q20-Q24)	12
Congenital Malformations of Urinary System (Q60-Q64)	5
Congenital Malformations Musculoskeletal & Integument (Q65-Q85)	13
Chromosomal Abnormalities Not Elsewhere Classified, (Q90-Q99)	(28)
Down's Syndrome (Q90)	5
Edward's Syndrome (Q91.0-Q91.3)	10
Other (Q91.4-Q99)	13
Other (Q08-Q18,Q25-Q56,Q86-Q89)	11
All Other Causes (A00-O00,R00-R99,V01-V84)	**4**

[1] Group totals are shown in bold.

[2] Sub-group totals are shown in parentheses.

Mortality Table G4. Fetal Deaths by Weight and Sex for Residents, 2005

Weight in Grams	Total	Male	Female	Unknown
State Totals	**519**	**268**	**247**	**4**
Under 250	26	13	13	0
250 - 499	103	66	37	0
500 - 749	72	34	38	0
750 - 999	33	14	19	0
1,000 - 1,499	24	13	11	0
1,500 - 1,999	25	16	9	0
2,000 - 2,499	36	19	17	0
2,500 - 2,999	45	19	26	0
3,000 - 3,499	17	5	12	0
3,500 - 3,999	15	9	6	0
4,000 - 4,499	12	9	3	0
4,500 and over	5	3	2	0
Unknown	106	48	54	4

Marriage

Marriage

The Washington State Marriage Certificate System gathers information about each marriage that occurs in Washington State. The information on the marriage certificate is provided by the couple themselves and the officiant. The filing of marriage certificates at the state level began in 1968.

The main purposes of the marriage system are: 1) to provide a legal record of the marriage; and 2) to collect information on population trends, especially in regards to the age and location of the participants.

Table 1. Marriages by County of Occurrence and County of Residence[1], 2005

	Occurrence		*Wife's Residence*		*Husband's Residence*	
County	**Number**	**Rate[2, 3]**	**Number**	**Rate[2]**	**Number**	**Rate[2]**
State Total	**40,802**	**6.5**	**37,579**	**6.0**	**37,158**	**5.9**
Adams	124	7.3	102	6.0	105	6.2
Asotin	99	4.7	51	2.4	56	2.7
Benton	987	6.2	861	5.4	852	5.4
Chelan	820	11.8	439	6.3	429	6.2
Clallam	481	7.2	370	5.5	372	5.6
Clark	2,431	6.2	2,180	5.6	2,076	5.3
Columbia	23	5.6	20	4.9	19	4.6
Cowlitz	695	7.2	574	6.0	585	6.1
Douglas	116	3.3	193	5.6	189	5.4
Ferry	40	5.4	22	3.0	21	2.8
Franklin	368	6.1	356	5.9	359	5.9
Garfield	12	5.0	10	4.2	10	4.2
Grant	431	5.4	455	5.8	435	5.5
Grays Harbor	568	8.1	437	6.3	418	6.0
Island	648	8.5	511	6.7	566	7.4
Jefferson	261	9.5	137	5.0	138	5.0
King	11,642	6.4	11,144	6.2	10,943	6.1
Kitsap	1,654	6.9	1,483	6.2	1,497	6.2
Kittitas	236	6.4	255	7.0	258	7.0
Klickitat	125	6.4	91	4.7	93	4.8
Lewis	482	6.7	461	6.4	455	6.4
Lincoln	68	6.7	46	4.6	47	4.7
Mason	390	7.5	306	5.9	311	6.0
Okanogan	298	7.5	179	4.5	192	4.8
Pacific	219	10.3	118	5.5	120	5.6
Pend Oreille	77	6.3	44	3.6	48	3.9
Pierce	5,564	7.4	5,217	6.9	5,325	7.0
San Juan	368	23.7	81	5.2	78	5.0
Skagit	876	7.9	690	6.2	669	6.0
Skamania	151	14.7	40	3.9	40	3.9
Snohomish	3,340	5.1	3,892	5.9	3,851	5.9
Spokane	2,263	5.2	2,129	4.9	2,072	4.7
Stevens	212	5.1	178	4.3	189	4.6
Thurston	1,544	6.9	1,499	6.7	1,432	6.4
Wahkiakum	33	8.5	17	4.4	24	6.2
Walla Walla	367	6.4	302	5.3	282	4.9
Whatcom	1,257	7.0	1,192	6.6	1,147	6.3
Whitman	151	3.6	180	4.2	173	4.1
Yakima	1,381	6.0	1,317	5.7	1,282	5.6
Tribal Authority	*	*	*	*	*	*
	–	–	–	–	–	–
Out of State	*	*	3,223	*	3,644	*
Unknown						

[1] Does not include marriages to Washington residents performed in other states or countries.

[2] Rates per 1,000 population.

[3] Exceptionally high rates by county of occurrence may reflect unique local circumstances, such as highly desirable locations for weddings. See pages 5-6 for a discussion of occurrence rates.

Table 2. Marriages by Woman's Age and County where Ceremony was Performed, 2005

County	Total	Under 20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65 and Over	Unk
State Total	**40,802**	**2,889**	**11,193**	**9,092**	**5,408**	**3,554**	**2,792**	**2,297**	**1,587**	**870**	**453**	**490**	**177**
Adams	124	30	38	20	15	8	8	0	2	0	2	1	0
Asotin	99	3	36	18	12	4	7	5	4	3	1	6	0
Benton	987	102	376	199	64	80	51	52	27	9	9	6	12
Chelan	820	58	201	177	122	78	61	41	38	14	8	12	10
Clallam	481	41	123	77	57	45	38	34	24	15	14	13	0
Clark	2,431	216	670	466	272	212	183	165	108	71	36	32	0
Columbia	23	1	8	6	0	1	1	2	1	1	0	1	1
Cowlitz	695	53	221	128	83	65	34	46	37	13	12	3	0
Douglas	116	6	38	16	11	11	10	7	12	0	3	1	1
Ferry	40	6	8	5	5	2	5	5	2	2	0	0	0
Franklin	368	59	125	80	45	18	15	7	7	5	1	5	1
Garfield	12	0	2	2	0	2	1	2	0	1	1	1	0
Grant	431	70	130	92	34	32	33	14	10	3	7	6	0
Grays Harbor	568	60	144	116	62	42	42	34	25	15	11	9	8
Island	648	61	193	124	78	57	36	25	26	16	11	15	6
Jefferson	261	6	32	62	43	37	26	19	14	10	4	7	1
King	11,642	479	2,577	3,060	1,989	1,177	765	617	448	242	108	102	78
Kitsap	1,654	151	508	331	178	145	110	88	62	37	17	23	4
Kittitas	236	15	83	39	29	19	18	15	5	6	3	3	1
Klickitat	125	13	35	19	18	7	8	8	6	4	3	4	0
Lewis	482	52	146	84	46	36	29	38	15	14	10	10	2
Lincoln	68	6	22	11	6	4	6	7	5	0	0	0	1
Mason	390	29	101	74	52	35	36	26	15	11	4	4	3
Okanogan	298	23	63	54	41	36	25	23	18	6	2	4	3
Pacific	219	13	52	39	24	19	26	15	16	5	6	4	0
Pend Oreille	77	9	25	13	5	4	4	7	4	1	1	3	1
Pierce	5,564	458	1,732	1,203	640	426	367	312	219	97	48	56	6
San Juan	368	1	37	78	97	58	43	18	13	11	6	2	4
Skagit	876	65	231	193	102	66	75	55	37	20	13	19	0
Skamania	151	11	24	24	21	20	17	9	12	6	3	4	0
Snohomish	3,340	224	915	730	438	285	258	204	129	77	28	38	14
Spokane	2,263	161	810	521	249	122	146	106	67	34	24	23	0
Stevens	212	14	67	34	23	19	14	17	12	5	4	3	0
Thurston	1,544	94	431	331	185	132	108	108	62	41	17	19	16
Wahkiakum	33	3	2	7	3	6	1	4	3	0	1	3	0
Walla Walla	367	40	126	72	33	27	18	18	9	10	4	10	0
Whatcom	1,257	87	355	278	156	113	89	67	44	35	14	15	4
Whitman	151	10	56	36	15	13	5	7	4	3	0	2	0
Yakima	1,381	159	450	273	155	91	73	70	45	27	17	21	0
Tribal Authority	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: Center for Health Statistics, Washington State Department of Health, 04/2007.

Table 3. Marriages by Man's Age and County where Ceremony was Performed, 2005

County	Total	Under 20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65 and Over	Unk
State Total	**40,802**	**1,111**	**9,114**	**9,411**	**6,173**	**4,343**	**3,139**	**2,601**	**1,910**	**1286**	**762**	**872**	**80**
Adams	124	9	44	27	15	12	7	2	4	1	1	2	0
Asotin	99	1	29	24	8	8	6	8	4	2	4	5	0
Benton	987	38	331	228	120	75	47	46	51	21	15	13	2
Chelan	820	24	157	191	124	92	72	59	40	19	18	19	5
Clallam	481	15	105	88	71	38	40	37	20	24	22	21	0
Clark	2,431	93	537	532	320	236	198	162	128	120	50	54	1
Columbia	23	1	5	7	2	1	2	1	1	0	0	3	0
Cowlitz	695	17	196	140	85	64	58	54	32	26	13	10	0
Douglas	116	1	31	19	16	9	6	7	13	6	6	2	0
Ferry	40	4	4	6	7	3	4	4	3	5	0	0	0
Franklin	368	20	124	97	43	25	21	13	9	10	1	5	0
Garfield	12	0	2	2	2	0	1	1	0	3	0	1	0
Grant	431	29	134	76	60	52	22	23	12	6	8	8	1
Grays Harbor	568	23	101	137	79	74	40	37	28	16	12	19	2
Island	648	25	173	138	90	69	33	33	26	23	14	24	0
Jefferson	261	1	27	48	39	46	29	26	10	11	12	12	0
King	11,642	140	1,870	2,897	2,168	1,515	970	721	561	363	199	201	37
Kitsap	1,654	55	470	352	212	148	125	90	80	45	40	35	2
Kittitas	236	4	72	54	26	26	15	13	7	10	7	2	0
Klickitat	125	3	32	21	20	13	5	5	7	6	5	8	0
Lewis	482	20	122	105	62	37	48	24	23	12	7	21	1
Lincoln	68	1	21	11	9	1	11	6	4	2	1	1	0
Mason	390	7	81	85	62	38	36	32	20	13	10	5	1
Okanogan	298	10	46	59	55	30	34	26	15	9	3	9	2
Pacific	219	7	36	42	26	26	26	17	17	11	4	7	0
Pend Oreille	77	6	20	14	9	4	5	6	4	1	5	3	0
Pierce	5,564	221	1,443	1,247	768	527	410	364	248	135	91	101	9
San Juan	368	0	24	63	87	63	42	33	18	21	11	5	1
Skagit	876	21	185	201	131	95	57	57	50	26	22	30	1
Skamania	151	2	23	19	20	18	13	25	7	12	6	6	0
Snohomish	3,340	78	770	760	507	355	275	222	151	98	51	69	4
Spokane	2,263	69	667	573	297	165	146	118	94	62	28	44	0
Stevens	212	7	55	51	15	19	17	16	10	9	8	5	0
Thurston	1,544	40	352	358	196	156	110	108	80	69	33	32	10
Wahkiakum	33	1	3	5	5	4	2	2	4	0	3	4	0
Walla Walla	367	21	102	96	41	19	22	19	12	13	6	16	0
Whatcom	1,257	25	282	289	180	139	94	89	69	38	23	29	0
Whitman	151	3	46	38	20	14	8	7	6	4	2	3	0
Yakima	1,381	69	392	311	176	127	82	88	42	34	21	38	1
Tribal Authority	0	0	0	0	0	0	0	0	0	0	0	0	0

Divorce

Divorce

The Washington State Divorce Certificate System gathers information about each dissolution, annulment, or legal separation that is finalized in Washington State. These certificates may come from any superior court or tribal court in the state. The clerk of the court forwards the divorce certificate to the Center upon finalization of the decree. The clerk of the court or the legal counsel for the person requesting the divorce can complete the information on the certificate. The filing of divorce certificates at the state level began in 1968.

The main purposes of the divorce system are 1) to provide a brief, legal record of the event; and 2) to collect information on population trends.

Table 1. Divorces and Annulments by County of Decree and County of Residence[1], 2005

	Occurrence		*Wife's Residence*		*Husband's Residence*	
County	**Number**	**Rate[2, 3]**	**Number**	**Rate[2]**	**Number**	**Rate[2]**
State Total	26,133	4.2	23,945	3.8	23,135	3.7
Adams	40	2.4	40	2.4	35	2.1
Asotin	106	5.1	99	4.7	82	3.9
Benton	642	4.1	607	3.8	570	3.6
Chelan	369	5.3	241	3.5	220	3.2
Clallam	282	4.2	263	3.9	262	3.9
Clark	1,519	3.9	1,528	3.9	1,423	3.6
Columbia	20	4.9	22	5.4	16	3.9
Cowlitz	398	4.2	390	4.1	401	4.2
Douglas	10	0.3	124	3.6	110	3.2
Ferry	17	2.3	24	3.2	21	2.8
Franklin	175	2.9	178	2.9	175	2.9
Garfield	10	4.2	9	3.8	11	4.6
Grant	262	3.3	256	3.2	257	3.2
Grays Harbor	300	4.3	299	4.3	303	4.3
Island	301	4	307	4	292	3.8
Jefferson	110	4	103	3.7	109	3.9
King	5,486	3	6,148	3.4	6,056	3.3
Kitsap	1,117	4.6	1,097	4.6	1,039	4.3
Kittitas	107	2.9	111	3	108	3
Klickitat	69	3.5	68	3.5	63	3.2
Lewis	337	4.7	338	4.7	309	4.3
Lincoln	3,860	382.2	34	3.4	27	2.7
Mason	221	4.3	236	4.5	272	5.2
Okanogan	111	2.8	115	2.9	121	3.1
Pacific	81	3.8	81	3.8	83	3.9
Pend Oreille	45	3.7	53	4.3	39	3.2
Pierce	2,689	3.6	3,371	4.5	3,280	4.3
San Juan	46	3	43	2.8	48	3.1
Skagit	496	4.5	462	4.2	441	4
Skamania	48	4.7	43	4.2	42	4.1
Snohomish	2,398	3.7	2,597	4	2,555	3.9
Spokane	1,735	4	1,864	4.3	1,741	4
Stevens	136	3.3	165	4	153	3.7
Thurston	893	4	973	4.3	883	3.9
Wahkiakum	21	5.4	18	4.6	19	4.9
Walla Walla	212	3.7	205	3.6	208	3.6
Whatcom	609	3.4	635	3.5	609	3.4
Whitman	114	2.7	107	2.5	100	2.4
Yakima	705	3.1	691	3	652	2.8
Tribal Authority	36	*	*	*	*	*
	–	–	–	–	–	–
Out-of-State	*	*	1,643	*	2,334	*
Unknown	*	*	545	*	664	*

[1] Does not include divorces to Washington residents obtained in other states or countries.

[2] Rates per 1,000 population.

[3] Exceptionally high rates may reflect unique local circumstances, such as administrative procedures that make divorces for non-county residents easy. See pages 5-6 for a discussion of occurrence rates.

Table 2. Divorces, Annulments, and Legal Separations by County of Decree, 2005

County	Total	Divorce	Annulment	Legal Separation[1]
State Total	**26,133**	**24,928**	**1205**	**889**
Adams	40	40	0	1
Asotin	106	95	11	0
Benton	642	603	39	12
Chelan	369	336	33	7
Clallam	282	282	0	11
Clark	1,519	1,505	14	55
Columbia	20	20	0	1
Cowlitz	398	367	31	2
Douglas	10	9	1	0
Ferry	17	17	0	0
Franklin	175	151	24	2
Garfield	10	10	0	0
Grant	262	234	28	6
Grays Harbor	300	250	50	5
Island	301	300	1	6
Jefferson	110	110	0	5
King	5,486	5,215	271	231
Kitsap	1,117	920	197	55
Kittitas	107	103	4	2
Klickitat	69	66	3	0
Lewis	337	274	63	8
Lincoln	3,860	3,802	58	81
Mason	221	220	1	9
Okanogan	111	110	1	1
Pacific	81	80	1	3
Pend Oreille	45	45	0	1
Pierce	2,689	2,638	51	119
San Juan	46	45	1	5
Skagit	496	459	37	14
Skamania	48	48	0	2
Snohomish	2,398	2,235	163	69
Spokane	1,735	1,650	85	75
Stevens	136	127	9	4
Thurston	893	888	5	47
Wahkiakum	21	21	0	0
Walla Walla	212	212	0	4
Whatcom	609	593	16	22
Whitman	114	114	0	1
Yakima	705	698	7	22
Tribal Authority	36	36	0	1

[1]Since legal separations are not final dissolutions of marriage they are excluded from the total.

Table 3. Divorces and Annulments by Wife's Age and County of Decree, 2005

County	Total	Under 20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65 and Over	Unk
State Total	**26,133**	**107**	**2,229**	**3,761**	**4,102**	**4,183**	**4,027**	**3,212**	**2,118**	**1151**	**469**	**360**	**414**
Adams	40	0	1	7	7	8	6	3	1	2	2	2	1
Asotin	106	2	8	10	18	17	23	12	7	5	2	1	1
Benton	642	3	83	97	105	98	104	64	45	19	15	5	4
Chelan	369	5	30	45	69	52	57	56	25	10	8	5	7
Clallam	282	2	32	39	34	32	47	32	27	13	7	6	11
Clark	1,519	8	86	206	264	242	265	184	122	71	36	18	17
Columbia	20	1	0	4	6	2	4	1	0	2	0	0	0
Cowlitz	398	0	25	61	72	69	52	45	38	17	7	11	1
Douglas	10	0	1	0	4	1	1	1	1	0	0	0	1
Ferry	17	1	1	2	4	1	4	1	2	0	1	0	0
Franklin	175	0	16	33	31	25	23	21	10	8	2	3	3
Garfield	10	0	0	1	1	2	4	0	0	2	0	0	0
Grant	262	2	32	43	34	43	38	29	13	13	6	7	2
Grays Harbor	300	1	28	36	40	50	52	40	27	11	7	4	4
Island	301	1	55	64	42	32	37	26	18	15	5	3	3
Jefferson	110	0	4	16	11	15	18	12	17	9	2	3	3
King	5,486	8	277	724	877	958	862	723	528	272	98	69	90
Kitsap	1,117	15	151	163	129	162	171	132	105	50	18	10	11
Kittitas	107	1	10	16	11	16	14	14	13	6	3	2	1
Klickitat	69	0	3	7	9	13	8	13	8	3	2	1	2
Lewis	337	1	40	52	48	53	54	42	22	10	6	7	2
Lincoln	3,860	12	347	599	649	622	578	470	272	162	61	50	38
Mason	221	1	23	32	28	38	28	28	15	11	4	8	5
Okanogan	111	0	16	14	16	12	15	13	10	11	2	0	2
Pacific	81	0	5	9	10	21	13	8	3	5	4	1	2
Pend Oreille	45	0	4	8	4	6	9	3	5	3	1	2	0
Pierce	2,689	17	286	426	417	425	398	314	193	95	43	33	42
San Juan	46	0	2	4	3	5	9	12	6	3	2	0	0
Skagit	496	2	39	75	77	74	63	69	49	20	10	15	3
Skamania	48	0	4	4	7	5	11	5	6	1	0	2	3
Snohomish	2,398	11	171	298	358	406	396	324	177	103	29	32	93
Spokane	1,735	7	215	270	294	246	252	174	135	71	30	20	21
Stevens	136	0	14	13	16	21	23	22	13	6	5	2	1
Thurston	893	2	80	139	141	143	124	116	79	35	9	16	9
Wahkiakum	21	0	2	3	5	3	0	2	1	1	2	2	0
Walla Walla	212	1	14	32	36	36	27	23	23	6	7	3	4
Whatcom	609	2	47	74	77	95	92	92	54	44	18	6	8
Whitman	114	0	13	23	19	15	20	12	4	4	3	1	0
Yakima	705	1	62	106	121	112	121	72	43	29	11	10	17
Tribal Authority	36	0	2	6	8	7	4	2	1	3	1	0	2

Table 4. Divorces and Annulments by Husband's Age and County of Decree, 2005

County	Total	Under 20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65 and Over	Unk
State Total	**26,133**	**29**	**1,333**	**3,054**	**3,951**	**4,068**	**4,136**	**3,536**	**2,592**	**1,579**	**801**	**704**	**350**
Adams	40	0	0	4	4	11	5	6	3	2	0	4	1
Asotin	106	2	6	7	15	24	15	14	12	6	4	1	0
Benton	642	1	51	89	102	84	95	96	52	39	18	12	3
Chelan	369	0	17	44	54	62	61	43	39	18	13	10	8
Clallam	282	0	20	35	30	30	44	35	31	23	17	9	8
Clark	1,519	2	55	142	233	256	267	199	169	104	46	35	11
Columbia	20	0	2	4	4	3	3	1	2	0	1	0	0
Cowlitz	398	0	19	46	61	62	72	44	42	24	12	16	0
Douglas	10	0	1	0	3	2	0	2	0	1	0	1	0
Ferry	17	0	2	1	1	3	2	1	2	0	1	4	0
Franklin	175	0	8	23	29	25	27	26	15	7	4	8	3
Garfield	10	0	0	0	3	0	2	4	1	0	0	0	0
Grant	262	1	21	36	36	31	43	32	20	16	10	11	5
Grays Harbor	300	1	15	28	37	54	47	40	31	25	9	9	4
Island	301	1	46	52	49	36	43	26	17	19	7	5	0
Jefferson	110	0	1	10	13	17	17	15	14	8	10	5	0
King	5,486	2	127	513	850	909	893	841	590	373	178	145	65
Kitsap	1,117	1	100	184	131	150	164	146	118	60	38	20	5
Kittitas	107	0	7	11	11	13	14	21	13	11	2	3	1
Klickitat	69	0	2	5	9	10	11	8	9	11	1	2	1
Lewis	337	1	16	41	51	51	50	54	33	18	10	12	0
Lincoln	3,860	6	215	482	646	634	575	493	344	215	120	93	37
Mason	221	0	10	35	32	30	32	28	17	20	4	12	1
Okanogan	111	0	7	17	13	13	14	15	10	11	6	4	1
Pacific	81	0	2	9	12	9	12	12	9	5	5	2	4
Pend Oreille	45	0	3	4	4	5	7	9	6	2	2	3	0
Pierce	2,689	7	190	377	414	412	399	351	238	139	69	59	34
San Juan	46	0	0	2	6	3	7	7	11	5	2	3	0
Skagit	496	1	22	61	82	68	67	71	48	27	17	27	5
Skamania	48	0	2	4	2	9	9	8	5	5	1	3	0
Snohomish	2,398	0	94	243	320	389	441	320	229	143	54	67	98
Spokane	1,735	2	139	230	271	261	272	199	158	93	52	42	16
Stevens	136	0	6	8	14	23	17	25	22	6	4	10	1
Thurston	893	0	47	112	140	148	132	124	100	46	21	15	8
Wahkiakum	21	0	1	3	4	5	0	3	0	1	2	2	0
Walla Walla	212	0	9	28	33	28	43	20	26	11	8	3	3
Whatcom	609	1	23	60	79	66	109	94	76	49	26	21	5
Whitman	114	0	11	11	22	19	17	11	10	4	5	4	0
Yakima	705	0	34	88	126	107	104	89	66	30	21	22	18
Tribal Authority	36	0	2	5	5	6	4	3	4	2	1	0	4

Table 5. Divorces and Annulments by Number of Children[1] and County of Wife's Residence[2], 2005

County	Total	0	1	2	3	4 +	Unknown[3]
State Total	**26,133**	**12,487**	**5,356**	**5,422**	**1,842**	**657**	**369**
Adams	40	13	8	12	4	3	0
Asotin	99	45	18	23	10	3	0
Benton	607	255	148	139	44	17	4
Chelan	241	105	46	59	25	6	0
Clallam	263	120	46	56	23	15	3
Clark	1,528	649	323	359	140	34	23
Columbia	22	8	5	8	1	0	0
Cowlitz	390	177	90	87	28	8	0
Douglas	124	52	24	30	10	7	1
Ferry	24	10	5	6	0	1	2
Franklin	178	66	42	34	16	16	4
Garfield	9	4	1	3	0	1	0
Grant	256	114	54	50	22	10	6
Grays Harbor	299	140	71	63	15	10	0
Island	307	163	63	51	22	6	2
Jefferson	103	50	23	17	9	1	3
King	6,148	3,134	1,166	1,257	385	121	85
Kitsap	1,097	499	234	241	82	26	15
Kittitas	111	40	27	27	12	1	4
Klickitat	68	28	9	21	6	3	1
Lewis	338	136	76	70	37	12	7
Lincoln	34	15	7	8	3	1	0
Mason	236	119	46	47	13	9	2
Okanogan	115	52	21	25	9	7	1
Pacific	81	37	17	16	7	3	1
Pend Oreille	53	29	7	9	6	2	0
Pierce	3,371	1,548	767	705	225	93	33
San Juan	43	24	10	5	4	0	0
Skagit	462	210	98	94	41	14	5
Skamania	43	20	8	11	2	0	2
Snohomish	2,597	1,191	527	595	187	57	40
Spokane	1,864	853	417	394	144	43	13
Stevens	165	84	33	30	10	6	2
Thurston	973	433	229	215	64	20	12
Wahkiakum	18	10	2	5	1	0	0
Walla Walla	205	91	45	41	17	10	1
Whatcom	635	288	124	130	58	18	17
Whitman	107	52	20	24	8	3	0
Yakima	691	264	153	162	68	31	13
Out-of-State	1,643	1059	256	216	59	26	27
Unknown	545	300	90	77	25	13	40

[1]Certificate of dissolution records, "Children born alive of this marriage." All children are counted regardless of age.

[2]Does not include residents who obtain divorces or annulments outside of Washington State.

[3]Unknowns are higher and divorces with no children appear lower in 1999 than in prior years since cases in which the number of children was not reported were previously entered as "none" rather than "unknown."

Appendices

Appendix A. Technical Appendix

Interpreting Vital Statistics

Washington State Vital Statistics presents commonly used vital statistics data. These data are intended for a variety of users ranging from the beginner to the sophisticated analyst. This section is intended primarily to help those who may not entirely understand how to use vital statistics data or are not aware of data limitations, especially limitations due to small numbers. Reading this section may help beginning users avoid drawing incorrect conclusions from the data**.** For other users, this section may serve as a review.

Vital statistics pertain to basic events of life collected from mandated certificates: birth, fetal death, death, marriage, and divorce. They provide powerful indicators of health problems and, therefore, can help track progress toward health improvement goals. They can also provide information on what health problems occur, who may have these problems, and when and where they occur. Unfortunately, vital statistics cannot usually tell us why health problems occur, which is what prevention programs really need to know. It is a common mistake to think that if two data items are associated or correlated (such as age of mother and low birth weight), then one causes the other. In reality, this could be a chance association (if you look at enough variables you usually find some relationship) or both items could be associated with a third, unmeasured factor (such as poverty or poor nutrition).

Mortality statistics are sometimes used as indicators of disease conditions within the population. They are very limited in this capacity, however, especially for illnesses that are not usually classified as the underlying cause of death. Hospital inpatient data from the Comprehensive Hospital Abstract Reporting System (CHARS) provide a somewhat better measure of morbidity, but even these data are limited to conditions that result in a hospital admission.

Trend Analysis

We conducted tests of trend to determine whether rates were increasing, decreasing, or staying the same over time. For these analyses, we used the "joinpoint" methodology developed by the National Cancer Institute. Information on this method is available at **http://srab.cancer.gov/joinpoint**.

Trend analysis for mortality data was complicated by changes in coding death certificates effective in 1999. For some causes of death, data before 1999 are not comparable to data from 1999 and later. In the *Vital Statistics*

2005, we conducted formal trend analysis for two time periods using the death data for 1980 through 1998 separately from data for 1999 through 2005. (See *Changes in Classification of Causes of Death* section for more details.)

Spatial Clustering

Clusters presented on maps were based on a spatial scan statistical test that looks at all the possible combinations of adjacent census tracts and identifies any grouping of areas that have significantly more cases or deaths than expected. The methodology and software (SaTScan) was developed under contract for the US National Cancer Institute. (http://www.satscan.org/)

For these analyses, we combined data for 2001-2005 by preparing counts by census tract. The counts for mortality were prepared by 10 year age groups and gender. Population by census tract, age and gender was obtained from *Population Estimates: Washington State Department of Health, Vista Partnership, Krupski Consulting; Washington State Population Estimates for Public Health. October 2004.*

Frequently asked Questions:

Residence vs. Occurrence

What's the difference between *residence* and *occurrence?* Users may notice that tables contain tabulations in two ways: 1) by residence (where the person lived) or 2) by occurrence (where the event occurred). For example, a woman who lived in Olympia (Thurston County) but had her baby in Seattle (King County) would be counted in Thurston County on a residence table and in King County on an occurrence table. The Center for Health Statistics actually registers only those vital events occurring in Washington State. However, because of an interstate exchange agreement, we receive data on Washington residents who have babies in another state, or who die in another state. Thus we have complete records on births, deaths and fetal deaths for residents of Washington State regardless of where the event took place.

Some users may be tempted to add residence and occurrence figures together to get a total for an area, but this would not be correct. There is a great deal of overlap between these two ways of counting, as most residents of a county have their babies or die in the same county. Other users try to subtract residence and occurrence data to figure out how many residents are born or die outside of their county, but this is also incorrect. The only way to determine where county residents are having babies or dying is to tabulate births or deaths by place of residence relative to place of occurrence. For

births, one may use *Natality Table C8* of this report which cross-tabulates the mother's county of residence by the county in which the birth occurred. For deaths, please refer to *Mortality Table A7-a*, which shows deaths by residence and occurrence by county and city.

When should residence or occurrence data be used? Users generally need data about the residents of an area. Residents would be the target audience for any local health assessment or health promotion programs. Population figures, commonly used to calculate rates, are also based on a person's residence. Hospital planners might want to know both (where births occurred to residents of their area) so they can assess possible markets.

For certain events, particularly external causes of death such as motor vehicle accidents or drowning, prevention programs might instead want to know where the event occurred so they can identify potentially hazardous situations or areas. Unfortunately, there is no population base to use for calculating occurrence rates, which might tell if the numbers are unusually high or low. For example, a rural road might have a high number of motor vehicle accidents relative to the number of people living there, but there may be many more people driving that road on their way to work, so there would be more people at risk of getting in accidents. The size of particular events and occurrences vary, so population must always be considered when looking at occurrence data.

Numbers vs. Crude or Age-Adjusted Rates

When should numbers or rates be used? All tables in this report give the number of events (e.g., the number of Washington residents dying of cancer). These numbers are used to determine the size of a problem in any area (e.g., how many people die of cancer) or to estimate population changes due to birth and death. But, using just numbers, we cannot readily compare two areas or two time periods. Such comparisons should take the size of the population into account to avoid erroneous conclusions.

To eliminate the effect of different sized populations, we compare rates. A rate is the number of vital events (such as deaths) in a specified time period divided by the number of people at risk of these events in that period (typically, a state or county population, or the number of births in the case of infant death). This figure is generally multiplied by a constant such as 1,000 or 100,000 to get a number that is easy to read and compare and is reported as "per 1,000" or "per 100,000."

Rates calculated in this manner are called ***crude rates***. They adjust for differences in population size but not differences in population characteristics. These population characteristics also need to be considered in interpreting comparisons. For example, since death rates increase with

increasing age, a county with an older population may have higher death rates just because its population is older.

To compare rates and see if a particular county's death rate is high just because of its older population, we need to use ***age-adjusted death rates***. These rates are computed by taking a county's death rates for each age group and applying them to a standard population. The traditional standard has been the 1940 US population. However, in 1999 the standard changed and is now the 2000 US population (see Anderson, RN, and Rosenberg, HM. *Age standardization of death rates: implementation of the year 2000 standard.* National Center for Health Statistics. National Vital Statistics Report 3 (47), 1998, or Klein,RJ and Schoenborn, CA. *Age Adjustment Using the 2000 Projected U.S. Population*. CDC Statistical Notes, No.20, January, 2001.). The year 2000 population has a higher concentration of population in the age groups between 35 to 44 years and 65 and over. The population of age 65 years and over almost doubled during this period. Since age-adjusted rates using 2000 population give more weight to older age groups, the magnitude of age-adjusted rates using this standard will change considerably.

Age-adjusted death rates describe what a particular county's death rate would be if it had the same age distribution as the standard population. The major use of age-adjusted death rates is to allow comparisons among different areas and/or over various periods of time. Users should be aware that an age-adjusted death rate has no absolute meaning; it is an artificial number based on a hypothetical population and is only useful for comparing with other rates calculated in the same manner. While age adjustment is the most common method for adjusting rates, a similar process can be used to adjust for other characteristics such as sex, education, or birth weight.

Although reports often focus on which population has the highest rate, one should remember that rates can mask differences in numbers that may be needed for policy decisions. For example, the infant mortality rate is considerably higher for many people of color than for whites. However, due to the state's racial composition, most infants who die in this state are white and examining the rate for all infants might mask information of a particular race or ethnicity. To reduce racial disparity, one would focus on reducing infant mortality among people of color. Such a reduction, however, would not necessarily have much effect on the state's overall infant mortality rate. So, to determine the burden of a health problem in a community, numbers rather than rates are usually the most appropriate measure.

Standards for Comparison of Rates

What are good standards for comparison of rates? To help interpret a particular rate, one may choose to compare it to rates for another county or similar geographical area, national or state data, or an independent goal or

standard. Such issues as comparability of population characteristics and stability of rates from year to year for the standard population should be considered when choosing a base for comparison.

In comparing rates from different sources, users should be sure that the same methods and definitions were used to calculate the rates. Otherwise, the rates are not truly comparable and may lead to incorrect conclusions. Some questions to ask might be: Are the rates crude or adjusted? Are they for the same time period? Is the definition of what constitutes an event the same? Are the same coding definitions used? Is the completeness of reporting events similar? Are the denominators taken from the same or similar data sources?

Unknowns

Most vital statistics data are not 100% complete. Sometimes the information is not (or cannot be) collected, and then the item is reported as unknown. How should unknowns be handled? When the number of unknowns for a particular characteristic is large, it can affect rates or percentage distributions based on that characteristic. For example, in 2005, father's education was missing for about 17% of the births.

How should unknowns be handled in calculating percentages? If we include unknowns in the total, the percent in any category is smaller than it would be if we subtract unknowns from the total. For example, in the case of 2005 births, the percent of fathers with less than a high school education is 13.6% if unknowns are included in the total, but is 16.4% if unknowns are excluded from the total.

In deciding which method offers a "truer" representation of the population as a whole one needs to consider whether the cases with an unknown characteristic are *similar to* or *different from* those cases in which the characteristic is known. If it appears likely that the cases with the unknown characteristic are similar to those with the known values, then "unknowns" should be excluded from the total and percentages should be based on the "known" population. To the extent that this assumption seems unlikely, then other methods could be invoked to distribute the cases with unknown values.

Assumptions about the probable characteristics of the population with a given unknown attribute could be based on: 1) greater familiarity with local situations by persons in the county or city health community; or 2) on more in-depth analysis of the source of the unknowns in the reporting system. For example, if only a few hospitals or medical facilities fail to report a particular variable, one might examine information about the population served by those particular facilities or those living in the nearby community.

Changes in Classification of Causes of Death (ICD-10)

Beginning with deaths occurring in January 1999, the United States began using International Classification of Diseases (ICD-10) to classify causes of death reported on death certificates. ICD-9 had been used during 1979-1998. Implementation of ICD-10 has had an important impact on the presentation and interpretation of mortality statistics by cause-of-death. The change to ICD-10 created a discontinuity in trends that must be accounted for when comparing mortality during 1999 and later to prior years. To put it another way, ***cause-of-death data for 1999 and later years are not comparable to prior years***, unless adjustments are made for the coding and classification changes. Without adjustment, it is impossible to know whether an observed increase or decrease in deaths due to a particular cause is "real" or merely the result of the changes in classification and coding.

Some of the differences between ICD-10 and ICD-9 are:

- ICD-10 is far more detailed and has about 8,000 categories compared to ICD-9 with about 5,000 categories.
- ICD-10 uses 4-digit alphanumeric codes that begin with a letter compared to ICD-9 which has 4-digit numeric codes.
- Additional chapters have been added and some have been rearranged. For example, myelodysplastic syndromes have been moved into the neoplasm chapter which has caused an increase in the number of benign neoplasms and neoplasms of uncertain or unknown behavior.
- Tabulation lists with groups of ICD codes have changed. More conditions are included in the lists used to determine leading causes of death and some of the groups of conditions have changed. For example, accidents and adverse effects were combined in ICD-9 tabulation lists. With ICD-10, accidents and adverse effects are now in separate categories.
- Coding rules for causes of death have changed. For example, pneumonia is now considered a direct sequel of more conditions which has led to a 30% decrease in pneumonia as an underlying cause-of-death.

To enable comparisons across the ICD-9 to ICD-10 transition, a preliminary comparability study was carried out by the National Center for Health Statistics (NCHS). NCHS double-coded a large sample of the 1996 national mortality file, once by ICD-9, and again by ICD-10. A **comparability ratio** was then calculated by dividing the number of deaths for a selected cause of death classified by ICD-10 by the number of deaths classified to the most nearly comparable cause of death by ICD-9. The resulting ratio can be used to ***adjust*** counts and rates for a given cause of death classified by ICD-9 so they are comparable to those for the most

similar cause classified by ICD-10. The ratio will also allow users to estimate the extent of the discontinuity of the change to ICD-10 by showing the net effect of coding and classification changes.

The National Center for Health Statistics (NCHS) has published its final comparability study based on the complete national mortality file to supercede the preliminary comparability study. The NCHS Study is published, and is noted on the CHS update website at http://www.doh.wa.gov/EHSPHL/CHS/CHS-Data/main.htm .

Calculations: In order to compare rates or counts coded by ICD-9 with rates or counts coded by ICD-10, multiply the ICD-9 count or rate by the cause specific comparability ratio. The Center for Health Statistics produced an additional report *Washington State Vital Statistics ICD-10 Supplement, 1990-1999 (*See: http://www.doh.wa.gov/ehsphl/chs/chs-data/public/sup90_99.pdf). This report provides more information about ICD-10 and includes tables with comparability ratios and tables with counts and age-adjusted mortality rates for 1990-1999.

For example, there were 1,717 deaths due to pneumonia and influenza to residents of Washington State in 1998 (ICD-9 480-487). In 1999, 1,257 residents of Washington State died due to pneumonia and influenza (ICD-10 J10-J18). Comparing these counts leads to a conclusion that there was a very large drop in deaths due to pneumonia and influenza. This conclusion is incorrect: By multiplying the 1998 count of 1,717 by the comparability ratio of 0.70, the resulting comparability modified number of deaths in 1998 would be 1,202. Comparing the modified count in 1998 of 1,202 to the ICD-10 count in 1999 of 1,257 shows an increase of only 55 deaths from 1998 to 1999 instead of a large decrease.

Small Numbers

How should small numbers be handled? If the state collects all births and deaths in a year, then aren't the birth and death rates exactly as calculated? It's certainly true that vital statistics are not based on samples of the population, as many research data are. We do know the actual number of births, deaths, and population (assuming complete reporting of events), so we can calculate an exact birth or death rate for any one year. However, the data may still be affected by random fluctuations in the number of events between successive measurements (e.g., for different years).

The effect of such random fluctuations on birth or death rates is proportionately larger when the number of events is small. For example, one more infant death has a larger numerical impact on an area with three deaths than it does on an area with 300 deaths. Because of these random fluctuations, the rates based on small numbers may not be as reliable as those

based on larger numbers in the sense that they may have limited predictive value. Specifically, knowing one year's rate in such instances may not allow one to reliably anticipate the rate for another year. This instability makes it difficult to use the rates for program planning or assessment purposes. In fact, considerable caution should be used in interpreting any data where the number of events is small.

There are no hard and fast rules as to when numbers are too small for rates to be stable predictors of what's happening. However, the Washington State Department of Health *Guidelines for Working with Small Numbers* call for suppressing calculation of rates when the number of events is less than five. In addition, tables should include a footnote indicating that rates based on fewer than 20 events are likely to be unstable and imprecise. To increase the stability of the rate, one can combine several years of data (as long as there is no strong temporal trend in rates) or one can group several counties in the same geographic area or with similar population characteristics. For more help in using small numbers consult the *Data Guidelines* at http://www.doh.wa.gov/Data/guidelines/SmallNumbers.htm.

Data Quality

How does data quality affect the use of the data? Conclusions and health policy decisions are only as good as the data that go into making them. Vital statistics data quality has three major components: completeness, accuracy, and timeliness. Are vital statistics ***complete***, i.e., do we have a record for each vital event? According to National Center for Health Statistics (NCHS) studies, registration of births and deaths is currently better than 99% complete. However, some records come in after the data files are prepared and thus are not included in the data presented in this report.

In addition to determining the completeness of a reporting system, researchers are often concerned with the degree to which people report what is actually happening. This characteristic of the data is called its ***validity.*** Studies of validity of reporting systems like the birth certificate system usually look for an independent source of the information and determine the consistency with data contained in the reporting system.

To improve data quality, both birth and death certificates are edited for accuracy of the data. Where possible, data are checked to see if they are within a reasonable range of values (e.g., mother's age must be 8-59, with warning notices for ages less than 14 or greater than 49). Data are also checked to see if there is internal consistency between items (e.g., a person is not expected to have more than one year of college education if he/she is less than 16 years old). Those who complete death certificates are queried if there is not enough information to establish an accurate and specific cause of death.

A factor that affects the completeness of the data is the number of ***unknowns*** among responses. Sometimes providers do not complete all items on a certificate. The information may be overlooked or refused by the informant, or the informant may not have been asked for the data. Missing data decrease the overall accuracy of an item because we don't know where they fit (e.g., are smokers less likely to respond to a question on smoking?). Periodic data quality analyses are done to help identify facilities with large amounts of missing data. These facilities are queried for more information. In order to help improve data completeness, the Center for Health Statistics recently developed a web-based method to provide feedback on data completeness to each birth hospital and also works intensively with the facilities throughout the year to help them improve their data collection procedures.

Finally, are vital statistics ***timely***, i.e., are they registered early enough so that the data are available when needed to be most useful for planning and program assessment purposes? There is often a tradeoff between timeliness and accuracy. For example, if birth certificates are filed quickly, there may not be enough time for malformations or complications to become evident. Similarly, if death certificates are filed quickly, there may not be time for autopsy results to be incorporated into the cause of death data. Despite the potential benefits of waiting for complete information, the main thrust, particularly for birth certificates, is to streamline the reporting process and to gather and report information as close to the event as possible. This has been accomplished by the Center for Health Statistics primarily by the development of the Electronic Birth Certificate System.

Confidentiality

How do we ensure confidentiality of the data? All of the data in this report are presented in aggregate form so that individuals are not likely to be identified from the tables. However, it is important for potential data users to be aware of confidentiality issues related to the data. The medical and health information on birth and fetal death certificates is confidential and is to be used only in aggregate statistics which do not enable the identification of specific individuals. Hence, such confidential data may not be linked to any identifying information except for research projects approved by the Washington State Institutional Review Board of the Department of Social and Health Services and the Department of Health. The sample birth and fetal death certificates in Appendix G delineate the portion that is confidential. Some death data (particularly causes of death such as suicide and AIDS), while not confidential by law, are extremely sensitive.
It is the responsibility of all data users to treat these data in such a way as to respect and protect the privacy of individuals who have provided information about their personal lives, to be used for the good of the public. To ensure

continued reporting of important demographic, medical, and health information, data must be handled in a way that ensures the privacy of individuals as required by law.

Sources of Data

Collection Year

Data for *Washington State Vital Statistics, 2005* are compiled from items on birth, death, fetal death, marriage, and dissolution certificates received before extraction of the annual data files from the database files in 2006. The tables in this report will therefore not reflect any changes made to the database files after the extraction date. (See Appendix F for samples of certificate forms used.)

Population

Population estimates in this report are from the Washington State Office of Financial Management, Forecasting Division, *Intercensal and Postcensal Estimates of County Population by Age and Sex: 1980-2005*, August 2006.

Classification of Data

Classification and coding of data on Washington State vital records follow National Center for Health Statistics (NCHS) guidelines as defined in *Vital Statistics Instruction Manuals*, parts 1-20 (Published by U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Health Statistics, Hyattsville, Maryland).

Demographics

Age

The death certificate contains fields for reported age at death and also birth and death dates, which are used to calculate age at death. Where there is a discrepancy between the reported and calculated ages, the county (and ultimately the funeral director) is queried and most of the discrepancies are resolved. For the remaining discrepancies, where there is a difference of one year, the calculated age is used for age at death (which assumes that the informant made an arithmetic error). Where there is a difference of more than one year, the reported age is used.

For infant deaths (<1 year), age is measured in minutes, hours, days, or months. Some certificates may report a primary and secondary age, e.g., 1 month 2 weeks. This report uses only the primary age (e.g., 1 month). The secondary age (e.g., 2 weeks) is dropped off, so the infant's age is truncated at the primary age category.

Race

Race data collected on vital statistics follow the definition established by the Census Bureau, as follows:

> The concept of race as used by the Census Bureau reflects self-identification; it does not denote any clear-cut scientific definition of biological stock. The data for race represents self-classification by people according to the race with which they most closely identify. Furthermore, it is recognized that the categories of the race item include both racial and national origin or socio-cultural groups.

Until 2003, birth and death certificates used open-ended reporting of race, allowing for multiple racial entries. As of 2003, race on birth and fetal death certificates is collected by a series of check boxes, according to rules established by the US Office of Management and Budget and used in the collection of the 2000 Census Data. (See 'Birth Data Notes' for more discussion.) Beginning January 1, 2004, the same convention was applied to race data captured by death certificates.

Reporting of race on birth certificates is based on information provided by the mother. Reporting of race on death certificates is sometimes based on observing the decedent, rather than questioning the next of kin. This procedure causes an underestimate of deaths for certain groups, particularly Native Americans, some of the Asian subgroups, and Hispanics. Thus, death rates based on death certificate data are lower than true death rates for these groups.

Because the denominator for infant mortality rates uses the race at birth, the most accurate race-specific infant mortality rates come from linked birth-infant death data files, where the mother's race can be used for both the numerator and the denominator. In this report, *Mortality Table F6* tabulates data by the mother's race/ethnicity.

Hispanic Origin

"Origin" as used by the Census Bureau refers to "the ancestry, nationality group, lineage, or country of birth of the person or the person's parents or ancestors before their arrival in the United States." Persons of Hispanic Origin have their origins in a Hispanic or Spanish-speaking country such as Mexico, Cuba, or Puerto Rico, or the Spanish-speaking countries of Central or South America. Persons of Hispanic Origin may be of any race.

The certificates for live births, deaths, and fetal deaths in Washington State capture Hispanic Origin under two separate items, one to measure ethnicity and another to measure race. The item measuring ethnicity asks, [Is the person] "Of Hispanic Origin or descent (Ancestry)?" and permits a "Yes/No" response. The item measuring race on the birth and fetal death certificates says, "Race (American Indian, White, Black, Asian/Pacific Islander (Specify subgroup), etc.). On the death certificate, the item reads, "Race (Specify)." Beginning in 1992, "Hispanic" was no longer listed as a sample response under "Race." Nonetheless, some people do report Hispanic Origin under the race item on birth, death, and fetal death certificates. To capture this information, separate codes are used to record Hispanic responses when provided under race, and this information is available on data files provided by the Center for Health Statistics.

The National Center for Health Statistics (NCHS), however, does not treat Hispanic Origin as a race and requires instead that persons reporting Hispanic as a race be counted as "White." Tables in this report use this NCHS convention for tabulations by race. In addition, at the end of each table on race, counts of persons identified as "Hispanic Origin" under the ethnicity item are provided as well.

County of Residence

The county of residence data reported by the informant was verified by a process called geocoding using software that identifies county based on street address. When the reported county differed from the one assigned through geocoding, the address was located on a base map and the correct county was assigned to the record. In the rare instances in which a post office box was given as the address, the reported county of residence was retained since the software cannot assign county without a street address. Geocoding has been done since 1987 for births, deaths, and fetal deaths. Geocoding could not be done prior to 1987 because address information was not available for many records in those years.

The county of residence assigned through geocoding matched the county originally reported by the informant in all but about 0.4% of the records. Most of the differences occurred in areas where zip codes cross county

boundaries. It is likely that some informants in this situation may be less sure of whether an address is in one county or the other. In most instances where differences were found, the geocoded county was determined to be correct and, in these instances, it was used in place of the reported county. The differences amounted to very small proportions of births or deaths in the affected counties.

In the few instances when the county or city of residence or occurrence is unknown, the county/city is imputed using NCHS guidelines. For place of occurrence, if the county is known but the city is not, the place of occurrence is set to the rural county value (no defined city). If both county and city are unknown, the place of occurrence is set to the county and city of occurrence of the previous record. For place of residence, if the county is known but the city is not, the place of residence is set to the rural county value. If both county and city of residence are unknown but the event occurred in Washington, the place of residence is set to the county/city of occurrence. If both county and city of residence are unknown and the event occurred outside Washington, the place of residence is set to the largest city in the state (Seattle).

City of Residence

A city is given a separate code in the vital statistics system only if it has a population of at least 2,500. Vital events in cities smaller than 2,500 are assigned a place of residence code that represents other small and rural areas of a county, termed "balance of county." Because of space considerations, only vital statistics for cities of 15,000 population or more are published in this report. Population estimates and information on the incorporation of cities provided by the Washington State Office of Financial Management are used to establish which cities meet the 2,500 minimum population criteria for receiving a separate place of residence code. New codes are implemented in January of each year based on population estimates and municipal incorporations published in the preceding year. Thus, an area that was incorporated in 1990 with a population of at least 2,500 would be coded as a distinct place of residence and would have separate vital statistics beginning with 1991 published data.

The city of residence assigned for a record is based on whether or not the person lived within city limits using responses to an item on the certificate: "Inside city limits - yes/no." If the response to this item is "yes," "unknown," or blank, the place of residence is assigned to the reported city. If the response is "no," the place of residence is assigned a "balance of county" code. Reporting on this item has been found to be somewhat unreliable when compared to locating addresses within city boundaries using geocoding software. For city of occurrence there is no

"inside city limits" item to use for coding. If a city is given on the certificate, the event is coded as occurring within city limits of that city. However, if the place of occurrence lists a rural road, state park, or other remote location, the place of occurrence is coded to "balance of county."

Birth Data Notes

Changes for 2003+ data

The 2003 birth certificate changed considerably, compared to earlier certificates. These changes can affect comparability with data tables from previous years. The effect of the changes on specific items is discussed below.

Note on unknowns

Only some of the states have adopted the new birth certificate form. The other states continue to use the old certificate form. Therefore, items which were added or significantly revised in 2003 will most likely not have data for Washington residents who gave birth in another state. These unknowns will show up in residence data but not occurrence data.

Body Mass Index (BMI)

The 2003 certificate collected data on mother's height for the first time. This addition made calculation of the Body Mass Index (BMI) possible. The BMI is a measure of weight for height. The formula for calculating BMI is: BMI = 703.1 x (prepregnancy weight in lb / square of height in inches). For analysis, Body Mass Index is generally grouped as follows: Underweight (<18.5), Normal (18.5 – 24.9), Overweight (25.0 – 29.9), and Obese (30.0 and above). For the birth database, BMI is only calculated where both the prepregnancy weight and the height is given; otherwise it is unknown.

Education

Before 2003, the mother was asked to report the highest grade completed in years of education (e.g., 16 for college graduate). The 2003 certificate instead provided a series of check boxes for her to report the highest level of education completed at the time of delivery. The check boxes include degrees completed rather than years of schooling. The item is now clearer and easier to complete.

The previous format tended to overestimate high school graduation because the mother could not report that she had 12 years of education without getting a degree. Thus, the percent of mothers without a high

school degree is expected to increase somewhat, as is seen in Natality Table A1.

Gestational Age, Calculated

The gestational age in weeks is calculated by subtracting the date of last normal menses from the birth date, dividing by 7 and truncating the result to eliminate decimal places. If the menses day is missing but the month and year are present, a value of '15' is used for the day. In earlier years, if the menses month and/or year were missing or the calculated gestational age was beyond a reasonable range (<18 or >45 weeks), the gestational age was estimated from the child's birth weight.

Currently, if the menses month and/or year is missing or the calculated age is out of range, the clinical estimate is used as the 'calculated' gestational age. If the clinical estimate is also out of range or unknown, the calculated age is unknown. This change makes the Washington State data consistent with national data but not with data published in earlier versions of this report. Gestational ages have now been recalculated by this method for 1980-2002 data. The Center for Health Statistics web site has corrected gestational age tables (see the Introduction to this report for instructions on how to access the web site).

Maternal Smoking

This item has undergone wording and placement changes over time. Note that data may not be comparable before and after the change.

- 1984-88: Used wording 'Smoking at any time during the pregnancy' and placed in the middle section of the certificate, which the mother generally completes from a worksheet.
- 1989: Changed wording to 'Tobacco use during pregnancy' (which could include smokeless tobacco) and relocated to the bottom of the certificate, which is generally completed by the physician. The percentage of missing data increased from 4% in 1984 to 13% in 1989, possibly as a result of this change.
- 1992: Changed back to original wording and placement on the certificate
- 2003: Item revised to collect average number of cigarettes per day three months before pregnancy and by trimester during pregnancy, but placement not changed.

For Tables B1, B2, and B3 in this report, smoking is defined as smoking during any trimester. Past data tables used the item 'smoking at any time during pregnancy' which is likely to be fairly comparable to the 2003+ data. Table B4 now reports the actual smoking data by trimester.

Method of Delivery

Before 2003, the method of delivery was selected by the data provider from a list of possible methods. This list just gave common methods with no hierarchy assumed by the order of the methods on the list. The data provider could check all methods that apply, although it was rare to have more than two methods given (<0.4% of births). For earlier reports, the method of delivery was determined by the following algorithm: If there was a second method given and it was a 'higher technology' or more invasive method, it was assigned as the method of delivery. Otherwise, the first method was used. Thus, for example, if both vaginal and forceps were reported, forceps was the method chosen.

Starting in 2003, the method of delivery section was revised so that the data provider reports only the final route and method of delivery. This final route and method is used in Tables C1 and C6.

Month Prenatal Care Began

In previous years, the mother or prenatal care provider reported the month of pregnancy in which the mother began prenatal care (e.g., 1st, 2nd, etc). As of 2003, this item was replaced by the exact dates of first and last prenatal visit. Thus, the month prenatal care began is now calculated from the menses date and the date of first prenatal care visit. Unfortunately, because the exact dates are harder to get, the month prenatal care began now has high rates of missing data.

For the 2003 report, there was an error in the way month care began was calculated. The program has been corrected for prenatal care tables in this report (Natality Tables C1, C2, C3, and C4). This change more than doubled the number of births where the mother had no prenatal care. The Center for Health Statistics web site has corrected prenatal care tables for 2003 (see the Introduction to this report for instructions on how to access the web site).

Race

As noted earlier, the race item was revised from an open-ended question to a check box format which allows multiple races to be reported. In this report, race is tabulated in two ways:
a. Single race data, which is used to compare with previous years' data. To get these data, the multiple race data are bridged back to a single race by the National Center for Health Statistics (NCHS). The bridging method uses National Health Interview Survey data to estimate what multiracial people are likely to report if they could only report a single race. See

http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm for details on the bridging process. Single race data are used in Natality Tables A1, A2a, A13a, and D2a.
b. Multiple race data, which includes all races reported by the mother. The reported race data are edited by NCHS to remove duplicate entries. See http://www.cdc.gov/nchs/data/dvs/multiple_race_docu_5-10-04.pdf for details. The Center for Health Statistics (CHS) has done further recoding to group the races into the five basic groups and to create single fields for the mother's and father's races with a code for each possible race combination. Multiple race data are used in Tables A2b, A13b, and D2b.

Death Certificate Items:

The race and education items changed with the 2004 Washington State implementation of the U.S. Standard Certificate of Death. See the *Birth Data Notes* above for further discussion.

Cause of Death

The causes of death presented in this report are classified in accordance with the International Classification of Diseases, Tenth Revision published by the World Health Organization. The State of Washington began using this revision on January 1, 1999. More information about the change to the new revision can be found in the introduction.

According to the National Center for Health Statistics, more than 99% of all deaths occurring in the United States are registered in the death certificate system. The accuracy of reporting specific causes of death may vary since classification of disease conditions is a medical-legal opinion subject to the best information available to the physician, medical examiner, or coroner certifying the cause of death.

Underlying Cause Of Death

Tabulated causes of death in this report are based on the underlying cause of death. The underlying cause of death is defined as "(a) the disease or injury which initiated the train of events leading directly to death or (b) the circumstances of the accident or violence which produced the fatal injury." International (World Health Organization) rules are used to determine the underlying cause of death using data supplied by the certifier in the "cause of death" and "other significant conditions" sections of the death certificate.

Information from other sources is used to supplement the cause of death data on the certificate to determine a more precise or more accurate cause of death. The following sources are used:

1. Queries: For about 8% of records, the certifier of the cause of death is asked for additional information because the cause of death data given is inaccurate, incomplete, or non-specific. About 93-98% of these queries are returned. The underlying cause of death may change minimally or substantially as a result of these queries. Query standards change over time, which can affect trends in cause of death and death rates for Washington compared to other states or to the United States.
2. State Patrol: The Washington State Patrol provides information on motor vehicle accidents which is used to refine or add a more complete cause of death for these deaths, particularly related to whether the decedent was the driver or a passenger.
3. Gun Surveillance: In many gun-related deaths, the gun is removed from the scene so the cause of death cannot be coded to the specific type of gun involved (such as handgun or rifle). Beginning in 1995, cause of death data have been supplemented with information on type of gun from a statewide reporting system for gun-related deaths operated by the Department of Health's Injury Prevention Program. Beginning in 1999, cause of death information for legal intervention was updated using the gun surveillance data.
4. Labor and Industries (L&I): For injury deaths, the death certificate asks whether the injury occurred at work or not. This item is sometimes open to interpretation as to whether the injury occurred in the course of the person's work or not. Beginning with 1996, death certificate data are supplemented with results of L&I investigations of work-related injuries.

Cause of Death Groupings

Due to the detailed nature of this classification system, it is common to group ICD codes into more general categories for analysis and comparison purposes. The National Center for Health Statistics (NCHS) provides one of the most commonly used classification systems in which causes of deaths for adults are grouped into 113 separate groups and deaths for infants into 130 groups. NCHS groupings were used throughout this report with the exception of Mortality Section E which follows guidelines from the NCHS International Collaborative Effort (ICE) on Injury Statistics.

Maternal Death

Maternal deaths are those for which a maternal condition (ICD-9 codes 630-676 and ICD-10 codes O00-O99) is given as the underlying cause of death. The World Health Organization defines a maternal death as:

> The death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

With ICD-10, an additional category was added for late maternal death (>42 days and > 1 year after termination of pregnancy). A death will be coded as maternal only if the death certificate notes pregnancy or a maternal condition.

In 1979-1988, Washington State supplemented reported maternal deaths with results from a special study. Death certificates for women ages 15-44 were linked to birth/fetal death certificates to see if the woman had a delivery within 42 days of the death. If so, the cause of death was examined to see if the death could have been related to the pregnancy. This special study added an average of two maternal deaths per year, a substantial change because only about three deaths per year are reported as maternal.

In 1990-1996, deaths to Washington resident women were linked to births, fetal deaths and obstetric hospitalizations within 365 days prior to death. Information from the linkages was provided to the Department of Health Maternal and Child Health Office. Three perinatologists, an obstetrician and an epidemiologist reviewed the information available on each death from the death certificate, birth/fetal death certificate and hospitalization information. All linked deaths were considered pregnancy-associated deaths (deaths which occurred within 365 days of pregnancy regardless of cause) and were further classified as to pregnancy-related (deaths caused by pregnancy or by condition exacerbated by pregnancy) or not. Deaths considered not pregnancy-related included all deaths due to cancer, injury, or deaths with a vague or indefinite cause. Deaths due to epilepsy or seizures, deep vein thrombosis, infection, or intracerebral hemorrhage if they occurred ≥ 42 days post delivery were also considered not pregnancy-related. Deaths considered pregnancy-related included deaths due to deep vein thrombosis, pneumonia or aneurysm that occurred during pregnancy or less than 42 days post delivery. Cardiovascular deaths within three months of delivery, and deaths due to epilepsy/seizures or infection that occurred within 42 days of delivery were considered on a case by case basis.

The 2004 Washington State implementation of the U.S. Standard Certificate of Death introduced a standard question format with categories designed to utilize additional codes available in ICD–10 for deaths associated with pregnancy, childbirth, and the puerperium. A separate pregnancy status item on the death certificate may result in the identification of more maternal deaths.

Place of Death

This item changed with the new 2004 death certificate. The worksheet includes a new check box for "Hospice Facility", changed "In transit "to "Dead on arrival"; changed "nursing Home to Nursing home/long term Care; changed "Home" to "Decedent's Home". The new check boxes will provide clarity. Adding hospice care and long-term care facility reflects changes in types of care.

Disposition

A check box for "entombment" was added to the death certificate in 2004 for method of disposition. This new category is reflected in mortality table B3.

Marital Status

A new category was added to the marital status item on the 2004 death certificate. A check box for "separated" is now included as an option. This new category is listed in mortality table A5.

Perinatal Death

The perinatal period covers times shortly before and after birth. Thus, perinatal death includes both fetal and infant deaths. Perinatal death rates are generally more consistent between different sources than infant or fetal death rates because they eliminate the effect of judgments as to whether the fetus was alive at time of delivery. However, there are at least four definitions of perinatal death, using different combinations of fetal death, gestational age, and infant age at death. This report uses the following definition from the National Center for Health Statistics: "fetal deaths of 20 or more weeks' gestation plus infant deaths of less than seven days." This definition gives the second largest number of perinatal deaths among the four common definitions. Caution should be used in comparing perinatal death rates in this report with rates from other sources unless it is certain that the same definition has been used.

Marriage and Divorce Data

Residence vs. Occurrence Data

Information on the number of marriages or divorces for all residents of Washington State is not available since residents may go elsewhere to have a marriage performed or to obtain a divorce. For marriage and divorce statistics, unlike other vital records such as births, deaths, or fetal deaths, there is no interstate agreement for the exchange of information on marriages or divorces for residents of Washington State that occur in other states or countries. Marriages are tabulated in this report according to the county in which the marriage was performed. Divorces, annulments and legal separations also include tabulations by the county in which the legal certificate was issued. Thus, statistics calculated with these data reflect the place of occurrence of the legal activity (e.g. marriage ceremony performed, divorce decree issued) rather than the place of residence of the individuals involved. Please note that tabulations by occurrence include events that were issued in Washington State for residents of other states.

Divorces and annulments issued in Washington State are also tabulated by wife's county of residence (Divorce Tables 1 and 5) and husband's county of residence (Divorce Table1). These tables, unlike the other tables in this section, present information by place of residence rather than by the place (county) where the legal document was issued and recorded. As stated above, the data in these tables do not include divorces to Washington residents obtained in other states or countries.

Legal Separations

In annual summaries for years prior to 1992, legal separations were included in divorce totals. Because legal separations are not final dissolutions of marriage, they have been excluded from divorce totals in annual summary tables beginning with 1992 data. This change makes Washington State's tabulations consistent with those contained in national publications by the National Center for Health Statistics. The impact of the change on trends is small, since legal separations reported to this office equal only about 1 to 2% of total dissolutions.

Court Orders

Prior to 1996, a small number of divorces (between 32 and 145, see Vital Statistics 1994-95 – Table 50) were submitted to the Center for Health Statistics by county clerks as court orders without filing the certificate of dissolution with the Center as required by law (RCW 70.58.055(3)). The number of such court orders were reported in a footnote in those years but were not included in divorce totals. Beginning in 1996, this problem has been corrected through the cooperation of county clerks.

Number of Children

Data on the number of children reported on the certificate of dissolution are captured by an item on the form labeled, "Children born alive of the marriage." Divorce Table 5 in this report presents the number of divorces and annulments tabulated by the number of children born to the couple regardless of the child's age (i.e., some of the children may be over 18 years of age).

Prior to 1997, in some cases, when the number of children was unknown, the number was erroneously recorded as none due to a data entry problem. Beginning in 1997, this problem was corrected. As a result, divorces for which the number of children is recorded as unknown is somewhat higher than in prior years.

Definitions

Birth Weight - Weight of fetus or infant at time of delivery (normally recorded in pounds and ounces). *Low birth weight* is any birth weight less than 2,500 grams (about 5-1/2 lbs).

Fetal Death - Death prior to the complete expulsion or extraction from its mother of a product of human conception, irrespective of the duration of pregnancy. The death is indicated by the fact that after such expulsion or extraction the fetus does not breathe or show any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. Reporting of fetal deaths to the state is required only when the gestational period is twenty weeks or more.

Infant Death - Death of a child under one year of age.

Live Birth - The complete expulsion or extraction from its mother of a product of human conception, irrespective of the duration of pregnancy, which, after such expulsion or extraction, breathes, or shows any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached.

Live Birth Order – Live birth order indicates what number the present birth represents; for example, a baby born to a mother who has had two previous live births (even if one or both are not now living) has a live birth order of three.

Low Birth Weight – See 'Birth Weight.'

Maternal Death - Death attributed to complications of pregnancy, childbirth, or the puerperium (ICD-10 O00-O99) for women of childbearing age; includes abortion-related death.

Neonatal Death - Death of an infant within the first 27 days of life.

Nulliparous - Having never given birth to a live born infant.

Occurrence Data - Data allocated by place where the event occurred, regardless of the person's place of residence.

Parity - Total number of <u>previous</u> live births; does not include the current birth.

Perinatal Death - Fetal deaths plus deaths to infants within the first six days of life.

Plurality - The number of siblings born as the result of a single pregnancy (e.g., twins, triplets).

Postneonatal Death - Death of an infant of 28-364 days of age.

Premature Birth - A live birth weighing 2,500 grams (5-1/2 pounds) or less. If birth weight is not stated, length of gestation (under 37 weeks) is used.

Residence Data - Data allocated by place of residence of the child's mother (births, fetal deaths), or by place of residence of the decedent (deaths), regardless of where the event occurred.

Underlying Cause of Death - The disease or injury which initiated the train of morbid events leading directly or indirectly to death or the circumstances of the accident or violence which produced the fatal injury.

Rates and Ratios

Rounding of Rates - Rates are rounded to the nearest tenth. When the rate or percent is less than one-tenth, the entry is 0. Rates are not calculated when the number of events is less than 5.

Rates and Ratios Used in this Report - Rates and ratios are calculated by dividing the number of events of concern by the population at risk (or a related population) and multiplying by a standard constant (i.e., 1,000 or 10,000 or 100,000).

$$(Crude)\ Birth\ Rate = \frac{\#\ Live\ Births}{Total\ Population}\ x1{,}000$$

$$Age-Specific\ Birth\ Rate = \frac{\#\ Births\ for\ Specific\ Age\ Group}{Population\ for\ Same\ Age\ Group}\ x1{,}000$$

$$(Crude)\ Death\ Rate = \frac{\#\ Deaths}{Total\ Population}\ x1{,}000$$

$$Age-Specific\ Death\ Rate = \frac{\#\ Deaths\ for\ Specific\ Age\ Group}{Population\ for\ Same\ Age\ Group}\ x100{,}000$$

$$Cause-Specific\ Death\ Rate = \frac{\#\ Deaths\ for\ Specific\ Cause}{Total\ Population}\ x100{,}000$$

$$Age-adjusted\ \ Death\ \ Rate = \sum_i Wi \bullet \frac{\#\ Deaths_i}{Population_i}\ x100{,}000$$

$$where\ Wi = \frac{Standard\ \ Population_i}{Total\ \ Standard\ \ Population}$$

$$and\ \ _i = agegroup$$

$$Comparability\ Ratio = \frac{\#\ Deaths\ Classified\ \ with\ ICD-10}{\#\ Deaths\ Classified\ \ with\ ICD-9}$$

$$Comparability\ Modified\ Values = Rate\ or\ Count \times Comparability\ Ratio$$

$$Infant\ Death\ Rate = \frac{\#\ Infant\ Deaths}{Total\ Live\ Births}\ x1{,}000$$

$$Neonatal\ Death\ Rate = \frac{\#\ Neonatal\ Deaths}{Total\ Live\ Births}\ x1{,}000$$

$$Postneonatal\ Death\ Rate = \frac{\#\ Postneonatal\ Deaths}{Total\ Live\ Births}\ x1{,}000$$

$$Maternal\ Death\ Rate = \frac{\#\ Maternal\ Deaths}{Total\ Live\ Births}\ x10{,}000$$

$$Fetal\ Death\ Ratio = \frac{\#\ Fetal\ Deaths}{Total\ Live\ Births}\ x1{,}000$$

$$Perinatal\ Death\ Rate = \frac{\#\ Perinatal\ Deaths}{Live\ Births + Fetal\ Deaths}\ x1{,}000$$

Appendix B. Conversion of Birth Weight in Grams to Pounds and Ounces

Weight in Grams	Pounds and Ounces
Under 1,000	2lbs. 3 oz. and less
1,000 - 1,499	2 lbs. 4 oz. - 3 lbs. 4 oz.
1,500 - 1,999	3 lbs. 5 oz. - 4 lbs. 6 oz.
2,000 - 2,499	4 lbs. 7 oz. - 5 lbs. 8 oz.
2,500 - 2,999	5 lbs. 9 oz. - 6 lbs. 9 oz.
3,000 - 3,499	6 lbs. 10 oz. - 7 lbs. 11 oz.
3,500 - 3,999	7 lbs. 12 oz. - 8 lbs. 13 oz.
4,000 - 4,499	8 lbs. 14 oz. - 9 lbs. 14 oz.
4,500 and over	9 lbs. 15 oz. and over

One pound = 453.59 grams

Appendix C. Estimated Population, State of Washington, by Age Group by Sex, April 1, 2004

Age Group	Total	Male	Female
Total	6,256,400	3,117,023	3,139,377
Under 1 Year[1]	82,625	42,329	40,296
1 - 4	323,699	165,561	158,138
5 - 14	853,310	437,480	415,830
15 - 19	450,228	230,712	219,516
20 - 24	448,636	230,705	217,931
25 - 34	834,279	427,520	406,759
35 - 44	940,811	476,366	464,445
45 - 54	947,453	471,436	476,017
55 - 64	663,549	328,020	335,529
65 - 74	360,029	171,001	189,028
75 - 84	247,359	102,238	145,121
85 and Over	104,422	33,655	70,767

[1]Population under 1 year is shown as births in current year, the denominator for infant mortality rates; other population estimates for children under 1 or aged 1-4 may differ.
Source: Washington State Office of Financial Management, Forecasting Division, Intercensal and Postcensal Estimates of County Population by Age and Sex: 1980-2005, October 2006.

Appendix D. Estimated Population of Counties and Cities of 15,000 Population and Over, April 1, 2005

Name	City	County
State Total	6,256,400	
Adams		17,000
Asotin		20,900
Benton		158,100
Kennewick	60,410	
Richland	43,520	
Chelan		69,200
Wenatchee	29,320	
Clallam		66,800
Port Angeles	18,640	
Clark		391,500
Vancouver	154,800	
Camas	15,460	
Columbia		4,100
Cowlitz		95,900
Longview	35,430	
Douglas		34,700
Ferry		7,400
Franklin		60,500
Pasco	44,190	
Garfield		2,400
Grant		79,100
Moses Lake	16,340	
Grays Harbor		69,800
Aberdeen	16,450	
Island		76,000
Oak Harbor	21,720	
Jefferson		27,600
King		1,808,300
Seattle	573,000	
Renton	56,840	
Auburn	43,540	
Kent	84,920	
Kirkland	45,740	
Bellevue	115,500	
Mercer Island	21,710	
Redmond	47,600	
Bothell part	16,250	
Des Moines	28,960	
Issaquah	17,060	
Tukwila	17,110	
Federal Way	85,800	
SeaTac	25,140	
Burien	31,040	
Shoreline	52,500	
Covington	16,610	
Maple Valley	17,870	
Kenmore	19,290	
Sammamish	38,640	
Kitsap		240,400
Bremerton	34,580	
Bainbridge Island	22,200	
Kittitas		36,600
Ellensburg	16,700	
Klickitat		19,500
Lewis		71,600
Centralia	15,340	
Lincoln		10,100
Mason		51,900
Okanogan		39,600
Pacific		21,300
Pend Oreille		12,200
Pierce		755,900
Tacoma	198,100	
Puyallup	35,830	
Lakewood	58,850	
University Place	30,980	
San Juan		15,500
Skagit		110,900
Anacortes	15,700	
Mount Vernon	28,210	
Skamania		10,300
Snohomish		655,800
Everett	97,500	
Edmonds	39,860	
Lynnwood	34,830	
Marysville	29,460	
Mountlake Terrace	20,390	
Monroe	15,920	
Mukilteo	19,360	
Spokane		436,300
Spokane (city)	198,700	
Spokane Valley	85,010	
Stevens		41,200
Thurston		224,100
Olympia	43,330	
Lacey	33,180	
Wahkiakum		3,900
Walla Walla		57,500
Walla Walla (city)	30,630	
Whatcom		180,800
Bellingham	72,320	
Whitman		42,400
Pullman	26,590	
Yakima		229,300
Yakima (city)	79480	

Source: Population estimates in this report are from the Washington State Office of Financial Management, Forecasting Division, Intercensal and Postcensal Estimates of County Population by Age and Sex: 1980-2005, October 2006.

Appendix E. Comparison Between Current and Previous Table Numbers

Table Numbers

2003+	2000-2002	1999[1]	1980-1998[2]	Current Title	Comments
Natality A: Demographics					
A1	A1	---	---	Summary Indicators, Washington State Residents, 1990-2000	
A2a	A2	1A	2A	Mother's Race/Ethnicity by Child's Sex, Residence	
A2b	---	---	---	Mother's Multiple Race by Child's Sex, Residence	New Table
A3	A3	1C	2C	Mother's Age Group by Child's Sex, Residence	
A4	A4	---	---	Child's Birth Order by Mother's Age Group, Residence	
A5	A5	---	---	Mother's Education by Mother's Age Group, Residence	New Education Categories
A6a	A6a	Appendix E		Top 100 Baby Names of Girls, Residence	
A6b	A6b	Appendix E		Top 100 Baby Names of Boys, Residence	
A7	A7	7	8	Place of Residence, Sex, and Place of Occurrence	
A8	A8	12	13	Month of Birth by Place of Residence	
A9	A9	8	9	Mother's Age Group by Place of Residence	
A10	A10	---	---	Age-Specific Live Birth Rates by Place of Residence[3]	
A11	A11	9	10	Single Mothers, Mother's Age Group by Place of Residence	
A12	A12	---	---	Father's Age Group by Place of Residence	
A13a	A13	10	11	Mother's Race/Ethnicity by Place of Residence	
A13b	---	---	---	Mother's Multiple Race by County of Residence	New Table
A14	A14	---	---	Mother's Education by Place of Residence	New Education Categories
Natality B: Behavioral and Health Characteristics					
B1	B1	---	---	Summary Indicators, Washington State Residents, 1990-2000	
B2	B2	---	---	Mother's Age Group by Maternal Smoking, Residence	
B3	B3	---	---	Mother's Education by Maternal Smoking, Residence	New Education Categories
B4	B4	16	17	Maternal Smoking During Pregnancy by Place of Residence	New Smoking Categories
B5	B5	---	---	Selected Medical Risk Factors by Place of Residence	New Risk Factors
B6	---	---	---	Body Mass Index by County of Residence	New Table
Natality C: Health Service Utilization					
C1	C1	---	---	Summary Indicators, Washington State Residents, 1990-2000	
C2	C2	5	6	Month Prenatal Care Began by Mother's Age Group, Residence	
C3	C3	6	7	Number of Prenatal Visits by Month Care Began, Residence	
C4	C4	14	15	Month Prenatal Care Began by Place of Residence	
C5	C5	17	18	Birth Facility by Place of Occurrence	
C6	C6	---	---	Method of Delivery by Place of Occurrence	
C7	C7	---	---	Birth Attendant by Place of Occurrence	
C8	C8	18	19	County of Residence by County of Occurrence	
Natality D: Infant Health					
D1	D1	---	---	Summary Indicators, Washington State Residents, 1990-2000	
D2a	D2	2	3	Birth Weight in Grams by Mother's Race/Ethnicity, Residence	
D2b	---	---	---	Birth Weight in Grams by Mother's Multiple Race, Residence	New Table
D3	D3	4	5	Birth Weight in Grams by Mother's Age Group, Residence	
D4	D4	---	---	Birth Weight in Grams by Calculated Gestational Age, Residence	New Gestational Age Calculation
D5	D5	---	---	Birth Weight in Grams by Plurality, Residence	
D6	D6	---	---	Mother's Age Group by Plurality, Residence	
D7	D7	13	14	Birth Weight in Grams by Place of Residence	
D8	D8	---	---	Calculated Gestational Age by Place of Residence	New Gestational Age Calculation
D9	D9	---	---	Plurality by Place of Residence	

Table Numbers

2000	1999[1]	1980-1998[2]	Current Title	Comments
Old Natality Tables Not Included in Current Report				
---	1B	2B	Residence, Child's Race/Ethnicity by Sex	Mother's race has been the standard since 1980
---	1D	2D	Residence, Order of Birth to Mother	See 'All ages' column of Table A4
---	1E	2E	Residence, Attendant at Birth	See 'State total' row of Table C7
---	1F	2F	Residence, Maternal Smoking	See 'State total' row of Table B4
---	1G	2G	Residence and Occurrence, Birth Weight in Grams by Sex	See 'State total' row of Table A8 (births)
---	1H	2H	Residence and Occurrence, Live Births and Fetal Deaths by Month	See 'State total' row of Table D7 (residence data)
---	1I	2I	Occurrence, Primary Method of Birth Delivery by Obstetric Procedures	See 'State total' row of Table C6
---	1J	2J	Occurrence, Type of Place	See 'State total' row of Table C5
---	3	4	Live Births to Residents by Birth Weight in Grams by Child's Race/Ethnicity	Mother's race has been the standard since 1980
---	11	12	Live Births by Child's Race/Ethnicity by Place of Residence	Mother's race has been the standard since 1980
---	15	16	Live Births with Malformations by Place of Residence	Malformation data are not very reliable
Mortality A: Demographics				
A1	--	--	Age-Adjusted Mortality Rates and Life Expectancy by Sex for Residents, 1990-2000	New Table
A2	2	20B	Age by Race/Ethnicity for Residents	
A3	3	20C	Age by Sex for Residents	
A4	4	20D	Life Expectancy by Age and Sex for Residents	
A5	7	20H	Marital Status by Sex for Residents	
A6	--	--	Education by Age for Residents	New Table
A7-a	17A	25	Residence and Occurrence by County and City	
A7-b	17B	--	Residence and Occurrence by County Listed by Age-Adjusted Rates for 1998-2000	
A8	18	26	Sex and Race/Ethnicity by County/City of Residence	
A9	19	27	Age Group by County of Residence	
A10	20	28	Month of Death by County of Residence	
A11	28	37	Place Where Death Occurred by County of Occurrence	
Mortality B: Autopsy and Disposition				
B1	--	--	Percent Autopsy and Cremation for Residents, 1990-2000	New Table
B2	9	--	Autopsy by Age and Manner of Death for Residents	
B3	--	--	Type of Disposition by County of Residence	New Table
Mortality C: Leading Causes of Death, Overview and Selected Causes of Death				
C1	--	--	Age-Adjusted Rates[1] for 10 Leading Causes of Death for Residents, 1990-	New Table
C2	5A	20E	Leading Causes of Death for Residents	
C3	10	21	Leading Causes by Age Group and Sex for Residents	
C4	11A	22	Crude Rates for Selected Causes by Sex for Residents	
C5	11B	22	Age-Adjusted Rates for Selected Causes by Sex for Residents	
C6	21A	29	Diabetes, Alzheimer's Disease, and Major Cardiovascular Disease by County of Residence	
C7	21B	29	Diseases of the Heart, Ischemic Heart Diseases, and Cerebrovascular Diseases by County of Residence	
C8	21C	29	Influenza & Pnuemonia, Chronic Lower Respiratory Disease, and Chronic Liver Disease & Cirrhosis by County of Residence	

Table Numbers				
2000	1999[1]	1980-1998[2]	Current Title	Comments
Mortality D: Cancer				
D1	--	--	Age-Adjusted Rates for Leading Causes of Cancer for Residents, 1990-	New Table
D2	12	23	Cancer by Primary Site and Sex for Residents	
D3	23A	30A	Cancer for Total All Sites, Lung, and Colo-Rectal by County of Residence	
D4	23B	30B	Cancer for Female Breast, Prostate, and Pancreas by County of Residence	
Mortality E: External Causes or Injuries				
E1	--	--	Age-Adjusted Rates for External Causes for Residents, 1990-2000	New Table
E2-a	13	24	External Causes of Injury With Crude Rates for Residents	
E2-b	13	24	External Causes of Injury With Age-Adjusted Rates for Residents	
E2-c	13	24	ICD-10 Codes for External Causes	
E3	14	--	External Causes by Place of Injury for Residents	
E4	15	--	Type of Firearm by Intent for Residents	
E5	16	--	Poisoning by Intent and Substance	
E6	25	33	Suicide, Homicide, Undetermined by County of Residence	
E7	22	--	Drug and Alcohol-Induced Causes for Residents	
E8	24A	32A	Unintentional Injury (Accident), Motor Vehicle Traffic, and Falls by Place of Residence	
E9	24B	32B	Drowning Drowning, Fires, and Other Unintentional Injury (Accident) by County of Residence	
E10	27	36	Suicide, Homicide, and Undetermined for Residents by County of Injury	Tables prior to 1999 used county of occurrence
E11	26	35	Unintentional Injury (Accident) to Residents by County of Injury	Tables prior to 1999 used county of occurrence
Mortality F: Infant Deaths				
F1	--	--	Selected Causes for Infant (Age < 1 Year) Residents, 1990-2000	New Table
F2	5B	20F	Leading Causes of Infant (Age < 1 Year) Death for Residents	
F3	29	--	Birth Weight and Age for Infant (Age < 1 Year) Residents	
F4-a	30A	38A	Selected Causes by Age and Sex for Infant (Age < 1 Year) Residents	
F4-b	30B	38B	Selected Causes by Age and Sex for Infant (Age < 1 Year) Residents	
F5	31	39	Selected Causes for Infant (Age < 1 Year) County of Residence	
F6	32	40	Mother's Race/Ethnicity by Infant (Age < 1 Year) County of Residence	
F7	34	42	Mother's Age Group by Infant (Age <1 Year) County of Residence	
F8	35	26	Fetal Deaths, Perinatal, Neonatal, and Infant Mortality by County/City of Residence	
Mortality G: Fetal Deaths				
G1	--	--	Selected Causes of Fetal Death Residents	New Table
G2	36	45	Fetal Deaths by Mother's Age Group by Place of Residence	
G3	37	46	Fetal Deaths for Residents by Cause	
G4	38	47	Fetal Deaths by Weight in Grams and Sex for Residents	
Mortality Tables Not Included in Current Report				
--	1	20A	Deaths to Residents by Race/Ethnicity and Sex	See 'State Total' row of Table A8
--	6	20G	Deaths to Residents and by Occurrence by Month of Death	See 'State Total' row of Table A10
--	8	20I	Deaths by Occurrence by Type of Place	See 'State Total' row of Table A11

Table Numbers				
2000	**1999[1]**	**1980-1998[2]**	**Current Title**	**Comments**
continued Mortality Tables Not Included in Current Report				
--	--	31	Deaths Due to Human Immunodeficiency Virus by Sex by Place of Residence	Number of deaths have declined; Most cells are zero
--	--	34	Deaths Due to Human Immunodeficiency Virus by Sex by Place of Occurrence	Number of deaths have declined; Most cells are zero
--	--	44	Fetal Deaths, Perinatal, Neonatal and Infant Mortality by Place of Occurrence	Place of Residence is used more often
--	33	41	Infant (Age < 1 Year) Deaths by Child's Race/Ethnicity by Residence	Mother's race has been the standard since 1980

[1]From *Washington State Vital Statistics, 1999*

[2]From *Washington State Vital Statistics Reports, 1980-1998*

[3] *Also published as Table 19 in Washington State Pregnancy and Induced Abortion Statistics*

Appendix F. Sample Certificates

Birth Filing Form

Washington State Birth Filing Form

Child's Information

*1. Child's Name
First
Middle
LAST

*2. Date of Birth (MM/DD/YYYY) / /

*3. Time of Birth (24 Hrs)

Suffix (Sr., Jr., II, III, etc.)

4a. Type of Birthplace (Specify Type)
1 ☐ Hospital 2 ☐ Enroute 3 ☐ Freestanding Birth Center
4 ☐ Clinic/Doctor's Office 5 ☐ Home–Planned ☐ Yes ☐ No
6 ☐ Other(Specify):

4b. Planned Birth Place, if different
Specify:

5. Sex ☐ Male ☐ Female

*6. Name of Facility (If not a facility, enter name of place and address)

*7. City, Town, or Location of Birth

*8. County of Birth

Mother's Information

*9. Mother's Name Before First Marriage
First
Middle
LAST

*10. Date of Birth (MM/DD/YYYY) / /

*11. Birthplace (State, Territory, or Foreign Country)

12. Mother's Social Security Number

13. Mother's Current Legal Last Name, if different from above

14. Social Security Number Requested for Child? ☐ Yes ☐ No

15. Is Mother Married to the Father? ☐ Yes ☐ No
If NO: Was Mother Married to anyone during this pregnancy? ☐ Yes ☐ No
Has the Paternity affidavit been signed? ☐ Yes ☐ No

16a. Residence: Number and Street (e.g., 624 SE 5th St.)
Apt No.

16b. City or Town

16c. County

16d. If you live on Tribal Reservation, give name

16e. State or Foreign Country

16f. Zip Code + 4

16g. Inside City Limits? ☐ Yes ☐ No ☐ Unk

17. Telephone Number ( ) -

18. How Long at Current Residence? Years: Months:

19. Mother's Mailing Address, if different: Number & Street:
Apt No.
City or Town:
State:
Zip Code:

20. Mother's Education-(Check the box that best describes the highest degree or level of school completed at the time of delivery.)
1 ☐ 8th grade or less (Specify):
2 ☐ 9th – 12th grade; no diploma
3 ☐ High school graduate or GED completed
4 ☐ Some college credit, but no degree
5 ☐ Associate degree(e.g., AA, AS)
6 ☐ Bachelor's degree(e.g., BA, AB, BS)
7 ☐ Master's degree(e.g., MA, MS, MEng, MEd, MSW, MBA)
8 ☐ Doctorate(e.g., PhD, EdD) or Professional degree(e.g., MD, DDS, DVM, LLB, JD)

21. Mother of Hispanic Origin? (Check the box that best describes whether the mother is Spanish/Hispanic/Latina or check the "No" box if mother is not Spanish/Hispanic/Latina.)
1 ☐ No, not Spanish/Hispanic/Latina
2 ☐ Yes, Mexican, Mexican American, Chicana
3 ☐ Yes, Puerto Rican
4 ☐ Yes, Cuban
5 ☐ Yes, other Spanish/Hispanic/Latina (Specify):

22. Mother's Race (Check one or more races to indicate what the mother considers herself to be.)
☐ White ☐ Black or African American
☐ American Indian or Alaska Native (Name of the enrolled or principal tribe)
☐ Asian Indian ☐ Chinese
☐ Filipino ☐ Japanese
☐ Korean ☐ Vietnamese
☐ Other Asian(Specify):
☐ Native Hawaiian ☐ Guamanian or Chamorro
☐ Samoan
☐ Other Pacific Islander(Specify):
☐ Other(Specify):

23. Occupation (Indicate type of work done during last year.)

24. Kind of Business/Industry (Do not use Company Name)

Father's Information

*25. Father's Current Legal Name
First
Middle
LAST
Suffix

*26. Date of Birth (MM/DD/YYYY) / /

*27. Birthplace (State, Territory, or Foreign Country)

28. Father's Social Security Number

29. Father's Education-(Check the box that best describes the highest degree or level of school completed at the time of delivery.)
1 ☐ 8th grade or less (Specify):
2 ☐ 9th – 12th grade; no diploma
3 ☐ High school graduate or GED completed
4 ☐ Some college credit, but no degree
5 ☐ Associate degree(e.g., AA, AS)
6 ☐ Bachelor's degree(e.g., BA, AB, BS)
7 ☐ Master's degree(e.g., MA, MS, MEng, MEd, MSW, MBA)
8 ☐ Doctorate(e.g., PhD, EdD) or Professional degree(e.g MD, DDS, DVM, LLB, JD)

30. Father of Hispanic Origin? (Check the box that best describes whether the father is Spanish/Hispanic/Latino or check the "No" box if father is not Spanish/Hispanic/Latino.)
1 ☐ No, not Spanish/Hispanic/Latino
2 ☐ Yes, Mexican, Mexican American, Chicano
3 ☐ Yes, Puerto Rican
4 ☐ Yes, Cuban
5 ☐ Yes, other Spanish/Hispanic/Latino (Specify):

31. Father's Race (Check one or more races to indicate what the father considers himself to be)
☐ White ☐ Black or African American
☐ American Indian or Alaska Native (Name of the enrolled or principal tribe)
☐ Asian Indian ☐ Chinese
☐ Filipino ☐ Japanese
☐ Korean ☐ Vietnamese
☐ Other Asian(Specify):
☐ Native Hawaiian ☐ Guamanian or Chamorro
☐ Samoan
☐ Other Pacific Islander(Specify):
☐ Other(Specify):

32. Occupation (Indicate type of work done during last year.)

33. Kind of Business/Industry (Do not use Company Name)

Optional Signature:

I agree that the above information is accurate: Date:

* *Only these items will be displayed on Legal Certificate. However all items are required by law* ***(RCW 70.58.080)***.

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Mother's Statistical Information

34. Mother's Medical Record Number

35. Mother's Prepregnancy Weight (Pounds)

36. Mother's Weight at Delivery (Pounds)

37. Mother's height Feet: Inches:

38. Did Mother get WIC food for herself during pregnancy? ☐ Yes ☐ No

39. Cigarette Smoking Before and During Pregnancy
If none enter "0"
Average number of cigarettes or packs per day:

	# of cigarettes	# of packs
Three months before pregnancy		OR
First three months of pregnancy		OR
Second three months of pregnancy		OR
Last three months of pregnancy		OR

40a. Number of Previous Live Births (Do not include this child)
Number Now Living _____ ☐ None
Number Now Dead _____ ☐ None

41a. Number of Other Pregnancy Outcomes (Spontaneous or induced losses or ectopic pregnancies)
Number of Other Outcomes_____ ☐ None

40b. Date of Last Live Birth (MM/YYYY) (Do not include this child) /

41b. Date of Last Other Pregnancy Outcome (MM/YYYY) /

42a. Date of First Prenatal Care Visit (MM/DD/YYYY) / / ☐ No Prenatal Care

42b. Date of Last Prenatal Care Visit (MM/DD/YYYY) / /

43. Total Number of Prenatal Visits for this Pregnancy
(If none, enter '0') _____

44. Date Last Normal Menses Began (MM/DD/YYYY) / /

45. Was mother transferred to higher level care for maternal medical or fetal indications for delivery? ☐ Yes ☐ No If yes, name of facility mother was transferred from:

46. Principal Source of Payment for this Delivery
☐ Medicaid ☐ Self Pay ☐ Private Insurance
☐ Indian Health ☐ CHAMPUS ☐ Other Gov't
☐ Other (Specify)

Newborn's Statistical Information

47. Newborn Medical Record Number

48. Birth Weight lbs: ozs: or grams:

49. Infant Head Circumference (cm)

50. Obstetric Estimate of Gestation (Completed weeks)

51. Apgar score at 5 minutes _____
If score is less than 6, score at 10 minutes _____

52. Plurality – Single, Twin, Triplet, etc. (Specify)

53. If not single birth – Born 1st, 2nd, 3rd, etc. (Specify)

54. Was infant transferred within 24 hours of delivery? ☐ Yes ☐ No
If yes, name of facility infant was transferred to:

55. Is infant living at the time of report? ☐ Yes ☐ No ☐ Transferred, Status Unknown

56. Is infant being breastfed? ☐ Yes ☐ No

Medical and Health Information

57. Risk Factors in this Pregnancy (Check all that apply):

1 ☐ Diabetes
☐ Prepregnancy (Diagnosis prior to this pregnancy)
☐ Gestational (Diagnosis in this pregnancy)
2 ☐ Hypertension
☐ Prepregnancy (Chronic)
☐ Gestational (PIH, preeclampsia, eclampsia)
3 ☐ Previous preterm births
4 ☐ Other previous poor pregnancy outcome (includes perinatal death, small-for-gestational age/intrauterine growth restricted birth)
5 ☐ Vaginal bleeding during this pregnancy prior to the onset of labor
6 ☐ Pregnancy resulted from infertility treatment
7 ☐ Mother had a previous cesarean delivery?
If Yes, how many_____
8 ☐ Group B Streptococcus culture positive
9 ☐ None of the above

58. Method of Delivery

A. Was delivery with forceps attempted but unsuccessful? ☐ Yes ☐ No

B. Was delivery with vacuum extraction attempted but unsuccessful? ☐ Yes ☐ No

C. Fetal presentation at birth ☐ Cephalic ☐ Breech ☐ Other

D. Final route and method of delivery (Check One)
Vaginal: ☐ Spontaneous ☐ Forceps ☐ Vacuum
Or,
Cesarean: ☐
If cesarean, was a trial of labor attempted? ☐ Yes ☐ No

59. Infections Present and/or Treated During this Pregnancy (Check all that apply):

1 ☐ Gonorrhea
2 ☐ Syphilis
3 ☐ Herpes Simplex Virus (HSV)
4 ☐ Chlamydia
5 ☐ Hepatitis B
6 ☐ Hepatitis C
7 ☐ HIV Infection
8 ☐ Other
Specify:_____
9 ☐ None of the above

60. Obstetric procedures (Check all that apply):

1 ☐ Cervical cerclage
2 ☐ Tocolysis
3 ☐ External cephalic version:
☐ Successful
☐ Failed
4 ☐ None of the above

61. Abnormal Conditions of the Newborn (Occurring within 24 hours of delivery) (Check all that apply):

1 ☐ Assisted ventilation required immediately following delivery
2 ☐ Assisted ventilation required for more than six hours
3 ☐ NICU admission
4 ☐ Newborn given surfactant replacement therapy
5 ☐ Antibiotics received by the newborn for suspected neonatal sepsis
6 ☐ Seizure or serious neurologic dysfunction
7 ☐ Significant birth injury (skeletal fracture(s), peripheral nerve injury, soft tissue or solid organ hemorrhage which requires intervention)
8 ☐ None of the above

62. Characteristics of Labor and Delivery (Check all that apply):

1 ☐ Induction of labor
2 ☐ Augmentation of labor
3 ☐ Non-vertex presentation
4 ☐ Epidural or spinal anesthesia during labor
5 ☐ Steroids (glucocorticoids) for fetal lung maturation received by the mother prior to delivery
6 ☐ Antibiotics received by the mother during labor
7 ☐ Clinical chorioamnionitis diagnosed during labor or maternal temperature ≥38°C (100.4°F)
8 ☐ Moderate/heavy meconium staining of the amniotic fluid
9 ☐ Fetal intolerance of labor such that one or more of the following actions was taken: in-utero resuscitation measures, further fetal assessment, or operative delivery
10 ☐ None of the above

63. Congenital Anomalies of the Newborn (Observed within 24 hours of delivery) (Check all that apply)

1 ☐ Anencephaly
2 ☐ Meningomyelocele / Spina bifida
3 ☐ Cyanotic congenital heart disease
4 ☐ Congenital diaphragmatic hernia
5 ☐ Omphalocele
6 ☐ Gastroschisis
7 ☐ Limb reduction defect (excluding congenital amputation and dwarfing syndrome)
8 ☐ Cleft Lip with or without Cleft Palate
9 ☐ Cleft Palate alone
10 ☐ Down Syndrome
☐ Karyotype confirmed
☐ Karyotype pending
11 ☐ Chromosomal disorder
☐ Karyotype confirmed
☐ Suspected, Karyotype pending
12 ☐ Hypospadias
13 ☐ None of the above

64. Maternal Morbidity (complications associated with labor and delivery) (Check all that apply):

1 ☐ Maternal transfusion
2 ☐ Third or fourth degree perineal laceration
3 ☐ Ruptured uterus
4 ☐ Unplanned hysterectomy
5 ☐ Admission to intensive care unit
6 ☐ Unplanned operating room procedure following delivery
7 ☐ None of the above

65. Onset of Labor (Check all that apply):

1 ☐ Premature rupture of the membranes (prolonged, ≥ 12hr)
2 ☐ Precipitous Labor (< 3hr)
3 ☐ Prolonged Labor (≥ 20hr)
4 ☐ None of the above

Attendant and Certifier Information

66. Certifier – Name and Title

67. Date Certified (MM/DD/YYYY) / /

68. Attendant – Name and Title (If other than Certifier)

69. NPI of person delivering the baby:

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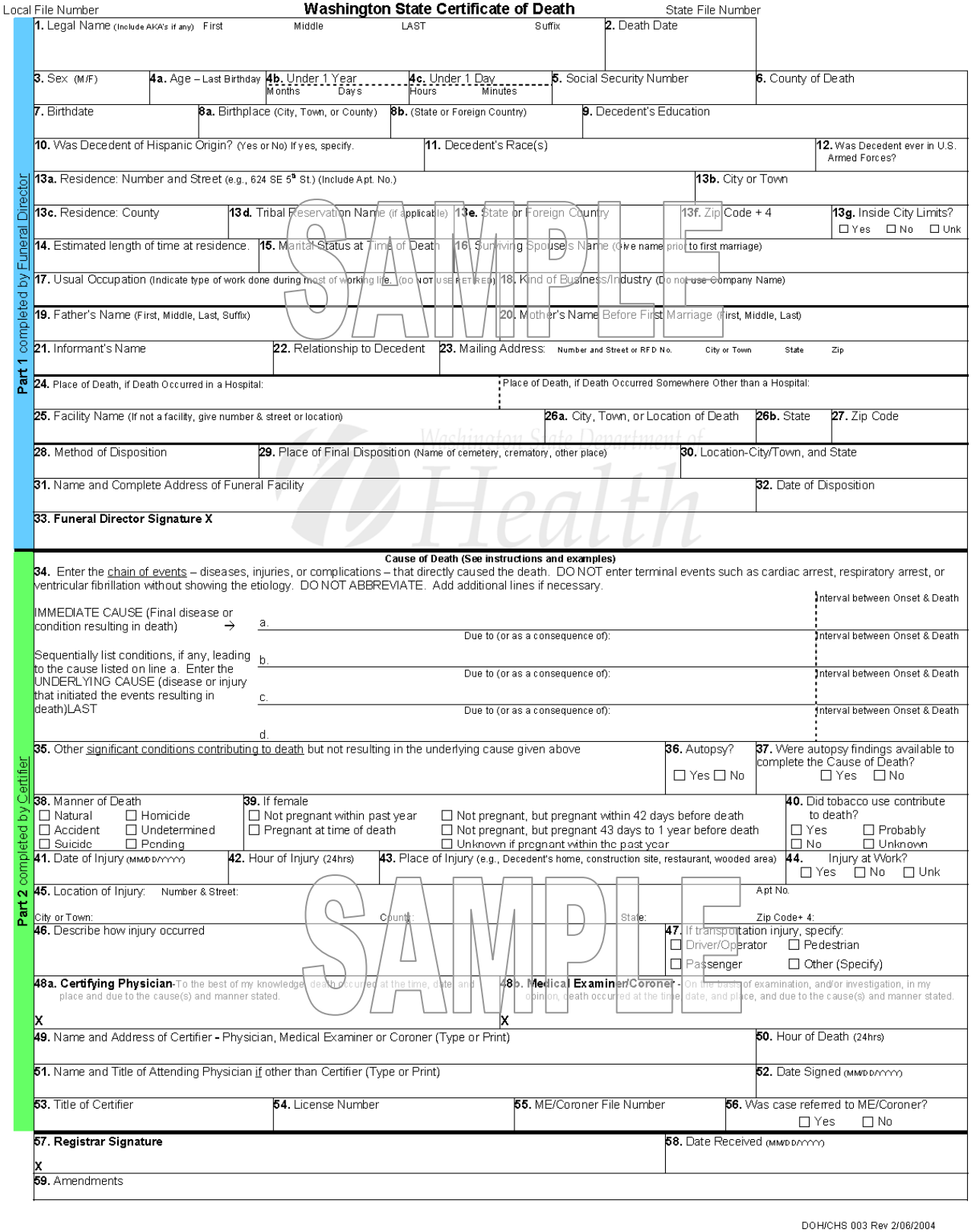
Certificate of Death



Local File Number

Washington State Certificate of Death

State File Number

Part 1 completed by Funeral Director

1. Legal Name (Include AKA's if any) First Middle LAST Suffix
2. Death Date
3. Sex (M/F)
4a. Age – Last Birthday
4b. Under 1 Year Months Days
4c. Under 1 Day Hours Minutes
5. Social Security Number
6. County of Death
7. Birthdate
8a. Birthplace (City, Town, or County)
8b. (State or Foreign Country)
9. Decedent's Education
10. Was Decedent of Hispanic Origin? (Yes or No) If yes, specify.
11. Decedent's Race(s)
12. Was Decedent ever in U.S. Armed Forces?
13a. Residence: Number and Street (e.g., 624 SE 5th St.) (Include Apt. No.)
13b. City or Town
13c. Residence: County
13d. Tribal Reservation Name (if applicable)
13e. State or Foreign Country
13f. Zip Code + 4
13g. Inside City Limits? ☐ Yes ☐ No ☐ Unk
14. Estimated length of time at residence.
15. Marital Status at Time of Death
16. Surviving Spouse's Name (Give name prior to first marriage)
17. Usual Occupation (Indicate type of work done during most of working life. (DO NOT USE RETIRED))
18. Kind of Business/Industry (Do not use Company Name)
19. Father's Name (First, Middle, Last, Suffix)
20. Mother's Name Before First Marriage (First, Middle, Last)
21. Informant's Name
22. Relationship to Decedent
23. Mailing Address: Number and Street or RFD No. City or Town State Zip
24. Place of Death, if Death Occurred in a Hospital:
Place of Death, if Death Occurred Somewhere Other than a Hospital:
25. Facility Name (If not a facility, give number & street or location)
26a. City, Town, or Location of Death
26b. State
27. Zip Code
28. Method of Disposition
29. Place of Final Disposition (Name of cemetery, crematory, other place)
30. Location-City/Town, and State
31. Name and Complete Address of Funeral Facility
32. Date of Disposition
33. **Funeral Director Signature X**

Part 2 completed by Certifier

Cause of Death (See instructions and examples)

34. Enter the chain of events – diseases, injuries, or complications – that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Add additional lines if necessary.

IMMEDIATE CAUSE (Final disease or condition resulting in death) → a. — Interval between Onset & Death

Due to (or as a consequence of):

Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death)LAST

b. — Interval between Onset & Death

Due to (or as a consequence of):

c. — Interval between Onset & Death

Due to (or as a consequence of):

d. — Interval between Onset & Death

35. Other significant conditions contributing to death but not resulting in the underlying cause given above
36. Autopsy? ☐ Yes ☐ No
37. Were autopsy findings available to complete the Cause of Death? ☐ Yes ☐ No
38. Manner of Death ☐ Natural ☐ Homicide ☐ Accident ☐ Undetermined ☐ Suicide ☐ Pending
39. If female ☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days before death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year
40. Did tobacco use contribute to death? ☐ Yes ☐ Probably ☐ No ☐ Unknown
41. Date of Injury (MM/DD/YYYY)
42. Hour of Injury (24hrs)
43. Place of Injury (e.g., Decedent's home, construction site, restaurant, wooded area)
44. Injury at Work? ☐ Yes ☐ No ☐ Unk
45. Location of Injury: Number & Street: Apt No.
City or Town: County: State: Zip Code+ 4:
46. Describe how injury occurred
47. If transportation injury, specify: ☐ Driver/Operator ☐ Pedestrian ☐ Passenger ☐ Other (Specify)
48a. **Certifying Physician**-To the best of my knowledge, death occurred at the time, date, and place and due to the cause(s) and manner stated.
48b. **Medical Examiner/Coroner** - On the basis of examination, and/or investigation, in my opinion, death occurred at the time, date, and place, and due to the cause(s) and manner stated.
X X
49. Name and Address of Certifier - Physician, Medical Examiner or Coroner (Type or Print)
50. Hour of Death (24hrs)
51. Name and Title of Attending Physician if other than Certifier (Type or Print)
52. Date Signed (MM/DD/YYYY)
53. Title of Certifier
54. License Number
55. ME/Coroner File Number
56. Was case referred to ME/Coroner? ☐ Yes ☐ No
57. **Registrar Signature** X
58. Date Received (MM/DD/YYYY)
59. Amendments

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Certificate of Fetal Death

Washington State Fetal Death Certificate

Local File Number | **State File Number**

Delivery Information

1. Name of Fetus - First | Middle | LAST | Suffix

2. Sex (M/F/Unk) | **3.** Date of Delivery (MM/DD/YYYY) / / | **4.** Time of Delivery (24 Hrs)

5a. Type of Birthplace (Specify Type)
1 ☐ Hospital 3 ☐ Freestanding Birth Center 5 ☐ Home - Planned ☐ Yes ☐ No **5b.** Planned Birth Place, If different Specify:
2 ☐ Enroute 4 ☐ Clinic/Doctor's Office 6 ☐ Other(Specify):

6. Name of Facility (If not a facility enter name of place and address) | **7.** Facility ID. (NPI)

8. City, Town, or Location of Delivery | **9.** Zip Code of Delivery | **10.** County of Delivery

Parent's Information

11. Mother's Name Before First Marriage (First, Middle, Last) | **12.** Date of Birth (MM/DD/YYYY)

13. Mother's Current Legal Last Name, If different from above | **14.** Birthplace (State, Territory, or Foreign Country)

15a. Residence – Number and Street (e.g., 624 SE 5th St) | Apt No. | **15b.** City or Town

15c. County | **15d.** If you live on Tribal Reservation, give name | **15e.** State or Foreign Country | **15f.** Zip Code + 4

15g. Inside City Limits? ☐ Yes ☐ No ☐ Unk | **16.** How Long at Current Residence? Years Months

17. Father's Current Legal Name (First, Middle, Last, Suffix) | **18.** Date of Birth (MM/DD/YYYY) / / | **19.** Birthplace (State, Territory, or Foreign County)

Disposition Information

20. Name and Title of Person Completing Cause of Death | Signature X

21. Date Signed (MM/DD/YYYY) / /

22. Name and Title of Person Delivering the Fetus | **23.** NPI of Person Delivering the Fetus:

24. Method of Disposition 1 ☐ Burial 2 ☐ Cremation 3 ☐ Removal from State 4 ☐ Donation 5 ☐ Hospital Disposition 6 ☐ Other(Specify): | **25.** Date of Disposition (MM/DD/YYYY) / /

26. Place of Disposition (Name of cemetery, crematory, other place) | **27.** Location-City/Town, and State

28. Name and Complete Address of Funeral Facility | **29. Funeral Director Signature** X

30. Initiating Cause/Condition *(Among the choices below, please select the ONE which most likely began the sequence of events resulting in the death of the fetus)*	**31.** Other Significant Causes or Conditions *(Select or specify all other conditions contributing to death)*
1 ☐ Maternal Conditions/Diseases (Specify)	1 ☐ Maternal Conditions/Diseases (Specify)
2 ☐ Complications of Placenta, Cord or Membranes ☐ Rupture of membranes prior to onset of labor ☐ Abruptio placenta ☐ Placental insufficiency ☐ Prolapsed cord ☐ Chorioamnionitis ☐ Other(Specify)	2 ☐ Complications of Placenta, Cord or Membranes ☐ Rupture of membranes prior to onset of labor ☐ Abruptio placenta ☐ Placental insufficiency ☐ Prolapsed cord ☐ Chorioamnionitis ☐ Other(Specify)
3 ☐ Other Obstetrical or Pregnancy Complications (Specify)	3 ☐ Other Obstetrical or Pregnancy Complications (Specify)
4 ☐ Fetal Anomaly (Specify)	4 ☐ Fetal Anomaly (Specify)
5 ☐ Fetal Injury (Specify)	5 ☐ Fetal Injury (Specify)
6 ☐ Fetal Infection (Specify)	6 ☐ Fetal Infection (Specify)
7 ☐ Other Fetal Conditions/Disorders (Specify)	7 ☐ Other Fetal Conditions/Disorders (Specify)
8 ☐ Unknown	8 ☐ Unknown

32. Estimated Time of Fetal Death
1 ☐ Dead at first assessment, no labor ongoing
2 ☐ Dead at first assessment, labor ongoing
3 ☐ Died during labor, after first assessment
4 ☐ Unknown time of fetal death

33. Was an autopsy performed? ☐ Yes ☐ No ☐ Planned

34. Was a histological placental examination performed? ☐ Yes ☐ No ☐ Planned

35. Were autopsy or histological placental examination results used in determining the cause of death? ☐ Yes ☐ No

36. Registrar Signature X | **37.** Date Received (MM/DD/YYYY) / /

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SAMPLE

Washington State Department of Health

Please complete side two →

Confidential Portion

38. Weight of Fetus

lbs: _____ ozs: _____ **or** grams: _____

39. Obstetric estimate of Gestation

(Completed Weeks)

40. Plurality – Single, Twin, Triplet, etc. (Specify)

41. If not Single Birth – Born First, Second, Third, etc.

Mother's Information

42. Mother's Education - Check the box that best describes the highest degree or level of school completed at the time of delivery.

1 ☐ 8th grade or less (Specify): _____
2 ☐ 9th – 12th grade; no diploma
3 ☐ High school graduate or GED completed
4 ☐ Some college credit, but no degree
5 ☐ Associate degree(e.g., AA, AS)
6 ☐ Bachelor's degree(e.g., BA, AB, BS)
7 ☐ Masters degree(e.g., MA, MS, MEng, MEd, MSW, MBA)
8 ☐ Doctorate(e.g., PhD EdD) or Professional degree(e.g., MD, DDS, DVM, LLB, JD)

43. Mother of Hispanic Origin?
Check the box that best describes whether the mother is Spanish/Hispanic/Latina or check the "No" box if mother is not Spanish/Hispanic/Latina.

0 ☐ No, not Spanish/Hispanic/Latina
1 ☐ Yes, Mexican, Mexican American, Chicana
2 ☐ Yes, Puerto Rican
3 ☐ Yes, Cuban
4 ☐ Yes, other Spanish/Hispanic/Latina
(Specify)

44. Mother's Race (Check one or more races to indicate what the mother considers herself to be)

1 ☐ White
2 ☐ Black or African American
3 ☐ American Indian or Alaska Native
(Name of the enrolled or principal tribe)
4 ☐ Asian Indian
5 ☐ Chinese
6 ☐ Filipino
7 ☐ Japanese
8 ☐ Korean
9 ☐ Vietnamese
10 ☐ Other Asian(Specify):
11 ☐ Native Hawaiian
12 ☐ Guamanian or Chamorro
13 ☐ Samoan
14 ☐ Other Pacific Islander(Specify):
15 ☐ Other(Specify):

45. Occupation (Indicate type of work done during last year.)

46. Kind of Business/Industry (Do not use Company Name)

47. Mother Married? (At delivery, conception, or any time between)
☐ Yes ☐ No

48. Mother's Height
Feet: Inches:

49. Did Mother get WIC food for herself during this Pregnancy?
☐ Yes ☐ No

50. Mother's Prepregnancy Weight
(Pounds)

51. Mother's Weight at Delivery
(Pounds)

52. Date Last Normal Menses Began (MMDD/YYYY)
/ /

53. Date of First Prenatal Care Visit (MMDD/YYYY)
/ /
☐ No Prenatal Care

54. Date of Last Prenatal Care Visit (MMDD/YYYY)
/ /

55. Total Number of Prenatal Visits for this Pregnancy
(If none, enter '0')

56a. Number of Previous Live Births
(Do not include this child)

Now Living
Number_____ ☐ None

Now Dead
Number_____ ☐ None

57a. Number of Other Pregnancy Outcomes
(Spontaneous or induced losses or ectopic pregnancies)

Other Outcomes
Number_____ ☐ None

58. Cigarette Smoking Before and During Pregnancy
If none, enter '0'
Average number of cigarettes or packs per day.

	# of cigarettes	# of packs
Three months before pregnancy	_____ OR	_____
First three months of pregnancy	_____ OR	_____
Second three months of pregnancy	_____ OR	_____
Last three months of pregnancy	_____ OR	_____

56b. Date of Last Live Birth (MMYYYY)
/

57b. Date of Last Other Pregnancy Outcome. (MMYYYY)
/

59. Was mother transferred to higher level care for maternal medical or fetal indications for delivery?
☐ Yes ☐ No If yes, name of facility mother was transferred from:

Father's Information

60. Father's Education-Check the box that best describes the highest degree or level of school completed at the time of delivery.

1 ☐ 8th grade or less (Specify): _____
2 ☐ 9th – 12th grade; no diploma
3 ☐ High school graduate or GED completed
4 ☐ Some college credit, but no degree
5 ☐ Associate degree(e.g., AA, AS)
6 ☐ Bachelor's degree(e.g., BA, AB, BS)
7 ☐ Masters degree(e.g., MA, MS, MEng, MEd, MSW, MBA)
8 ☐ Doctorate(e.g., PhD EdD) or Professional degree(e.g., MD, DDS, DVM, LLB, JD)

61. Father of Hispanic Origin?
Check the box that best describes whether the father is Spanish/Hispanic/Latino or check the "No" box if father is not Spanish/Hispanic/Latino.

0 ☐ No, not Spanish/Hispanic/Latino
1 ☐ Yes, Mexican, Mexican American, Chicano
2 ☐ Yes, Puerto Rican
3 ☐ Yes, Cuban
4 ☐ Yes, other Spanish/Hispanic/Latino
(Specify):

62. Father's Race (Check one or more races to indicate what the father considers himself to be)

1 ☐ White
2 ☐ Black or African American
3 ☐ American Indian or Alaska Native
(Name of the enrolled or principal tribe)
4 ☐ Asian Indian
5 ☐ Chinese
6 ☐ Filipino
7 ☐ Japanese
8 ☐ Korean
9 ☐ Vietnamese
10 ☐ Other Asian(Specify):
11 ☐ Native Hawaiian
12 ☐ Guamanian or Chamorro
13 ☐ Samoan
14 ☐ Other Pacific Islander(Specify):
15 ☐ Other(Specify):

63. Occupation (Indicate type of work done during last year.)

64. Kind of Business/Industry (Do not use Company Name)

Medical and Health Information

65. Risk Factors in this Pregnancy (Check all that apply):

1 ☐ Diabetes
☐ Prepregnancy (Diagnosis prior to this pregnancy)
☐ Gestational (Diagnosis in this pregnancy)
2 ☐ Hypertension
☐ Prepregnancy (Chronic)
☐ Gestational (PIH, preeclampsia, eclampsia)
3 ☐ Previous preterm birth
4 ☐ Other previous poor pregnancy outcome (includes perinatal death, small-for-gestational age/intrauterine growth restricted birth)
5 ☐ Vaginal bleeding during this pregnancy prior to the onset of labor
6 ☐ Pregnancy resulted from infertility treatment
7 ☐ Mother had a previous cesarean delivery?
If Yes, how many_____
8 ☐ None of the above

66. Method of Delivery

A. Was delivery with forceps attempted but unsuccessful?
☐ Yes ☐ No

B. Was delivery with vacuum extraction attempted but unsuccessful?
☐ Yes ☐ No

C. Fetal presentation at birth
☐ Cephalic ☐ Breech ☐ Other

D. Final route and method of delivery (Check One)
Vaginal: ☐ Spontaneous
☐ Forceps
☐ Vacuum
Or,
Cesarean: ☐
If cesarean, was a trial of labor attempted?
☐ Yes
☐ No

E. Hysterotomy/Hysterectomy
☐ Yes ☐ No

67. Congenital Anomalies of the Fetus

1 ☐ Anencephaly
2 ☐ Meningomyelocele / Spina bifida
3 ☐ Cyanotic congenital heart disease
4 ☐ Congenital diaphragmatic hernia
5 ☐ Omphalocele
6 ☐ Gastroschisis
7 ☐ Limb reduction defect (excluding congenital amputation and dwarfing syndrome)
8 ☐ Cleft Lip with or without Cleft Palate
9 ☐ Cleft Palate alone
10 ☐ Down Syndrome
☐ Karyotype confirmed
☐ Karyotype pending
11 ☐ Suspected chromosomal disorder
☐ Karyotype confirmed
☐ Karyotype pending
12 ☐ Hypospadias
13 ☐ None of the above

68. Maternal Morbidity
(complication associated with labor and delivery)
(Check all that apply):

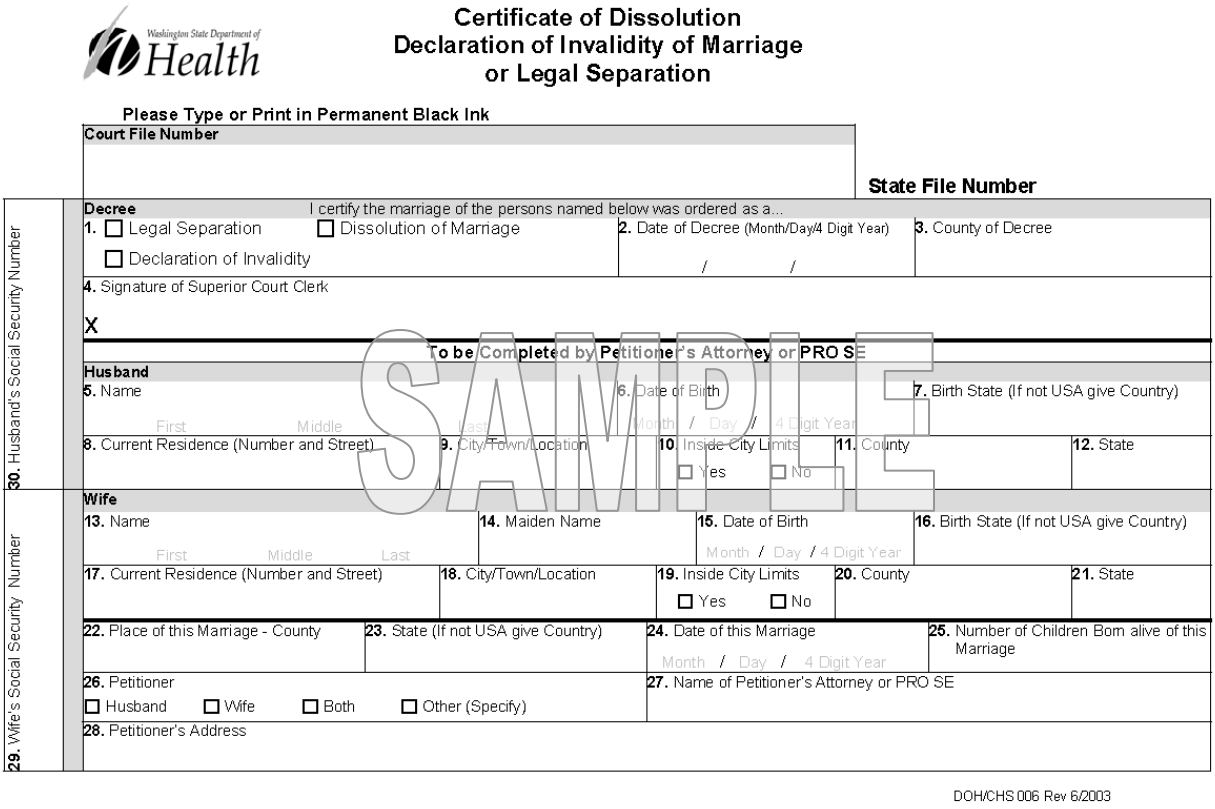
1 ☐ Maternal transfusion
2 ☐ Third or fourth degree perineal laceration
3 ☐ Ruptured uterus
4 ☐ Unplanned hysterectomy
5 ☐ Admission to intensive care unit
6 ☐ Unplanned operating room procedure following delivery
7 ☐ None of the above

69. Infections Present and/or Treated During this Pregnancy
(Check all that apply):

1 ☐ Gonorrhea
2 ☐ Syphilis
3 ☐ Herpes Simplex Virus (HSV)
4 ☐ Chlamydia
5 ☐ Listeria
6 ☐ Group B Streptococcus
7 ☐ Cytomegalovirus
8 ☐ Parvovirus
9 ☐ Toxoplasmosis
10 ☐ HIV Infection
11 ☐ Other
Specify:_____
12 ☐ None of the above

DOH/CHS 002 Rev. 8/03/2004

Certificate of Dissolution



Washington State Department of Health

Certificate of Dissolution
Declaration of Invalidity of Marriage
or Legal Separation

Please Type or Print in Permanent Black Ink

Court File Number

State File Number

Decree I certify the marriage of the persons named below was ordered as a...

1. ☐ Legal Separation ☐ Dissolution of Marriage ☐ Declaration of Invalidity
2. Date of Decree (Month/Day/4 Digit Year) / /
3. County of Decree
4. Signature of Superior Court Clerk

X

To be Completed by Petitioner's Attorney or PRO SE

30. Husband's Social Security Number

Husband

5. Name (First Middle Last)
6. Date of Birth (Month / Day / 4 Digit Year)
7. Birth State (If not USA give Country)
8. Current Residence (Number and Street)
9. City/Town/Location
10. Inside City Limits ☐ Yes ☐ No
11. County
12. State

29. Wife's Social Security Number

Wife

13. Name (First Middle Last)
14. Maiden Name
15. Date of Birth (Month / Day / 4 Digit Year)
16. Birth State (If not USA give Country)
17. Current Residence (Number and Street)
18. City/Town/Location
19. Inside City Limits ☐ Yes ☐ No
20. County
21. State
22. Place of this Marriage - County
23. State (If not USA give Country)
24. Date of this Marriage (Month / Day / 4 Digit Year)
25. Number of Children Born alive of this Marriage
26. Petitioner ☐ Husband ☐ Wife ☐ Both ☐ Other (Specify)
27. Name of Petitioner's Attorney or PRO SE
28. Petitioner's Address

SAMPLE

DOH/CHS 006 Rev 6/2003

Certificate of Marriage

Washington State Department of Health

CERTIFICATE OF MARRIAGE

Please type or print clearly in permanent black ink.

State File Number

COUNTY OF LICENSE		DATE VALID	NOT VALID AFTER
OFFICIANT - I certify the persons named below were married on			
1.DATE OF MARRIAGE(MO/DAY/YR)	2. COUNTY OF CEREMONY	3. TYPE OF CEREMONY ☐ Religious ☐ Civil	4.DATE SIGNED(MO/DAY/YR)
5. OFFICIANT'S NAME (PRINT)		6. OFFICIANT'S SIGNATURE X	
7. OFFICIANT'S ADDRESS (STREET, CITY, STATE & ZIP)			
GROOM			
8. **GROOM'S NAME** FIRST	MIDDLE	LAST	
9. CURRENT RESIDENCE ADDRESS (NUMBER AND STREET)	10.**DATE OF BIRTH**(MO/DAY/YR)	11.**BIRTHSTATE**(IF NOT USA GIVE COUNTRY)	
12. CITY/TOWN/LOCATION	13. INSIDE CITY LIMITS ☐ Yes ☐ No	14. COUNTY	15. STATE
16. FATHER'S NAME (FIRST/LAST)		17.BIRTHSTATE(IF NOT USA GIVE COUNTRY)	
18. MOTHER'S MAIDEN NAME (FIRST/LAST)		19.BIRTHSTATE(IF NOT USA GIVE COUNTRY)	
20. **GROOM'S SIGNATURE** X		21. **DATE SIGNED** (MO/DAY/YR)	
BRIDE			
22. **BRIDE'S NAME** FIRST	MIDDLE LAST	23. MAIDEN NAME	
24. CURRENT RESIDENCE ADDRESS (NUMBER AND STREET)	25.**DATE OF BIRTH**(MO/DAY/YR)	26.**BIRTHSTATE**(IF NOT USA GIVE COUNTRY)	
27. CITY/TOWN/LOCATION	28. INSIDE CITY LIMITS ☐ Yes ☐ No	29. COUNTY	30. STATE
31. FATHER'S NAME (FIRST/LAST)		32.BIRTHSTATE(IF NOT USA GIVE COUNTRY)	
33. MOTHER'S MAIDEN NAME (FIRST/LAST)		34.BIRTHSTATE(IF NOT USA GIVE COUNTRY)	
35. **BRIDE'S SIGNATURE** X		36. **DATE SIGNED** (MO/DAY/YR)	
37. WITNESS' SIGNATURE X	38. WITNESS' SIGNATURE X		
39. COUNTY AUDITOR'S SIGNATURE X		40. DATE RECEIVED (MO/DAY/YR)	

DOH/CHS 005 REV 6/2003

SAMPLE

Social Security Number for Applicants	
Department of Health is required to collect your Social Security Number in order to assist in child support laws (Section 7, Chapter 160 Laws of 1998). If you do not have a Social Security Number, you are required to complete the Social Security Declaration.	
41. GROOM'S SOCIAL SECURITY NUMBER	42. BRIDE'S SOCIAL SECURITY NUMBER

Declaration in Absence of a Social Security Number

*I have not furnished a Social Security Number on my application for registration of a marriage certificate, because **I do not have a Social Security Number.***

I declare under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Groom's Signature _____ Date _____

Bride's Signature _____ Date _____

Center for Health Statistics

MARRIAGE CERTIFICATE INSTRUCTIONS

(RCW 26.04.090)

Items 1 - 7 ---------- Completed by the Officiant. Signature and complete address required.
Items 8 -19 ---------- Completed at the time the application for marriage license is filed.
Items 20 - 21 --------- The signature of the groom and date signed is required.
Items 22 - 34 --------- Completed at the time the application for marriage license is filed.
Items 35 - 36 --------- The signature or the bride and date signed is required.
Items 37 - 38 --------- Signatures of two witnesses are required by law.
Items 39 - 40 --------- Completed by the county auditor when the certificate is filed.
Items 41 - 42 --------- Completed at the time the application for marriage license is filed.

NOTE: This form is to be transmitted to the county auditor for the county in which the license was obtained within thirty (30) days of the marriage.

DOH/CHS 005 REV 6/2003