

# Washington State Vital Statistics 2004

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For more information contact:

Center for Health Statistics  
PO Box 47814  
Olympia, WA 98504-7814

360 236-4321  
Fax 360 753-4135

Mary C. Selecky  
Secretary of Health

***Center for Health Statistics, Vital Statistics Report staff:***

Joe Campo, *Manager, Research Services (360) 236-4321*

Patricia Starzyk, *Research Investigator – Births (360) 236-4323*

Phyllis Reed, *Research Investigator - Deaths (360) 236-4324*

Ann Lima, *State Nosologist – (360) 236-4326*

Gregory Newkirk *IT Specialist –  
Marriage & Divorce (360) 236-4332*

*Design Consultation:*

Office of Health Promotion

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Jude VanBuren DrPH, MPH, RN, RS  
Assistant Secretary  
*Epidemiology, Health Statistics & Public Health Laboratories*

Teresa J. Jennings MPA  
State Registrar and Director  
*Center for Health Statistics*

## Washington State Vital Statistics Highlights for 2004

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

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- **More babies were born in 2004**  
Washington women had 81,715 babies in 2004, an increase of about 1,230 births compared to 2003. Despite this change, 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 is on the decline**  
The percent of women who smoked during pregnancy has decreased nearly 40% over the decade, from 16.1% in 1995 to 10.2% in 2004.
- **Pregnancy-related conditions are increasing**  
The percent of women with gestational diabetes has nearly doubled over the decade (from 2.4% in 1995 to 4.5% in 2004), while pregnancy-associated hypertension increased about 30% (from 4.1% in 1995 to 5.3% in 2004).
- **Cesarean section deliveries are increasing**  
In 2004, more than a quarter of deliveries (27.2%) were by primary or repeat C-section, compared to 17.2% ten years ago.
- **Fewer residents died in 2004**  
There were 44,703 deaths of Washington State residents in 2004.
- **Cancer replaced heart disease as the leading cause of death in 2004**  
Alzheimer's disease moved down to the 6<sup>th</sup> leading cause of death and accidents moved up to 5<sup>th</sup> 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 5.5 per 1,000 live births in 2004. For comparison, the infant death rate in 1994 was 6.2 per 1,000 live births.
- **The marriage and divorce rates showed little or no change**  
The marriage rate was 6.5 per 1,000 population in 2004. The divorce rate was 4.2 per 1,000 population in 2004.
- **Emma and Jacob remained the most popular names for babies born in 2004**  
The next most popular names were Emily and Olivia for girls and Ethan and Andrew for boys.

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

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

- 223 births including:
  - 6 to teens <18
  - 7 to women aged 40+
  - 67 to unmarried women
  - 14 with low birth weight
  - 61 by Cesarean section
  - 22 to maternal smokers
- 110 marriages
- 122 deaths including:
  - 29 due to heart disease
  - 30 due to cancer
  - 6 due to unintentional injuries (accidents)
  - 2 due to suicide
- 71 divorces

### **Washington State outperformed the nation<sup>1</sup> 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<sup>1</sup> by experiencing a...**

- higher percentage of women getting prenatal care after the first trimester
- 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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<sup>1</sup>National data reported in "Births: Preliminary Data for 2004" *National Vital Statistics Reports*, Vol 54 No 8 (December 29, 2005), available on the internet at [http://www.cdc.gov/nchs/data/nvsr/nvsr54/nvsr54\\_08.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr54/nvsr54_08.pdf) and "Deaths: Preliminary Data for 2003" *National Vital Statistics Reports*, Vol 53 No 15 (February 28, 2005), available on the internet at [http://www.cdc.gov/nchs/data/nvsr/nvsr53/nvsr53\\_15.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr53/nvsr53_15.pdf)

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# Introduction



# Washington Counties and County Seats



## Introduction

*Washington State Vital Statistics, 2004*, 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 2004.

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

<b>Certificate</b>	<b>Completed by</b>	<b>Initially Filed with</b>
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 1980-2003 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 2004 vital statistics in Washington State. The number of births increased in 2004, compared to 2003. However, the state's population also increased. As a result, there was no difference in the birth rate. The number of deaths and the death rate decreased substantially in 2004. The number and rate for infant deaths has shown little change since 2001. The number and ratio for fetal deaths both had relatively large increases in 2003 but decreased again in 2004, to levels consistent with data for 2000-2002.

Trends in vital statistics since the early part of the last century have been dramatic. The state population increased more than five-fold from 1910-2004, while the number of fetal deaths is about 50% lower than it was and the number of infant deaths is about one-quarter what it was early in the century. The difference in rates is even more dramatic. The fetal death ratio had about a seven-fold decrease while the infant death rate decreased about 17-fold.

### *Maternal mortality*

Notes on maternal death reporting: Maternal death rates are based on very small numbers (even the relatively large 2004 rate is only based on 22 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 most of the increase in maternal deaths.

**Overview Table 1. Live Births, Deaths, Infant Deaths, Maternal Deaths, and Fetal Deaths Washington Residents, 1910-2004**

Year	Population <sup>1</sup>	Live Births		Deaths		Infant Deaths		Maternal Deaths		Fetal Deaths	
		Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>	Number	Rate <sup>3</sup>	Number <sup>4</sup>	Rate <sup>5</sup>	Number	Ratio <sup>3</sup>
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

**Overview Table 1. Live Births, Deaths, Infant Deaths, Maternal Deaths, and Fetal Deaths Washington Residents, 1910-2004**

Year	Population <sup>1</sup>	Live Births		Deaths		Infant Deaths		Maternal Deaths		Fetal Deaths	
		Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>	Number	Rate <sup>3</sup>	Number <sup>4</sup>	Rate <sup>5</sup>	Number	Ratio <sup>3</sup>
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



**Overview Table 1. Live Births, Deaths, Infant Deaths, Maternal Deaths, and Fetal Deaths Washington Residents, 1910-2004**

Year	Population <sup>1</sup>	Live Births		Deaths		Infant Deaths		Maternal Deaths		Fetal Deaths	
		Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>	Number	Rate <sup>3</sup>	Number <sup>4</sup>	Rate <sup>5</sup>	Number	Ratio <sup>3</sup>
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

<sup>1</sup> 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

<sup>2</sup> Rate per 1,000 population.

<sup>3</sup> Ratio per 1,000 live births.

<sup>4</sup> 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.

<sup>5</sup> 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.

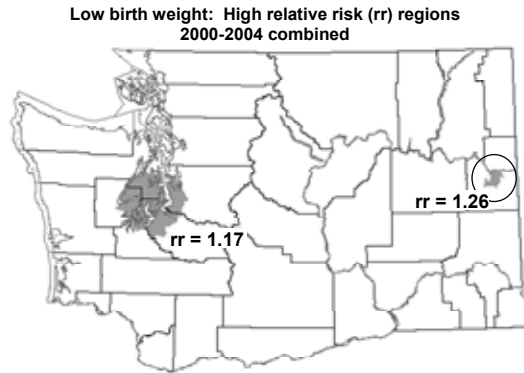
Note: Rates based on fewer than 20 events are likely to be unstable and imprecise.

## What's new

*This report marks the beginning of two new approaches in assessing birth and death data. Interspersed throughout the report are natality and mortality figures that include mapped and trend data. Here's a brief overview of how these figures were developed and how to interpret them.*

### Maps

Maps showing the relative risk (rr) for regions where health events appear to be significantly different than expected were identified using the spatial scan statistic in SaTScan<sup>1</sup> (<http://www.satscan.org/>) a program provided by the National Cancer Institute (NCI).



Broadly, this methodology totals the number of events (e.g., lung cancer deaths) for every possible combination of contiguous census tracts, and then compares those totals to an expected number of events computed for each of those possible regions. A likelihood ratio test is applied to identify outlying regions whose number of events was least likely to have occurred by chance. P-values for those regions are then obtained through Monte Carlo simulations. Outlier regions displayed in this report have a p-value  $\leq 0.05$ .

More specifically, the Poisson model was used for all mortality data. In this model, age- and sex-specific rates are computed for the area *outside* of each region being examined; these rates are then multiplied by the age- and sex-specific population *within* each region to calculate the expected number of events.

The Bernoulli model was used for all natality data. For these data, the ratio of cases (e.g., low birth weight newborns) to controls (e.g., non-low weight newborns) is computed instead of the age- and sex-specific rates. As with the mortality data, the expected number of cases within each region is based upon the ratio calculated for the area outside that region.

In both models, the size of the region being examined is never greater than 50% of the total number of events. In both models, too, higher- and lower-than-expected regions were assessed; only regions with higher than expected outcomes are presented in this report.

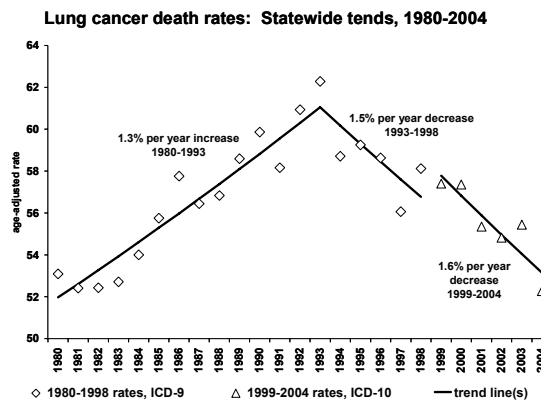
For each of the sets of birth and death data examined, six maps are provided: one for each of the five individual years assessed (2000-2004) and one for all five years combined.

In general, any region consistently identified in each of the single year maps and in the combined 5 year map can be thought of as representing an area which would warrant further public health assessment and potential intervention.

Regions identified sporadically across each of the individual year maps, or in the combined 5 year map only, are more apt to be a function of one-time anomalies and/or low-level non-persistent events. These would generally constitute areas of lower priority concern.

### Trends

Trends in this report were also developed using a statistical package provided by NCI, the JoinPoint Regression Program<sup>2</sup> (<http://srab.cancer.gov/joinpoint/>).



A join point (or inflection point) constitutes a point at which the trend in a data series changes. Rates for a disease may increase for a number of years and then begin to decrease or level off. With JoinPoint, these potential changes in direction are identified through a series of statistical tests.

Broadly, JoinPoint identifies all possible trends generated from a series of three or more data points. It then compares each simpler trend or model (e.g., one with no join points) to a more complex model (e.g., one with one joinpoint).

While a more complex model will always fit the data better (with the best fit being a model in which each data point constitutes a join point), JoinPoint tests to see if the more complex model fits the data better than would be expected by chance alone. This is done through a series of permutations using the Bonferroni correction for multiple testing with Monte Carlo simulations used to calculate p values.

For this report JoinPoint was run using the log-linear model with a minimum of zero and up to a maximum of three join points. The various natality and mortality rates analyzed were found to be increasing,

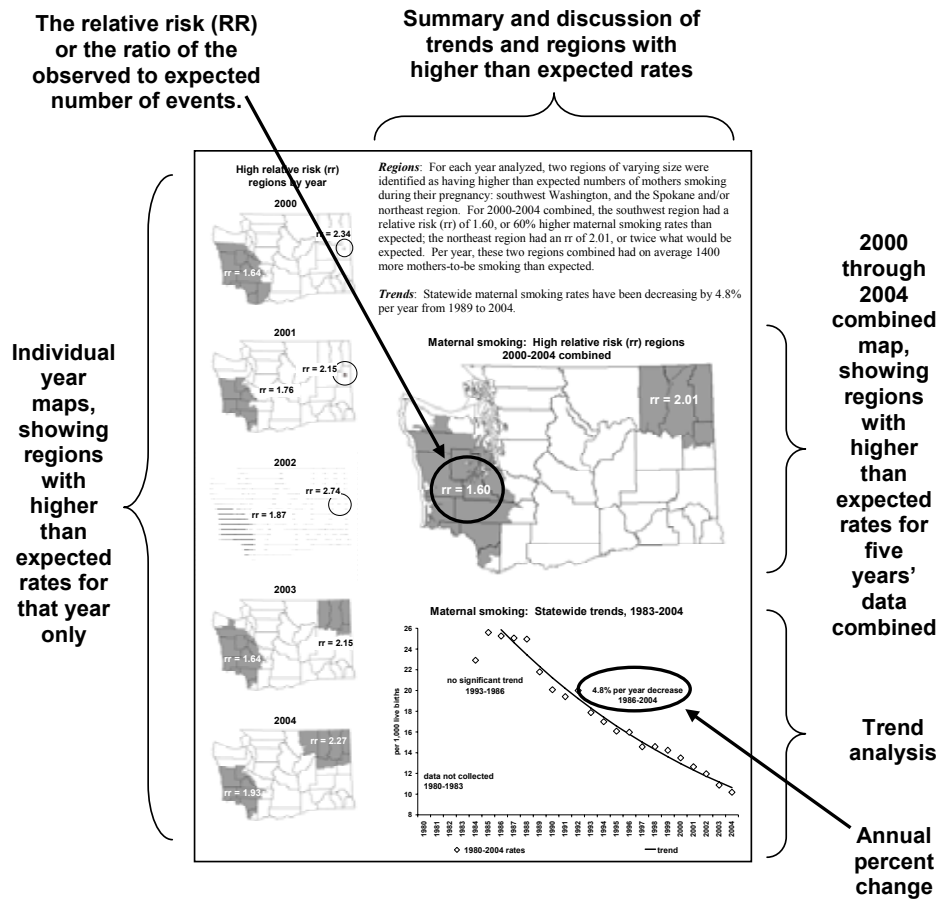
decreasing, not significantly changing, or, in some instances, a combination of two or more of these possible directions.

Because the coding of death certificates changed in 1999 (shifting from ICD-9 to ICD-10) trends were analyzed separately for 1980 to 1998 and for 1999 to 2004.

*What's what and where is it?*

Below is a sample page from this report showing where the various maps and trend graphs are laid out in the report.

Only select natality and mortality data were profiled; in general these included outcomes that can be affected by public health interventions.



Specifically, included in this report are profiles on:

- [Maternal smoking](#)
- [Low birth weight](#)
- [Heart disease deaths](#)
- [Lung cancer deaths](#)
- [Late or no prenatal care](#)
- [Singleton low birth weight](#)
- [Stroke deaths](#)
- [Infant mortality](#)

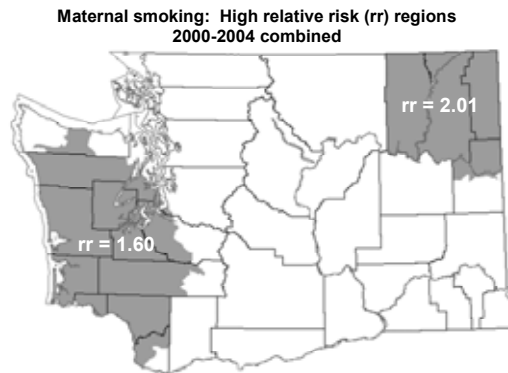
In addition, [all deaths](#) and [all cancer deaths](#) were profiled.

*What do the data indicate?*

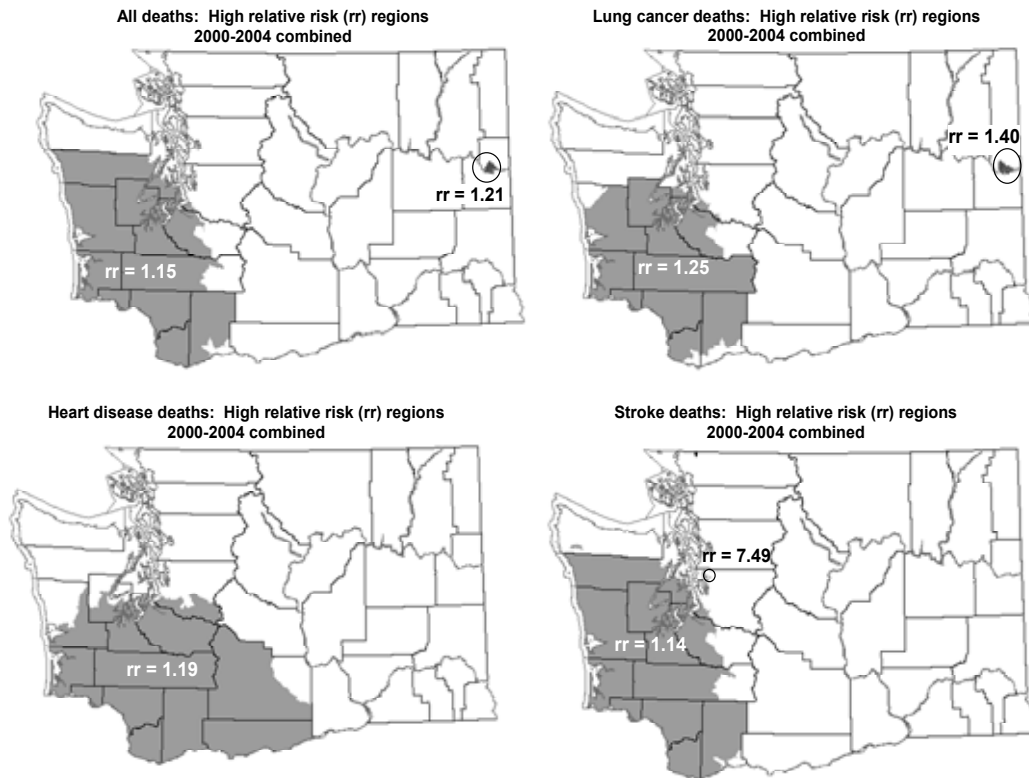
It is important to note that this report presents descriptive statistics only. *No formal analysis of causation or association was performed.* Nonetheless, the simple juxtaposition of these maps or trends does assist in identifying potentially at-risk communities and/or impacts of statewide initiatives. Below are two examples.

• **Tobacco use**

Based upon birth certificate data, southwest Washington was found to be consistently high in the number of mothers who reported being smokers. High maternal smoking rates likely correspond to high smoking rates in general.



Using death certificate data, we find that the southwest region is higher in lung cancer, heart disease and stroke deaths – all of which are highly correlated with tobacco use. Given that these conditions are among the leading causes of death, it is not surprising that this same general



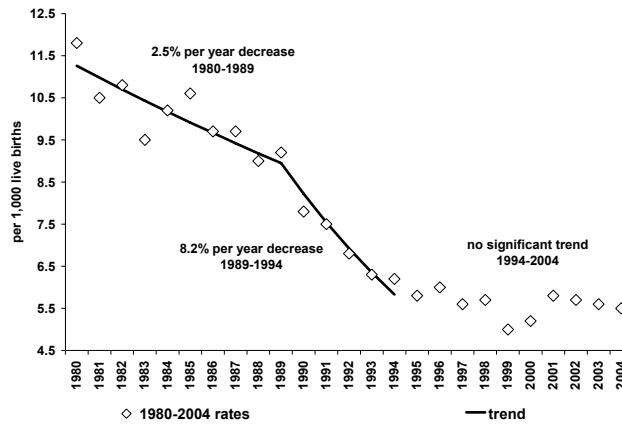
region is also significantly high for total mortalities. Here then is a region that may be in particular need of targeted tobacco prevention and cessation interventions.

**• Infant Mortality**

Infant mortality rates were found to be decreasing by 2.5% per year from 1980 to 1989. However, in 1989 this trend took a turn – for the better: From 1989 to 1994 infant mortality rates decreased by 8.2% per year.

Concurrently, the percent of expectant mothers receiving late or no prenatal care had been rising from 1980 to 1989. Again, however, in 1989 this trend took a turn for the better. Between 1989 and 1993, the proportion of expectant mothers receiving late or no prenatal care began to decrease by 7.8% per year.

**Infant mortality: Statewide trends, 1983-2004**



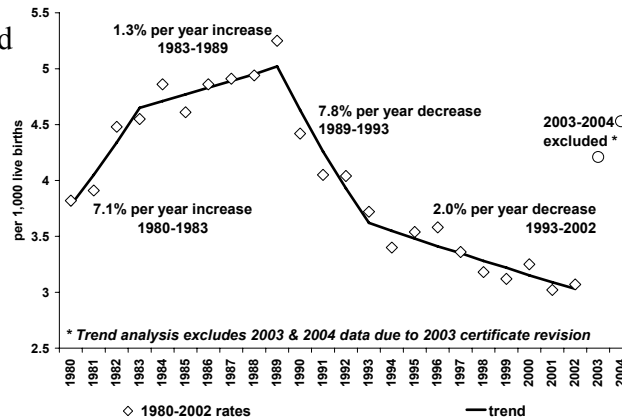
What could have occurred in 1989 that might have affected these trends?

Not coincidentally, 1989 marked the first year implementation of the Department of Social and Health Services’

*First Steps*, an insurance program that offers

prenatal care service coverage for low-income women. Inferring a relationship between the implementation of this program and a concurrent decline in the proportion of late or no prenatal care is reasonable. Moreover, given the relationship between prenatal care and infant mortality, the concurrent decline in infant mortality may also be partially attributable to the implementation of the *First Steps* program.

**Late or no prenatal care: Statewide trends, 1980-2004**



Broadly then, our intent in presenting these data is to augment community assessments and to spur research and program analyses. We believe these new approaches in displaying and analyzing these data further that aim.

# 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, 1995 - 2004**

	Percent of Births <sup>1</sup> where Mother is...			
	A Teenager (<20)	Unmarried	Not a High School Graduate	A Woman of Color <sup>2</sup>
1995	11.5	26.7	18.7	24.1
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

<sup>1</sup> Unknowns have been subtracted from total births in calculating percentages

<sup>2</sup> 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). Education data changed very little between 2003 and 2004.



**Nativity Table A2a. Mother's Race/Ethnicity by Child's Sex<sup>1</sup> for Residents, 2004**

Race/Ethnicity	Total		Male	Female
	Number	Percent <sup>2</sup>		
<b>State Total</b>	<b>81,715</b>	<b>100.0</b>	<b>42,106</b>	<b>39,609</b>
White	67,823	83.0	34,853	32,970
African American	3,543	4.3	1,802	1,741
Native American	1,849	2.3	989	860
Japanese	436	0.5	229	207
Chinese	1,026	1.3	543	483
Filipino	1,271	1.6	664	607
Other Asian	4,737	5.8	2,452	2,285
Other	0	0.0	0	0
Unknown	1,030	1.3	574	456
Hispanic <sup>3</sup>	14,250	17.4	7,324	6,926

<sup>1</sup> Total includes 0 births for which sex is unknown.

<sup>2</sup> Percents may not add to 100% due to rounding.

<sup>3</sup> Persons of Hispanic Origin may be of any race. See Appendix A, "Hispanic Origin."

NOTE: Uses bridged race, see Technical Appendix

**Nativity Table A2b. Mother's Multiple Race by Child's Sex<sup>1</sup> for Residents, 2004**

Race	Total		Male	Female
	Number	Percent <sup>2</sup>		
<b>State Total</b>	<b>81,715</b>	<b>100.0</b>	<b>42,106</b>	<b>39,609</b>
<b>Single Race</b>				
White	65,742	80.5	33,778	31,964
African American	2,991	3.7	1,527	1,464
Native American	1,580	1.9	852	728
Asian	6,292	7.7	3,285	3,007
Pacific Islander	673	0.8	338	335
<b>Multiple Race</b>				
White/African American	460	0.6	220	240
White/Native American	773	0.9	396	377
White/Asian	657	0.8	332	325
White/Pacific Islander	110	0.1	62	48
Other multiple race	458	0.6	256	202
Unknown	1,979	2.4	1,060	919

<sup>1</sup> Total includes 0 births for which sex is unknown.

<sup>2</sup> Percents may not add to 100% due to rounding.

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

**Nativity Table A3. Mother's Age Group by Child's Sex<sup>1</sup> for Residents, 2004**

Age	Total		Male	Female
	Number	Percent <sup>2</sup>		
<b>State Total</b>	<b>81,715</b>	<b>100.0</b>	<b>42,106</b>	<b>39,609</b>
Under 15	94	0.1	54	40
15 - 17	2,006	2.5	1,051	955
18 - 19	4,727	5.8	2,437	2,290
20 - 24	19,931	24.4	10,233	9,698
25 - 29	22,644	27.7	11,664	10,980
30 - 34	19,886	24.3	10,286	9,600
35 - 39	9,996	12.2	5,158	4,838
40 - 44	2,234	2.7	1,126	1,108
45 and Over	154	0.2	76	78
Unknown	43	0.1	21	22

<sup>1</sup> Total includes 0 births for which sex is unknown.

<sup>2</sup> Percents may not add to 100% due to rounding.

**Nativity Table A4. Child's Birth Order by Mother's Age Group for Residents, 2004**

Order at Birth	All	Under									Age Unk
	Ages	15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45 and Over	
<b>State Total</b>	<b>81,715</b>	<b>94</b>	<b>2,006</b>	<b>4,727</b>	<b>19,931</b>	<b>22,644</b>	<b>19,886</b>	<b>9,996</b>	<b>2,234</b>	<b>154</b>	<b>43</b>
1st Child	33,052	86	1,810	3,625	9,886	8,077	6,282	2,688	539	40	19
2nd Child	25,093	3	138	831	6,411	7,288	6,554	3,210	605	40	13
3rd Child	12,562	1	7	137	2,352	4,160	3,653	1,856	371	19	6
4th Child	5,062	0	3	8	613	1,608	1,628	930	255	15	2
5th Child	2,004	0	0	4	153	555	684	457	141	10	0
6th Child	816	0	0	0	25	206	293	204	84	4	0
7th Child	400	0	0	0	5	64	121	146	56	8	0
8th Child	211	0	0	1	1	21	62	82	36	8	0
9th Child	103	0	0	0	4	10	26	45	16	2	0
10th or more	150	0	0	0	1	11	29	53	52	4	0
Unknown	2,262	4	48	121	480	644	554	325	79	4	3

**Nativity Table A5. Mother's Education by Mother's Age Group for Residents, 2004**

Education	All	Under									Age Unk
	Ages	15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45 and Over	
<b>State Total</b>	<b>81,715</b>	<b>94</b>	<b>2,006</b>	<b>4,727</b>	<b>19,931</b>	<b>22,644</b>	<b>19,886</b>	<b>9,996</b>	<b>2,234</b>	<b>154</b>	<b>43</b>
8th Grade or Less	4,086	56	217	299	1,047	1,140	856	367	96	6	2
Some High School	11,234	33	1,507	1,877	3,902	2,207	1,147	451	98	5	7
High School / GED	19,108	0	189	1,868	7,400	5,174	2,848	1,285	317	18	9
Some College	17,497	0	17	521	5,220	5,716	3,804	1,762	417	29	11
Associate Degree	6,609	0	0	25	1,107	2,359	1,978	918	209	11	2
Bachelor's Degree	14,348	0	0	2	680	4,144	5,719	3,168	592	35	8
Postgraduate Educ.	6,405	0	0	0	53	1,261	2,925	1,709	414	41	2
Unknown	2,428	5	76	135	522	643	609	336	91	9	2

**Nativity Table A6a. Top 100 Baby Names of Girls for Residents, 2004**

Rank	First Name	N	%	Cumulative		Rank	First Name	N	%	Cumulative	
				N	%					N	%
1	EMMA	486	1.2	486	1.2	51	KATELYN	104	0.3	10,064	25.4
2	EMILY	461	1.2	947	2.4	52	TRINITY	104	0.3	10,168	25.7
3	OLIVIA	366	0.9	1,313	3.3	53	MACKENZIE	103	0.3	10,271	25.9
4	ISABELLA	355	0.9	1,668	4.2	54	SAVANNAH	103	0.3	10,374	26.2
5	HANNAH	342	0.9	2,010	5.1	55	NEVAEH	101	0.3	10,475	26.4
6	MADISON	340	0.9	2,350	5.9	56	JORDAN	100	0.3	10,575	26.7
7	GRACE	326	0.8	2,676	6.8	57	VANESSA	100	0.3	10,675	27.0
8	SOPHIA	293	0.7	2,969	7.5	58	ALLISON	98	0.2	10,773	27.2
9	ELIZABETH	279	0.7	3,248	8.2	59	BROOKE	96	0.2	10,869	27.4
10	ABIGAIL	272	0.7	3,520	8.9	60	MAKAYLA	94	0.2	10,963	27.7
11	SAMANTHA	263	0.7	3,783	9.6	61	BRIANNA	93	0.2	11,056	27.9
12	ALEXIS	251	0.6	4,034	10.2	62	RILEY	90	0.2	11,146	28.1
13	ELLA	230	0.6	4,264	10.8	63	DIANA	89	0.2	11,235	28.4
14	ASHLEY	222	0.6	4,486	11.3	64	ISABEL	87	0.2	11,322	28.6
15	HAILEY	222	0.6	4,708	11.9	65	RUBY	87	0.2	11,409	28.8
16	ANNA	220	0.6	4,928	12.4	66	AMELIA	86	0.2	11,495	29.0
17	CHLOE	220	0.6	5,148	13.0	67	GABRIELLA	85	0.2	11,580	29.2
18	NATALIE	220	0.6	5,368	13.6	68	AVERY	84	0.2	11,664	29.4
19	SARAH	215	0.5	5,583	14.1	69	CLAIRE	84	0.2	11,748	29.7
20	AVA	213	0.5	5,796	14.6	70	MAYA	83	0.2	11,831	29.9
21	JESSICA	202	0.5	5,998	15.1	71	HALEY	82	0.2	11,913	30.1
22	TAYLOR	192	0.5	6,190	15.6	72	AMANDA	81	0.2	11,994	30.3
23	ALYSSA	191	0.5	6,381	16.1	73	LEAH	80	0.2	12,074	30.5
24	SYDNEY	185	0.5	6,566	16.6	74	SOPHIE	79	0.2	12,153	30.7
25	JASMINE	178	0.4	6,744	17.0	75	ANDREA	78	0.2	12,231	30.9
26	ZOE	166	0.4	6,910	17.4	76	MOLLY	78	0.2	12,309	31.1
27	LAUREN	163	0.4	7,073	17.9	77	JENNA	77	0.2	12,386	31.3
28	KAYLA	152	0.4	7,225	18.2	78	STEPHANIE	76	0.2	12,462	31.5
29	MIA	151	0.4	7,376	18.6	79	ISABELLE	75	0.2	12,537	31.7
30	LILY	148	0.4	7,524	19.0	80	SIERRA	75	0.2	12,612	31.8
31	MEGAN	147	0.4	7,671	19.4	81	BAILEY	74	0.2	12,686	32.0
32	KYLIE	144	0.4	7,815	19.7	82	MARISSA	74	0.2	12,760	32.2
33	KATHERINE	143	0.4	7,958	20.1	83	REBECCA	74	0.2	12,834	32.4
34	KAYLEE	132	0.3	8,090	20.4	84	JOCELYN	72	0.2	12,906	32.6
35	VICTORIA	129	0.3	8,219	20.8	85	MELISSA	72	0.2	12,978	32.8
36	RACHEL	128	0.3	8,347	21.1	86	MARY	71	0.2	13,049	32.9
37	JENNIFER	127	0.3	8,474	21.4	87	AMY	70	0.2	13,119	33.1
38	JULIA	122	0.3	8,596	21.7	88	GABRIELLE	70	0.2	13,189	33.3
39	KAITLYN	122	0.3	8,718	22.0	89	LUCY	70	0.2	13,259	33.5
40	LILLIAN	122	0.3	8,840	22.3	90	ARIANA	69	0.2	13,328	33.6
41	PAIGE	120	0.3	8,960	22.6	91	EVELYN	69	0.2	13,397	33.8
42	ALEXANDRA	118	0.3	9,078	22.9	92	KATIE	69	0.2	13,466	34.0
43	AUDREY	114	0.3	9,192	23.2	93	RYLEE	68	0.2	13,534	34.2
44	MADELINE	114	0.3	9,306	23.5	94	ANGELA	67	0.2	13,601	34.3
45	FAITH	112	0.3	9,418	23.8	95	DESTINY	67	0.2	13,668	34.5
46	MARIA	112	0.3	9,530	24.1	96	ALEXA	66	0.2	13,734	34.7
47	MORGAN	110	0.3	9,640	24.3	97	MICHELLE	66	0.2	13,800	34.8
48	SOFIA	110	0.3	9,750	24.6	98	PEYTON	65	0.2	13,865	35.0
49	ANGELINA	105	0.3	9,855	24.9	99	ELLIE	64	0.2	13,929	35.2
50	NICOLE	105	0.3	9,960	25.1	100	GRACIE	64	0.2	13,993	35.3

**Nativity Table A6b. Top 100 Baby Names of Boys for Residents, 2004**

Rank	First Name	N	%	Cumulative		Rank	First Name	N	%	Cumulative	
				N	%					N	%
1	JACOB	515	1.2	515	1.2	51	AIDEN	173	0.4	14,160	33.6
2	ETHAN	501	1.2	1,016	2.4	52	LUCAS	173	0.4	14,333	34.0
3	ANDREW	460	1.1	1,476	3.5	53	JAYDEN	171	0.4	14,504	34.4
4	ALEXANDER	417	1.0	1,893	4.5	54	COLE	170	0.4	14,674	34.9
5	DANIEL	402	1.0	2,295	5.5	55	AARON	168	0.4	14,842	35.2
6	JOSHUA	397	0.9	2,692	6.4	56	ANGEL	166	0.4	15,008	35.6
7	RYAN	378	0.9	3,070	7.3	57	WYATT	165	0.4	15,173	36.0
8	MICHAEL	371	0.9	3,441	8.2	58	KEVIN	164	0.4	15,337	36.4
9	SAMUEL	344	0.8	3,785	9.0	59	CODY	157	0.4	15,494	36.8
10	TYLER	343	0.8	4,128	9.8	60	ALEX	156	0.4	15,650	37.2
11	BENJAMIN	341	0.8	4,469	10.6	61	JUAN	147	0.3	15,797	37.5
12	LOGAN	337	0.8	4,806	11.4	62	KYLE	144	0.3	15,941	37.9
13	JOSEPH	331	0.8	5,137	12.2	63	ROBERT	141	0.3	16,082	38.2
14	WILLIAM	330	0.8	5,467	13.0	64	NATHANIEL	137	0.3	16,219	38.5
15	DAVID	329	0.8	5,796	13.8	65	ADAM	134	0.3	16,353	38.8
16	NATHAN	314	0.7	6,110	14.5	66	LIAM	134	0.3	16,487	39.2
17	MATTHEW	313	0.7	6,423	15.3	67	HAYDEN	133	0.3	16,620	39.5
18	DYLAN	312	0.7	6,735	16.0	68	CARTER	132	0.3	16,752	39.8
19	ANTHONY	305	0.7	7,040	16.7	69	JESSE	129	0.3	16,881	40.1
20	NICHOLAS	289	0.7	7,329	17.4	70	ASHTON	127	0.3	17,008	40.4
21	ZACHARY	279	0.7	7,608	18.1	71	JASON	127	0.3	17,135	40.7
22	ISAAC	269	0.6	7,877	18.7	72	TIMOTHY	126	0.3	17,261	41.0
23	CALEB	266	0.6	8,143	19.3	73	CHARLES	125	0.3	17,386	41.3
24	JAMES	263	0.6	8,406	20.0	74	JADEN	124	0.3	17,510	41.6
25	NOAH	255	0.6	8,661	20.6	75	ERIC	123	0.3	17,633	41.9
26	ELIJAH	254	0.6	8,915	21.2	76	KADEN	122	0.3	17,755	42.2
27	CHRISTOPHER	253	0.6	9,168	21.8	77	CARSON	120	0.3	17,875	42.5
28	AUSTIN	241	0.6	9,409	22.3	78	CHASE	120	0.3	17,995	42.7
29	BRANDON	241	0.6	9,650	22.9	79	RILEY	119	0.3	18,114	43.0
30	EVAN	238	0.6	9,888	23.5	80	TRISTAN	116	0.3	18,230	43.3
31	GABRIEL	236	0.6	10,124	24.0	81	BLAKE	114	0.3	18,344	43.6
32	JONATHAN	229	0.5	10,353	24.6	82	JESUS	114	0.3	18,458	43.8
33	JACKSON	228	0.5	10,581	25.1	83	ADRIAN	111	0.3	18,569	44.1
34	JOSE	225	0.5	10,806	25.7	84	BRAYDEN	111	0.3	18,680	44.4
35	GAVIN	224	0.5	11,030	26.2	85	SEAN	111	0.3	18,791	44.6
36	MASON	222	0.5	11,252	26.7	86	TANNER	111	0.3	18,902	44.9
37	CHRISTIAN	219	0.5	11,471	27.2	87	BRIAN	109	0.3	19,011	45.2
38	CONNOR	219	0.5	11,690	27.8	88	JULIAN	109	0.3	19,120	45.4
39	AIDAN	216	0.5	11,906	28.3	89	DIEGO	108	0.3	19,228	45.7
40	JACK	211	0.5	12,117	28.8	90	CARLOS	107	0.3	19,335	45.9
41	ISAIAH	210	0.5	12,327	29.3	91	HENRY	106	0.3	19,441	46.2
42	JOHN	205	0.5	12,532	29.8	92	LUIS	106	0.3	19,547	46.4
43	CAMERON	194	0.5	12,726	30.2	93	LEVI	101	0.2	19,648	46.7
44	LUKE	189	0.4	12,915	30.7	94	CADEN	100	0.2	19,748	46.9
45	HUNTER	188	0.4	13,103	31.1	95	BRYAN	99	0.2	19,847	47.1
46	OWEN	178	0.4	13,281	31.5	96	JOSIAH	99	0.2	19,946	47.4
47	THOMAS	178	0.4	13,459	32.0	97	SETH	99	0.2	20,045	47.6
48	IAN	176	0.4	13,635	32.4	98	COLIN	95	0.2	20,140	47.8
49	JORDAN	176	0.4	13,811	32.8	99	ALEXIS	94	0.2	20,234	48.1
50	JUSTIN	176	0.4	13,987	33.2	100	CONNER	94	0.2	20,328	48.3



**Nativity Table A7. County/City of Residence, Sex<sup>1</sup>, and County/City of Occurrence, 2004**

County and City	Total	Residence		Occurrence	
		Rate <sup>2</sup>	Male	Female	Total
<b>State Total</b>	<b>81,715</b>	<b>13.2</b>	<b>42,106</b>	<b>39,609</b>	<b>81,404</b>
Adams	389	23.3	192	197	563
Asotin	261	12.6	134	127	1
Benton	2,188	14.1	1,093	1,095	3,346
Kennewick	1,127	19.1	570	557	1,243
Richland	535	12.5	265	270	1,742
Chelan	902	13.2	480	422	1,345
Wenatchee	523	18.2	283	240	1,261
Clallam	602	9.1	298	304	568
Port Angeles	224	12.1	121	103	453
Clark	5,541	14.5	2,867	2,674	4,990
Camas	328	21.4	159	169	1
Vancouver	3,679	24.1	1,905	1,774	4,971
Columbia	40	9.8	22	18	0
Cowlitz	1,230	12.9	614	616	1,193
Longview	554	15.7	268	286	1,188
Douglas	455	13.3	223	232	0
Ferry	78	10.7	46	32	2
Franklin	1,328	23.3	660	668	554
Pasco	1,107	27.1	549	558	550
Garfield	11	4.6	7	4	0
Grant	1,441	18.4	681	760	1,053
Moses Lake	406	25.2	184	222	971
Grays Harbor	830	12.0	429	401	607
Aberdeen	286	17.4	139	147	595
Island	989	13.2	501	488	705
Oak Harbor	518	24.7	272	246	458
Jefferson	195	7.2	107	88	121
King	22,874	12.8	11,831	11,043	27,249
Auburn	984	22.5	500	484	1,009
Bellevue	1,395	12.0	741	654	3,922
Bothell part	303	18.6	154	149	0
Burien	363	11.7	170	193	1,365
Covington	201	13.2	103	98	1
Des Moines	332	11.4	170	162	0
Federal Way	1,230	14.7	633	597	1,348
Issaquah	498	32.1	247	251	1
Kenmore	189	9.9	108	81	0
Kent	1,691	20.0	910	781	3
Kirkland	799	17.4	423	376	4,559
Maple Valley	319	19.6	178	141	2
Mercer Island	156	7.1	90	66	1
Redmond	954	20.3	508	446	2
Renton	1,421	25.7	719	702	2,897
Sammamish	644	17.6	337	307	1
SeaTac	317	12.6	168	149	0
Seattle	7,211	12.6	3,683	3,528	11,820
Shoreline	420	8.0	217	203	11

**Nativity Table A7. (Continued) County/City of Residence, Sex<sup>1</sup>, and County/City of Occurrence, 2004**

County and City	Total	Residence		Occurrence	
		Rate <sup>2</sup>	Male	Female	Total
Tukwila	246	14.3	129	117	0
Kitsap	3,009	12.6	1,535	1,474	2,679
Bainbridge Island	143	6.6	61	82	1
Bremerton	999	26.6	499	500	803
Kittitas	342	9.6	176	166	299
Ellensburg	163	9.9	88	75	299
Klickitat	223	11.6	121	102	136
Lewis	847	12.0	448	399	590
Centralia	276	18.2	158	118	512
Lincoln	91	8.9	48	43	2
Mason	559	11.0	290	269	280
Okanogan	499	12.6	270	229	513
Pacific	200	9.5	89	111	7
Pend Oreille	115	9.7	71	44	107
Pierce	10,278	13.8	5,370	4,908	10,358
Lakewood	922	15.6	469	453	0
Puyallup	1,042	29.2	559	483	1,761
Tacoma	3,712	18.9	1,923	1,789	8,138
University Place	368	11.9	192	176	2
San Juan	107	7.1	52	55	3
Skagit	1,418	13.0	699	719	1,540
Anacortes	138	8.9	69	69	317
Mount Vernon	531	19.2	273	258	1,214
Skamania	82	8.1	43	39	2
Snohomish	8,641	13.4	4,487	4,154	5,698
Edmonds	423	10.7	221	202	1,151
Everett	2,197	22.7	1,128	1,069	3,829
Lynnwood	1,041	30.1	538	503	5
Marysville	648	22.5	345	303	7
Monroe	278	18.0	147	131	352
Mountlake Terrace	214	10.5	102	112	1
Mukilteo	183	9.5	85	98	4
Spokane	5,480	12.7	2,752	2,728	6,371
Spokane (city)	3,388	17.2	1,661	1,727	6,367
Stevens	484	11.9	250	234	276
Thurston	2,604	11.9	1,378	1,226	2,830
Lacey	547	16.8	297	250	4
Olympia	991	23.0	542	449	2,821
Wahkiakum	29	7.6	13	16	0
Walla Walla	715	12.6	376	339	955
Walla Walla (city)	482	15.8	247	235	955
Whatcom	2,061	11.6	1,081	980	2,048
Bellingham	851	12.0	454	397	2,013
Whitman	377	9.0	199	178	349
Pullman	235	9.1	112	123	293
Yakima	4,200	18.5	2,173	2,027	4,064
Yakima (city)	1,722	21.7	893	829	2,914

<sup>1</sup> Total includes 0 births for which sex is unknown.

<sup>2</sup> 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.

**Nativity Table A8. Month of Birth by County of Residence, 2004**

County	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>State Total</b>	<b>81,715</b>	<b>6,382</b>	<b>6,275</b>	<b>7,053</b>	<b>6,965</b>	<b>7,045</b>	<b>7,294</b>	<b>7,238</b>	<b>6,903</b>	<b>6,914</b>	<b>6,681</b>	<b>6,358</b>	<b>6,607</b>
Adams	389	26	24	31	37	36	42	37	28	28	29	35	36
Asotin	261	18	17	24	22	23	21	23	22	24	19	24	24
Benton	2,188	178	159	196	201	171	186	182	174	207	178	163	193
Chelan	902	73	59	71	76	87	88	85	69	66	67	76	85
Clallam	602	48	39	60	53	55	56	64	46	44	42	59	36
Clark	5,541	451	442	447	454	487	521	506	467	456	449	436	425
Columbia	40	3	1	5	3	4	4	4	2	3	6	1	4
Cowlitz	1,230	67	76	119	103	120	112	101	110	136	113	82	91
Douglas	455	41	42	38	29	32	46	42	33	47	40	38	27
Ferry	78	11	0	7	11	7	4	9	6	7	6	5	5
Franklin	1,328	92	85	121	122	103	107	127	118	130	124	92	107
Garfield	11	1	0	1	1	3	0	1	0	1	1	2	0
Grant	1,441	98	110	116	134	103	148	137	110	137	114	110	124
Grays Harbor	830	63	58	79	68	66	71	85	81	64	55	49	91
Island	989	82	64	99	84	88	89	84	78	85	85	66	85
Jefferson	195	16	15	19	18	9	26	13	14	16	23	8	18
King	22,874	1,784	1,780	1,918	1,921	1,941	2,051	2,038	1,953	1,929	1,899	1,798	1,862
Kitsap	3,009	226	236	218	248	268	274	300	228	286	224	253	248
Kittitas	342	31	23	18	30	33	29	36	34	28	31	22	27
Klickitat	223	21	20	14	24	15	23	17	26	13	19	15	16
Lewis	847	63	63	69	76	57	81	75	66	87	65	74	71
Lincoln	91	3	7	6	7	9	6	8	14	10	9	5	7
Mason	559	37	50	50	58	49	48	43	45	40	47	51	41
Okanogan	499	29	42	41	31	37	45	42	51	43	53	44	41
Pacific	200	11	19	14	22	16	12	17	20	20	16	14	19
Pend Oreille	115	7	10	9	7	12	5	11	13	11	6	13	11
Pierce	10,278	834	794	934	879	896	912	891	845	847	856	777	813
San Juan	107	9	6	11	6	11	10	10	8	7	14	9	6
Skagit	1,418	108	93	123	129	121	115	111	124	120	126	112	136
Skamania	82	4	8	10	7	8	8	10	5	6	6	6	4
Snohomish	8,641	699	693	758	685	802	764	740	716	728	711	659	686
Spokane	5,480	403	409	483	485	492	488	473	498	456	449	425	419
Stevens	484	42	38	47	54	41	30	30	42	36	41	43	40
Thurston	2,604	205	207	231	238	206	224	218	228	213	209	209	216
Wahkiakum	29	2	3	1	2	5	1	2	2	3	3	2	3
Walla Walla	715	59	56	68	59	54	74	67	58	57	51	44	68
Whatcom	2,061	176	178	182	176	172	159	191	170	164	158	164	171
Whitman	377	34	24	34	33	36	35	38	34	29	30	27	23
Yakima	4,200	327	325	381	372	370	379	370	365	330	307	346	328



**Nativity Table A9. Mother's Age Group by County of Residence, 2003**

County	All	Under		15-17	18-19	20-24	25-29	30-34	35-39	40-44	45 and Over	Age Unk
	Ages	15	15-19									
<b>State Total</b>	<b>81,715</b>	<b>94</b>	<b>6,733</b>	<b>2,006</b>	<b>4,727</b>	<b>19,931</b>	<b>22,644</b>	<b>19,886</b>	<b>9,996</b>	<b>2,234</b>	<b>154</b>	<b>43</b>
Adams	389	4	66	30	36	103	104	73	30	9	0	0
Asotin	261	0	44	12	32	90	71	35	20	1	0	0
Benton	2,188	4	229	73	156	627	630	457	183	55	3	0
Chelan	902	2	100	35	65	272	252	177	73	26	0	0
Clallam	602	1	61	20	41	184	164	115	55	21	1	0
Clark	5,541	1	391	99	292	1,355	1,676	1,349	634	124	11	0
Columbia	40	0	1	1	0	14	13	9	3	0	0	0
Cowlitz	1,230	3	157	52	105	375	358	221	95	21	0	0
Douglas	455	1	56	17	39	136	136	87	36	3	0	0
Ferry	78	0	6	1	5	27	20	13	10	1	0	1
Franklin	1,328	2	173	61	112	399	394	251	80	29	0	0
Garfield	11	0	0	0	0	4	3	2	2	0	0	0
Grant	1,441	5	225	77	148	468	386	241	92	22	2	0
Grays Harbor	830	1	133	37	96	286	227	115	55	11	2	0
Island	989	0	73	9	64	337	266	198	95	17	1	2
Jefferson	195	0	16	4	12	52	43	43	33	8	0	0
King	22,874	16	1,080	322	758	3,686	5,672	7,181	4,230	934	61	14
Kitsap	3,009	3	251	56	195	925	843	588	322	71	5	1
Kittitas	342	1	25	7	18	91	115	74	26	7	3	0
Klickitat	223	0	29	7	22	74	53	43	20	4	0	0
Lewis	847	1	112	29	83	262	271	144	49	7	0	1
Lincoln	91	0	6	0	6	23	36	18	8	0	0	0
Mason	559	1	74	21	53	190	134	103	42	15	0	0
Okanogan	499	1	58	15	43	169	128	95	37	10	1	0
Pacific	200	0	27	9	18	61	59	36	14	3	0	0
Pend Oreille	115	0	17	3	14	41	32	17	7	0	1	0
Pierce	10,278	11	913	270	643	2,878	3,067	2,207	996	187	12	7
San Juan	107	0	5	2	3	23	30	26	17	6	0	0
Skagit	1,418	4	179	60	119	375	376	323	116	40	5	0
Skamania	82	0	5	1	4	18	26	19	12	2	0	0
Snohomish	8,641	7	562	152	410	1,920	2,538	2,265	1,094	228	15	12
Spokane	5,480	5	483	144	339	1,559	1,609	1,185	513	119	6	1
Stevens	484	1	65	18	47	154	127	80	41	12	4	0
Thurston	2,604	2	206	48	158	683	744	613	270	73	11	2
Wahkiakum	29	0	4	1	3	5	9	7	4	0	0	0
Walla Walla	715	1	89	30	59	213	196	123	82	11	0	0
Whatcom	2,061	2	153	46	107	464	599	533	241	64	4	1
Whitman	377	0	13	2	11	85	122	95	48	12	2	0
Yakima	4,200	14	646	235	411	1,303	1,115	725	311	81	4	1

**Nativity Table A10. Age Specific Live Birth Rates<sup>1</sup> by County of Residence, 2004**

County	All Ages	15-19	15-17	18-19	20-24	25-29	30-34	35-39	40-44
<b>State Total</b>	<b>62.8</b>	<b>31.2</b>	<b>15.5</b>	<b>54.4</b>	<b>93.4</b>	<b>116.2</b>	<b>94.0</b>	<b>45.5</b>	<b>9.1</b>
Adams	120.0	94.3	67.1	142.3	184.3	207.2	147.2	64.9	17.2
Asotin	65.3	56.2	24.0	112.7	146.8	128.9	58.5	29.6	*
Benton	69.1	37.4	18.6	71.1	131.3	143.9	94.1	34.2	8.9
Chelan	69.3	40.6	22.5	71.5	140.2	135.5	90.6	33.2	10.0
Clallam	58.6	29.7	15.2	55.7	134.4	130.1	83.3	29.9	8.9
Clark	68.7	29.4	11.9	58.9	110.7	138.2	99.5	44.9	8.1
Columbia	60.0	*	*	*	140.0	164.6	98.9	*	*
Cowlitz	67.3	47.3	25.0	85.0	133.0	134.7	76.6	31.0	5.9
Douglas	67.9	42.2	19.8	83.2	140.1	149.6	88.9	30.8	*
Ferry	62.1	21.0	*	55.6	163.6	129.0	75.1	48.3	*
Franklin	115.2	72.5	40.7	125.8	191.3	207.0	145.1	46.8	16.9
Garfield	28.9	*	*	*	*	*	*	*	*
Grant	94.4	71.2	38.3	128.6	183.7	165.2	104.0	39.7	8.5
Grays Harbor	65.4	52.7	23.1	103.9	155.6	133.1	61.2	25.8	4.2
Island	70.8	31.8	6.2	76.6	154.0	133.0	87.6	38.0	6.2
Jefferson	50.2	22.0	*	51.7	126.8	104.4	76.6	47.0	7.5
King	57.0	19.9	10.2	33.6	57.4	84.3	100.4	61.5	12.5
Kitsap	63.2	30.4	10.5	66.3	127.8	131.8	78.1	38.5	7.3
Kittitas	39.3	14.5	11.1	16.5	30.5	118.8	84.6	26.6	6.0
Klickitat	65.7	43.9	15.2	110.0	176.2	118.0	88.7	33.2	*
Lewis	65.9	43.1	17.4	89.2	132.3	160.9	78.8	22.6	2.7
Lincoln	55.4	16.9	*	60.6	132.2	203.4	73.8	26.8	*
Mason	65.5	44.1	18.9	94.0	168.6	124.5	84.5	27.2	7.9
Okanogan	69.8	38.7	15.2	83.8	182.1	134.0	91.3	31.6	6.4
Pacific	65.3	44.2	22.1	88.2	160.9	165.7	80.9	26.6	*
Pend Oreille	57.4	38.4	*	110.2	219.3	148.8	60.3	17.6	*
Pierce	63.8	33.6	16.5	59.2	109.8	129.7	83.3	36.3	6.2
San Juan	49.9	14.0	*	*	105.5	130.4	90.3	40.7	9.4
Skagit	68.1	45.4	24.4	79.9	117.0	128.6	100.8	33.8	9.7
Skamania	42.4	13.2	*	*	84.1	109.2	67.1	32.5	*
Snohomish	61.9	25.1	10.8	49.2	98.2	124.3	95.2	42.7	8.2
Spokane	60.3	29.0	15.4	46.6	93.2	125.8	89.0	35.1	7.1
Stevens	66.6	40.5	15.8	101.5	185.8	157.0	75.5	33.5	6.9
Thurston	56.8	25.8	9.8	51.1	90.6	116.0	88.2	35.0	7.9
Wahkiakum	50.7	*	*	*	82.0	134.3	80.5	*	*
Walla Walla	63.9	36.2	24.7	47.4	90.1	147.3	79.8	51.9	5.7
Whatcom	52.1	20.2	12.9	26.8	48.5	116.8	101.4	42.7	10.0
Whitman	31.4	4.8	*	5.4	17.6	93.4	87.2	49.2	10.8
Yakima	92.1	71.7	41.6	122.6	165.0	155.9	104.8	44.6	10.6

<sup>1</sup> 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.

Population Data: See Appendix A: Technical Appendix.

**Nativity Table A11. Single Mothers, Mother's Age Group by County of Residence, 2004**

County	All Ages	Under 15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45 and Over	Age Unk
<b>State Total</b>	<b>24,588</b>	<b>90</b>	<b>1,800</b>	<b>3,584</b>	<b>9,508</b>	<b>5,384</b>	<b>2,597</b>	<b>1,244</b>	<b>353</b>	<b>13</b>	<b>15</b>
Adams	150	2	21	26	43	29	21	5	3	0	0
Asotin	114	0	12	27	47	22	2	4	0	0	0
Benton	722	4	69	117	265	145	76	35	11	0	0
Chelan	320	2	30	50	123	65	27	18	5	0	0
Clallam	249	1	19	31	105	50	27	13	3	0	0
Clark	1,431	1	91	209	578	316	152	74	10	0	0
Columbia	15	0	1	0	6	3	4	1	0	0	0
Cowlitz	503	3	49	92	209	91	30	21	8	0	0
Douglas	182	1	14	31	68	46	14	8	0	0	0
Ferry	37	0	1	2	15	8	5	6	0	0	0
Franklin	517	2	54	84	187	100	66	15	9	0	0
Garfield	1	0	0	0	1	0	0	0	0	0	0
Grant	591	5	63	109	225	119	51	17	2	0	0
Grays Harbor	417	1	36	81	161	87	29	19	2	1	0
Island	194	0	9	34	86	33	20	10	2	0	0
Jefferson	78	0	4	10	33	14	10	6	1	0	0
King	5,446	16	297	607	1,902	1,343	747	402	122	6	4
Kitsap	817	3	50	139	334	175	72	36	7	0	1
Kittitas	86	1	6	10	36	23	3	4	3	0	0
Klickitat	83	0	7	18	32	14	9	2	1	0	0
Lewis	317	1	27	58	122	78	19	12	0	0	0
Lincoln	23	0	0	5	7	5	5	1	0	0	0
Mason	235	1	19	44	99	37	22	11	2	0	0
Okanogan	217	1	13	30	80	48	32	9	4	0	0
Pacific	72	0	9	13	23	17	9	1	0	0	0
Pend Oreille	47	0	3	10	24	9	1	0	0	0	0
Pierce	3,430	11	249	492	1,389	758	334	154	37	2	4
San Juan	24	0	0	3	8	5	3	3	2	0	0
Skagit	383	2	42	74	133	73	40	10	9	0	0
Skamania	22	0	1	4	10	5	2	0	0	0	0
Snohomish	2,272	7	133	313	916	502	249	121	24	2	5
Spokane	1,836	5	133	248	799	381	164	79	26	1	0
Stevens	170	1	17	32	68	27	16	9	0	0	0
Thurston	794	2	43	128	307	172	75	42	23	1	1
Wahkiakum	10	0	1	2	3	3	0	1	0	0	0
Walla Walla	239	1	24	48	104	41	12	8	1	0	0
Whatcom	540	2	37	78	190	135	63	26	9	0	0
Whitman	56	0	2	7	27	12	6	2	0	0	0
Yakima	1,948	14	214	318	743	393	180	59	27	0	0

**Nativity Table A12. Father's Age Group by County of Residence, 2004**

County	All Ages	Under 15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45 and Over	Age Unk
<b>State Total</b>	<b>81,715</b>	<b>6</b>	<b>455</b>	<b>1,611</b>	<b>12,471</b>	<b>19,374</b>	<b>20,224</b>	<b>12,838</b>	<b>5,273</b>	<b>2,208</b>	<b>7,255</b>
Adams	389	0	6	17	75	100	76	41	24	4	46
Asotin	261	0	0	11	55	73	49	30	7	3	33
Benton	2,188	0	13	56	400	562	480	270	121	58	228
Chelan	902	0	2	24	193	230	201	119	47	28	58
Clallam	602	0	5	14	121	169	112	67	44	24	46
Clark	5,541	0	15	64	691	1,338	1,395	821	323	131	763
Columbia	40	0	0	0	10	16	8	1	1	1	3
Cowlitz	1,230	0	15	37	247	342	236	145	43	26	139
Douglas	455	0	5	13	100	124	99	49	28	9	28
Ferry	78	0	0	2	13	21	20	7	6	1	8
Franklin	1,328	0	15	37	278	335	286	142	64	28	143
Garfield	11	0	0	0	2	4	2	0	2	0	1
Grant	1,441	0	20	48	321	375	290	131	70	31	155
Grays Harbor	830	1	11	35	195	213	153	75	34	25	88
Island	989	0	3	18	256	255	219	103	47	32	56
Jefferson	195	0	2	6	36	31	57	26	19	7	11
King	22,874	1	58	261	2,061	4,402	6,626	5,088	2,062	815	1,500
Kitsap	3,009	0	19	54	678	756	628	363	178	65	268
Kittitas	342	0	0	7	57	107	90	37	15	11	18
Klickitat	223	0	1	5	44	51	43	32	16	6	25
Lewis	847	0	6	17	164	219	171	88	31	12	139
Lincoln	91	0	0	3	19	27	22	9	6	2	3
Mason	559	0	2	23	126	139	104	61	27	10	67
Okanogan	499	0	4	15	112	136	108	50	25	12	37
Pacific	200	0	0	4	33	66	34	20	11	6	26
Pend Oreille	115	0	0	6	30	29	25	8	5	3	9
Pierce	10,278	0	44	237	1,790	2,611	2,445	1,289	515	213	1,134
San Juan	107	0	1	0	10	24	28	21	12	5	6
Skagit	1,418	1	16	41	277	310	333	173	78	25	164
Skamania	82	0	1	0	13	19	24	13	2	3	7
Snohomish	8,641	0	38	115	1,153	2,044	2,321	1,472	575	222	701
Spokane	5,480	1	37	116	987	1,483	1,305	699	282	105	465
Stevens	484	0	8	22	100	122	100	57	26	14	35
Thurston	2,604	0	9	58	423	672	615	399	132	80	216
Wahkiakum	29	0	0	0	7	9	4	5	2	1	1
Walla Walla	715	0	7	28	143	214	135	91	38	11	48
Whatcom	2,061	0	11	46	318	530	494	333	138	56	135
Whitman	377	0	0	2	47	110	102	58	35	12	11
Yakima	4,200	2	81	169	886	1,106	784	445	182	111	434

**Nativity Table A13a. Mother's Race/Ethnicity by County of Residence, 2004**

County	Total	White	African American	Native American	Japanese	Chinese	Filipino	Other Asian	Other	Unk	Hispanic Origin <sup>1</sup>
<b>State Total</b>	<b>81,715</b>	<b>67,823</b>	<b>3,543</b>	<b>1,849</b>	<b>436</b>	<b>1,026</b>	<b>1,271</b>	<b>4,737</b>	<b>0</b>	<b>1,030</b>	<b>14,250</b>
Adams	389	368	3	13	0	1	0	2	0	2	307
Asotin	261	251	2	6	0	0	0	1	0	1	9
Benton	2,188	2,046	45	18	0	12	9	40	0	18	583
Chelan	902	879	2	11	0	0	2	4	0	4	425
Clallam	602	524	3	63	0	1	2	7	0	2	51
Clark	5,541	5,072	99	65	19	30	35	214	0	7	557
Columbia	40	39	0	1	0	0	0	0	0	0	2
Cowlitz	1,230	1,166	11	15	1	1	8	19	0	9	152
Douglas	455	448	1	3	0	0	0	1	0	2	196
Ferry	78	52	0	25	0	0	0	1	0	0	1
Franklin	1,328	1,287	11	3	0	0	6	17	0	4	869
Garfield	11	10	0	1	0	0	0	0	0	0	0
Grant	1,441	1,407	9	17	0	0	0	6	0	2	782
Grays Harbor	830	713	4	77	0	0	7	14	0	15	117
Island	989	849	51	10	6	1	36	30	0	6	96
Jefferson	195	180	1	9	0	0	2	3	0	0	6
King	22,874	16,142	1,790	258	293	808	640	2,538	0	405	2,980
Kitsap	3,009	2,597	128	52	16	10	90	102	0	14	233
Kittitas	342	328	6	0	1	2	1	3	0	1	48
Klickitat	223	211	1	8	0	0	0	1	0	2	47
Lewis	847	797	7	22	0	2	2	9	0	8	105
Lincoln	91	87	1	2	0	0	0	0	0	1	5
Mason	559	509	2	33	0	1	1	7	0	6	89
Okanogan	499	404	0	79	0	0	1	4	0	11	133
Pacific	200	187	0	9	0	0	0	4	0	0	32
Pend Oreille	115	102	1	10	0	1	0	0	0	1	2
Pierce	10,278	8,110	899	207	28	26	177	724	0	107	1,338
San Juan	107	102	0	1	1	0	0	2	0	1	11
Skagit	1,418	1,335	10	24	2	1	5	21	0	20	457
Skamania	82	78	0	3	0	0	0	0	0	1	9
Snohomish	8,641	7,143	230	162	39	69	162	613	0	223	1,056
Spokane	5,480	5,033	113	146	8	9	25	110	0	36	293
Stevens	484	427	2	50	1	1	0	1	0	2	26
Thurston	2,604	2,209	63	62	9	13	36	142	0	70	216
Wahkiakum	29	28	0	1	0	0	0	0	0	0	0
Walla Walla	715	686	4	5	3	1	3	11	0	2	239
Whatcom	2,061	1,841	7	110	4	10	10	42	0	37	242
Whitman	377	316	12	5	1	25	1	15	0	2	18
Yakima	4,200	3,860	25	263	4	1	10	29	0	8	2,518

<sup>1</sup>Persons of Hispanic Origin maybe of any race. See Appendix A, "Hispanic Origin."

NOTE: Uses bridged race, see Technical Appendix

**Nativity Table A13b. Mother's Multiple Race by County of Residence, 2004**

County	Total	Single race					More than one race given	Race unknown
		White	African Amer.	Native Amer.	Asian	Pacific Islander		
<b>State Total</b>	<b>81,715</b>	<b>65,742</b>	<b>2,991</b>	<b>1,580</b>	<b>6,292</b>	<b>673</b>	<b>2,458</b>	<b>1,979</b>
Adams	389	369	2	13	2	1	1	1
Asotin	261	251	0	5	1	0	3	1
Benton	2,188	2,035	31	16	52	2	38	14
Chelan	902	871	1	8	6	0	12	4
Clallam	602	516	3	60	8	1	8	6
Clark	5,541	4,273	61	32	197	37	106	835
Columbia	40	39	0	1	0	0	0	0
Cowlitz	1,230	1,100	5	9	20	2	39	55
Douglas	455	447	1	3	1	0	1	2
Ferry	78	52	0	24	1	0	1	0
Franklin	1,328	1,277	9	3	21	2	12	4
Garfield	11	9	0	1	0	0	1	0
Grant	1,441	1,388	6	15	5	1	23	3
Grays Harbor	830	691	2	61	15	1	46	14
Island	989	838	39	9	55	3	38	7
Jefferson	195	175	1	7	5	0	7	0
King	22,874	15,893	1,627	208	3,853	284	680	329
Kitsap	3,009	2,535	110	44	145	34	130	11
Kittitas	342	326	2	0	6	0	6	2
Klickitat	223	113	0	4	0	0	4	102
Lewis	847	792	5	20	10	2	10	8
Lincoln	91	86	1	2	0	0	1	1
Mason	559	494	1	30	6	3	21	4
Okanogan	499	403	0	77	4	1	4	10
Pacific	200	113	0	6	3	0	4	74
Pend Oreille	115	99	0	9	1	0	5	1
Pierce	10,278	7,869	731	165	674	190	556	93
San Juan	107	102	0	1	2	0	1	1
Skagit	1,418	1,326	6	18	19	5	25	19
Skamania	82	48	0	3	0	0	0	31
Snohomish	8,641	7,021	188	144	767	45	272	204
Spokane	5,480	4,930	75	130	105	24	187	29
Stevens	484	423	1	42	2	1	12	3
Thurston	2,604	2,164	48	57	163	24	81	67
Wahkiakum	29	23	0	1	0	0	1	4
Walla Walla	715	683	2	4	14	2	7	3
Whatcom	2,061	1,816	6	99	56	2	48	34
Whitman	377	312	11	3	41	0	10	0
Yakima	4,200	3,840	16	246	32	6	57	3

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

**Nativity Table A14. Mother's Education by County of Residence, 2004**

County	Total	8th Grade or Less	Some High School	High School / GED	Some College	Associate Degree	Bachelor's Degree	Postgrad Educ	Unknown
<b>State Total</b>	<b>81,715</b>	<b>4,086</b>	<b>11,234</b>	<b>19,108</b>	<b>17,497</b>	<b>6,609</b>	<b>14,348</b>	<b>6,405</b>	<b>2,428</b>
Adams	389	122	99	82	38	10	26	10	2
Asotin	261	2	54	74	73	17	33	7	1
Benton	2,188	150	396	501	476	160	305	132	68
Chelan	902	192	162	235	111	71	82	41	8
Clallam	602	27	87	186	167	47	60	22	6
Clark	5,541	164	674	1,240	1,289	389	686	260	839
Columbia	40	1	5	12	11	6	2	3	0
Cowlitz	1,230	69	233	302	333	104	90	43	56
Douglas	455	70	85	131	66	44	41	16	2
Ferry	78	1	10	34	22	5	4	2	0
Franklin	1,328	272	366	265	210	70	85	26	34
Garfield	11	0	1	3	3	2	1	1	0
Grant	1,441	293	408	350	221	58	74	32	5
Grays Harbor	830	62	188	264	196	47	46	18	9
Island	989	4	80	310	337	80	127	43	8
Jefferson	195	1	15	63	60	13	33	9	1
King	22,874	656	2,143	4,251	3,782	1,757	6,425	3,341	519
Kitsap	3,009	34	367	802	918	269	446	158	15
Kittitas	342	24	33	81	83	26	77	17	1
Klickitat	223	12	30	36	23	10	12	4	96
Lewis	847	44	160	260	227	73	60	19	4
Lincoln	91	0	9	40	21	3	11	6	1
Mason	559	50	100	162	143	48	35	18	3
Okanogan	499	56	99	157	98	36	28	19	6
Pacific	200	22	21	32	28	16	7	1	73
Pend Oreille	115	0	20	46	31	11	3	4	0
Pierce	10,278	284	1,595	2,696	2,554	930	1,395	595	229
San Juan	107	2	15	49	21	4	10	5	1
Skagit	1,418	151	240	431	199	89	127	52	129
Skamania	82	2	12	14	11	7	4	2	30
Snohomish	8,641	291	1,024	1,965	2,175	847	1,674	517	148
Spokane	5,480	56	628	1,393	1,459	565	985	377	17
Stevens	484	4	63	217	104	31	42	20	3
Thurston	2,604	48	287	641	691	231	459	192	55
Wahkiakum	29	1	4	6	7	4	2	1	4
Walla Walla	715	71	131	159	137	84	82	48	3
Whatcom	2,061	66	210	495	498	207	383	161	41
Whitman	377	0	15	36	72	45	123	86	0
Yakima	4,200	782	1,165	1,087	602	193	263	97	11

## 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.

**Nativity Table B1. Behavioral and Health Summary Indicators for Residents, 1995 - 2004**

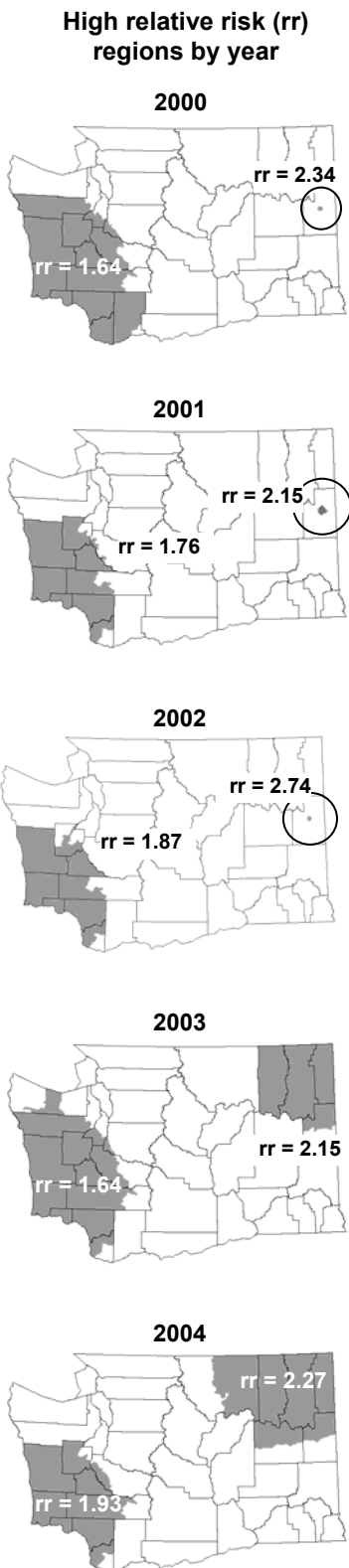
	Percent of Births where Mother...		
	Smokes <sup>1</sup>	Has Gestational Diabetes	Has Pregnancy-Associated Hypertension
1995	16.1	2.4	4.1
1996	16.0	2.6	4.2
1997	14.6	2.5	4.5
1998	14.6	2.6	4.5
1999	14.2	2.7	4.7
2000	13.5	3.1	5.1
2001	12.6	3.5	5.1
2002	12.0	3.6	4.8
2003	10.9	4.3	5.3
2004	10.2	4.5	5.3

<sup>1</sup>Unknowns have been subtracted from total births in calculating percentages.

Trends of declining smoking and increasing diabetes and hypertension have continued over the decade. 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.

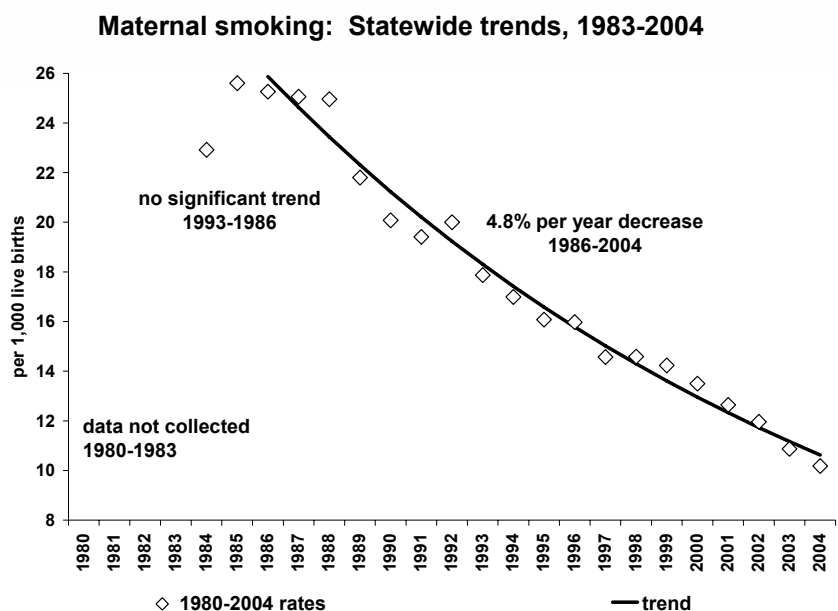
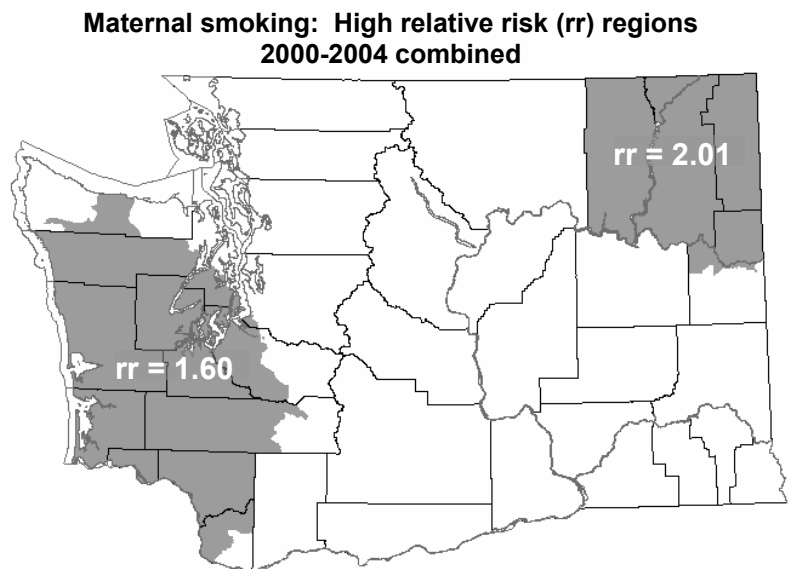


**Nativity Figure 1. Maternal smoking, regions and trends**



**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.



**Nativity Table B2. Mother's Age Group by Maternal Smoking for Residents, 2004**

Age	Total	Maternal Smoking	No Maternal Smoking	Unknown
<b>State Total</b>	<b>81,715</b>	<b>8,068</b>	<b>71,197</b>	<b>2,450</b>
Under 15	94	6	87	1
15 - 17	2,006	329	1,628	49
18 - 19	4,727	913	3,706	108
20 - 24	19,931	3,244	16,192	495
25 - 29	22,644	1,993	19,997	654
30 - 34	19,886	978	18,230	678
35 - 39	9,996	475	9,164	357
40 - 44	2,234	124	2,013	97
45 and Over	154	5	138	11
Unknown	43	1	42	0

**Nativity Table B3. Mother's Education by Maternal Smoking for Residents, 2004**

Education	Total	Maternal Smoking	No Maternal Smoking	Unknown
<b>State Total</b>	<b>81,715</b>	<b>8,068</b>	<b>71,197</b>	<b>2,450</b>
8th Grade or Less	4,086	229	3,804	53
Some High School	11,234	2,466	8,581	187
High School / GED	19,108	3,026	15,777	305
Some College	17,497	1,765	15,451	281
Associate Degree	6,609	298	6,213	98
Bachelor's Degree	14,348	160	13,989	199
Postgraduate Educ.	6,405	27	6,289	89
Unknown	2,428	97	1,093	1,238

**Nativity Table B4. Maternal Smoking During Pregnancy by County of Residence, 2004**

County	Total Births	No Smoking	Smoking	Maternal Smoking			Unknown Maternal Smoking
		During Pregnancy	3 Months Before	First Trimester	Second Trimester	Third Trimester	
<b>State Total</b>	<b>81,715</b>	<b>71,197</b>	<b>9,631</b>	<b>7,875</b>	<b>6,879</b>	<b>6,683</b>	<b>2,450</b>
Adams	389	381	9	8	5	5	0
Asotin	261	195	75	65	61	56	0
Benton	2,188	1,938	290	226	195	185	15
Chelan	902	869	29	27	24	24	6
Clallam	602	480	127	113	102	97	8
Clark	5,541	4,068	849	614	508	483	834
Columbia	40	30	10	10	10	10	0
Cowlitz	1,230	905	283	260	245	239	64
Douglas	455	436	16	16	16	15	3
Ferry	78	59	20	19	17	17	0
Franklin	1,328	1,270	67	51	40	38	7
Garfield	11	7	5	4	2	2	0
Grant	1,441	1,293	154	143	126	122	3
Grays Harbor	830	552	271	241	209	202	30
Island	989	878	168	106	89	81	3
Jefferson	195	154	45	41	38	36	0
King	22,874	21,378	1,301	1,008	863	849	459
Kitsap	3,009	2,606	464	391	344	329	10
Kittitas	342	299	52	40	26	24	3
Klickitat	223	95	33	28	25	24	100
Lewis	847	642	221	174	152	151	23
Lincoln	91	75	22	16	16	15	0
Mason	559	437	104	88	75	72	32
Okanogan	499	426	75	65	51	50	4
Pacific	200	109	20	14	13	12	76
Pend Oreille	115	84	35	30	29	30	0
Pierce	10,278	8,850	1,341	1,089	974	942	310
San Juan	107	102	6	5	5	5	0
Skagit	1,418	1,269	161	146	137	134	2
Skamania	82	39	14	13	12	12	30
Snohomish	8,641	7,759	952	804	689	673	63
Spokane	5,480	4,442	1,166	1,022	939	923	2
Stevens	484	372	126	111	99	97	1
Thurston	2,604	1,934	444	325	268	257	325
Wahkiakum	29	21	4	4	4	4	4
Walla Walla	715	645	79	66	65	66	1
Whatcom	2,061	1,886	165	143	126	128	28
Whitman	377	354	25	20	18	18	3
Yakima	4,200	3,858	403	329	262	256	1

**Nativity Table B5. Selected Medical Risk Factors<sup>1</sup> by County of Residence, 2004**

County	Total Births	Diabetes		Hypertension		Previous Poor Pregnancy Outcome	Infertility Treatment	Group B Strep Culture Positive
		Gestational	Established	Gestational	Established			
<b>State Total</b>	<b>81,715</b>	<b>3,718</b>	<b>461</b>	<b>4,291</b>	<b>853</b>	<b>2,548</b>	<b>827</b>	<b>13,079</b>
Adams	389	29	4	17	2	18	6	46
Asotin	261	25	2	6	3	4	0	52
Benton	2,188	112	15	122	18	134	22	336
Chelan	902	32	6	9	5	13	1	86
Clallam	602	39	4	37	9	22	0	108
Clark	5,541	232	12	391	39	151	38	783
Columbia	40	1	0	1	0	2	0	9
Cowlitz	1,230	37	11	64	15	46	7	202
Douglas	455	15	1	8	3	3	0	31
Ferry	78	4	0	1	1	4	0	9
Franklin	1,328	68	8	40	6	48	11	156
Garfield	11	0	0	0	0	0	1	3
Grant	1,441	59	8	50	15	39	8	158
Grays Harbor	830	45	4	44	15	35	2	159
Island	989	42	7	53	20	36	10	168
Jefferson	195	7	0	10	1	7	0	32
King	22,874	935	113	899	201	523	379	3,801
Kitsap	3,009	157	21	198	52	79	19	671
Kittitas	342	27	0	25	3	15	8	52
Klickitat	223	6	0	19	1	5	0	20
Lewis	847	26	7	49	8	46	6	188
Lincoln	91	8	0	6	2	7	1	18
Mason	559	28	6	37	6	18	2	110
Okanogan	499	18	4	42	6	39	1	52
Pacific	200	8	0	13	5	9	0	17
Pend Oreille	115	7	1	7	0	4	1	26
Pierce	10,278	338	74	502	90	284	69	1,544
San Juan	107	4	0	1	2	4	0	4
Skagit	1,418	96	13	101	38	41	7	196
Skamania	82	5	0	4	1	2	0	8
Snohomish	8,641	438	51	606	122	308	96	1,518
Spokane	5,480	305	23	328	49	222	65	970
Stevens	484	31	1	34	3	24	4	51
Thurston	2,604	139	19	116	33	113	21	395
Wahkiakum	29	2	0	3	0	0	0	8
Walla Walla	715	32	7	29	8	32	5	79
Whatcom	2,061	42	5	122	24	58	5	329
Whitman	377	20	0	26	9	9	15	76
Yakima	4,200	299	34	271	38	144	17	608

<sup>1</sup>Numbers may be underestimated by about 6% because of missing medical risk factor data.

**Nativity Table B6. Body Mass Index<sup>1</sup> by County of Residence, 2004**

County	Total Births	Underweight (<18.5)	Normal (18.5-24.9)	Overweight (25.0-29.9)	Obese (30.0+)	Unknown
<b>State Total</b>	<b>81,715</b>	<b>2,203</b>	<b>32,572</b>	<b>17,016</b>	<b>14,214</b>	<b>15,710</b>
Adams	389	4	142	111	80	52
Asotin	261	16	113	66	63	3
Benton	2,188	67	962	536	448	175
Chelan	902	16	294	170	139	283
Clallam	602	15	269	150	144	24
Clark	5,541	165	2,419	1,119	922	916
Columbia	40	0	16	13	7	4
Cowlitz	1,230	32	471	237	238	252
Douglas	455	10	142	92	73	138
Ferry	78	2	34	19	17	6
Franklin	1,328	37	526	376	269	120
Garfield	11	0	2	6	3	0
Grant	1,441	37	568	384	336	116
Grays Harbor	830	15	323	193	208	91
Island	989	35	417	249	192	96
Jefferson	195	7	92	56	35	5
King	22,874	566	9,023	3,870	2,759	6,656
Kitsap	3,009	91	1,347	791	663	117
Kittitas	342	7	163	87	65	20
Klickitat	223	6	54	35	24	104
Lewis	847	26	354	197	205	65
Lincoln	91	3	41	21	25	1
Mason	559	13	165	95	114	172
Okanogan	499	12	190	130	117	50
Pacific	200	3	52	26	32	87
Pend Oreille	115	3	47	24	34	7
Pierce	10,278	292	3,758	2,096	1,876	2,256
San Juan	107	0	50	34	13	10
Skagit	1,418	21	436	291	268	402
Skamania	82	1	22	21	7	31
Snohomish	8,641	226	3,336	1,895	1,626	1,558
Spokane	5,480	241	2,839	1,299	1,056	45
Stevens	484	17	231	132	94	10
Thurston	2,604	58	942	536	500	568
Wahkiakum	29	2	10	7	2	8
Walla Walla	715	22	329	165	158	41
Whatcom	2,061	36	842	368	330	485
Whitman	377	9	166	85	70	47
Yakima	4,200	90	1,385	1,034	1,002	689

<sup>1</sup>Body Mass Index=(703.1xwt in lb)/square of ht in inches; classifications are from the Centers for Disease Control.

### 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.

**Nativity Table C1. Health Service Utilization Summary Indicators for Residents, 1995 - 2004**

	Percent of Births <sup>1</sup> where Mother has...		
	1st Trimester Prenatal Care	Late/No Prenatal Care <sup>2</sup>	Primary C-Section Delivery
1995	82.6	3.5	11.2
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

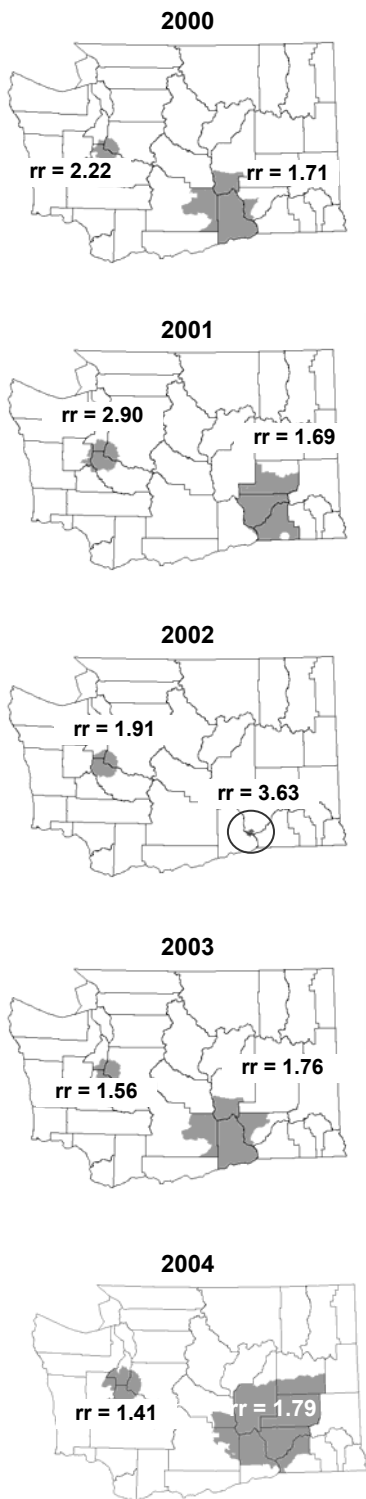
<sup>1</sup>Unknowns have been subtracted from total births in calculating percentages.

<sup>2</sup>Includes no care or care beginning in third trimester.

C-section delivery continues to increase, following a national trend. In 2004, mothers were less likely to have timely prenatal care than they had been for the past decade. However, 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 were very high (nearly 20%).

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

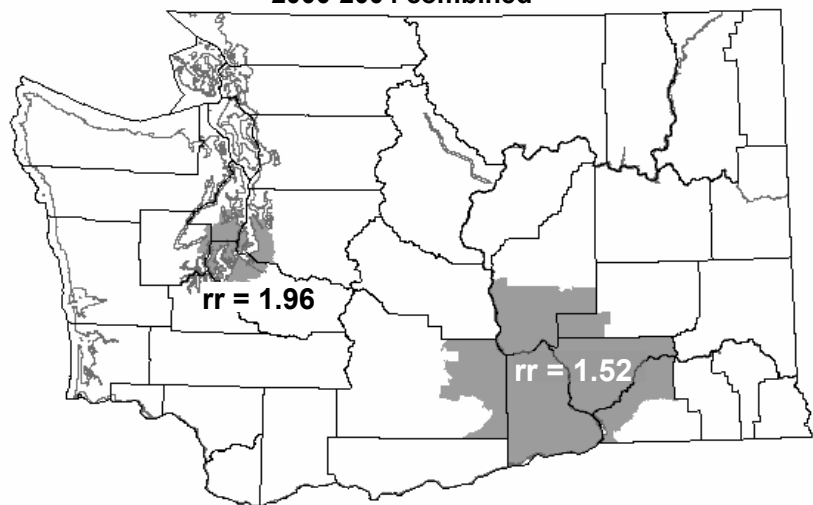
**High relative risk (rr) regions by year**



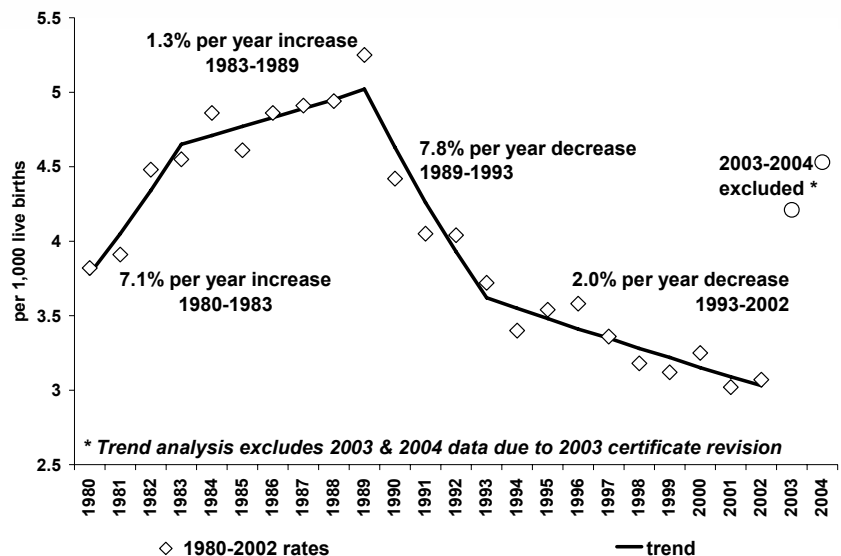
**Regions:** Although varying in size and shape, for each year assessed two regions were consistently identified as having more “late or no prenatal care” than expected: south Puget Sound, and south central Washington. For 2000-2004 combined, south Puget Sound had a relative risk (rr) of 1.96, about 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.

**Late or no prenatal care: High relative risk (rr) regions 2000-2004 combined**



**Late or no prenatal care: Statewide trends, 1980-2004**



**Nativity Table C2. Month Prenatal Care Began by Mother's Age Group for Residents, 2004**

Month Care Began	All		Under							45 and		Unk
	Ages	15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	Over		
<b>State Total</b>	<b>81,715</b>	<b>94</b>	<b>2,006</b>	<b>4,727</b>	<b>19,931</b>	<b>22,644</b>	<b>19,886</b>	<b>9,996</b>	<b>2,234</b>	<b>154</b>	<b>43</b>	
First	10,313	2	132	440	2,272	3,043	2,835	1,297	272	14	6	
Second	27,744	9	439	1,230	6,201	8,102	7,398	3,555	763	38	9	
Third	15,310	16	400	1,005	4,007	4,163	3,435	1,845	390	42	7	
Fourth	5,679	11	276	521	1,771	1,464	1,013	458	151	11	3	
Fifth	3,117	11	172	318	965	803	502	265	75	5	1	
Sixth	1,845	10	117	165	633	446	272	157	43	2	0	
Seventh	1,244	6	78	124	415	276	225	87	29	2	2	
Eighth	816	4	37	76	261	198	146	73	20	0	1	
Ninth +	327	1	13	32	102	85	63	23	8	0	0	
No Care	653	5	38	61	202	151	113	66	15	0	2	
Unknown	14,667	19	304	755	3,102	3,913	3,884	2,170	468	40	12	

**Nativity Table C3. Number of Prenatal Visits by Month Prenatal Care Began for Residents, 2004**

Number of Prenatal Visits	Total						Unk
	1 - 3	4 - 6	7 - 9+	No Care	Unk		
<b>State Total</b>	<b>80,482</b>	<b>52,883</b>	<b>9,617</b>	<b>2,033</b>	<b>374</b>	<b>15,575</b>	
9 or More	52,923	42,412	4,639	300	2	5,570	
5 - 8	13,023	7,227	3,786	787	0	1,223	
1 - 4	2,552	563	794	855	1	339	
No Visits	728	8	4	1	337	378	
Unknown	11,256	2,673	394	90	34	8,065	



**Nativity Table C4. Month Prenatal Care Began by County of Residence, 2004**

County	Total	1st	2nd	3rd	4th	5th	6th	7th	8th	9th+	No Care	Unk
<b>State Total</b>	<b>81,715</b>	<b>10,313</b>	<b>27,744</b>	<b>15,310</b>	<b>5,679</b>	<b>3,117</b>	<b>1,845</b>	<b>1,244</b>	<b>816</b>	<b>327</b>	<b>653</b>	<b>14,667</b>
Adams	389	39	152	88	46	19	13	5	8	3	6	10
Asotin	261	25	90	75	33	23	4	1	3	1	5	1
Benton	2,188	218	862	477	215	116	79	44	36	13	20	108
Chelan	902	54	438	221	70	25	17	16	8	5	5	43
Clallam	602	76	276	127	49	23	9	9	2	3	5	23
Clark	5,541	360	2,213	1,606	614	318	186	98	47	21	29	49
Columbia	40	0	16	14	6	0	2	0	0	0	0	2
Cowlitz	1,230	171	535	244	97	68	30	19	10	7	19	30
Douglas	455	39	218	111	25	13	10	7	9	3	1	19
Ferry	78	9	28	21	6	5	4	1	0	0	0	4
Franklin	1,328	111	430	310	136	85	59	51	31	11	17	87
Garfield	11	3	4	4	0	0	0	0	0	0	0	0
Grant	1,441	156	575	287	112	75	53	34	41	12	57	39
Grays Harbor	830	93	269	155	66	52	28	24	11	7	17	108
Island	989	107	429	220	75	32	22	27	16	4	5	52
Jefferson	195	18	64	58	23	10	7	2	5	1	1	6
King	22,874	2,706	7,067	3,295	1,105	613	368	274	178	85	148	7,035
Kitsap	3,009	243	1,046	918	246	159	94	66	57	14	24	142
Kittitas	342	61	161	63	27	4	6	3	0	0	1	16
Klickitat	223	20	90	63	27	9	7	3	1	0	0	3
Lewis	847	186	264	143	63	40	33	11	7	5	6	89
Lincoln	91	22	43	9	5	5	0	0	2	0	0	5
Mason	559	60	172	108	59	35	15	15	8	2	8	77
Okanogan	499	79	176	119	36	19	11	15	5	1	4	34
Pacific	200	23	66	44	24	16	7	7	2	1	1	9
Pend Oreille	115	16	46	34	7	4	2	1	0	0	2	3
Pierce	10,278	1,341	3,449	1,802	642	403	246	142	106	38	89	2,020
San Juan	107	6	46	32	5	4	5	1	2	0	2	4
Skagit	1,418	133	590	300	126	95	34	35	21	7	11	66
Skamania	82	2	29	36	8	4	1	1	0	0	0	1
Snohomish	8,641	882	2,646	1,346	576	268	162	117	72	43	37	2,492
Spokane	5,480	1,538	2,143	867	291	145	80	57	23	4	52	280
Stevens	484	95	182	98	30	24	16	9	3	3	6	18
Thurston	2,604	564	603	286	114	54	32	26	17	4	12	892
Wahkiakum	29	5	13	5	1	2	2	0	1	0	0	0
Walla Walla	715	63	255	206	73	42	17	12	10	1	3	33
Whatcom	2,061	79	696	664	254	105	71	33	25	7	13	114
Whitman	377	38	172	97	19	18	7	8	3	1	1	13
Yakima	4,200	672	1,190	757	368	185	106	70	46	20	46	740

**Natality Table C5. Birth Facility by County of Occurrence, 2004**

County	Total	Hospital	Birth Center	Federal Facility	Home	Born On Arrival	Other	Unknown
<b>State Total</b>	<b>81,404</b>	<b>76,798</b>	<b>692</b>	<b>2,978</b>	<b>880</b>	<b>41</b>	<b>15</b>	<b>0</b>
Adams	563	559	0	0	1	1	2	0
Asotin	1	0	0	0	1	0	0	0
Benton	3,346	3,311	20	0	15	0	0	0
Chelan	1,345	1,326	19	0	0	0	0	0
Clallam	568	555	0	0	12	0	1	0
Clark	4,990	4,948	0	0	36	3	3	0
Columbia	0	0	0	0	0	0	0	0
Cowlitz	1,193	1,185	0	0	7	1	0	0
Douglas	0	0	0	0	0	0	0	0
Ferry	2	1	0	0	1	0	0	0
Franklin	554	547	0	0	7	0	0	0
Garfield	0	0	0	0	0	0	0	0
Grant	1,053	1,042	0	0	10	1	0	0
Grays Harbor	607	593	0	0	13	1	0	0
Island	705	204	39	458	4	0	0	0
Jefferson	121	105	0	0	16	0	0	0
King	27,249	26,737	273	0	228	11	0	0
Kitsap	2,679	1,851	0	786	41	1	0	0
Kittitas	299	293	0	0	6	0	0	0
Klickitat	136	130	0	0	6	0	0	0
Lewis	590	532	0	0	57	1	0	0
Lincoln	2	1	0	0	1	0	0	0
Mason	280	273	0	0	7	0	0	0
Okanogan	513	507	0	0	5	1	0	0
Pacific	7	1	0	0	5	0	1	0
Pend Oreille	107	103	0	0	4	0	0	0
Pierce	10,358	8,345	207	1,734	67	5	0	0
San Juan	3	0	0	0	1	0	2	0
Skagit	1,540	1,511	0	0	29	0	0	0
Skamania	2	0	0	0	2	0	0	0
Snohomish	5,698	5,559	47	0	89	3	0	0
Spokane	6,371	6,255	73	0	37	6	0	0
Stevens	276	268	0	0	7	1	0	0
Thurston	2,830	2,762	0	0	68	0	0	0
Wahkiakum	0	0	0	0	0	0	0	0
Walla Walla	955	937	14	0	0	0	4	0
Whatcom	2,048	1,960	0	0	84	2	2	0
Whitman	349	344	0	0	5	0	0	0
Yakima	4,064	4,053	0	0	8	3	0	0

**Nativity Table C6. Method of Delivery<sup>1</sup> by County of Occurrence, 2004**

County	Total	Vaginal Deliveries				Primary	Repeat C-Section		Unk
		Sponta- neous	Forceps	Vacuum	VBAC	C-Section	With Labor	No Labor	
<b>State Total</b>	<b>81,404</b>	<b>52,985</b>	<b>694</b>	<b>4,424</b>	<b>1,130</b>	<b>15,647</b>	<b>424</b>	<b>6,095</b>	<b>5</b>
Adams	563	318	0	85	2	88	0	70	0
Asotin	1	1	0	0	0	0	0	0	0
Benton	3,346	2,150	36	206	79	531	20	324	0
Chelan	1,345	956	5	9	24	251	2	98	0
Clallam	568	445	3	6	1	64	2	47	0
Clark	4,990	3,464	34	198	104	782	32	376	0
Columbia	0	0	0	0	0	0	0	0	0
Cowlitz	1,193	746	5	62	21	224	11	124	0
Douglas	0	0	0	0	0	0	0	0	0
Ferry	2	2	0	0	0	0	0	0	0
Franklin	554	374	5	31	8	105	6	25	0
Garfield	0	0	0	0	0	0	0	0	0
Grant	1,053	686	3	105	4	150	0	105	0
Grays Harbor	607	413	1	6	16	108	2	61	0
Island	705	457	19	32	2	121	7	67	0
Jefferson	121	79	0	9	0	22	1	10	0
King	27,249	16,516	337	1,837	293	6,246	147	1,873	0
Kitsap	2,679	1,778	24	150	25	438	23	240	1
Kittitas	299	202	1	12	2	46	0	36	0
Klickitat	136	81	0	6	1	28	0	20	0
Lewis	590	407	6	47	1	70	1	58	0
Lincoln	2	1	0	0	1	0	0	0	0
Mason	280	199	1	12	4	46	2	16	0
Okanogan	513	327	0	21	4	111	4	46	0
Pacific	7	5	0	0	2	0	0	0	0
Pend Oreille	107	77	0	4	0	21	0	5	0
Pierce	10,358	6,928	66	391	140	2,045	26	761	1
San Juan	3	3	0	0	0	0	0	0	0
Skagit	1,540	1,022	8	77	30	284	10	109	0
Skamania	2	2	0	0	0	0	0	0	0
Snohomish	5,698	3,779	9	284	105	931	40	550	0
Spokane	6,371	4,215	81	249	78	1,199	23	525	1
Stevens	276	192	1	13	2	49	1	18	0
Thurston	2,830	1,849	10	157	30	579	27	176	2
Wahkiakum	0	0	0	0	0	0	0	0	0
Walla Walla	955	669	3	45	4	191	0	43	0
Whatcom	2,048	1,418	23	58	25	418	10	96	0
Whitman	349	223	0	24	2	65	2	33	0
Yakima	4,064	3,001	13	288	120	434	25	183	0

<sup>1</sup>Based on first or second methods given. See Appendix A for details.

**Nativity Table C7. Birth Attendant by County of Occurrence, 2004**

County	Total	MD	DO	Cert Midwife	Lic Midwife	Other Midwife	Nurse	Hosp Admin	Father	Other	Unk
<b>State Total</b>	<b>81,404</b>	<b>72,393</b>	<b>737</b>	<b>6,149</b>	<b>1,274</b>	<b>15</b>	<b>643</b>	<b>3</b>	<b>35</b>	<b>112</b>	<b>43</b>
Adams	563	559	0	0	1	0	0	0	0	3	0
Asotin	1	0	0	0	0	0	0	0	0	1	0
Benton	3,346	2,743	175	415	6	0	0	0	3	3	1
Chelan	1,345	1,308	0	18	19	0	0	0	0	0	0
Clallam	568	390	0	166	10	0	0	0	1	1	0
Clark	4,990	3,711	11	1,243	12	5	0	0	1	6	1
Columbia	0	0	0	0	0	0	0	0	0	0	0
Cowlitz	1,193	1,151	8	27	6	1	0	0	0	0	0
Douglas	0	0	0	0	0	0	0	0	0	0	0
Ferry	2	1	0	0	0	0	0	0	0	1	0
Franklin	554	528	0	20	5	0	0	0	0	1	0
Garfield	0	0	0	0	0	0	0	0	0	0	0
Grant	1,053	865	91	87	0	0	0	0	8	2	0
Grays Harbor	607	440	0	157	6	0	1	0	0	2	1
Island	705	657	0	0	43	0	0	0	0	5	0
Jefferson	121	92	13	0	15	0	0	0	0	1	0
King	27,249	24,947	81	1,713	409	0	39	0	5	45	10
Kitsap	2,679	2,580	5	45	37	0	0	0	3	8	1
Kittitas	299	271	0	22	4	1	0	0	1	0	0
Klickitat	136	130	0	0	4	0	0	0	2	0	0
Lewis	590	319	212	1	56	0	0	0	1	0	1
Lincoln	2	0	0	0	1	0	0	1	0	0	0
Mason	280	272	0	0	7	0	0	0	0	1	0
Okanogan	513	452	0	57	1	0	0	0	1	2	0
Pacific	7	1	0	0	5	0	0	0	1	0	0
Pend Oreille	107	91	9	5	0	0	0	0	1	1	0
Pierce	10,358	9,091	21	971	210	0	52	0	1	6	6
San Juan	3	0	0	0	0	0	1	0	0	1	1
Skagit	1,540	1,364	0	146	29	0	0	0	0	1	0
Skamania	2	0	0	0	1	0	0	0	1	0	0
Snohomish	5,698	5,289	1	258	125	1	0	0	1	7	16
Spokane	6,371	5,823	7	423	101	6	0	2	1	6	2
Stevens	276	269	0	0	6	0	0	0	0	1	0
Thurston	2,830	2,500	0	262	63	0	0	0	0	2	3
Wahkiakum	0	0	0	0	0	0	0	0	0	0	0
Walla Walla	955	853	20	82	0	0	0	0	0	0	0
Whatcom	2,048	1,934	0	29	82	1	0	0	1	1	0
Whitman	349	342	0	0	5	0	0	0	0	2	0
Yakima	4,064	3,420	83	2	5	0	550	0	2	2	0



Nativity Table C8 County of Residence by County of Occurrence, 2004

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	278		25							2		47							
Asotin		1	1										1						
Benton	2		2,017							99		1					5		
Chelan			1	866								1					11		1
Clallam					547								1		5	30	3		
Clark						4,672		14									3		
Columbia																			
Cowlitz			1			136		1,024									3		
Douglas				369									1				12		
Ferry									2			5							
Franklin	56		831							429		4					2		
Garfield																			
Grant	223		18	97						2		934					9	1	5
Grays Harbor					1			1					517				9		
Island					1									666			57		
Jefferson					14										115	14	48		
King			2		1	1						1				22,176	5		
Kitsap			1												1	227	2,445		
Kittitas	1											1					29		285
Klickitat			7			1													
Lewis								39					1				12		1
Lincoln	1											14							
Mason					1										1	6	103		
Okanogan				9								38					2		
Pacific								1					81				1		
Pend Oreille																			
Pierce					1			1				2	2			1,188	63	2	
San Juan						1									5	9			
Skagit										1				25		69			
Skamania						33													
Snohomish													1	6		3,159	2		
Spokane			2							1		3				4			
Stevens			1	1												1			
Thurston			1			1										54	1		
Wahkiakum								25											
Walla Walla			49							16		1							
Whatcom																54	1		
Whitman			1																
Yakima			276							2						32			4
Out of State	2		112	3	2	145		88		2			3	2		71	7	1	
Occurrence Total	563	1	3,346	1,345	568	4,990	0	1,193	0	2	554	0	1,053	607	705	121	27,249	2,679	299

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

Nativity Table C8 (Continued) County of Residence by County of Occurrence, 2004

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
							1					33						2	1		389
												7						7		244	261
1												5				2			51	5	2,188
				11			1				2	6		1					1		902
	1						6				1						1			7	602
	1						2					1							1	847	5,541
																39				1	40
	5						2							2					1	56	1,230
				72								1									455
				6							1	20	42							2	78
							2					2				1				1	1,328
																		1		10	11
				1			2					54						1	91	3	1,441
	14		2		1		28				1			254						2	830
							35	113			106							3		8	989
			1				2				1										195
							490		5		139	2		10			1		3	38	22,874
			1				318				11									5	3,009
							2							1					22	1	342
109																			6	100	223
	509		1				27							253			1		1	2	847
		1							1			74									91
			265				24							158					1		559
				421			2				1	22						3		1	499
	3				6		1							32			1			74	200
						66						41	5							3	115
	4		2	1			8,928				2	1		57		1			2	21	10,278
								3	84		1							3		1	107
							1		1,221		41						57			3	1,418
17										2										30	82
							15	69			5,371	2		2			5	1	2	6	8,641
						5	1	1				5,423	4	1				3	1	31	5,480
		1					1					253	225							1	484
	50		7	1			421				4	1		2,055						8	2,604
																				4	29
								1				13				632			1	2	715
							2	37			5						1,960			2	2,061
												46				1		286		43	377
							2	1		1	3			1					3,875	3	4,200
9	3		1			36	42		7		10	361		3		279	13	48	4		1,254
136	590	2	280	513	7	107	10,358	3	1,540	2	5,698	6,371	276	2,830	0	955	2,048	349	4,064	1,565	82,969

## 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.

**Nativity Table D1. Infant Health Summary Indicators for Residents, 1995 - 2004**

	Percent of Births <sup>1</sup> that are...			
	Low Birth Weight	Low Birth Weight - Singletons	Plural (Twins+)	Preterm ( < 37 Weeks)
1995	5.5	4.4	2.3	8.6
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

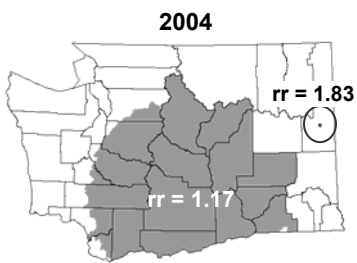
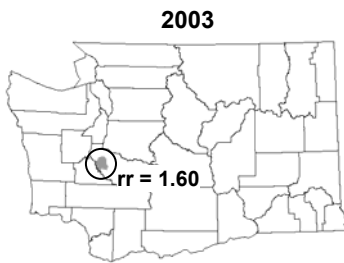
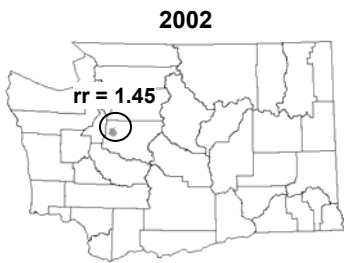
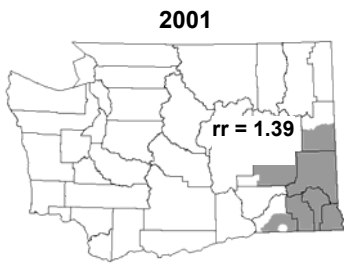
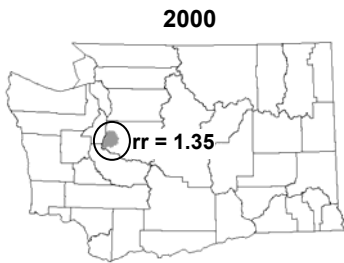
<sup>1</sup>Unknowns have been subtracted from total births in calculating percentages.

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



**Nativity Figure 3. Low birth weight**

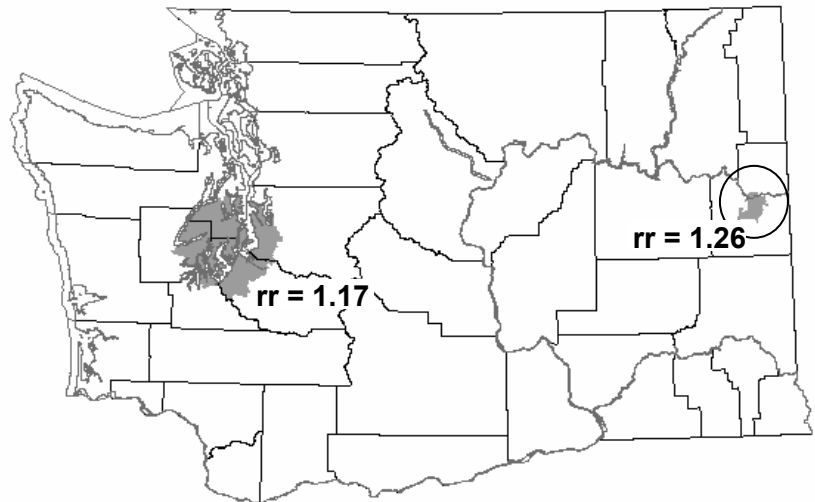
**High relative risk (rr) regions by year**



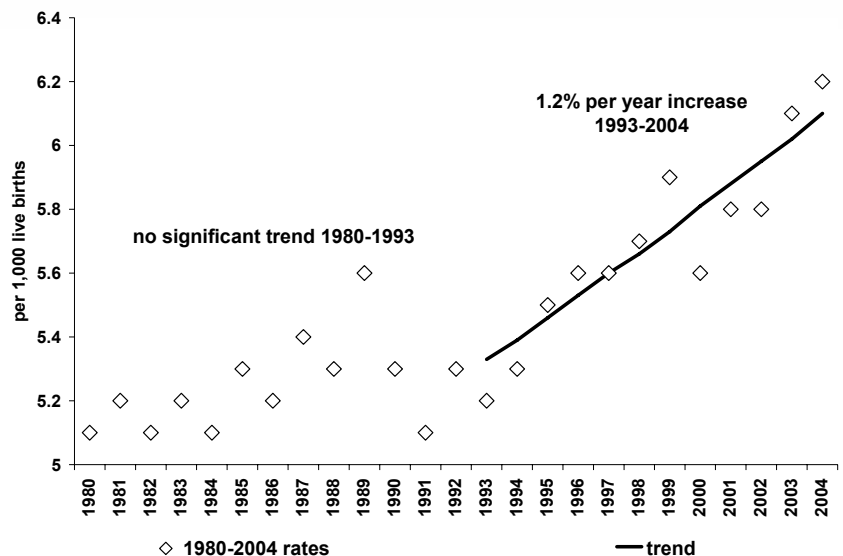
**Regions:** Specific regions with more than expected low birth weight newborns varied year to year, although urban areas within the Puget Sound environs showed elevated rates for 4 of the 5 years analyzed. For 2000-2004 combined, the whole south Puget Sound region had a relative risk (rr) of 1.17, that 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 was 1.26, 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.

**Low birth weight: High relative risk (rr) regions 2000-2004 combined**

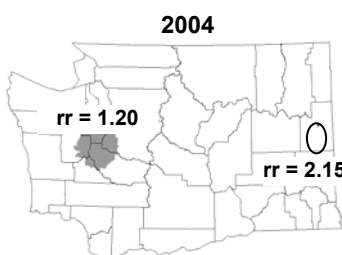
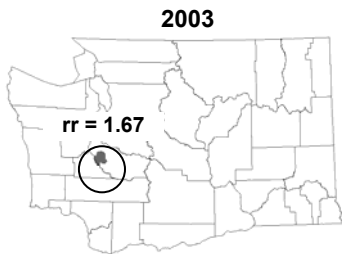
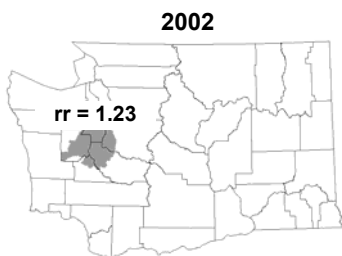
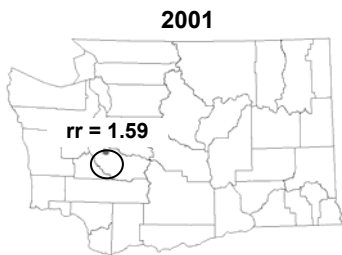
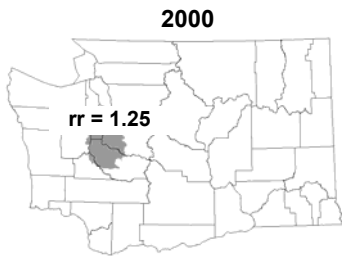


**Low birth weight: Statewide trends, 1980-2004**



**Nativity Figure 4. Singleton birth low birth weight**

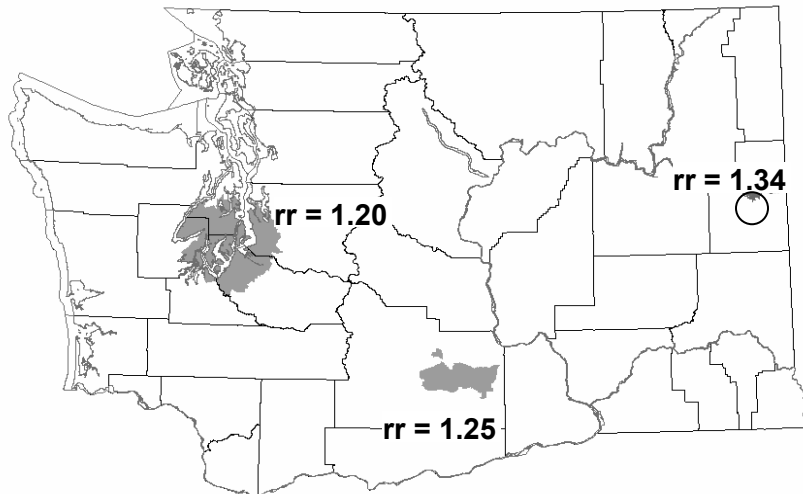
**High relative risk (rr) regions by year**



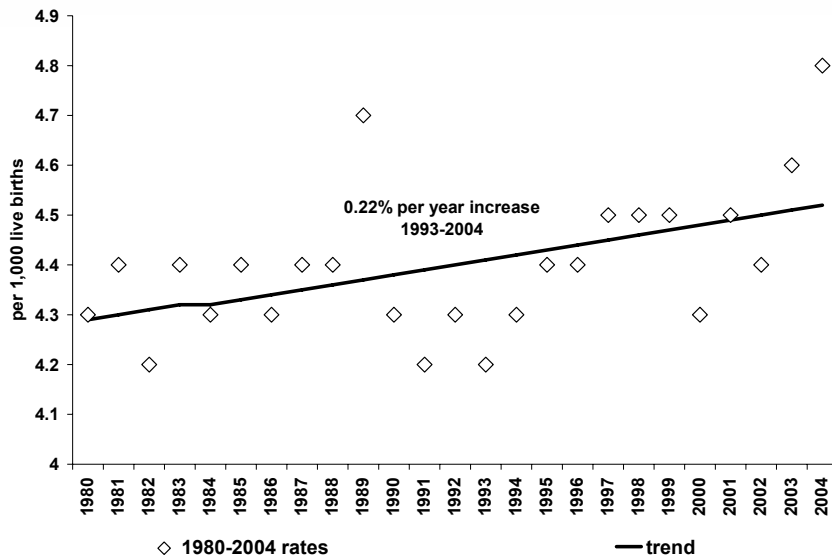
**Regions:** For singleton births there is a persistent pattern of low birth weight newborns seen in the urban Pierce County/south Puget Sound area. For 2000-2004 combined this region had a relative risk of 1.20, that is, 20% more low birth weight singleton newborns than expected. Per year, that equals 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**



**Nativity Table D2a. Birth Weight in Grams by Mother's Race/Ethnicity for Residents, 2004**

Birth Weight in Grams	Total	African		Native		Other			Hispanic		
		White	Amer.	Amer.	Japanese	Chinese	Filipino	Asian	Other	Unk	Origin <sup>1</sup>
<b>State Total</b>	<b>81,715</b>	<b>67,823</b>	<b>3,543</b>	<b>1,849</b>	<b>436</b>	<b>1,026</b>	<b>1,271</b>	<b>4,737</b>	<b>0</b>	<b>1,030</b>	<b>14,250</b>
Under 1,000	435	308	51	12	0	6	13	27	0	18	86
1,000 - 1,499	435	343	29	8	1	6	9	28	0	11	73
1,500 - 1,999	962	773	65	24	4	9	19	51	0	17	180
2,000 - 2,499	3,231	2,505	239	85	22	54	62	224	0	40	525
2,500 - 2,999	11,806	9,215	642	279	89	192	239	989	0	161	2,234
3,000 - 3,499	29,906	24,370	1,388	637	190	434	567	1,951	0	369	5,643
3,500 - 3,999	25,242	21,769	831	568	104	259	278	1,128	0	305	4,180
4,000 - 4,499	7,884	6,989	234	188	22	52	63	265	0	71	1,111
4,500 and Over	1,474	1,303	43	41	2	7	13	44	0	21	182
Unknown	340	248	21	7	2	7	8	30	0	17	36

<sup>1</sup>Persons of Hispanic Origin may be of any race. See Appendix A, "Hispanic Origin."

NOTE: Uses bridged race, see Technical Appendix

**Nativity Table D2b. Birth Weight in Grams by Mother's Multiple Race for Residents, 2004**

Birth Weight in Grams	Total	Single race					Pacific Islander	More than one race given	Race unknown
		White	African Amer.	Native Amer.	Asian	Other			
<b>State Total</b>	<b>81,715</b>	<b>65,742</b>	<b>2,991</b>	<b>1,580</b>	<b>6,292</b>	<b>673</b>	<b>2,458</b>	<b>1,979</b>	
Under 1,000	435	281	46	9	35	9	17	38	
1,000 - 1,499	435	299	21	5	34	5	23	48	
1,500 - 1,999	962	712	54	18	70	7	40	61	
2,000 - 2,499	3,231	2,399	212	73	319	23	89	116	
2,500 - 2,999	11,806	8,941	550	240	1,320	100	377	278	
3,000 - 3,499	29,906	23,646	1,155	547	2,707	248	928	675	
3,500 - 3,999	25,242	21,155	704	482	1,432	189	719	561	
4,000 - 4,499	7,884	6,796	200	163	293	72	210	150	
4,500 and Over	1,474	1,271	33	36	38	19	42	35	
Unknown	340	242	16	7	44	1	13	17	

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

**Nativity Table D3. Birth Weight in Grams by Mother's Age Group for Residents, 2004**

Birth Weight in Grams	Total	Under								45 and Over	Age Unk
		15	15-17	18-19	20-24	25-29	30-34	35-39	40-44		
<b>State Total</b>	<b>81,715</b>	<b>94</b>	<b>2,006</b>	<b>4,727</b>	<b>19,931</b>	<b>22,644</b>	<b>19,886</b>	<b>9,996</b>	<b>2,234</b>	<b>154</b>	<b>43</b>
Under 1,000	435	2	10	33	100	101	103	65	20	1	0
1,000 - 1,499	435	3	15	36	86	110	108	56	15	6	0
1,500 - 1,999	962	2	22	54	203	247	216	166	42	9	1
2,000 - 2,499	3,231	11	107	243	759	792	730	457	114	13	5
2,500 - 2,999	11,806	20	386	847	3,033	3,158	2,592	1,400	327	35	8
3,000 - 3,499	29,906	34	836	1,842	7,656	8,375	6,976	3,382	757	34	14
3,500 - 3,999	25,242	18	505	1,303	6,087	7,070	6,502	3,064	645	39	9
4,000 - 4,499	7,884	4	104	304	1,641	2,282	2,153	1,134	244	12	6
4,500 and Over	1,474	0	14	55	286	415	422	218	59	5	0
Unknown	340	0	7	10	80	94	84	54	11	0	0

**Nativity Table D4. Birth Weight in Grams by Calculated Gestational Age<sup>1</sup> for Residents, 2004**

Birth Weight in Grams	Total	Gestational Age			Unknown
		Preterm (<37 wks)	Term (37-41 wks)	Postterm (42+ wks)	
<b>State Total</b>	<b>81,715</b>	<b>8,076</b>	<b>67,393</b>	<b>5,470</b>	<b>776</b>
Under 1,000	435	427	3	0	5
1,000 - 1,499	435	398	25	3	9
1,500 - 1,999	962	741	127	9	85
2,000 - 2,499	3,231	1,576	1,406	76	173
2,500 - 2,999	11,806	2,162	8,943	539	162
3,000 - 3,499	29,906	1,718	26,124	1,946	118
3,500 - 3,999	25,242	766	22,386	2,035	55
4,000 - 4,499	7,884	180	6,974	715	15
4,500 and over	1,474	31	1,303	136	4
Unknown	340	77	102	11	150

<sup>1</sup>See Appendix A for method used to calculate gestational age.

**Nativity Table D5. Birth Weight in Grams by Plurality for Residents, 2004**

<b>Birth Weight in Grams</b>	<b>Total</b>	<b>Single</b>	<b>Twin</b>	<b>Triplet</b>	<b>Quadruplet+</b>	<b>Unknown</b>
<b>State Total</b>	81,715	79,268	2,365	78	4	0
Under 1,000	435	337	86	12	0	0
1,000 - 1,499	435	320	100	12	3	0
1,500 - 1,999	962	643	291	27	1	0
2,000 - 2,499	3,231	2,516	692	23	0	0
2,500 - 2,999	11,806	10,996	806	4	0	0
3,000 - 3,499	29,906	29,586	320	0	0	0
3,500 - 3,999	25,242	25,203	39	0	0	0
4,000 - 4,499	7,884	7,882	2	0	0	0
4,500 and over	1,474	1,474	0	0	0	0
Unknown	340	311	29	0	0	0

**Nativity Table D6. Mother's Age Group by Plurality for Residents, 2004**

<b>Age</b>	<b>Total</b>	<b>Single</b>	<b>Twin</b>	<b>Triplet</b>	<b>Quadruplet+</b>	<b>Unknown</b>
<b>State Total</b>	81,715	79,268	2,365	78	4	0
Under 15	94	92	2	0	0	0
15 - 17	2,006	1,976	30	0	0	0
18 - 19	4,727	4,657	70	0	0	0
20 - 24	19,931	19,557	371	3	0	0
25 - 29	22,644	22,003	614	27	0	0
30 - 34	19,886	19,137	725	24	0	0
35 - 39	9,996	9,547	430	15	4	0
40 - 44	2,234	2,136	89	9	0	0
45 and Over	154	120	34	0	0	0
Unknown	43	43	0	0	0	0

**Nativity Table D7. Birth Weight in Grams by County of Residence, 2004**

County	Total	Under 1000	1000-1499	1500-1999	2000-2499	2500-2999	3000-3499	3500-3999	4000-4499	4500+	Unk
<b>State Total</b>	<b>81,715</b>	<b>435</b>	<b>435</b>	<b>962</b>	<b>3,231</b>	<b>11,806</b>	<b>29,906</b>	<b>25,242</b>	<b>7,884</b>	<b>1,474</b>	<b>340</b>
Adams	389	3	3	6	11	66	173	96	27	4	0
Asotin	261	4	1	5	11	34	87	86	29	4	0
Benton	2,188	10	11	22	99	305	809	666	226	25	15
Chelan	902	6	8	11	31	126	334	297	74	15	0
Clallam	602	2	2	4	24	75	209	189	79	14	4
Clark	5,541	22	34	57	202	684	2,021	1,811	568	140	2
Columbia	40	0	0	0	0	8	14	12	5	1	0
Cowlitz	1,230	6	6	9	55	167	464	397	107	17	2
Douglas	455	2	1	5	18	68	157	161	36	7	0
Ferry	78	0	0	0	7	10	27	28	6	0	0
Franklin	1,328	5	8	23	49	191	559	351	107	27	8
Garfield	11	0	0	0	0	3	2	4	2	0	0
Grant	1,441	14	11	16	58	238	556	419	106	23	0
Grays Harbor	830	4	2	4	38	113	313	265	77	13	1
Island	989	6	9	8	46	122	326	324	108	29	11
Jefferson	195	1	0	0	3	29	62	68	26	6	0
King	22,874	107	112	299	937	3,385	8,475	6,907	2,154	379	119
Kitsap	3,009	12	23	36	133	395	1,037	965	339	66	3
Kittitas	342	2	0	4	10	49	132	106	35	3	1
Klickitat	223	0	0	2	6	37	95	62	18	3	0
Lewis	847	7	2	10	27	117	307	258	94	25	0
Lincoln	91	2	2	2	2	18	31	22	9	3	0
Mason	559	7	1	5	25	94	189	169	54	13	2
Okanogan	499	3	3	6	27	93	177	147	38	5	0
Pacific	200	1	0	2	5	19	75	74	22	2	0
Pend Oreille	115	0	0	0	2	23	42	32	12	4	0
Pierce	10,278	63	52	117	465	1,510	3,636	3,183	1,037	197	18
San Juan	107	0	3	3	2	9	34	43	11	2	0
Skagit	1,418	9	15	20	44	213	544	404	139	26	4
Skamania	82	0	2	2	3	13	27	30	4	1	0
Snohomish	8,641	33	43	101	274	1,210	3,058	2,688	921	171	142
Spokane	5,480	36	33	49	217	842	2,037	1,696	490	80	0
Stevens	484	1	1	7	16	73	189	134	55	7	1
Thurston	2,604	11	11	26	97	328	970	843	262	54	2
Wahkiakum	29	0	0	0	0	3	10	14	2	0	0
Walla Walla	715	4	4	9	39	102	264	220	59	12	2
Whatcom	2,061	10	9	24	60	267	685	724	231	49	2
Whitman	377	1	3	8	18	48	137	121	36	4	1
Yakima	4,200	41	20	60	170	719	1,642	1,226	279	43	0

**Nativity Table D8. Calculated Gestational Age<sup>1</sup> by County of Residence, 2004**

<b>County</b>	<b>Total</b>	<b>Preterm (&lt;37 wks)</b>	<b>Term (37-41 wks)</b>	<b>Postterm (42+ wks)</b>	<b>Unknown</b>
<b>State Total</b>	<b>81,715</b>	<b>8,076</b>	<b>67,393</b>	<b>5,470</b>	<b>776</b>
Adams	389	56	293	39	1
Asotin	261	26	201	34	0
Benton	2,188	236	1,771	138	43
Chelan	902	90	765	45	2
Clallam	602	65	481	54	2
Clark	5,541	537	4,620	374	10
Columbia	40	2	30	6	2
Cowlitz	1,230	131	972	116	11
Douglas	455	43	381	31	0
Ferry	78	9	62	5	2
Franklin	1,328	166	1,067	74	21
Garfield	11	0	10	1	0
Grant	1,441	155	1,227	57	2
Grays Harbor	830	87	659	79	5
Island	989	103	791	87	8
Jefferson	195	22	159	14	0
King	22,874	2,065	19,093	1,425	291
Kitsap	3,009	291	2,569	138	11
Kittitas	342	17	294	24	7
Klickitat	223	21	180	22	0
Lewis	847	84	685	77	1
Lincoln	91	15	66	10	0
Mason	559	58	451	43	7
Okanogan	499	77	384	37	1
Pacific	200	17	166	15	2
Pend Oreille	115	9	92	14	0
Pierce	10,278	1,064	8,427	662	125
San Juan	107	7	92	6	2
Skagit	1,418	138	1,183	93	4
Skamania	82	13	64	5	0
Snohomish	8,641	773	7,148	600	120
Spokane	5,480	573	4,553	335	19
Stevens	484	43	404	36	1
Thurston	2,604	223	2,133	213	35
Wahkiakum	29	4	23	2	0
Walla Walla	715	76	577	59	3
Whatcom	2,061	182	1,689	170	20
Whitman	377	36	313	23	5
Yakima	4,200	562	3,318	307	13

<sup>1</sup>See Appendix A for method used to calculate gestational age.

**Nativity Table D9. Plurality by County of Residence, 2004**

County	Total	Single	Twin	Triplet	Quadruplet+	Unknown
<b>State Total</b>	<b>81,715</b>	<b>79,268</b>	<b>2,365</b>	<b>78</b>	<b>4</b>	<b>0</b>
Adams	389	382	4	3	0	0
Asotin	261	255	6	0	0	0
Benton	2,188	2,144	44	0	0	0
Chelan	902	880	22	0	0	0
Clallam	602	592	10	0	0	0
Clark	5,541	5,369	169	3	0	0
Columbia	40	38	2	0	0	0
Cowlitz	1,230	1,188	39	3	0	0
Douglas	455	449	6	0	0	0
Ferry	78	76	2	0	0	0
Franklin	1,328	1,303	22	3	0	0
Garfield	11	11	0	0	0	0
Grant	1,441	1,410	31	0	0	0
Grays Harbor	830	814	16	0	0	0
Island	989	951	35	3	0	0
Jefferson	195	193	2	0	0	0
King	22,874	22,126	726	18	4	0
Kitsap	3,009	2,914	95	0	0	0
Kittitas	342	324	18	0	0	0
Klickitat	223	217	6	0	0	0
Lewis	847	831	16	0	0	0
Lincoln	91	87	4	0	0	0
Mason	559	550	9	0	0	0
Okanogan	499	489	10	0	0	0
Pacific	200	196	4	0	0	0
Pend Oreille	115	113	2	0	0	0
Pierce	10,278	9,947	319	12	0	0
San Juan	107	103	4	0	0	0
Skagit	1,418	1,364	51	3	0	0
Skamania	82	76	6	0	0	0
Snohomish	8,641	8,384	242	15	0	0
Spokane	5,480	5,300	174	6	0	0
Stevens	484	466	18	0	0	0
Thurston	2,604	2,529	75	0	0	0
Wahkiakum	29	27	2	0	0	0
Walla Walla	715	701	14	0	0	0
Whatcom	2,061	2,000	58	3	0	0
Whitman	377	361	16	0	0	0
Yakima	4,200	4,108	86	6	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, 1995-2004.**

Year	Age-Adjusted Rate <sup>1</sup>						Infant Life Expectancy <sup>2</sup>					
	Washington State			United States <sup>3</sup>			Washington State			United States <sup>3</sup>		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
1995	842.0	1,030.4	699.8	918.5	1150.3	748.2	77.6	74.7	80.3	75.8	72.5	78.9
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				79.3	76.9	81.6			

<sup>1</sup>Rate per 100,000 age-adjusted to U.S. 2000 population.

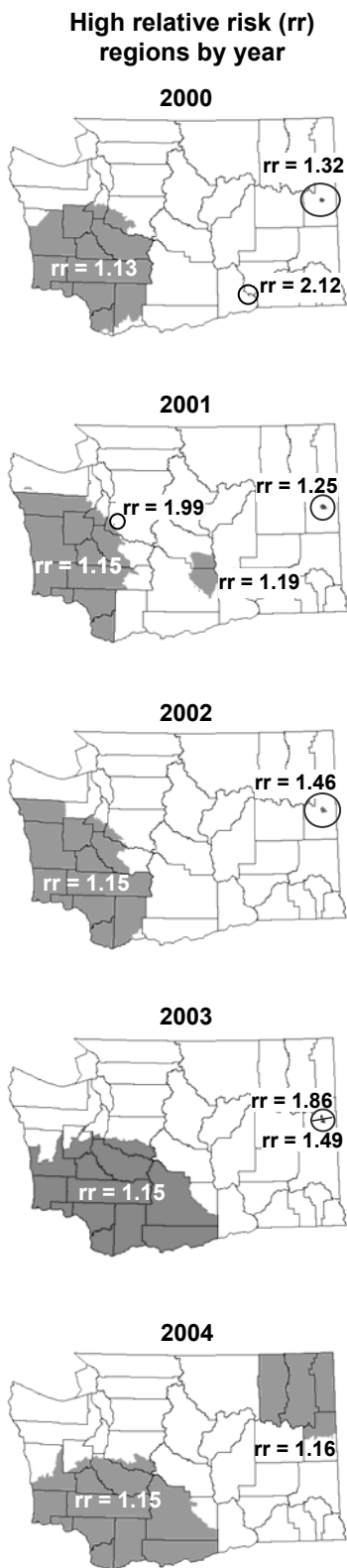
<sup>2</sup>Life expectancy is the average number of years an infant is expected to live.

<sup>3</sup>Source for United States mortality and Life Expectancy is:

Hoyert DL, Kung HC, Smith BL. Deaths: Preliminary data for 2003. National vital statistics reports; vol 53 no 15. Hyattsville, Maryland: National Center for Health Statistics, 2005.

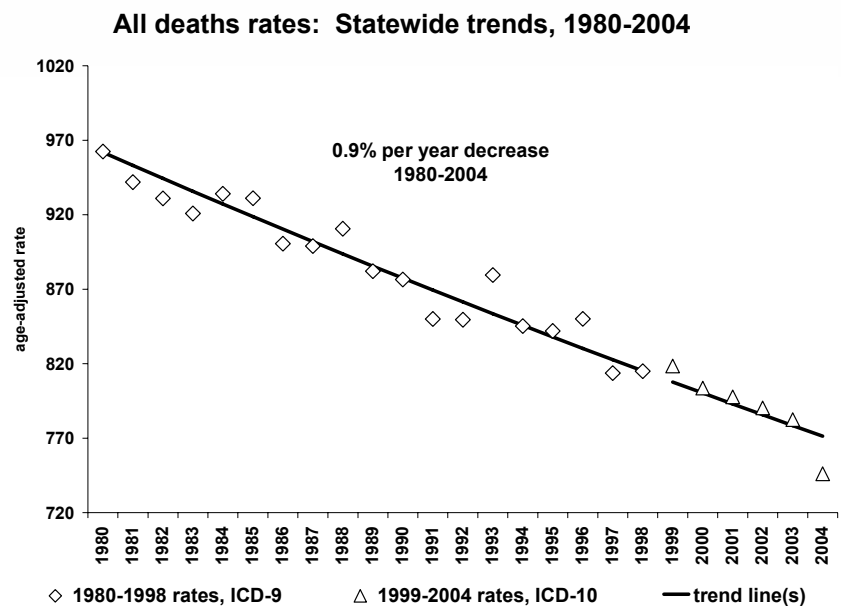
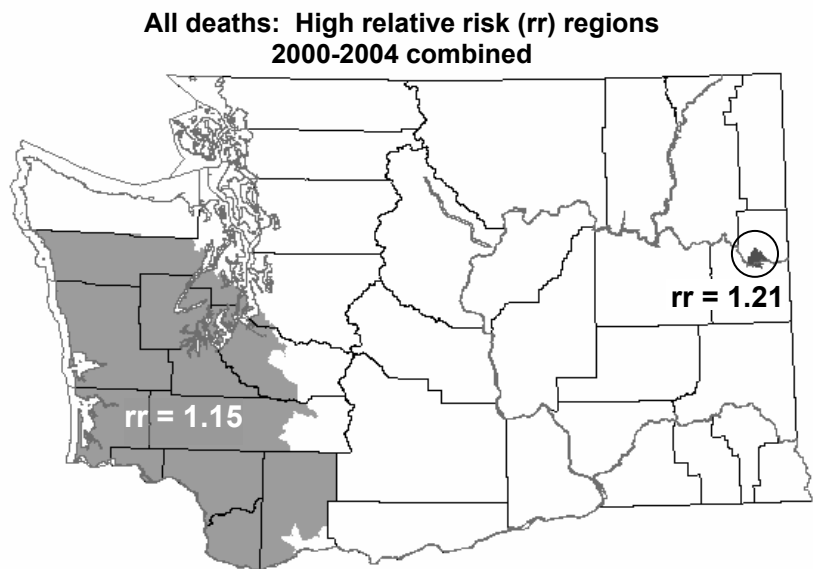
The mortality rate of 746.1 in 2004 is the lowest mortality rate ever reported in Washington State and continues an almost steady decline in mortality over time. Mortality rates for males are much higher than females. This results in life expectancies of 76.9 years for males and 81.6 for females. The 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, 2004**

Age Group	Total	African		Native	Japa-	Chi-	Other			Unk	Hispanic Origin <sup>1</sup>
		White	American	American	nese	nese	Filipino	Asian	Other		
<b>State Total</b>	<b>44,703</b>	<b>41,653</b>	<b>1,070</b>	<b>579</b>	<b>287</b>	<b>197</b>	<b>266</b>	<b>610</b>	<b>0</b>	<b>40</b>	<b>890</b>
Under 1	451	358	43	18	1	2	4	20	0	5	94
1-4	68	56	6	2	0	0	0	4	0	0	16
5-14	108	87	6	6	0	0	3	6	0	0	15
15-19	254	206	15	16	3	1	1	12	0	0	33
20-24	347	287	23	17	1	4	2	13	0	0	40
25-34	657	544	42	27	2	2	7	32	0	1	69
35-44	1,504	1,308	78	58	5	7	12	35	0	1	81
45-54	3,276	2,943	138	77	9	12	21	67	0	9	88
55-64	4,931	4,473	197	95	18	14	29	101	0	4	104
65-74	7,012	6,452	162	115	68	31	52	126	0	6	114
75-84	12,742	12,075	212	105	111	63	65	99	0	11	152
85-94	11,278	10,861	127	37	62	47	53	88	0	3	71
95 and over	2,075	2,003	21	6	7	14	17	7	0	0	13
Unknown	0	0	0	0	0	0	0	0	0	0	0

<sup>1</sup> Persons of Hispanic Origin may be of any race. See Appendix A, "Hispanic Origin."

**Mortality Table A2b. Age by Multiple Race for Residents, 2004**

Age Group	Total	African		Native	Pacific		More Than	Unk
		White	American	American	Asian	Islander	One Race Given	
<b>State Total</b>	<b>44,703</b>	<b>41,553</b>	<b>1,038</b>	<b>539</b>	<b>1,210</b>	<b>115</b>	<b>210</b>	<b>38</b>
Under 1	451	347	29	16	17	4	33	5
1-4	68	56	3	1	4	0	4	0
5-14	108	86	6	6	4	5	1	0
15-19	254	204	15	15	15	2	3	0
20-24	347	286	23	17	18	1	2	0
25-34	657	539	41	22	32	10	12	1
35-44	1,504	1,302	76	55	43	11	16	1
45-54	3,276	2,927	133	69	84	23	31	9
55-64	4,931	4,458	196	87	142	16	28	4
65-74	7,012	6,436	161	110	257	17	27	4
75-84	12,742	12,059	208	102	316	15	31	11
85-94	11,278	10,851	126	33	233	11	21	3
95 and over	2,075	2,002	21	6	45	0	1	0
Unknown	0	0	0	0	0	0	0	0

<sup>1</sup> Includes all races as reported on the Death Certificate.

**Mortality Table A3. Age by Sex for Residents, 2004**

Age Group	Total		Male	Female
	Number	Percent <sup>1</sup>		
<b>State Total</b>	<b>44,703</b>	<b>100.0</b>	<b>22,332</b>	<b>22,371</b>
Under 1	451	1.0	258	193
1 - 4	68	0.2	38	30
5 - 14	108	0.2	64	44
15 - 19	254	0.6	175	79
20 - 24	347	0.8	251	96
25 - 34	657	1.5	452	205
35 - 44	1,504	3.4	955	549
45 - 54	3,276	7.3	2,024	1,252
55 - 64	4,931	11.0	2,897	2,034
65 - 74	7,012	15.7	3,885	3,127
75 - 84	12,742	28.5	6,322	6,420
85 - 94	11,278	25.2	4,473	6,805
95 and Over	2,075	4.6	538	1,537
Unknown	0	0.0	0	0

<sup>1</sup> Percents may not add to 100% due to rounding.

**Mortality Table A4. Life Expectancy<sup>1</sup> by Age and Sex for Residents, 2004**

Age Group	Total	Male	Female
Under 1	79.3	76.9	81.6
1-5	78.7	76.3	81.0
5-10	74.8	72.4	77.0
10-15	69.8	67.5	72.1
15-20	64.9	62.5	67.1
20-25	60.0	57.7	62.2
25-30	55.3	53.1	57.4
30-35	50.5	48.3	52.5
35-40	45.7	43.6	47.6
40-45	40.9	38.9	42.8
45-50	36.3	34.3	38.1
50-55	31.8	29.9	33.5
55-60	27.4	25.6	29.0
60-65	23.2	21.5	24.7
65-70	19.3	17.7	20.6
70-75	15.7	14.2	16.8
75-80	12.4	11.0	13.5
80-85	9.6	8.4	10.4
85 and Over	7.4	6.3	8.1

<sup>1</sup> Persons of Hispanic Origin may be of any race. See Appendix A, "Hispanic Origin."

**Mortality Table A5. Marital Status by Sex for Residents, 2004**

Marital Status	Total		Male	Female
	Number	Percent <sup>1</sup>		
<b>State Total</b>	<b>44,703</b>	<b>100.0</b>	<b>22,332</b>	<b>22,371</b>
Single	4,254	9.5	2,844	1,410
Married	17,355	38.8	11,626	5,729
Divorced	6,654	14.9	3,451	3,203
Widowed	16,170	36.2	4,224	11,946
Seperated	59	0.1	32	27
Unknown	211	0.5	155	56

<sup>1</sup> Percents may not add to 100% due to rounding.

**Mortality Table A6. Education by Age for Residents, 2004**

Age	Total	8th Grade or Less	Some High School	High School / GED	Some College	Associate Degree	Bachelor's Degree	Postgrad Educ	Unknown
<b>State Total</b>	<b>44,703</b>	<b>5,186</b>	<b>5,057</b>	<b>17,615</b>	<b>7,222</b>	<b>2,328</b>	<b>4,506</b>	<b>2,034</b>	<b>755</b>
Under 1	451	441	0	0	0	0	0	0	10
1-4	68	65	0	0	0	0	0	0	3
5-14	108	101	4	0	0	0	0	0	3
15-19	254	14	151	69	19	0	0	0	1
20-24	347	20	75	156	74	9	9	0	4
25-34	657	45	102	248	141	44	51	16	10
35-44	1,504	63	234	616	277	112	131	42	29
45-54	3,276	107	341	1,304	662	295	349	130	88
55-64	4,931	233	504	1,873	964	361	594	273	129
65-74	7,012	602	811	2,884	1,162	378	692	366	117
75-84	12,742	1,360	1,435	5,290	2,036	554	1,301	600	166
85-94	11,278	1,688	1,166	4,527	1,598	492	1,138	516	153
95 and over	2,075	447	234	648	289	83	241	91	42
Unknown	0	0	0	0	0	0	0	0	0



**Mortality Table A7-a. Residence and Occurrence by County and City, 2004**

County and City	Residence			Occurrence
	Total	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>	Total
<b>State Total</b>	<b>44703</b>	<b>7.2</b>	<b>7.5</b>	<b>44778</b>
Adams	108	6.5	7.4	99
Asotin	212	10.2	7.7	173
Benton	995	6.4	7.4	1028
Kennewick	417	7.1	.	523
Richland	309	7.2	.	380
Chelan	540	7.9	6.7	696
Wenatchee	266	9.2	.	494
Clallam	824	12.5	8	757
Port Angeles	223	12	.	441
Clark	2625	6.8	8.2	2510
Camas	109	7.1	.	99
Vancouver	1550	10.1	.	2089
Columbia	49	12	8.7	41
Cowlitz	953	10	8.9	1012
Longview	472	13.4	.	837
Douglas	270	7.9	7.7	172
Ferry	71	9.7	10.2	52
Franklin	289	5.1	7	219
Pasco	225	5.5	.	209
Garfield	30	12.5	8	24
Grant	568	7.3	7.9	462
Moses Lake	143	8.9	.	232
Grays Harbor	778	11.2	9.3	619
Aberdeen	200	12.2	.	313
Island	592	7.9	7.3	454
Oak Harbor	153	7.3	.	158
Jefferson	292	10.8	7.2	221
King	11191	6.3	6.6	12534
Auburn	424	9.7	.	550
Bellevue	707	6.1	.	801
Bothell part	150	9.2	.	103
Burien	188	6	.	412
Covington	53	3.5	.	25
Des Moines	277	9.5	.	270
Federal Way	506	6.1	.	621
Issaquah	197	12.7	.	236
Kenmore	125	6.5	.	46
Kent	509	6	.	317
Kirkland	324	7.1	.	773
Maple Valley	65	4	.	49
Mercer Island	146	6.7	.	105
Redmond	236	5	.	282
Renton	500	9	.	696
Sammamish	80	2.2	.	40
SeaTac	112	4.5	.	56
Seattle	4362	7.6	.	6217
Shoreline	395	7.5	.	410



**Mortality Table A7-a. (Continued) Residence and Occurrence by County and City, 2004**

County and City	Residence			Occurrence
	Total	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>	Total
Tukwila	67	3.9	.	47
Kitsap	1771	7.4	7.9	1722
Bainbridge Island	168	7.7	.	135
Bremerton	442	11.8	.	411
Kittitas	245	6.8	6.8	240
Ellensburg	108	6.6	.	185
Klickitat	162	8.4	7.3	106
Lewis	791	11.2	8.9	688
Centralia	266	17.5	.	476
Lincoln	104	10.2	6.5	82
Mason	533	10.5	8.8	394
Okanogan	361	9.1	8.2	299
Pacific	274	13	8.4	207
Pend Oreille	142	11.9	11.1	114
Pierce	5226	7	8	5201
Lakewood	452	7.7	.	460
Puyallup	336	9.4	.	885
Tacoma	1787	9.1	.	2602
University Place	202	6.6	.	151
San Juan	108	7.2	5.2	87
Skagit	952	8.8	7.3	957
Anacortes	185	12	.	198
Mount Vernon	224	8.1	.	411
Skamania	77	7.6	8.6	57
Snohomish	4104	6.4	7.7	3682
Edmonds	388	9.8	.	536
Everett	914	9.4	.	1371
Lynnwood	397	11.5	.	314
Marysville	297	10.3	.	277
Monroe	115	7.4	.	174
Mountlake Terrace	102	5	.	55
Mukilteo	82	4.3	.	38
Spokane	3691	8.5	7.9	4126
Spokane (city)	2142	10.9	.	3309
Stevens	393	9.7	9.1	306
Thurston	1598	7.3	7.4	1698
Lacey	327	10.1	.	288
Olympia	520	12.1	.	1211
Wahkiakum	44	11.6	8.2	32
Walla Walla	505	8.9	6.9	561
Walla Walla (city)	325	10.7	.	467
Whatcom	1325	7.5	7.5	1324
Bellingham	653	9.2	.	961
Whitman	201	4.8	6	169
Pullman	56	2.2	.	57
Yakima	1709	7.5	7.7	1653
Yakima (city)	825	10.4	.	1190

<sup>1</sup> Rate per 1,000 population.

<sup>2</sup> 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 2002-2004.**

County	2002 - 2004			2004		
	Total	Crude Rate <sup>1</sup>	Age-Adj <sup>2</sup>	Total	Crude Rate <sup>1</sup>	Age-Adj <sup>2</sup>
San Juan	343	7.7	5.5	108	7.2	5.2
Garfield	74	10.3	6.5	30	12.5	8.0
Whitman	636	5.2	6.5	201	4.8	6.0
Lincoln	307	10.1	6.7	104	10.2	6.5
King	34,354	6.4	6.9	11,191	6.3	6.6
Kittitas	758	7.2	7.2	245	6.8	6.8
Chelan	1,723	8.5	7.3	540	7.9	6.7
Klickitat	483	8.3	7.3	162	8.4	7.3
Jefferson	874	10.9	7.4	292	10.8	7.2
Walla Walla	1,601	9.5	7.5	505	8.9	6.9
Island	1,772	8.0	7.5	592	7.9	7.3
Skamania	203	6.8	7.5	77	7.6	8.6
Franklin	865	5.3	7.5	289	5.1	7.0
Asotin	623	10.0	7.5	212	10.2	7.7
Whatcom	3,934	7.5	7.6	1,325	7.5	7.5
<b>State Total</b>	<b>135,754</b>	<b>7.4</b>	<b>7.7</b>	<b>44,703</b>	<b>7.2</b>	<b>7.5</b>
Thurston	4,906	7.6	7.8	1,598	7.3	7.4
Skagit	2,993	9.3	7.8	952	8.8	7.3
Douglas	801	7.9	7.9	270	7.9	7.7
Benton	3,065	6.7	7.9	995	6.4	7.4
Adams	339	6.8	7.9	108	6.5	7.4
Snohomish	12,353	6.5	8.0	4,104	6.4	7.7
Yakima	5,232	7.7	8.0	1,709	7.5	7.7
Spokane	11,049	8.6	8.1	3,691	8.5	7.9
Grant	1,708	7.4	8.1	568	7.3	7.9
Clallam	2,470	12.6	8.1	824	12.5	8.0
Kitsap	5,318	7.5	8.2	1,771	7.4	7.9
Clark	7,607	6.8	8.2	2,625	6.8	8.2
Pierce	16,166	7.3	8.5	5,226	7.0	8.0
Columbia	145	11.8	8.6	49	12.0	8.7
Mason	1,531	10.2	8.6	533	10.5	8.8
Okanogan	1,142	9.6	8.7	361	9.1	8.2
Pacific	869	13.8	9.0	274	13.0	8.4
Lewis	2,375	11.2	9.0	791	11.2	8.9
Cowlitz	2,871	10.1	9.2	953	10.0	8.9
Stevens	1,192	9.8	9.3	393	9.7	9.1
Ferry	190	8.7	9.4	71	9.7	10.2
Grays Harbor	2,330	11.3	9.5	778	11.2	9.3
Wahkiakum	156	13.7	10.1	44	11.6	8.2
Pend Oreille	396	11.2	10.5	142	11.9	11.1

<sup>1</sup> Rate per 1,000 population.

<sup>2</sup> 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, 2004**

County & City	Total	Male	Female	White	African Amer.	Native Amer.	Japa-nese	Chi-nese	Fili-pino	Other Asian	Other	Unk	Hispanic <sup>1</sup>
<b>State Total</b>	<b>44,703</b>	<b>22,332</b>	<b>22,371</b>	<b>41,653</b>	<b>1,070</b>	<b>579</b>	<b>287</b>	<b>197</b>	<b>266</b>	<b>610</b>	<b>0</b>	<b>40</b>	<b>890</b>
Adams	108	54	54	108	0	0	0	0	0	0	0	0	16
Asotin	212	93	119	206	0	4	0	0	1	0	0	1	0
Benton	995	491	504	969	5	1	0	5	3	12	0	0	26
Kennewick	417	173	244	403	3	1	0	1	2	7	0	0	13
Richland	309	168	141	299	1	0	0	4	1	4	0	0	2
Chelan	540	271	269	532	1	5	0	0	0	1	0	1	10
Wenatchee	266	131	135	261	0	3	0	0	0	1	0	1	5
Clallam	824	422	402	793	0	23	2	1	3	2	0	0	5
Port Angeles	223	113	110	219	0	2	1	0	1	0	0	0	1
Clark	2,625	1,321	1,304	2,542	27	11	4	3	5	32	0	1	33
Camas	109	56	53	102	3	1	0	0	1	2	0	0	1
Vancouver	1,550	770	780	1,490	18	4	3	2	4	28	0	1	20
Columbia	49	27	22	49	0	0	0	0	0	0	0	0	0
Cowlitz	953	468	485	934	4	6	1	0	2	5	0	1	12
Longview	472	219	253	459	3	1	1	0	2	5	0	1	6
Douglas	270	144	126	265	1	1	0	0	1	1	0	1	8
Ferry	71	35	36	58	0	13	0	0	0	0	0	0	1
Franklin	289	148	141	266	15	1	3	0	0	4	0	0	40
Pasco	225	110	115	202	15	1	3	0	0	4	0	0	34
Garfield	30	12	18	30	0	0	0	0	0	0	0	0	1
Grant	568	306	262	550	8	6	3	0	1	0	0	0	41
Moses Lake	143	77	66	134	6	0	2	0	1	0	0	0	12
Grays Harbor	778	412	366	741	3	29	1	1	1	2	0	0	8
Aberdeen	200	103	97	188	0	9	0	0	1	2	0	0	3
Island	592	295	297	577	3	0	2	1	3	5	0	1	10
Oak Harbor	153	70	83	147	1	0	0	1	1	3	0	0	3
Jefferson	292	154	138	283	1	6	1	0	0	1	0	0	2
King	11,191	5,507	5,684	9,793	586	101	155	161	132	252	0	10	166
Auburn	424	208	216	401	6	6	0	0	2	9	0	0	5
Bellevue	707	309	398	651	10	0	10	16	1	17	0	2	9
Bothell part	150	71	79	148	1	0	0	0	1	0	0	0	1
Burien	188	100	88	168	6	1	1	1	2	9	0	0	3
Covington	53	20	33	46	5	2	0	0	0	0	0	0	0
Des Moines	277	112	165	256	12	2	1	0	1	5	0	0	8
Federal Way	506	232	274	446	29	3	5	2	4	17	0	0	5
Issaquah	197	91	106	187	2	0	5	1	0	2	0	0	1
Kenmore	125	58	67	119	1	0	0	0	0	4	0	1	1
Kent	509	277	232	454	18	4	3	1	10	19	0	0	19
Kirkland	324	153	171	305	6	0	4	1	2	4	0	2	7
Maple Valley	65	35	30	64	0	0	0	0	0	0	0	1	1
Mercer Island	146	76	70	134	0	0	4	6	0	2	0	0	0
Redmond	236	116	120	225	3	0	1	3	1	2	0	1	2
Renton	500	260	240	413	48	2	7	9	9	12	0	0	8
Sammamish	80	38	42	74	0	0	1	3	0	2	0	0	1
SeaTac	112	63	49	90	10	2	3	0	1	6	0	0	6
Seattle	4,362	2,207	2,155	3,506	406	60	99	99	81	107	0	3	66
Shoreline	395	191	204	383	2	3	1	1	2	3	0	0	5

**Mortality Table A8. (Continued) Sex and Race/Ethnicity by County/City of Residence, 2004**

County & City	Total	Male	Female	White	African Amer.	Native Amer.	Japa-nese	Chi-nese	Fili-pino	Other Asian	Other	Unk	Hispanic <sup>1</sup>
Tukwila	67	34	33	55	4	2	0	1	0	5	0	0	4
Kitsap	1,771	867	904	1,665	27	21	14	2	24	18	0	0	15
Bainbridge Island	168	74	94	161	0	0	4	0	2	1	0	0	1
Bremerton	442	217	225	410	14	3	3	0	8	4	0	0	5
Kittitas	245	124	121	241	1	1	1	1	0	0	0	0	3
Ellensburg	108	52	56	107	0	0	1	0	0	0	0	0	1
Klickitat	162	86	76	157	0	5	0	0	0	0	0	0	0
Lewis	791	400	391	784	1	3	0	0	0	0	0	3	7
Centralia	266	113	153	263	0	2	0	0	0	0	0	1	2
Lincoln	104	61	43	103	1	0	0	0	0	0	0	0	1
Mason	533	275	258	513	1	16	2	0	0	1	0	0	9
Okanogan	361	199	162	311	0	50	0	0	0	0	0	0	12
Pacific	274	163	111	269	0	2	1	0	0	1	0	1	0
Pend Oreille	142	81	61	140	1	1	0	0	0	0	0	0	0
Pierce	5,226	2,634	2,592	4,676	249	62	42	2	35	156	0	4	86
Lakewood	452	234	218	367	34	5	9	0	10	27	0	0	12
Puyallup	336	170	166	318	2	3	4	1	3	3	0	2	6
Tacoma	1,787	879	908	1,514	150	32	12	1	10	66	0	2	31
University Place	202	96	106	180	10	0	1	0	2	9	0	0	0
San Juan	108	49	59	103	0	1	0	0	0	4	0	0	1
Skagit	952	475	477	930	2	12	5	0	0	3	0	0	28
Anacortes	185	86	99	184	0	0	1	0	0	0	0	0	1
Mount Vernon	224	110	114	219	1	1	1	0	0	2	0	0	16
Skamania	77	29	48	77	0	0	0	0	0	0	0	0	0
Snohomish	4,104	2,030	2,074	3,908	41	30	13	10	26	67	0	9	69
Edmonds	388	191	197	374	1	2	2	1	1	6	0	1	1
Everett	914	442	472	857	15	8	2	3	7	18	0	4	18
Lynnwood	397	178	219	363	6	2	4	2	4	16	0	0	16
Marysville	297	146	151	285	1	3	1	0	4	2	0	1	4
Monroe	115	62	53	112	2	0	0	0	0	1	0	0	4
Mountlake Terrace	102	56	46	96	1	0	0	1	2	2	0	0	2
Mukilteo	82	47	35	76	3	0	0	0	1	2	0	0	0
Spokane	3,691	1,783	1,908	3,568	41	36	23	4	5	10	0	4	26
Spokane (city)	2,142	993	1,149	2,058	35	23	12	2	3	8	0	1	17
Stevens	393	215	178	371	1	20	0	0	1	0	0	0	4
Thurston	1,598	818	780	1,523	21	19	5	1	10	19	0	0	21
Lacey	327	172	155	307	7	2	1	0	4	6	0	0	5
Olympia	520	253	267	496	10	5	1	1	1	6	0	0	5
Wahkiakum	44	23	21	44	0	0	0	0	0	0	0	0	0
Walla Walla	505	232	273	492	5	6	0	0	1	1	0	0	15
Walla Walla (city)	325	149	176	314	5	4	0	0	1	1	0	0	11
Whatcom	1,325	644	681	1,278	3	19	6	2	3	12	0	2	15
Bellingham	653	309	344	633	2	5	2	2	3	5	0	1	8
Whitman	201	94	107	198	2	0	0	1	0	0	0	0	2
Pullman	56	27	29	54	2	0	0	0	0	0	0	0	1
Yakima	1,709	890	819	1,606	19	68	3	2	9	1	0	1	197
Yakima (city)	825	415	410	796	16	6	0	1	4	1	0	1	54

<sup>1</sup> 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, 2004**

County & City	Total	Male	Female	White	Single Race				More	
					African Amer.	Native Amer.	Asian	Pacific Islander	than one race given	Race Unk
<b>State Total</b>	<b>44,703</b>	<b>22,332</b>	<b>22,371</b>	<b>41,553</b>	<b>1,038</b>	<b>539</b>	<b>1,210</b>	<b>115</b>	<b>210</b>	<b>38</b>
Adams	108	54	54	108	0	0	0	0	0	0
Asotin	212	93	119	206	0	3	1	0	1	1
Benton	995	491	504	969	5	1	18	2	0	0
Kennewick	417	173	244	403	3	1	9	1	0	0
Richland	309	168	141	299	1	0	9	0	0	0
Chelan	540	271	269	532	1	5	1	0	0	1
Wenatchee	266	131	135	261	0	3	1	0	0	1
Clallam	824	422	402	792	0	23	7	1	1	0
Port Angeles	223	113	110	218	0	2	2	0	1	0
Clark	2,625	1,321	1,304	2,537	27	8	38	4	10	1
Camas	109	56	53	102	3	0	3	0	1	0
Vancouver	1,550	770	780	1,488	18	2	33	2	6	1
Columbia	49	27	22	49	0	0	0	0	0	0
Cowlitz	953	468	485	933	4	4	7	1	3	1
Longview	472	219	253	459	3	0	7	1	1	1
Douglas	270	144	126	265	1	1	2	0	0	1
Ferry	71	35	36	58	0	13	0	0	0	0
Franklin	289	148	141	266	15	1	7	0	0	0
Pasco	225	110	115	202	15	1	7	0	0	0
Garfield	30	12	18	30	0	0	0	0	0	0
Grant	568	306	262	550	8	5	4	0	1	0
Moses Lake	143	77	66	134	6	0	3	0	0	0
Grays Harbor	778	412	366	739	3	25	4	0	7	0
Aberdeen	200	103	97	187	0	9	2	0	2	0
Island	592	295	297	578	3	0	9	1	1	0
Oak Harbor	153	70	83	147	1	0	3	1	1	0
Jefferson	292	154	138	283	1	6	1	1	0	0
King	11,191	5,507	5,684	9,766	575	94	645	40	61	10
Auburn	424	208	216	399	6	6	8	1	4	0
Bellevue	707	309	398	650	10	0	42	0	3	2
Bothell part	150	71	79	148	0	0	1	0	1	0
Burien	188	100	88	168	6	1	10	3	0	0
Covington	53	20	33	46	5	2	0	0	0	0
Des Moines	277	112	165	256	11	2	5	2	1	0
Federal Way	506	232	274	446	29	3	27	1	0	0
Issaquah	197	91	106	187	2	0	6	0	2	0
Kenmore	125	58	67	119	1	0	4	0	0	1
Kent	509	277	232	451	17	3	28	5	5	0
Kirkland	324	153	171	305	6	0	10	1	1	1
Maple Valley	65	35	30	64	0	0	0	0	0	1
Mercer Island	146	76	70	134	0	0	12	0	0	0
Redmond	236	116	120	225	3	0	7	0	0	1
Renton	500	260	240	411	46	2	35	2	4	0
Sammamish	80	38	42	74	0	0	6	0	0	0
SeaTac	112	63	49	90	9	2	4	5	2	0
Seattle	4,362	2,207	2,155	3,493	402	56	366	15	26	4
Shoreline	395	191	204	380	2	3	7	0	3	0
Tukwila	67	34	33	55	4	1	4	2	1	0
Kitsap	1,771	867	904	1,660	26	18	47	10	10	0
Bainbridge Island	168	74	94	161	0	0	6	0	1	0

**Mortality Table A8b. (Continued) Sex and Multiple Race by County/City of Residence, 2004**

County & City	Total	Male	Female	White	Single Race				More	
					African Amer.	Native Amer.	Asian	Pacific Islander	than one race given	Race Unk
Bremerton	442	217	225	409	13	3	12	3	2	0
Kittitas	245	124	121	240	1	1	2	0	1	0
Ellensburg	108	52	56	107	0	0	1	0	0	0
Klickitat	162	86	76	157	0	5	0	0	0	0
Lewis	791	400	391	781	1	2	0	0	4	3
Centralia	266	113	153	262	0	1	0	0	2	1
Lincoln	104	61	43	103	1	0	0	0	0	0
Mason	533	275	258	511	1	13	2	1	5	0
Okanogan	361	199	162	310	0	49	0	0	2	0
Pacific	274	163	111	268	0	2	2	0	1	1
Pend Oreille	142	81	61	140	1	1	0	0	0	0
Pierce	5,226	2,634	2,592	4,655	238	58	192	33	46	4
Lakewood	452	234	218	366	34	5	36	8	3	0
Puyallup	336	170	166	315	2	3	11	0	3	2
Tacoma	1,787	879	908	1,507	143	29	79	6	21	2
University Place	202	96	106	180	9	0	11	1	1	0
San Juan	108	49	59	103	0	1	4	0	0	0
Skagit	952	475	477	928	2	12	6	1	3	0
Anacortes	185	86	99	184	0	0	1	0	0	0
Mount Vernon	224	110	114	218	1	1	2	1	1	0
Skamania	77	29	48	76	0	0	0	0	1	0
Snohomish	4,104	2,030	2,074	3,898	38	27	101	13	18	9
Edmonds	388	191	197	374	1	2	9	1	0	1
Everett	914	442	472	854	13	7	27	3	6	4
Lynnwood	397	178	219	362	6	1	23	3	2	0
Marysville	297	146	151	285	1	2	6	1	1	1
Monroe	115	62	53	112	2	0	1	0	0	0
Mountlake Terrace	102	56	46	95	1	0	4	1	1	0
Mukilteo	82	47	35	76	3	0	3	0	0	0
Spokane	3,691	1,783	1,908	3,562	39	36	41	1	8	4
Spokane (city)	2,142	993	1,149	2,054	33	23	25	0	6	1
Stevens	393	215	178	370	1	19	1	0	2	0
Thurston	1,598	818	780	1,520	21	17	31	3	6	0
Lacey	327	172	155	306	7	2	11	0	1	0
Olympia	520	253	267	496	10	5	6	2	1	0
Wahkiakum	44	23	21	44	0	0	0	0	0	0
Walla Walla	505	232	273	492	5	5	2	0	1	0
Walla Walla (city)	325	149	176	314	5	3	2	0	1	0
Whatcom	1,325	644	681	1,278	3	18	20	3	2	1
Bellingham	653	309	344	634	2	5	11	1	0	0
Whitman	201	94	107	197	1	0	1	0	2	0
Pullman	56	27	29	54	1	0	0	0	1	0
Yakima	1,709	890	819	1,599	16	66	14	0	13	1
Yakima (city)	825	415	410	791	13	6	5	0	9	1

**Mortality Table A9. Age Group by County of Residence, 2004**

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
<b>State Total</b>	<b>44,703</b>	<b>451</b>	<b>68</b>	<b>108</b>	<b>254</b>	<b>347</b>	<b>657</b>	<b>1,504</b>	<b>3,276</b>	<b>4,931</b>	<b>7,012</b>	<b>12,742</b>	<b>13,353</b>	<b>0</b>
Adams	108	4	0	0	2	1	1	2	5	12	17	37	27	0
Asotin	212	4	0	0	0	3	4	6	17	23	33	50	72	0
Benton	995	9	0	2	8	6	11	34	81	93	153	322	276	0
Chelan	540	2	1	0	2	2	4	10	33	53	76	152	205	0
Clallam	824	4	0	1	6	4	7	22	51	77	126	259	267	0
Clark	2,625	27	8	8	9	25	39	94	185	333	440	753	704	0
Columbia	49	0	0	0	1	0	1	2	4	6	5	19	11	0
Cowlitz	953	8	1	1	4	6	9	38	74	118	143	262	289	0
Douglas	270	2	0	3	2	0	2	8	14	26	49	78	86	0
Ferry	71	0	0	1	1	0	2	2	6	11	16	18	14	0
Franklin	289	6	2	2	2	5	9	16	28	26	51	76	66	0
Garfield	30	0	0	0	0	0	0	2	2	1	5	12	8	0
Grant	568	13	2	2	4	8	13	24	46	56	85	176	139	0
Grays Harbor	778	3	0	2	5	1	12	32	64	97	130	221	211	0
Island	592	9	0	0	1	5	6	18	31	64	100	185	173	0
Jefferson	292	0	0	0	1	2	2	9	18	37	47	100	76	0
King	11,191	101	11	20	54	83	181	399	809	1,184	1,581	3,176	3,592	0
Kitsap	1,771	14	2	5	9	11	18	43	140	220	293	496	520	0
Kittitas	245	4	0	1	1	1	2	6	9	25	38	65	93	0
Klickitat	162	0	0	0	2	0	2	6	12	31	33	39	37	0
Lewis	791	8	1	0	5	7	8	18	50	75	129	249	241	0
Lincoln	104	0	0	1	2	0	0	2	8	8	15	21	47	0
Mason	533	7	1	2	5	8	5	15	37	75	95	155	128	0
Okanogan	361	6	2	4	1	2	5	16	26	42	63	102	92	0
Pacific	274	2	0	0	1	2	2	7	19	23	56	85	77	0
Pend Oreille	142	0	0	0	0	0	1	6	18	17	29	37	34	0
Pierce	5,226	60	14	15	39	57	85	194	417	627	886	1,475	1,357	0
San Juan	108	0	1	0	0	1	1	4	6	4	11	39	41	0
Skagit	952	11	3	2	5	8	10	23	65	84	134	287	320	0
Skamania	77	1	0	1	1	1	2	4	2	9	16	18	22	0
Snohomish	4,104	40	6	10	22	25	71	137	335	480	653	1,163	1,162	0
Spokane	3,691	37	4	4	28	27	53	118	267	381	588	1,035	1,149	0
Stevens	393	4	0	3	4	4	8	9	28	46	78	95	114	0
Thurston	1,598	18	2	4	9	12	23	53	116	176	267	455	463	0
Wahkiakum	44	0	0	0	0	0	0	1	3	5	4	20	11	0
Walla Walla	505	2	0	2	3	0	5	9	34	47	76	134	193	0
Whatcom	1,325	9	3	2	5	6	22	43	91	136	190	363	455	0
Whitman	201	2	1	0	0	1	1	1	15	14	29	60	77	0
Yakima	1,709	34	3	10	10	23	30	71	110	189	272	453	504	0



**Mortality Table A10. Month of Death by County of Residence, 2004**

County	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>State Total</b>	<b>44,703</b>	<b>4,091</b>	<b>3,735</b>	<b>3,981</b>	<b>3,651</b>	<b>3,684</b>	<b>3,553</b>	<b>3,670</b>	<b>3,518</b>	<b>3,500</b>	<b>3,712</b>	<b>3,749</b>	<b>3,859</b>
Adams	108	11	5	9	11	8	8	9	7	11	7	7	15
Asotin	212	19	14	23	12	19	15	19	18	19	15	23	16
Benton	995	82	81	90	75	70	69	84	80	102	88	83	91
Chelan	540	57	50	51	46	49	50	40	28	40	37	47	45
Clallam	824	89	71	73	62	67	65	77	51	58	66	65	80
Clark	2,625	231	210	247	216	222	211	201	203	211	233	219	221
Columbia	49	5	3	4	3	6	4	4	3	4	4	4	5
Cowlitz	953	80	84	83	85	89	76	80	61	73	76	74	92
Douglas	270	27	20	21	18	29	26	21	21	19	26	23	19
Ferry	71	9	0	2	7	4	7	4	5	6	10	10	7
Franklin	289	28	25	20	27	28	20	24	24	30	22	20	21
Garfield	30	2	3	4	1	5	4	1	3	2	1	0	4
Grant	568	52	45	51	41	40	55	49	54	48	42	44	47
Grays Harbor	778	70	67	66	69	64	50	78	65	53	70	60	66
Island	592	50	55	62	35	52	42	47	52	50	50	46	51
Jefferson	292	26	27	26	23	23	25	21	18	25	23	31	24
King	11,191	1,020	960	993	895	917	945	913	851	867	944	947	939
Kitsap	1,771	162	170	160	139	137	150	145	156	133	161	117	141
Kittitas	245	25	23	18	25	14	13	17	21	11	21	21	36
Klickitat	162	13	11	11	11	19	17	19	10	13	11	14	13
Lewis	791	77	60	65	78	71	55	57	67	68	69	69	55
Lincoln	104	7	9	10	12	8	8	6	10	7	8	11	8
Mason	533	45	46	43	43	45	49	45	52	38	44	44	39
Okanogan	361	33	27	30	37	31	32	28	34	29	24	27	29
Pacific	274	30	17	31	24	21	26	15	24	18	12	25	31
Pend Oreille	142	20	8	17	7	10	7	14	14	9	10	15	11
Pierce	5,226	499	448	466	445	435	404	415	419	380	417	463	435
San Juan	108	12	10	6	10	4	6	10	10	10	7	6	17
Skagit	952	97	79	87	81	88	76	88	58	82	66	73	77
Skamania	77	5	6	6	7	6	9	8	5	3	9	6	7
Snohomish	4,104	339	344	349	337	325	317	367	324	321	336	355	390
Spokane	3,691	359	278	332	313	320	270	293	292	307	301	314	312
Stevens	393	33	33	34	45	21	37	32	35	34	31	29	29
Thurston	1,598	153	137	147	122	122	114	130	133	138	133	142	127
Wahkiakum	44	2	4	4	1	4	6	7	2	5	4	3	2
Walla Walla	505	37	37	44	30	35	35	44	50	56	52	37	48
Whatcom	1,325	120	113	110	100	121	106	99	109	91	120	110	126
Whitman	201	14	15	24	17	14	22	21	22	11	17	13	11
Yakima	1,709	151	140	162	141	141	122	138	127	118	145	152	172

**Mortality Table A11. Place Where Death Occurred by County of Occurrence, 2004**

County	Total	General Hospital	Nursing Home	Hospice Facility	Home	Federal Facility	Psychiatric Hospital	State Facility	Dead on Arrival	Other and Unk
<b>State Total</b>	<b>44,778</b>	<b>14,525</b>	<b>13,105</b>	<b>997</b>	<b>13,422</b>	<b>570</b>	<b>41</b>	<b>2</b>	<b>76</b>	<b>2,040</b>
Adams	99	34	36	0	22	0	0	0	0	7
Asotin	173	50	60	0	56	0	0	0	0	7
Benton	1,028	358	179	158	291	0	0	0	1	41
Chelan	696	327	176	2	162	0	0	0	0	29
Clallam	757	200	225	1	296	0	0	0	0	35
Clark	2,510	603	653	136	975	10	0	0	2	131
Columbia	41	18	10	0	11	0	0	0	0	2
Cowlitz	1,012	175	202	389	212	0	0	0	2	32
Douglas	172	0	91	2	60	0	0	0	1	18
Ferry	52	12	1	0	31	0	0	0	1	7
Franklin	219	66	69	1	71	0	0	0	0	12
Garfield	24	11	10	0	3	0	0	0	0	0
Grant	462	169	131	0	129	0	0	0	3	30
Grays Harbor	619	186	163	1	230	0	0	0	5	34
Island	454	69	147	2	216	2	0	0	0	18
Jefferson	221	39	46	0	118	0	0	0	0	18
King	12,534	4,852	3,446	263	3,179	239	0	1	12	542
Kitsap	1,722	527	642	5	472	10	0	0	5	61
Kittitas	240	39	79	0	87	0	0	0	1	34
Klickitat	106	26	4	0	59	0	0	0	0	17
Lewis	688	225	239	1	195	0	0	0	2	26
Lincoln	82	32	27	0	17	0	0	0	0	6
Mason	394	80	128	0	161	0	0	0	2	23
Okanogan	299	77	83	1	117	0	0	0	2	19
Pacific	207	63	59	0	70	0	0	0	0	15
Pend Oreille	114	31	26	1	45	0	0	0	1	10
Pierce	5,201	1,684	1,497	6	1,582	199	20	0	9	204
San Juan	87	0	34	1	46	0	0	0	0	6
Skagit	957	259	344	0	300	0	0	0	1	53
Skamania	57	0	3	0	37	0	0	0	0	17
Snohomish	3,682	1,030	1,239	9	1,229	0	0	0	6	169
Spokane	4,126	1,497	1,196	15	1,167	70	21	0	11	149
Stevens	306	72	88	0	115	0	0	0	2	29
Thurston	1,698	549	530	0	539	0	0	0	4	76
Wahkiakum	32	0	16	0	10	0	0	0	0	6
Walla Walla	561	186	176	0	145	40	0	0	0	14
Whatcom	1,324	322	460	3	463	0	0	0	0	76
Whitman	169	36	66	0	54	0	0	0	0	13
Yakima	1,653	621	524	0	450	0	0	1	3	54

*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, 1995-2004**

<b>Year</b>	<b>Percent Autopsy</b>	<b>Percent Cremation</b>
1995	11.1	50.5
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

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 2004. 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, 2004**

Age Group	Total Deaths			Natural or Disease			External Causes (e.g., Accident, Suicide, Homicide, etc.)		
	Total	Autopsy	Percent <sup>1</sup>	Total	Autopsy	Percent <sup>1</sup>	Total	Autopsy	Percent <sup>1</sup>
<b>State Total</b>	<b>44,703</b>	<b>4,425</b>	<b>9.9</b>	<b>41,173</b>	<b>2,137</b>	<b>5.2</b>	<b>3,530</b>	<b>2,288</b>	<b>64.8</b>
Under 1	451	183	40.6	422	155	36.7	29	28	96.6
1-4	68	44	64.7	33	12	36.4	35	32	91.4
5-14	108	51	47.2	62	18	29.0	46	33	71.7
15-19	254	176	69.3	61	22	36.1	193	154	79.8
20-24	347	244	70.3	81	27	33.3	266	217	81.6
25-34	657	421	64.1	262	100	38.2	395	321	81.3
35-44	1,504	729	48.5	893	240	26.9	611	489	80.0
45-54	3,276	965	29.5	2,615	464	17.7	661	501	75.8
55-64	4,931	684	13.9	4,584	446	9.7	347	238	68.6
65-74	7,012	386	5.5	6,776	273	4.0	236	113	47.9
75-84	12,742	374	2.9	12,388	264	2.1	354	110	31.1
85 and over	13,353	168	1.3	12,996	116	0.9	357	52	14.6
Unknown	0	0	0.0	0	0	0.0	0	0	0.0

<sup>1</sup> 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, 2004**

County	Total	Burial	Cremation	Removal	Medical Research	Body Not Recovered	Entombment	Other	Unknown
<b>State Total</b>	<b>44,703</b>	<b>14,332</b>	<b>28,000</b>	<b>1,141</b>	<b>172</b>	<b>3</b>	<b>519</b>	<b>13</b>	<b>523</b>
Adams	108	64	43	1	0	0	0	0	0
Asotin	212	58	85	66	2	0	0	0	1
Benton	995	397	537	42	4	0	4	0	11
Chelan	540	211	316	5	3	0	3	0	2
Clallam	824	156	651	6	6	0	5	0	0
Clark	2,625	823	1,460	73	6	0	33	1	229
Columbia	49	17	31	1	0	0	0	0	0
Cowlitz	953	309	568	11	3	0	29	0	33
Douglas	270	127	134	4	1	0	3	0	1
Ferry	71	24	45	1	0	0	1	0	0
Franklin	289	134	134	18	0	0	1	0	2
Garfield	30	12	16	2	0	0	0	0	0
Grant	568	216	339	9	0	0	1	2	1
Grays Harbor	778	245	512	6	5	0	6	0	4
Island	592	131	438	18	1	0	3	0	1
Jefferson	292	42	242	5	1	0	1	0	1
King	11,191	3,230	7,329	325	74	1	181	7	44
Kitsap	1,771	414	1,272	54	10	0	15	2	4
Kittitas	245	74	166	2	1	0	2	0	0
Klickitat	162	31	72	3	0	0	0	0	56
Lewis	791	309	460	10	0	0	4	0	8
Lincoln	104	42	60	1	0	0	0	0	1
Mason	533	126	395	8	1	0	1	0	2
Okanogan	361	151	203	3	1	0	0	0	3
Pacific	274	74	166	1	0	0	1	0	32
Pend Oreille	142	32	108	0	0	0	0	0	2
Pierce	5,226	1,843	3,112	161	14	1	76	0	19
San Juan	108	23	80	3	1	0	0	0	1
Skagit	952	291	635	14	2	0	8	0	2
Skamania	77	16	41	0	0	0	3	0	17
Snohomish	4,104	1,168	2,748	103	19	0	54	0	12
Spokane	3,691	1,247	2,300	74	7	0	49	0	14
Stevens	393	134	249	6	1	0	2	0	1
Thurston	1,598	450	1,096	33	4	0	10	0	5
Wahkiakum	44	11	29	1	0	0	1	0	2
Walla Walla	505	194	295	9	1	0	4	0	2
Whatcom	1,325	456	831	26	2	1	6	1	2
Whitman	201	95	96	7	2	0	0	0	1
Yakima	1,709	955	706	29	0	0	12	0	7

### 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<sup>1</sup> for 10 Leading Causes of Death for Residents, 1995-2004**

Year	Heart Disease	Cancer	Strokes	COPD	Uninten- tional or Accident	Alzheimer's	Diabetes	Flu & Pneumonia	Inten- tional or Suicide	Liver Disease
1995	239.4	205.0	70.5	45.2	34.2	10.8	22.2	33.4	14.6	8.8
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

<sup>1</sup>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

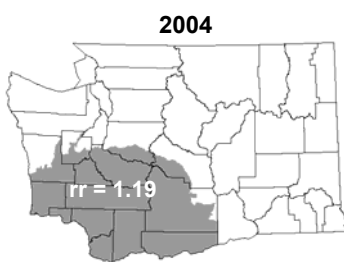
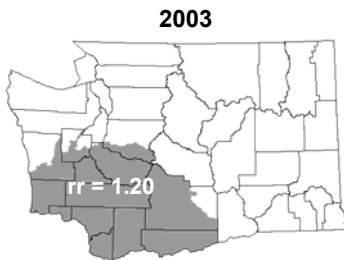
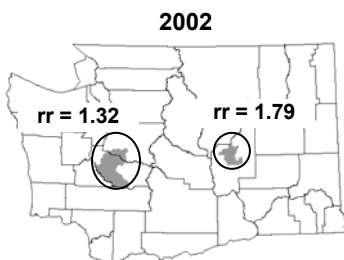
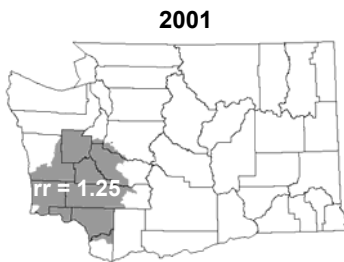
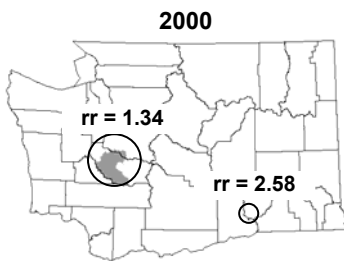
Intentional or Suicide: ICD-9: E950-E959; ICD-10: X60-X84,Y87.0; CR=1.0022

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

The ten leading causes of death accounted for 79.6% of all deaths to residents of Washington State in 2004. Heart disease and cancer alone account for 48.3% 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**

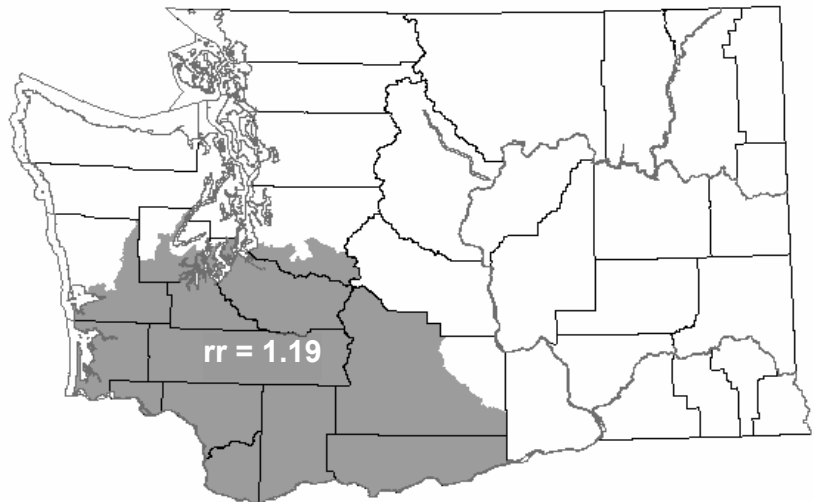
**High relative risk (rr) regions by year**



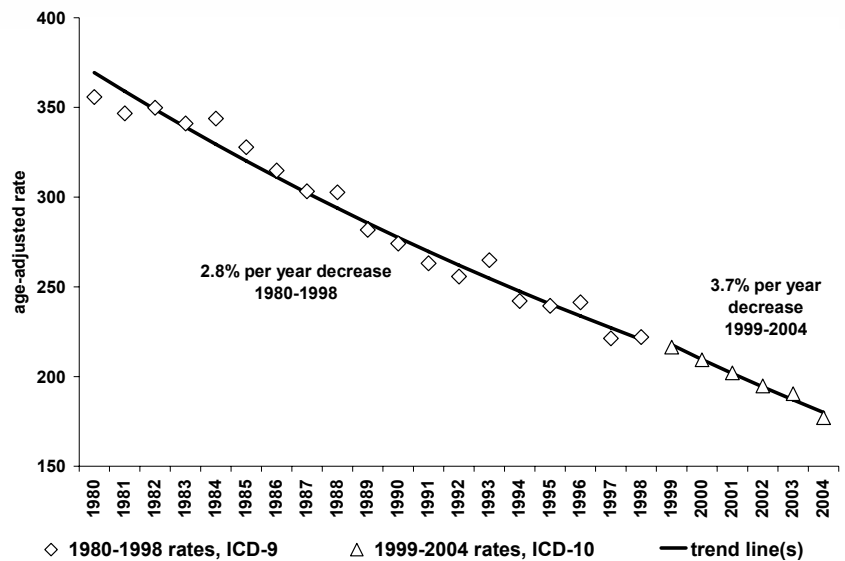
**Regions:** Although varying in size, portions of Pierce County and southwest Washington are consistently found to have higher than expected heart disease deaths. For 2000-2004 combined this southwest region had a relative risk (rr) of 1.19, or 19% more heart disease deaths than expected. On average, 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**

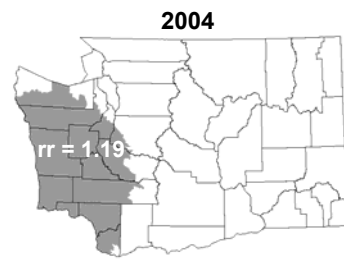
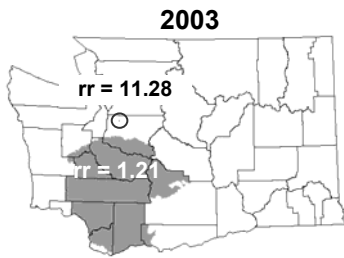
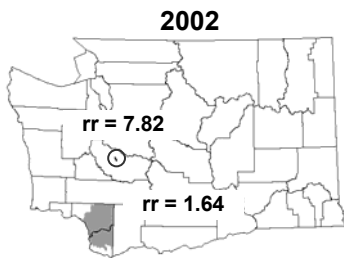
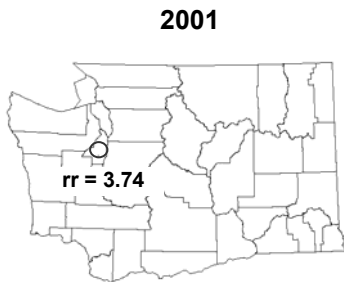
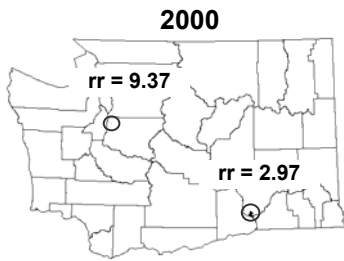


**Heart disease death rates: Statewide trends, 1980-2004**



**Mortality Figure 7. Stroke deaths**

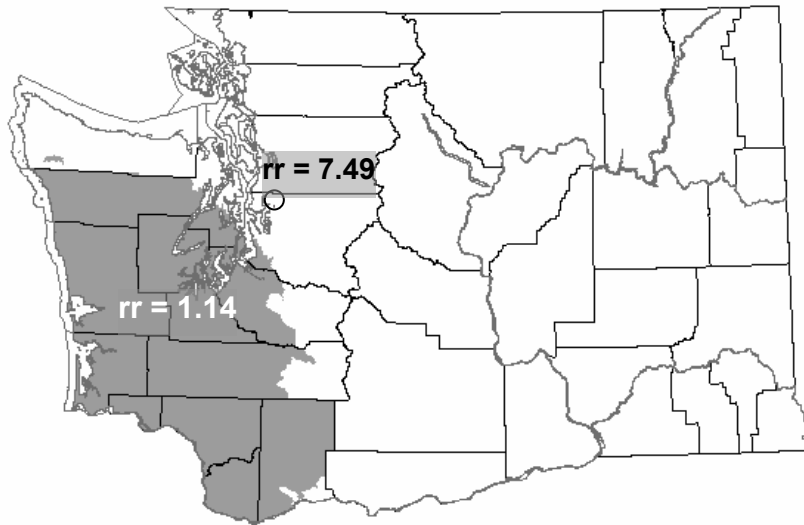
**High relative risk (rr) regions by year**



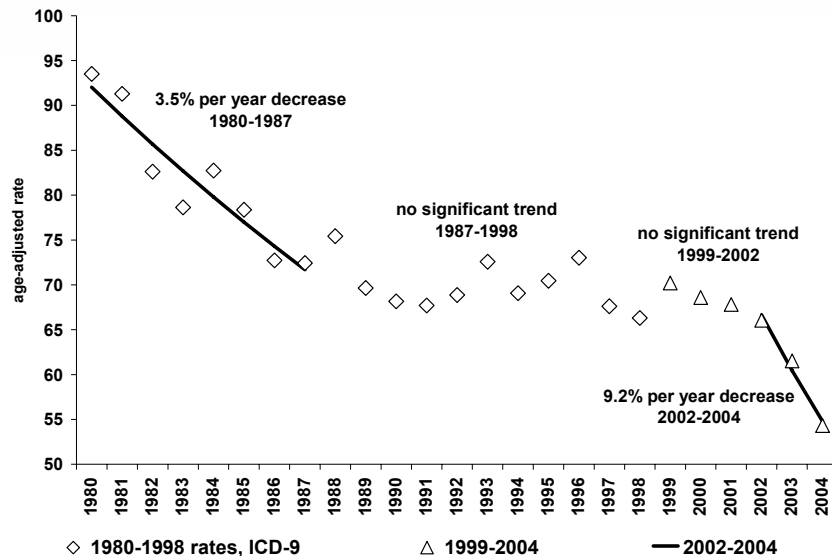
**Regions:** Very small regions varying year-to-year in location likely reflect one-time aberrations in excess stroke deaths. However, from 2002 to 2004 portions of southwest Washington appear to have higher than expected stroke deaths. For 2000-2004 combined, the southwest region has a relative risk 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 trends, 1980-2004**



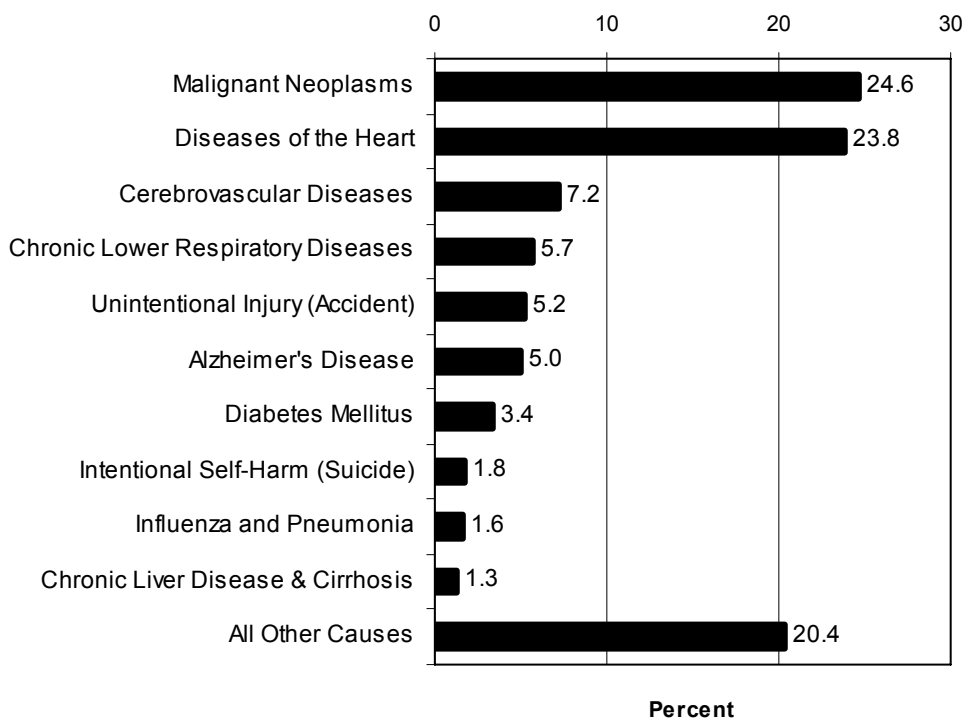


**Mortality Table C2. Leading Causes of Death for Residents, 2004**

Rank	Causes of Death and ICD-10 Codes	Number	Percent <sup>1</sup>	Cumulative Percent
	<b>All Causes</b>	<b>44,703</b>	<b>100.0</b>	
1	Malignant Neoplasms (C00-C97)	10,978	24.6	24.6
2	Diseases of the Heart (I00-I09,I11,I13,I20-I51)	10,626	23.8	48.3
3	Cerebrovascular Diseases (I60-I69)	3,238	7.2	55.6
4	Chronic Lower Respiratory Diseases (J40-J47)	2,543	5.7	61.3
5	Unintentional Injury (Accident) (V01-X59,Y85-Y86)	2,326	5.2	66.5
6	Alzheimer's Disease (G30)	2,234	5.0	71.5
7	Diabetes Mellitus (E10-E14)	1,506	3.4	74.8
8	Intentional Self-Harm (Suicide) (X60-X84,Y87.0)	823	1.8	76.7
9	Influenza and Pneumonia (J10-J18)	737	1.6	78.3
10	Chronic Liver Disease & Cirrhosis (K70,K73-K74)	563	1.3	79.6
	All Other Causes	9,129	20.4	100.0

<sup>1</sup> Percents may not add to 100% due to rounding.

**Mortality Figure 8. Leading Causes of Death for Residents, 2004**



**Mortality Table C3. Leading Causes by Age Group and Sex for Residents, 2004**

Age Group with Causes and ICD-10 Codes	Total			Male			Female		
	No.	Rate <sup>1</sup>	Pct <sup>2</sup>	No.	Rate <sup>1</sup>	Pct <sup>2</sup>	No.	Rate <sup>1</sup>	Pct <sup>2</sup>
<b>All Ages</b>									
All Causes	44,703	724.8	100.0	22,332	726.9	100.0	22,371	722.7	100.0
Malignant Neoplasms (C00-C97)	10,978	178.0	24.6	5,636	183.4	25.2	5,342	172.6	23.9
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	10,626	172.3	23.8	5,541	180.4	24.8	5,085	164.3	22.7
Cerebrovascular Diseases (I60-I69)	3,238	52.5	7.2	1,286	41.9	5.8	1,952	63.1	8.7
Chronic Lower Respiratory Diseases (J40-J47)	2,543	41.2	5.7	1,179	38.4	5.3	1,364	44.1	6.1
Unintentional Injury (Accident) (V01-X59,Y85-Y86)	2,326	37.7	5.2	1,519	49.4	6.8	807	26.1	3.6
Alzheimer's Disease (G30)	2,234	36.2	5.0	686	22.3	3.1	1,548	50.0	6.9
Diabetes Mellitus (E10-E14)	1,506	24.4	3.4	763	24.8	3.4	743	24.0	3.3
Intentional Self-Harm (Suicide)(X60-X84,Y87.0)	823	13.3	1.8	633	20.6	2.8	190	6.1	0.8
Influenza and Pneumonia (J10-J18)	737	11.9	1.6	343	11.2	1.5	394	12.7	1.8
Chronic Liver Disease & Cirrhosis (K70,K73-K74)	563	9.1	1.3	352	11.5	1.6	211	6.8	0.9
All Other Causes	9,129	148.0	20.4	4,394	143.0	19.7	4,735	153.0	21.2
<b>Under 1</b>									
All Causes	451	551.9	100.0	258	612.7	100.0	193	487.3	100.0
Congenital Malformations (Q00-Q99)	120	146.9	26.6	70	166.2	27.1	50	126.2	25.9
Sudden Infant Death Syndrome (R95)	53	64.9	11.8	33	78.4	12.8	20	50.5	10.4
Short Gestation & Low Birth Weight (P07)	45	55.1	10.0	27	64.1	10.5	18	45.4	9.3
Maternal Complications of Pregnancy (P01)	27	33.0	6.0	11	26.1	4.3	16	40.4	8.3
Unintentional Injury (Accident) (V01-X59,Y85-Y86)	15	18.4	3.3	10	23.7	3.9	5	12.6	2.6
All Other Causes	191	233.7	42.4	107	254.1	41.5	84	212.1	43.5
<b>1-4</b>									
All Causes	68	21.3	100.0	38	23.3	100.0	30	19.2	100.0
Unintentional Injury (Accident) (V01-X59,Y85-Y86)	24	7.5	35.3	19	11.6	50.0	5	3.2	16.7
Assault (Homicide) (X85-Y09,Y87.1)	11	3.4	16.2	3	.	7.9	8	5.1	26.7
Congenital Anomalies (Q00-Q99)	8	2.5	11.8	4	.	10.5	4	.	13.3
Malignant Neoplasms (C00-C97)	6	1.9	8.8	5	3.1	13.2	1	.	3.3
Cerebrovascular Diseases (I60-I69)	2	.	2.9	1	.	2.6	1	.	3.3
All Other Causes	17	5.3	25.0	6	3.7	15.8	11	7.0	36.7
<b>5-14</b>									
All Causes	108	12.6	100.0	64	14.6	100.0	44	10.5	100.0
Unintentional Injury (Accident) (V01-X59,Y85-Y86)	35	4.1	32.4	28	6.4	43.8	7	1.7	15.9
Malignant Neoplasms (C00-C97)	25	2.9	23.1	16	3.6	25.0	9	2.2	20.5
Assault (Homicide) (X85-Y09,Y87.1)	5	0.6	4.6	1	.	1.6	4	.	9.1
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	5	0.6	4.6	1	.	1.6	4	.	9.1
Congenital Anomalies (Q00-Q99)	4	.	3.7	4	.	6.3	.	.	.
All Other Causes	34	4.0	31.5	14	3.2	21.9	.	.	.
<b>15 - 19</b>									
All Causes	254	57.4	100.0	175	77.1	100.0	79	36.6	100.0
Unintentional Injury (Accident) (V01-X59,Y85-Y86)	126	28.4	49.6	91	40.1	52.0	35	16.2	44.3
Intentional Self-Harm (Suicide)(X60-X84,Y87.0)	45	10.2	17.7	34	15.0	19.4	11	5.1	13.9
Assault (Homicide) (X85-Y09,Y87.1)	19	4.3	7.5	16	7.1	9.1	3	.	3.8
Malignant Neoplasms (C00-C97)	16	3.6	6.3	8	3.5	4.6	8	3.7	10.1
Congenital Anomalies (Q00-Q99)	5	1.1	2.0	3	.	1.7	2	.	2.5
All Other Causes	43	9.7	16.9	23	10.1	13.1	20	9.3	25.3
<b>20 - 24</b>									
All Causes	347	78.9	100.0	251	110.9	100.0	96	45.0	100.0
Unintentional Injury (Accident) (V01-X59,Y85-Y86)	168	38.2	48.4	128	56.6	51.0	40	18.7	41.7
Intentional Self-Harm (Suicide)(X60-X84,Y87.0)	57	13.0	16.4	44	19.4	17.5	13	6.1	13.5
Assault (Homicide) (X85-Y09,Y87.1)	34	7.7	9.8	29	12.8	11.6	5	2.3	5.2
Malignant Neoplasms (C00-C97)	25	5.7	7.2	15	6.6	6.0	10	4.7	10.4
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	9	2.0	2.6	6	2.7	2.4	3	.	3.1
All Other Causes	54	12.3	15.6	29	12.8	11.6	25	11.7	26.0
<b>25 - 34</b>									
All Causes	657	78.8	100.0	452	105.8	100.0	205	50.4	100.0
Unintentional Injury (Accident) (V01-X59,Y85-Y86)	221	26.5	33.6	170	39.8	37.6	51	12.5	24.9
Intentional Self-Harm (Suicide)(X60-X84,Y87.0)	109	13.1	16.6	80	18.7	17.7	29	7.1	14.1
Malignant Neoplasms (C00-C97)	70	8.4	10.7	39	9.1	8.6	31	7.6	15.1
Assault (Homicide) (X85-Y09,Y87.1)	45	5.4	6.8	34	8.0	7.5	11	2.7	5.4
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	39	4.7	5.9	30	7.0	6.6	9	2.2	4.4
All Other Causes	173	20.8	26.3	99	23.2	21.9	74	18.2	36.1

**Mortality Table C3. (Continued) Leading Causes by Age Group and Sex for Residents, 2004**

Age Group with Causes and ICD-10 Codes	Total			Male			Female		
	No.	Rate <sup>1</sup>	Pct <sup>2</sup>	No.	Rate <sup>1</sup>	Pct <sup>2</sup>	No.	Rate <sup>1</sup>	Pct <sup>2</sup>
<b>35 - 44</b>									
All Causes	1,504	159.6	100.0	955	200.5	100.0	549	117.9	100.0
Unintentional Injury (Accident) (V01-X59,Y85-Y86)	343	36.4	22.8	235	49.3	24.6	108	23.2	19.7
Malignant Neoplasms (C00-C97)	268	28.4	17.8	130	27.3	13.6	138	29.6	25.1
Intentional Self-Harm (Suicide)(X60-X84,Y87.0)	192	20.4	12.8	148	31.1	15.5	44	9.4	8.0
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	182	19.3	12.1	128	26.9	13.4	54	11.6	9.8
Chronic Liver Disease & Cirrhosis (K70,K73-K74)	56	5.9	3.7	37	7.8	3.9	19	4.1	3.5
All Other Causes	463	49.1	30.8	277	58.2	29.0	186	39.9	33.9
<b>45 - 54</b>									
All Causes	3,276	352.4	100.0	2,024	438.1	100.0	1,252	267.7	100.0
Malignant Neoplasms (C00-C97)	928	99.8	28.3	445	96.3	22.0	483	103.3	38.6
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	596	64.1	18.2	431	93.3	21.3	165	35.3	13.2
Unintentional Injury (Accident) (V01-X59,Y85-Y86)	414	44.5	12.6	286	61.9	14.1	128	27.4	10.2
Intentional Self-Harm (Suicide)(X60-X84,Y87.0)	182	19.6	5.6	131	28.4	6.5	51	10.9	4.1
Chronic Liver Disease & Cirrhosis (K70,K73-K74)	151	16.2	4.6	98	21.2	4.8	53	11.3	4.2
All Other Causes	1,005	108.1	30.7	633	137.0	31.3	372	79.6	29.7
<b>55 - 64</b>									
All Causes	4,931	788.1	100.0	2,897	935.8	100.0	2,034	643.4	100.0
Malignant Neoplasms (C00-C97)	1,916	306.2	38.9	999	322.7	34.5	917	290.1	45.1
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	1,015	162.2	20.6	742	239.7	25.6	273	86.4	13.4
Chronic Lower Respiratory Diseases (J40-J47)	252	40.3	5.1	113	36.5	3.9	139	44.0	6.8
Diabetes Mellitus (E10-E14)	243	38.8	4.9	141	45.5	4.9	102	32.3	5.0
Unintentional Injury (Accident) (V01-X59,Y85-Y86)	226	36.1	4.6	156	50.4	5.4	70	22.1	3.4
All Other Causes	1,279	204.4	25.9	746	241.0	25.8	533	168.6	26.2
<b>65 - 74</b>									
All Causes	7,012	1,995.2	100.0	3,885	2,334.5	100.0	3,127	1,690.1	100.0
Malignant Neoplasms (C00-C97)	2,678	762.0	38.2	1,433	861.1	36.9	1,245	672.9	39.8
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	1,507	428.8	21.5	920	552.8	23.7	587	317.3	18.8
Chronic Lower Respiratory Diseases (J40-J47)	571	162.5	8.1	279	167.7	7.2	292	157.8	9.3
Cerebrovascular Diseases (I60-I69)	374	106.4	5.3	197	118.4	5.1	177	95.7	5.7
Diabetes Mellitus (E10-E14)	300	85.4	4.3	154	92.5	4.0	146	78.9	4.7
All Other Causes	1,582	450.2	22.6	902	542.0	23.2	680	367.5	21.7
<b>75-84</b>									
All Causes	12,742	5,176.9	100.0	6,322	6,249.1	100.0	6,420	4,428.6	100.0
Malignant Neoplasms (C00-C97)	3,306	1,343.2	25.9	1,696	1,676.4	26.8	1,610	1,110.6	25.1
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	3,144	1,277.4	24.7	1,683	1,663.6	26.6	1,461	1,007.8	22.8
Cerebrovascular Diseases (I60-I69)	1,099	446.5	8.6	495	489.3	7.8	604	416.6	9.4
Chronic Lower Respiratory Diseases (J40-J47)	989	401.8	7.8	464	458.6	7.3	525	362.2	8.2
Alzheimer's Disease (G30)	663	269.4	5.2	231	228.3	3.7	432	298.0	6.7
All Other Causes	3,541	1,438.6	27.8	1,753	1,732.8	27.7	1,788	1,233.4	27.9
<b>85 and Over</b>									
All Causes	13,353	13,490.0	100.0	5,011	15,790.0	100.0	8,342	12,404.0	100.0
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	4,114	4,156.2	30.8	1,590	5,010.2	31.7	2,524	3,753.2	30.3
Malignant Neoplasms (C00-C97)	1,739	1,756.8	13.0	850	2,678.4	17.0	889	1,321.9	10.7
Alzheimer's Disease (G30)	1,444	1,458.8	10.8	395	1,244.7	7.9	1,049	1,559.9	12.6
Cerebrovascular Diseases (I60-I69)	1,423	1,437.6	10.7	414	1,304.6	8.3	1,009	1,500.4	12.1
Chronic Lower Respiratory Diseases (J40-J47)	617	623.3	4.6	268	844.5	5.3	349	519.0	4.2
All Other Causes	4,016	4,057.2	30.1	1,494	4,707.7	29.8	2,522	3,750.2	30.2

<sup>1</sup> Rate per 100,000 population in each age-sex group.

<sup>2</sup> 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, 2004**

Cause with ICD-10 Code	Total		Male		Female	
	Number	Crude Rate <sup>2</sup>	Number	Crude Rate <sup>2</sup>	Number	Crude Rate <sup>2</sup>
<b>All Causes<sup>1</sup></b>	(44,703)	(724.8)	(22,332)	(726.9)	(22,371)	(722.7)
<b>Certain Infectious &amp; Parasitic Disease (A00-B99)</b>	(822)	(13.3)	(453)	(14.7)	(369)	(11.9)
Tuberculosis (A16-A19)	4	*	3	*	1	*
Septicemia (A40-A41)	311	5.0	138	4.5	173	5.6
Viral Hepatitis (B15-B19)	149	2.4	100	3.3	49	1.6
HIV (B20-B24)	121	2.0	101	3.3	20	0.6
Other (A00-A15,A20-A39,A42-B14,B25-B99)	237	3.8	111	3.6	126	4.1
<b>Neoplasms (C00-D48)</b>	(11,214)	(181.8)	(5,761)	(187.5)	(5,453)	(176.2)
Malignant Neoplasms (C00-C97)	10,978	178.0	5,636	183.4	5,342	172.6
In Situ & Benign Neoplasms (D00-D48)	236	3.8	125	4.1	111	3.6
<b>Diseases of Blood &amp; Blood-Forming Organs (D50-D89)</b>	(137)	(2.2)	(51)	(1.7)	(86)	(2.8)
Anemias (D50-D64)	67	1.1	25	0.8	42	1.4
Other (D65-D89)	70	1.1	26	0.8	44	1.4
<b>Endocrine, Nutritional &amp; Metabolic Diseases (E00-E90)</b>	(2,076)	(33.7)	(1,035)	(33.7)	(1,041)	(33.6)
Diabetes Mellitus (E10-E14)	1,506	24.4	763	24.8	743	24.0
Nutritional Diseases (E40-E64)	55	0.9	26	0.8	29	0.9
Other (E00-E09,E15-E39,E65-E90)	515	8.3	246	8.0	269	8.7
<b>Mental &amp; Behavioral Disorders (F01-F99)</b>	(698)	(11.3)	(306)	(10.0)	(392)	(12.7)
<b>Diseases of the Nervous System (G00-G98)</b>	(3,329)	(54.0)	(1,297)	(42.2)	(2,032)	(65.6)
Meningitis (G00-G03)	11	0.2	4	*	7	0.2
Amyotrophic Lateral Sclerosis (G12.2)	159	2.6	96	3.1	63	2.0
Parkinson's Disease (G20-G21)	504	8.2	308	10.0	196	6.3
Alzheimer's Disease (G30)	2,234	36.2	686	22.3	1,548	50.0
Multiple Sclerosis (G35)	105	1.7	35	1.1	70	2.3
Other (G04-G12.1,G12.3-G19,G22-G29,G31-G34,G36-G98)	316	5.1	168	5.5	148	4.8
<b>Diseases of the Eye &amp; Ear (H00-H93)</b>	(3)	(*)	(0)	(*)	(3)	(*)
<b>Diseases of the Circulatory System (I00-I99)</b>	(15,159)	(245.8)	(7,409)	(241.2)	(7,750)	(250.4)
Major Cardiovascular Diseases (I00-I78)	(15,055)	(244.1)	(7,351)	(239.3)	(7,704)	(248.9)
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	(10,626)	(172.3)	(5,541)	(180.4)	(5,085)	(164.3)
Acute & Chronic Rheumatic Disease (I00-I09)	104	1.7	43	1.4	61	2.0
Hypertensive Heart Disease (I11)	587	9.5	246	8.0	341	11.0
Hypertensive Heart & Renal Disease (I13)	58	0.9	29	0.9	29	0.9
Ischemic Heart Diseases (I20-I25)	(7,651)	(124.0)	(4,208)	(137.0)	(3,443)	(111.2)
Acute Myocardial Infarction (I21-I22)	2,424	39.3	1,333	43.4	1,091	35.2
Other Acute Ischemic Heart Disease (I24)	22	0.4	14	0.5	8	0.3
Other Chronic Ischemic Heart Disease (I20,I25)	(5,205)	(84.4)	(2,861)	(93.1)	(2,344)	(75.7)
Atherosclerotic Cardiovascular Disease (I25.0)	1,568	25.4	850	27.7	718	23.2
All Other Chronic Disease (I20,I25.1-I25.9)	3,637	59.0	2,011	65.5	1,626	52.5
Other Heart Diseases (I26-I51)	(2,226)	(36.1)	(1,015)	(33.0)	(1,211)	(39.1)
Acute & Subacute Endocarditis (I33)	24	0.4	12	0.4	12	0.4
Disease Pericardium & Acute Myocarditis (I30-I31,I40)	21	0.3	13	0.4	8	0.3
Heart Failure (I50)	489	7.9	216	7.0	273	8.8
All Other Heart disease (I26-I28,I34-I38,I42-I49,I51)	1,692	27.4	774	25.2	918	29.7
Hypertension & Hypertensive Renal Disease (I10,I12)	394	6.4	130	4.2	264	8.5
Cerebrovascular Diseases (I60-I69)	3,238	52.5	1,286	41.9	1,952	63.1
Atherosclerosis (I70)	314	5.1	126	4.1	188	6.1
Other Diseases of Circulatory System (I71-I78)	(483)	(7.8)	(268)	(8.7)	(215)	(6.9)
Aortic Aneurysm & Dissection (I71)	283	4.6	182	5.9	101	3.3
Other Disease of Arteries (I72-I78)	200	3.2	86	2.8	114	3.7
Other (I80-I99)	104	1.7	58	1.9	46	1.5

**Mortality Table C4. (Continued) Crude Rates for Selected Causes by Sex for Residents, 2004**

Cause with ICD-10 Code	Total		Male		Female	
	Number	Crude Rate <sup>2</sup>	Number	Crude Rate <sup>2</sup>	Number	Crude Rate <sup>2</sup>
<b>Diseases of the Respiratory System (J00-J98)</b>	(4,152)	(67.3)	(1,998)	(65.0)	(2,154)	(69.6)
Influenza and Pneumonia (J10-J18)	(737)	(11.9)	(343)	(11.2)	(394)	(12.7)
Influenza (J10-J11)	18	0.3	7	0.2	11	0.4
Pneumonia (J12-J18)	719	11.7	336	10.9	383	12.4
Other Acute Lower Respiratory Infections (J20-J22)	4	*	1	*	3	*
Chronic Lower Respiratory Disease (J40-J47)	(2,543)	(41.2)	(1,179)	(38.4)	(1,364)	(44.1)
Bronchitis, Chronic and Unspecified (J40-J42)	11	0.2	2	*	9	0.3
Emphysema (J43)	252	4.1	125	4.1	127	4.1
Asthma (J45-J46)	81	1.3	24	0.8	57	1.8
Other Chronic Lower Respiratory Disease (J44,J47)	2,199	35.7	1,028	33.5	1,171	37.8
Pneumoconioses & Chemical Effects (J60-J66,J68)	30	0.5	27	0.9	3	*
Pneumonitis Due to Solids & Liquids (J69)	352	5.7	183	6.0	169	5.5
Other (J00-J06,J30-J39,J67,J70-J98)	486	7.9	265	8.6	221	7.1
<b>Diseases of the Digestive System (K00-K92)</b>	(1,752)	(28.4)	(861)	(28.0)	(891)	(28.8)
Peptic Ulcer (K25-K28)	99	1.6	51	1.7	48	1.6
Diseases of Appendix (K35-K38)	16	0.3	10	0.3	6	0.2
Hernia (K40-K46)	34	0.6	11	0.4	23	0.7
Chronic Liver Disease & Cirrhosis (K70,K73-K74)	(563)	(9.1)	(352)	(11.5)	(211)	(6.8)
Alcoholic Liver Disease (K70)	432	7.0	299	9.7	133	4.3
Other (K73-K74)	131	2.1	53	1.7	78	2.5
Cholelithiasis & Other Gallbladder Disease (K80-K82)	53	0.9	30	1.0	23	0.7
Other (K00-K24,K29-K34,K39,K47-K69,K71-K72,K75-K79,K83-K92)	987	16.0	407	13.2	580	18.7
<b>Diseases of Skin &amp; Subcutaneous Tissue (L00-L98)</b>	(75)	(1.2)	(29)	(0.9)	(46)	(1.5)
<b>Diseases Musculoskeletal &amp; Connective Tissue (M00-M99)</b>	(345)	(5.6)	(100)	(3.3)	(245)	(7.9)
<b>Diseases of the Genitourinary System (N00-N98)</b>	(757)	(12.3)	(303)	(9.9)	(454)	(14.7)
Nephritis (N00-N07,N17-N19,N25-N27)	(350)	(5.7)	(159)	(5.2)	(191)	(6.2)
Acute Nephrotic Syndrome (N00-N01,N04)	2	*	1	*	1	*
Chronic Nephritis & Unsp. Nephritis(N02-N03,N05-N07,N26)	12	0.2	4	*	8	0.3
Renal Failure (N17-N19)	334	5.4	153	5.0	181	5.8
Other Disorders of Kidney (N25,N27)	2	*	1	*	1	*
Infections of Kidney (N10-N12,N13.6,N15.1)	27	0.4	8	0.3	19	0.6
Hyperplasia of Prostate (N40)	n/a	n/a	14	0.5	n/a	n/a
Other(N13.0-N13.5,N13.7-N15.0,N15.8-N16,N20-N23,N28-N39,N41-N99)	366	5.9	122	4.0	244	7.9
<b>Pregnancy, Childbirth &amp; Puerperium (O00-O99)</b>	n/a	n/a	n/a	n/a	(13)	(0.4)
<b>Conditions Originating in Perinatal Period (P00-P96)</b>	(190)	(3.1)	(97)	(3.2)	(93)	(3.0)
<b>Congenital Anomalies (Q00-Q99)</b>	(230)	(3.7)	(124)	(4.0)	(106)	(3.4)
<b>Symptoms &amp; Signs Not Elsewhere Classified (R00-R99)</b>	(221)	(3.6)	(107)	(3.5)	(114)	(3.7)
Sudden Infant Death Syndrome (R95)	53	0.9	33	1.1	20	0.6
Other (R00-R94,R96-R99)	168	2.7	74	2.4	94	3.0
<b>External Causes of Mortality (V01-Y89)</b>	(3,530)	(57.2)	(2,401)	(78.2)	(1,129)	(36.5)
Unintentional Injury or Accident (V01-X59,Y85-Y86)	(2,326)	(37.7)	(1,519)	(49.4)	(807)	(26.1)
Transport Accidents (V01-V99,Y85)	756	12.3	552	18.0	204	6.6
Nontransport Accidents (W00-X59,Y86)	1,570	25.5	967	31.5	603	19.5
Intentional Self-Harm (Suicide) (X60-X84,Y87.0)	823	13.3	633	20.6	190	6.1
Assault (Homicide) (X85-Y09,Y87.1)	216	3.5	155	5.0	61	2.0
Legal Intervention (Y35,Y89.0)	8	0.1	8	0.3	0	*
Events of Undetermined Intent (Y10-Y34,Y87.2,Y89.9)	110	1.8	63	2.1	47	1.5
Operations of War & Sequelae (Y36,Y89.1)	0	*	0	*	0	*
Complications of Medical & Surgical Care (Y40-Y84,Y88)	47	0.8	23	0.7	24	0.8

<sup>1</sup> Group totals are shown in parentheses.

<sup>2</sup> 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, 2004**

Cause with ICD-10 Code	Total		Male		Female	
	Number	Age-Adj Rate <sup>2</sup>	Number	Age-Adj Rate <sup>2</sup>	Number	Age-Adj Rate <sup>2</sup>
<b>All Causes<sup>1</sup></b>	(44,703)	(746.1)	(22,332)	(891.8)	(22,371)	(635.8)
<b>Certain Infectious &amp; Parasitic Disease (A00-B99)</b>	(822)	(13.4)	(453)	(16.1)	(369)	(10.7)
Tuberculosis (A16-A19)	4	*	3	*	1	*
Septicemia (A40-A41)	311	5.2	138	5.5	173	5.0
Viral Hepatitis (B15-B19)	149	2.3	100	3.2	49	1.5
HIV (B20-B24)	121	1.9	101	3.2	20	0.6
Other (A00-A15,A20-A39,A42-B14,B25-B99)	237	3.9	111	4.1	126	3.6
<b>Neoplasms (C00-D48)</b>	(11,214)	(188.9)	(5,761)	(227.0)	(5,453)	(163.9)
Malignant Neoplasms (C00-C97)	10,978	184.9	5,636	221.8	5,342	160.8
In Situ & Benign Neoplasms (D00-D48)	236	4.0	125	5.2	111	3.1
<b>Diseases of Blood &amp; Blood-Forming Organs (D50-D89)</b>	(137)	(2.3)	(51)	(2.2)	(86)	(2.5)
Anemias (D50-D64)	67	1.1	25	1.1	42	1.2
Other (D65-D89)	70	1.2	26	1.1	44	1.3
<b>Endocrine, Nutritional &amp; Metabolic Diseases (E00-E90)</b>	(2,076)	(34.7)	(1,035)	(40.9)	(1,041)	(30.1)
Diabetes Mellitus (E10-E14)	1,506	25.2	763	30.2	743	21.7
Nutritional Diseases (E40-E64)	55	0.9	26	1.1	29	0.8
Other (E00-E09,E15-E39,E65-E90)	515	8.5	246	9.5	269	7.6
<b>Mental &amp; Behavioral Disorders (F01-F99)</b>	(698)	(11.4)	(306)	(12.1)	(392)	(10.4)
<b>Diseases of the Nervous System (G00-G98)</b>	(3,329)	(55.4)	(1,297)	(56.7)	(2,032)	(54.1)
Meningitis (G00-G03)	11	0.2	4	*	7	0.2
Amyotrophic Lateral Sclerosis (G12.2)	159	2.7	96	3.6	63	1.9
Parkinson's Disease (G20-G21)	504	8.7	308	13.9	196	5.5
Alzheimer's Disease (G30)	2,234	37.0	686	31.8	1,548	39.8
Multiple Sclerosis (G35)	105	1.7	35	1.1	70	2.1
Other (G04-G12.1,G12.3-G19,G22-G29,G31-G34,G36-G98)	316	5.2	168	6.2	148	4.4
<b>Diseases of the Eye &amp; Ear (H00-H93)</b>	(3)	(*)	(0)	(*)	(3)	(*)
<b>Diseases of the Circulatory System (I00-I99)</b>	(15,159)	(253.1)	(7,409)	(307.9)	(7,750)	(211.6)
Major Cardiovascular Diseases (I00-I78)	(15,055)	(251.4)	(7,351)	(305.7)	(7,704)	(210.2)
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	(10,626)	(177.1)	(5,541)	(228.2)	(5,085)	(139.2)
Acute & Chronic Rheumatic Disease (I00-I09)	104	1.8	43	1.8	61	1.7
Hypertensive Heart Disease (I11)	587	9.5	246	9.6	341	8.9
Hypertensive Heart & Renal Disease (I13)	58	0.9	29	1.3	29	0.7
Ischemic Heart Diseases (I20-I25)	(7,651)	(128.0)	(4,208)	(172.8)	(3,443)	(94.7)
Acute Myocardial Infarction (I21-I22)	2,424	40.6	1,333	54.1	1,091	30.3
Other Acute Ischemic Heart Disease (I24)	22	0.4	14	0.6	8	0.2
Other Chronic Ischemic Heart Disease (I20,I25)	(5,205)	(87.1)	(2,861)	(118.1)	(2,344)	(64.2)
Atherosclerotic Cardiovascular Disease (I25.0)	1,568	25.9	850	32.8	718	19.7
All Other Chronic Disease (I20,I25.1-I25.9)	3,637	61.2	2,011	85.3	1,626	44.5
Other Heart Diseases (I26-I51)	(2,226)	(36.9)	(1,015)	(42.7)	(1,211)	(33.2)
Acute & Subacute Endocarditis (I33)	24	0.4	12	0.4	12	0.4
Disease Pericardium & Acute Myocarditis (I30-I31,I40)	21	0.4	13	0.5	8	0.3
Heart Failure (I50)	489	8.1	216	9.7	273	7.1
All Other Heart disease (I26-I28,I34-I38,I42-I49,I51)	1,692	28.0	774	32.1	918	25.5
Hypertension & Hypertensive Renal Disease (I10,I12)	394	6.6	130	5.6	264	7.2
Cerebrovascular Diseases (I60-I69)	3,238	54.3	1,286	55.2	1,952	53.0
Atherosclerosis (I70)	314	5.2	126	5.6	188	4.8
Other Diseases of Circulatory System (I71-I78)	(483)	(8.2)	(268)	(11.0)	(215)	(6.0)
Aortic Aneurysm & Dissection (I71)	283	4.8	182	7.5	101	2.9
Other Disease of Arteries (I72-I78)	200	3.4	86	3.6	114	3.1
Other (I80-I99)	104	1.7	58	2.2	46	1.3

**Mortality Table C5. (Continued) Age-Adjusted Rates for Selected Causes by Sex for Residents, 2004**

Cause with ICD-10 Code	Total		Male		Female	
	Number	Age-Adj Rate <sup>2</sup>	Number	Age-Adj Rate <sup>2</sup>	Number	Age-Adj Rate <sup>2</sup>
<b>Diseases of the Respiratory System (J00-J98)</b>	(4,152)	(70.6)	(1,998)	(85.1)	(2,154)	(61.8)
Influenza and Pneumonia (J10-J18)	(737)	(12.2)	(343)	(15.1)	(394)	(10.4)
Influenza (J10-J11)	18	0.3	7	0.3	11	0.3
Pneumonia (J12-J18)	719	11.9	336	14.8	383	10.1
Other Acute Lower Respiratory Infections (J20-J22)	4	*	1	*	3	*
Chronic Lower Respiratory Disease (J40-J47)	(2,543)	(43.6)	(1,179)	(49.6)	(1,364)	(40.3)
Bronchitis, Chronic and Unspecified (J40-J42)	11	0.2	2	*	9	0.2
Emphysema (J43)	252	4.3	125	5.1	127	3.9
Asthma (J45-J46)	81	1.3	24	0.9	57	1.7
Other Chronic Lower Respiratory Disease (J44,J47)	2,199	37.8	1,028	43.5	1,171	34.5
Pneumoconioses & Chemical Effects (J60-J66,J68)	30	0.5	27	1.2	3	*
Pneumonitis Due to Solids & Liquids (J69)	352	5.9	183	8.0	169	4.5
Other (J00-J06,J30-J39,J67,J70-J98)	486	8.3	265	11.1	221	6.3
<b>Diseases of the Digestive System (K00-K92)</b>	(1,752)	(28.8)	(861)	(32.6)	(891)	(25.4)
Peptic Ulcer (K25-K28)	99	1.7	51	2.2	48	1.3
Diseases of Appendix (K35-K38)	16	0.3	10	0.4	6	0.2
Hernia (K40-K46)	34	0.6	11	0.4	23	0.6
Chronic Liver Disease & Cirrhosis (K70,K73-K74)	(563)	(8.9)	(352)	(11.6)	(211)	(6.4)
Alcoholic Liver Disease (K70)	432	6.7	299	9.7	133	4.0
Other (K73-K74)	131	2.2	53	1.9	78	2.4
Cholelithiasis & Other Gallbladder Disease (K80-K82)	53	0.9	30	1.3	23	0.7
Other (K00-K24,K29-K34,K39,K47-K69,K71-K72,K75-K79,K83-K92)	987	16.5	407	16.6	580	16.2
<b>Diseases of Skin &amp; Subcutaneous Tissue (L00-L98)</b>	(75)	(1.2)	(29)	(1.2)	(46)	(1.2)
<b>Diseases Musculoskeletal &amp; Connective Tissue (M00-M99)</b>	(345)	(5.7)	(100)	(4.0)	(245)	(6.8)
<b>Diseases of the Genitourinary System (N00-N98)</b>	(757)	(12.7)	(303)	(13.1)	(454)	(12.5)
Nephritis (N00-N07,N17-N19,N25-N27)	(350)	(5.9)	(159)	(6.7)	(191)	(5.4)
Acute Nephrotic Syndrome (N00-N01,N04)	2	*	1	*	1	*
Chronic Nephritis & Unsp. Nephritis(N02-N03,N05-N07,N26)	12	0.2	4	*	8	0.2
Renal Failure (N17-N19)	334	5.6	153	6.4	181	5.1
Other Disorders of Kidney (N25,N27)	2	*	1	*	1	*
Infections of Kidney (N10-N12,N13.6,N15.1)	27	0.4	8	0.4	19	0.5
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)	366	6.1	122	5.4	244	6.6
<b>Pregnancy, Childbirth &amp; Puerperium (O00-O99)</b>	n/a	n/a	n/a	n/a	(13)	(0.4)
<b>Conditions Originating in Perinatal Period (P00-P96)</b>	(190)	(3.2)	(97)	(3.2)	(93)	(3.2)
<b>Congenital Anomalies (Q00-Q99)</b>	(230)	(3.8)	(124)	(4.1)	(106)	(3.5)
<b>Symptoms &amp; Signs Not Elsewhere Classified (R00-R99)</b>	(221)	(3.6)	(107)	(3.8)	(114)	(3.3)
Sudden Infant Death Syndrome (R95)	53	0.9	33	1.1	20	0.7
Other (R00-R94,R96-R99)	168	2.7	74	2.8	94	2.6
<b>External Causes of Mortality (V01-Y89)</b>	(3,530)	(57.0)	(2,401)	(81.9)	(1,129)	(34.3)
Unintentional Injury or Accident (V01-X59,Y85-Y86)	(2,326)	(37.6)	(1,519)	(52.5)	(807)	(24.1)
Transport Accidents (V01-V99,Y85)	756	12.1	552	17.9	204	6.5
Nontransport Accidents (W00-X59,Y86)	1,570	25.4	967	34.6	603	17.6
Intentional Self-Harm (Suicide) (X60-X84,Y87.0)	823	13.2	633	21.3	190	6.0
Assault (Homicide) (X85-Y09,Y87.1)	216	3.5	155	4.9	61	2.0
Legal Intervention (Y35,Y89.0)	8	0.1	8	0.2	0	*
Events of Undetermined Intent (Y10-Y34,Y87.2,Y89.9)	110	1.8	63	2.1	47	1.5
Operations of War & Sequelae (Y36,Y89.1)	0	*	0	*	0	*
Complications of Medical & Surgical Care (Y40-Y84,Y88)	47	0.8	23	0.9	24	0.7

<sup>1</sup> Group totals are shown in parentheses.

<sup>2</sup> 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, 2004**

County	Diabetes (E10-E14)			Alzheimer's Disease (G30)			Major Cardiovascular Disease (I00-I78)		
	Number	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>	Number	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>	Number	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>
<b>State Total</b>	<b>1,506</b>	<b>24.4</b>	<b>25.2</b>	<b>2,234</b>	<b>36.2</b>	<b>37.0</b>	<b>15,055</b>	<b>244.1</b>	<b>251.4</b>
Adams	11	65.9	77.8	1	*	*	39	233.5	272.2
Asotin	7	33.8	22.9	8	38.6	24.1	69	333.3	245.2
Benton	25	16.1	19.2	39	25.1	31.3	331	213.4	254.1
Chelan	15	21.9	19.0	33	48.2	37.1	180	263.2	212.3
Clallam	29	44.0	27.4	39	59.2	34.0	274	415.8	254.4
Clark	85	22.2	26.4	115	30.0	37.6	827	215.8	264.9
Columbia	4	*	*	2	*	*	18	439.2	310.0
Cowlitz	41	43.0	38.8	52	54.6	46.8	311	326.3	285.5
Douglas	7	20.5	19.5	21	61.4	60.8	97	283.6	275.4
Ferry	2	*	*	2	*	*	16	219.1	255.6
Franklin	18	31.6	43.0	7	12.3	19.3	95	166.7	250.5
Garfield	2	*	*	3	*	*	9	375.3	259.2
Grant	20	25.5	27.3	19	24.3	27.6	193	246.5	273.2
Grays Harbor	19	27.5	21.9	31	44.8	35.4	244	352.6	286.9
Island	8	10.7	10.7	43	57.5	55.7	193	258.0	240.8
Jefferson	8	29.6	18.0	6	22.2	14.8	85	314.8	201.5
King	339	19.0	20.2	581	32.5	33.6	3,781	211.4	223.5
Kitsap	50	20.9	22.3	123	51.4	55.8	593	247.6	266.4
Kittitas	7	19.6	20.5	12	33.5	29.0	81	226.2	219.7
Klickitat	7	36.3	31.3	4	*	*	55	284.9	248.0
Lewis	33	46.7	36.8	46	65.1	47.0	276	390.4	302.4
Lincoln	3	*	*	4	*	*	47	460.7	272.1
Mason	16	31.5	24.3	18	35.4	31.3	169	332.7	276.9
Okanogan	8	20.2	17.0	13	32.8	28.5	115	290.4	255.1
Pacific	14	66.7	39.2	8	38.1	22.7	108	514.2	306.5
Pend Oreille	6	50.4	40.8	1	*	*	40	336.1	323.7
Pierce	219	29.4	33.4	219	29.4	35.2	1,813	243.7	283.1
San Juan	4	*	*	5	33.1	22.7	40	264.9	185.2
Skagit	27	24.8	20.0	61	56.1	43.0	308	283.1	228.1
Skamania	5	49.5	55.5	5	49.5	59.1	21	207.9	229.5
Snohomish	117	18.1	22.2	231	35.8	45.6	1,412	219.0	273.6
Spokane	132	30.6	28.8	200	46.3	40.4	1,224	283.3	254.8
Stevens	22	54.1	51.0	8	19.7	19.9	137	336.6	308.8
Thurston	58	26.5	26.3	82	37.5	38.0	513	234.8	239.6
Wahkiakum	3	*	*	5	131.5	94.7	17	447.3	316.4
Walla Walla	10	17.6	14.0	26	45.9	30.4	186	328.0	238.9
Whatcom	44	24.8	25.1	76	42.9	41.6	483	272.4	269.1
Whitman	8	19.2	23.5	10	24.0	27.2	73	175.1	208.5
Yakima	73	32.1	33.9	75	33.0	31.0	582	255.8	258.5

<sup>1</sup> Rate per 100,000 population.

<sup>2</sup> 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, 2004**

County	Diseases of the Heart (I00-I09,I11,I13,I20-I51)			Ischemic Heart Disease (I20-I25)			Cerebrovascular Disease (I60-I69)		
	Number	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>	Number	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>	Number	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>
<b>State Total</b>	<b>10,626</b>	<b>172.3</b>	<b>177.1</b>	<b>7,651</b>	<b>124.0</b>	<b>128.0</b>	<b>3,238</b>	<b>52.5</b>	<b>54.3</b>
Adams	24	143.7	167.0	20	119.8	138.7	9	53.9	65.1
Asotin	50	241.5	184.8	34	164.2	129.0	13	62.8	43.5
Benton	251	161.8	190.9	180	116.1	137.4	65	41.9	51.4
Chelan	131	191.5	154.1	89	130.1	104.9	38	55.6	45.5
Clallam	184	279.2	171.2	122	185.1	110.6	72	109.3	67.4
Clark	570	148.7	182.4	381	99.4	122.3	200	52.2	64.1
Columbia	14	341.6	245.1	9	219.6	161.1	4	*	*
Cowlitz	227	238.2	209.4	171	179.4	158.4	59	61.9	52.9
Douglas	64	187.1	181.6	48	140.3	136.4	25	73.1	71.4
Ferry	9	123.3	130.7	7	95.9	102.7	4	*	*
Franklin	78	136.8	204.5	62	108.8	166.1	14	24.6	38.2
Garfield	8	333.6	206.5	6	250.2	145.8	1	*	*
Grant	132	168.6	185.9	106	135.4	148.9	52	66.4	74.5
Grays Harbor	190	274.6	224.1	132	190.8	154.5	38	54.9	44.3
Island	141	188.5	175.6	116	155.1	144.0	40	53.5	50.4
Jefferson	54	200.0	128.1	38	140.7	90.6	25	92.6	59.9
King	2,602	145.5	153.6	1,815	101.5	107.9	851	47.6	50.2
Kitsap	385	160.8	170.9	235	98.1	104.7	165	68.9	75.9
Kittitas	47	131.3	125.6	33	92.2	88.7	23	64.2	61.5
Klickitat	40	207.2	181.1	29	150.2	128.5	9	46.6	41.0
Lewis	204	288.5	224.6	168	237.6	186.9	51	72.1	54.5
Lincoln	29	284.3	169.0	22	215.7	128.7	9	88.2	55.2
Mason	116	228.4	188.6	84	165.4	134.7	37	72.8	63.2
Okanogan	86	217.2	189.3	63	159.1	137.6	22	55.6	49.8
Pacific	90	428.5	250.7	70	333.3	195.4	11	52.4	34.6
Pend Oreille	31	260.5	250.9	22	184.9	167.7	8	67.2	66.6
Pierce	1,288	173.1	200.0	984	132.3	153.0	378	50.8	59.8
San Juan	22	145.7	99.7	12	79.5	54.3	12	79.5	58.2
Skagit	214	196.7	158.5	151	138.8	112.2	67	61.6	49.7
Skamania	12	118.8	122.5	10	99.0	100.0	7	69.3	82.6
Snohomish	1,025	159.0	197.9	761	118.0	147.7	294	45.6	57.9
Spokane	846	195.8	177.2	601	139.1	126.8	238	55.1	49.3
Stevens	108	265.4	243.2	88	216.2	198.0	21	51.6	47.6
Thurston	353	161.6	165.0	238	108.9	111.2	120	54.9	55.7
Wahkiakum	12	315.7	224.0	9	236.8	171.3	4	*	*
Walla Walla	129	227.5	164.2	93	164.0	120.5	41	72.3	54.3
Whatcom	346	195.2	192.8	241	135.9	135.3	104	58.7	58.1
Whitman	49	117.5	138.9	35	83.9	101.8	18	43.2	52.5
Yakima	465	204.4	207.1	366	160.9	164.3	89	39.1	38.8

<sup>1</sup> Rate per 100,000 population.

<sup>2</sup> 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, 2004**

County	Pneumonia and Influenza (J10-J18)			Chronic Lower Resp. Dis. (J40-J47)			Chronic Liver Disease & Cirrhosis (K70,K73-K74)		
	Number	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>	Number	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>	Number	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>
<b>State Total</b>	<b>737</b>	<b>11.9</b>	<b>12.2</b>	<b>2,543</b>	<b>41.2</b>	<b>43.6</b>	<b>563</b>	<b>9.1</b>	<b>8.9</b>
Adams	5	29.9	36.9	3	*	*	1	*	*
Asotin	7	33.8	19.6	11	53.1	40.0	5	24.2	20.0
Benton	8	5.2	6.2	55	35.5	42.1	12	7.7	8.6
Chelan	12	17.5	13.9	27	39.5	33.9	8	11.7	10.5
Clallam	22	33.4	20.5	50	75.9	45.8	12	18.2	13.7
Clark	34	8.9	10.7	186	48.5	60.1	29	7.6	7.9
Columbia	1	*	*	4	*	*	0	*	*
Cowlitz	18	18.9	15.6	77	80.8	74.2	10	10.5	9.4
Douglas	2	*	*	12	35.1	33.9	2	*	*
Ferry	1	*	*	8	109.6	115.2	2	*	*
Franklin	4	*	*	11	19.3	28.8	4	*	*
Garfield	1	*	*	4	*	*	0	*	*
Grant	13	16.6	17.6	31	39.6	43.4	10	12.8	13.4
Grays Harbor	18	26.0	20.9	75	108.4	87.2	9	13.0	11.9
Island	6	8.0	7.9	40	53.5	48.7	8	10.7	8.6
Jefferson	7	25.9	16.4	21	77.8	51.1	6	22.2	14.5
King	208	11.6	12.1	514	28.7	31.7	126	7.0	6.8
Kitsap	28	11.7	12.5	114	47.6	52.9	24	10.0	9.3
Kittitas	11	30.7	26.7	9	25.1	26.1	2	*	*
Klickitat	1	*	*	12	62.2	53.3	3	*	*
Lewis	15	21.2	15.7	43	60.8	46.9	9	12.7	10.5
Lincoln	2	*	*	2	*	*	2	*	*
Mason	5	9.8	8.8	31	61.0	47.8	4	*	*
Okanogan	7	17.7	16.3	16	40.4	35.6	13	32.8	28.9
Pacific	3	*	*	15	71.4	41.3	2	*	*
Pend Oreille	0	*	*	17	142.8	132.8	3	*	*
Pierce	71	9.5	11.2	333	44.8	52.6	62	8.3	8.8
San Juan	2	*	*	2	*	*	0	*	*
Skagit	15	13.8	10.8	56	51.5	42.2	16	14.7	13.2
Skamania	2	*	*	6	59.4	68.5	2	*	*
Snohomish	64	9.9	12.5	217	33.7	43.9	58	9.0	9.2
Spokane	53	12.3	11.3	237	54.9	51.5	43	10.0	9.5
Stevens	7	17.2	15.6	19	46.7	45.3	6	14.7	13.5
Thurston	26	11.9	12.2	99	45.3	47.7	25	11.4	11.1
Wahkiakum	0	*	*	4	*	*	2	*	*
Walla Walla	6	10.6	6.4	25	44.1	34.8	5	8.8	8.9
Whatcom	24	13.5	13.2	39	22.0	22.8	13	7.3	7.1
Whitman	2	*	*	17	40.8	54.8	3	*	*
Yakima	26	11.4	11.2	101	44.4	47.9	22	9.7	10.4

<sup>1</sup> Rate per 100,000 population.

<sup>2</sup> 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<sup>1</sup> for Leading Causes of Cancer for Residents, 1995-2004**

Year	All Sites	Lung <sup>2</sup>	Colo-Rectal <sup>2</sup>	Breast	Prostate	Pancreas
1995	205.0	59.2	20.9	30.2	34.2	10.5
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

<sup>1</sup>Rate per 100,000 age-adjusted to U.S. 2000 population.

<sup>2</sup>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

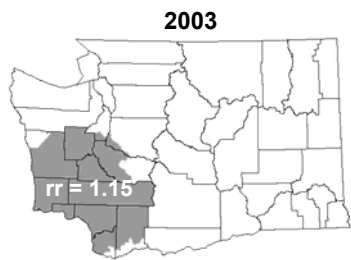
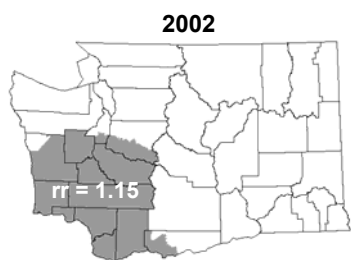
Prostate: ICD-9: 185; ICD-10: C61; CR=1.0144

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

Mortality rates for all sites observed in Mortality Table D1 were lower in 2004 than 1995. Deaths due to female breast cancer and prostate cancer have had the largest decreases over time.

**Mortality Figure 9. All cancer deaths**

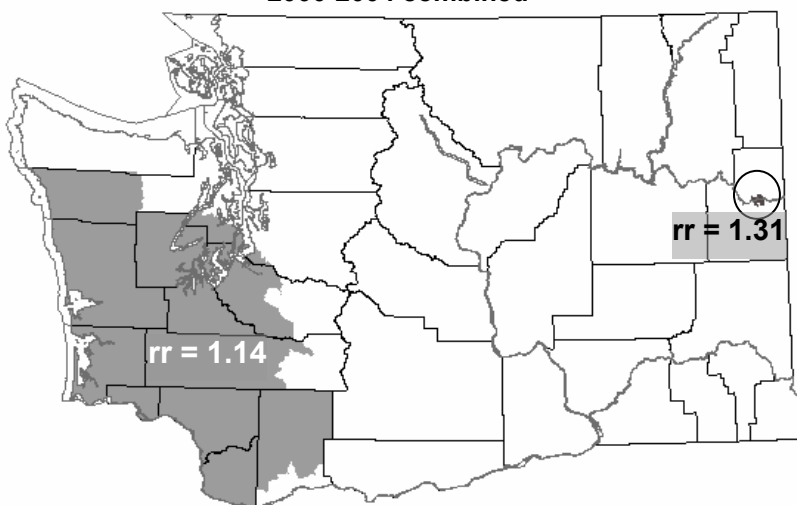
**High relative risk (rr) regions by year**



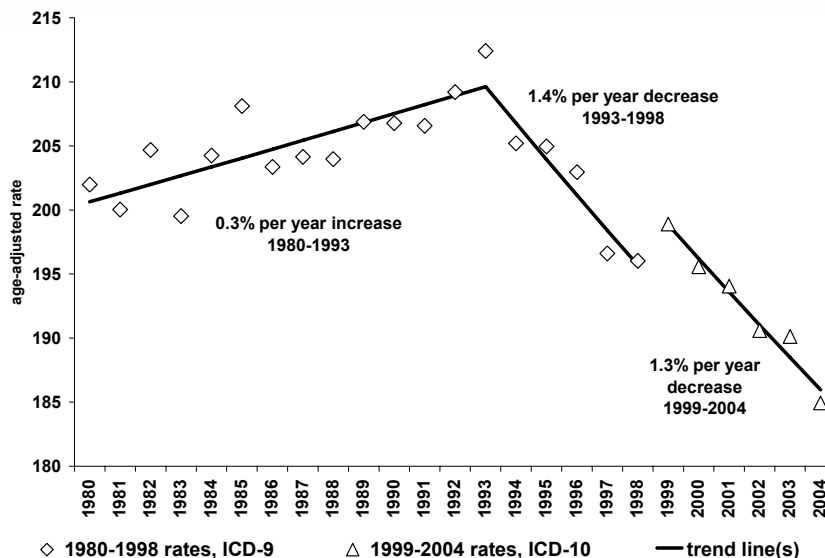
**Regions:** Most of southwest Washington has had higher than expected total cancer deaths for each year individually and for all years combined. For 2000-2004 combined, the relative risk (rr) was 1.14, or 14% more cancer deaths than expected; this equals about 290 excess deaths per year. While not seen 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**

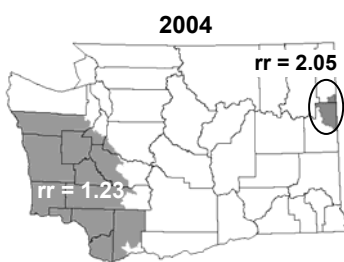
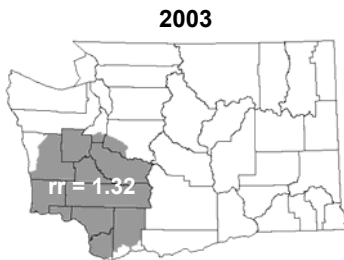
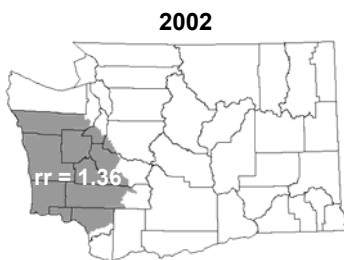
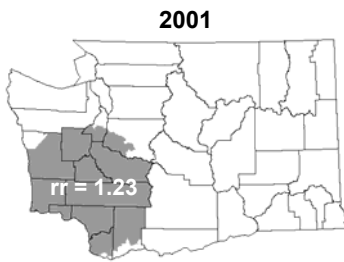
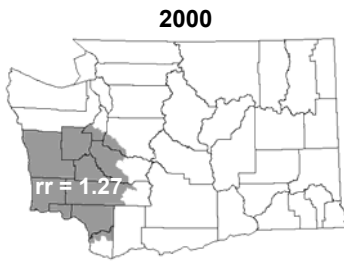


**Cancer death rates: Statewide trends, 1980-2004**



**Mortality Figure 10. Lung cancer deaths**

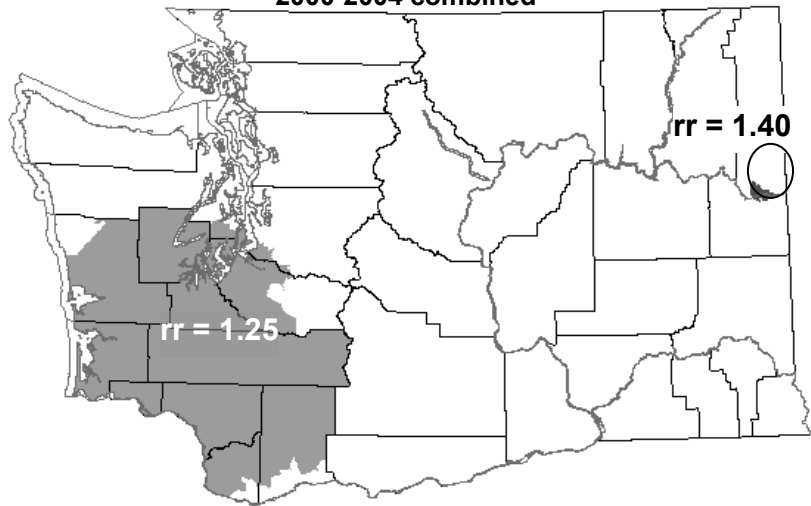
**High relative risk (rr) regions by year**



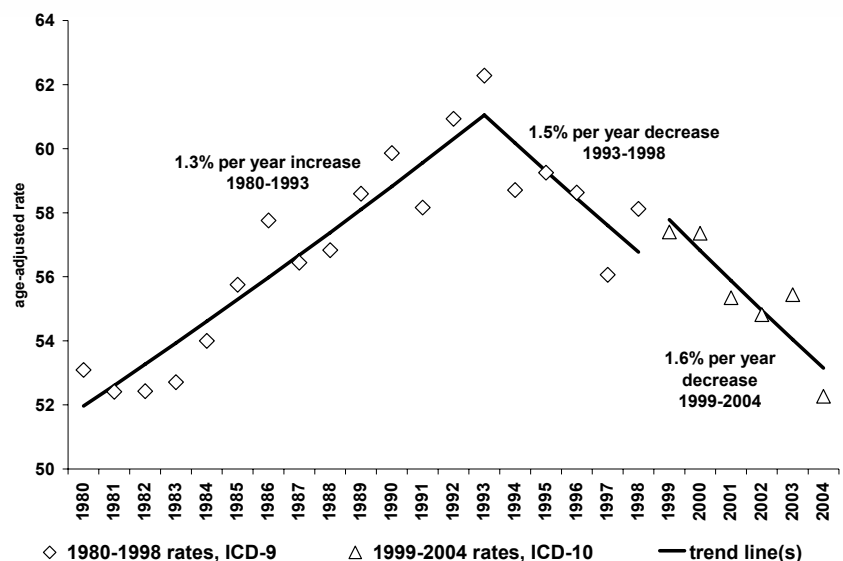
**Regions:** For each year individually and for all years combined most of southwest Washington has had higher than expected lung cancer deaths. For 2000-2004 combined the relative risk (rr) within this region was 1.25, or 25% more lung cancer deaths than expected. On average this means there were 146 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 trends, 1980-2004**



**Mortality Table D2. Cancer by Primary Site by Sex for Residents, 2004**

Cause with ICD-10 Codes	Total			Male			Female		
	No.	Crude Rate <sup>1</sup>	Age-Adj. Rate <sup>2</sup>	No.	Crude Rate <sup>1</sup>	Age-Adj. Rate <sup>2</sup>	No.	Crude Rate <sup>1</sup>	Age-Adj. Rate <sup>2</sup>
<b>All Sites Combined (C00-C97)</b>	<b>10,978</b>	<b>178.0</b>	<b>184.9</b>	<b>5,636</b>	<b>183.4</b>	<b>221.8</b>	<b>5,342</b>	<b>172.6</b>	<b>160.8</b>
Bladder (C67)	274	4.4	4.7	198	6.4	8.3	76	2.5	2.2
Brain, Meninges, & CNS (C70-C72) <sup>3</sup>	335	5.4	5.5	172	5.6	6.2	163	5.3	5.0
Brain (C71)	332	5.4	5.5	171	5.6	6.2	161	5.2	5.0
Breast (C50)	782	12.7	12.9	6	0.2	0.2	776	25.1	23.4
Cervix (C53)	n/a	n/a	n/a	n/a	n/a	n/a	57	1.8	1.7
Colorectal (C18-C21) <sup>3</sup>	984	16.0	16.5	485	15.8	19.1	499	16.1	14.6
Colorectal (C18-C20,C26.0)	976	15.8	16.4	481	15.7	19.0	495	16.0	14.4
Endometrium & Uterus (C54-C55) <sup>3</sup>	n/a	n/a	n/a	n/a	n/a	n/a	147	4.7	4.4
Endometrium (C54)	n/a	n/a	n/a	n/a	n/a	n/a	71	2.3	2.1
Esophagus (C15)	263	4.3	4.3	211	6.9	8.0	52	1.7	1.5
Hodgkin's Disease (C81)	27	0.4	0.4	13	0.4	0.5	14	0.5	0.4
Kidney & Renal Pelvis (C64-C65)	264	4.3	4.4	174	5.7	6.7	90	2.9	2.7
Larynx (C32)	57	0.9	1.0	45	1.5	1.8	12	0.4	0.4
Leukemia (C91-C95) <sup>3</sup>	485	7.9	8.2	287	9.3	11.5	198	6.4	5.9
Leukemia (C90.1,C91-C95)	488	7.9	8.2	289	9.4	11.5	199	6.4	5.9
Liver (C22) <sup>3</sup>	346	5.6	5.7	236	7.7	8.3	110	3.6	3.4
Liver (C22.0,C22.2-C22.4,C22.7,C22.9)	253	4.1	4.1	186	6.1	6.5	67	2.2	2.1
Lung, Bronchus & Trachea (C33-C34) <sup>3</sup>	3,066	49.7	52.3	1,645	53.5	64.1	1,421	45.9	43.7
Lung & Bronchus (C34)	3,065	49.7	52.3	1,644	53.5	64.0	1,421	45.9	43.7
Melanoma of Skin (C43)	196	3.2	3.3	133	4.3	5.0	63	2.0	1.9
Multiple Myeloma & Immunoproliferative (C88,C90) <sup>3</sup>	205	3.3	3.5	120	3.9	4.9	85	2.7	2.5
Multiple Myeloma (C90.0,C90.2)	199	3.2	3.4	116	3.8	4.7	83	2.7	2.5
Non-Hodgkin's Lymphoma (C82-C85)	448	7.3	7.6	252	8.2	10.1	196	6.3	5.8
Oral Cavity & Pharynx (C00-C14)	171	2.8	2.9	108	3.5	4.1	63	2.0	1.9
Ovary (C56)	n/a	n/a	n/a	n/a	n/a	n/a	349	11.3	10.6
Pancreas (C25)	679	11.0	11.4	329	10.7	12.5	350	11.3	10.5
Prostate (C61)	n/a	n/a	n/a	590	19.2	25.8	n/a	n/a	n/a
Stomach (C16)	210	3.4	3.5	114	3.7	4.4	96	3.1	2.8
Testis (C62)	n/a	n/a	n/a	10	0.3	0.4	n/a	n/a	n/a
Thyroid & Endocrine Glands (C73-C75) <sup>3</sup>	51	0.8	0.8	20	0.7	0.7	31	1.0	0.9
Thyroid (C73)	32	0.5	0.5	8	0.3	0.3	24	0.8	0.7
Site Unspecified (C80)	400	6.5	6.8	171	5.6	6.8	229	7.4	6.6
All Other Sites <sup>4</sup>	573	9.3	9.6	312	10.2	12.3	261	8.4	7.8

<sup>1</sup> Rate per 100,000 population.

<sup>2</sup> Rate per 100,000 age-adjusted to U.S. 2000 population. Does not include deaths where age is unknown.

<sup>3</sup> 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.

<sup>4</sup> 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, 2004**

County	All Sites (C00-C97)			Lung <sup>1</sup> (C33-C34)			Colo-Rectal <sup>1</sup> (C18-C21)		
	Number	Crude Rate <sup>2</sup>	Age-Adj Rate <sup>3</sup>	Number	Crude Rate <sup>2</sup>	Age-Adj Rate <sup>3</sup>	Number	Crude Rate <sup>2</sup>	Age-Adj Rate <sup>3</sup>
<b>State Total</b>	<b>10,978</b>	<b>178.0</b>	<b>184.9</b>	<b>3,066</b>	<b>49.7</b>	<b>52.3</b>	<b>984</b>	<b>16.0</b>	<b>16.5</b>
Adams	21	125.7	145.1	7	41.9	46.8	0	*	*
Asotin	42	202.9	160.5	4	*	*	2	*	*
Benton	271	174.7	199.5	81	52.2	59.9	21	13.5	15.0
Chelan	153	223.7	193.8	50	73.1	63.7	12	17.5	16.2
Clallam	212	321.7	199.2	60	91.0	56.0	17	25.8	15.5
Clark	711	185.5	218.9	191	49.8	59.2	70	18.3	22.2
Columbia	12	292.8	208.5	6	146.4	94.2	2	*	*
Cowlitz	206	216.2	192.3	60	63.0	56.6	17	17.8	16.3
Douglas	68	198.8	193.3	21	61.4	58.6	12	35.1	33.7
Ferry	28	383.5	361.9	8	109.6	105.0	1	*	*
Franklin	63	110.5	151.4	14	24.6	35.7	7	12.3	15.6
Garfield	9	375.3	256.4	3	*	*	1	*	*
Grant	131	167.3	178.9	51	65.1	68.5	11	14.0	15.8
Grays Harbor	199	287.6	236.4	75	108.4	87.7	10	14.5	11.6
Island	170	227.3	199.1	44	58.8	50.5	18	24.1	22.4
Jefferson	91	337.0	211.7	33	122.2	75.0	5	18.5	11.4
King	2,737	153.1	164.7	713	39.9	44.1	245	13.7	14.6
Kitsap	440	183.7	198.3	126	52.6	58.1	36	15.0	15.9
Kittitas	69	192.7	201.1	13	36.3	37.8	11	30.7	32.8
Klickitat	40	207.2	174.5	14	72.5	55.9	3	*	*
Lewis	184	260.3	209.5	53	75.0	61.1	14	19.8	15.3
Lincoln	27	264.7	184.1	8	78.4	56.8	0	*	*
Mason	159	313.0	245.8	50	98.4	77.0	13	25.6	20.2
Okanogan	82	207.1	183.1	25	63.1	56.4	4	*	*
Pacific	66	314.3	195.4	21	100.0	60.6	12	57.1	34.0
Pend Oreille	39	327.7	285.7	15	126.0	101.4	5	42.0	40.6
Pierce	1,293	173.8	197.4	381	51.2	57.6	117	15.7	17.8
San Juan	27	178.8	122.5	3	*	*	1	*	*
Skagit	231	212.3	178.1	67	61.6	52.0	21	19.3	15.9
Skamania	15	148.5	161.7	6	59.4	63.8	2	*	*
Snohomish	972	150.7	182.7	267	41.4	51.0	99	15.4	18.8
Spokane	850	196.8	189.8	254	58.8	58.1	71	16.4	15.7
Stevens	82	201.5	182.5	19	46.7	42.9	7	17.2	14.6
Thurston	408	186.7	189.7	100	45.8	45.9	39	17.8	18.0
Wahkiakum	5	131.5	81.9	0	*	*	0	*	*
Walla Walla	107	188.7	161.5	26	45.9	39.6	7	12.3	9.4
Whatcom	338	190.6	192.6	84	47.4	49.0	26	14.7	15.2
Whitman	45	107.9	137.9	12	28.8	38.3	6	14.4	17.1
Yakima	375	164.8	173.8	101	44.4	48.3	39	17.1	17.9

<sup>1</sup> 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.

<sup>2</sup> Rate per 100,000 population.

<sup>3</sup> 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, 2004**

County	Female Breast (C50)			Prostate (C61)			Pancreas (C25)		
	Number	Crude Rate <sup>2</sup>	Age-Adj Rate <sup>3</sup>	Number	Crude Rate <sup>2</sup>	Age-Adj Rate <sup>3</sup>	Number	Crude Rate <sup>2</sup>	Age-Adj Rate <sup>3</sup>
<b>State Total</b>	<b>776</b>	<b>25.1</b>	<b>23.4</b>	<b>590</b>	<b>19.2</b>	<b>25.8</b>	<b>679</b>	<b>11.0</b>	<b>11.4</b>
Adams	0	*	*	1	*	*	3	*	*
Asotin	6	55.4	42.7	4	*	*	1	*	*
Benton	20	25.7	26.0	16	20.7	32.8	19	12.3	13.9
Chelan	12	35.0	29.0	9	26.4	27.8	10	14.6	13.2
Clallam	20	60.0	38.8	15	46.0	32.0	8	12.1	7.2
Clark	46	23.8	24.1	42	22.1	34.6	50	13.0	15.5
Columbia	2	*	*	0	*	*	0	*	*
Cowlitz	14	29.1	24.5	10	21.2	21.8	12	12.6	10.6
Douglas	3	*	*	5	29.5	33.6	5	14.6	14.2
Ferry	3	*	*	0	*	*	2	*	*
Franklin	4	*	*	4	*	*	6	10.5	13.6
Garfield	1	*	*	0	*	*	0	*	*
Grant	6	15.7	15.5	6	15.0	17.8	10	12.8	14.3
Grays Harbor	7	20.1	16.4	14	40.7	40.4	6	8.7	6.8
Island	13	34.8	26.2	7	18.7	18.2	14	18.7	16.0
Jefferson	6	44.1	23.8	6	44.7	31.5	3	*	*
King	195	21.7	20.4	148	16.6	23.9	181	10.1	10.9
Kitsap	35	29.6	26.9	23	18.9	27.6	29	12.1	12.4
Kittitas	5	27.8	28.3	5	28.1	34.6	7	19.6	22.1
Klickitat	4	*	*	3	*	*	3	*	*
Lewis	10	28.1	19.6	7	20.0	19.6	12	17.0	13.6
Lincoln	0	*	*	2	*	*	4	*	*
Mason	11	44.8	33.6	11	41.9	38.4	8	15.7	11.8
Okanogan	8	40.3	32.2	6	30.4	28.4	5	12.6	10.7
Pacific	3	*	*	4	*	*	3	*	*
Pend Oreille	3	*	*	3	*	*	2	*	*
Pierce	93	24.9	25.1	70	18.9	28.9	57	7.7	8.7
San Juan	1	*	*	4	*	*	1	*	*
Skagit	16	29.1	23.7	5	9.3	9.1	18	16.5	13.5
Skamania	1	*	*	1	*	*	1	*	*
Snohomish	71	22.0	23.6	37	11.5	19.1	66	10.2	12.2
Spokane	69	31.4	28.0	44	20.7	25.3	41	9.5	9.3
Stevens	8	39.2	32.8	5	24.6	28.2	8	19.7	17.2
Thurston	22	19.7	18.5	16	14.9	20.0	27	12.4	12.6
Wahkiakum	1	*	*	0	*	*	0	*	*
Walla Walla	1	*	*	7	24.2	24.9	11	19.4	15.7
Whatcom	30	33.4	31.6	28	32.0	40.8	16	9.0	9.3
Whitman	4	*	*	1	*	*	2	*	*
Yakima	22	19.3	18.5	21	18.5	23.9	28	12.3	12.3

<sup>1</sup> Rate per 100,000 population.

<sup>2</sup> Rate per 100,000 age-adjusted to U.S. 2000 population. Does not include deaths where age is unknown.

<sup>3</sup> 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<sup>1</sup> for External Causes for Residents, 1995-2004**

Year	Unintentional Injury (Accident)	Intentional Self-Harm (Suicide)	Assault (Homicide)	Undetermined	Drug-Induced <sup>2</sup>	Alcohol-Induced <sup>2</sup>	Motor Vehicle Traffic Accidents	Falls	Drowning, Accidental
1995	34.2	14.6	5.3	1.8	8.2	10.4	13.1	6.6	2.1
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	33.9	12.3	4.0	1.7	8.1	10.0	12.8	6.4	1.9
*** 1998 Comparability Modified ***									
*** 1998	34.7	12.3	4.0	1.6	8.4	9.2	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

<sup>1</sup>Rate per 100,000 age-adjusted to U.S. 2000 population.

<sup>2</sup>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 during this time period.

**Mortality Table E2-a. External Causes of Injury With Crude Rates for Residents, 2004**

Cause	Total		Unintentional or Accident		Suicide		Homicide		Undetermined		Legal Intervention & War <sup>1</sup>	
	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>
<b>All Injuries<sup>3</sup></b>	<b>(3,483)</b>	<b>(56.5)</b>	<b>(2,326)</b>	<b>(37.7)</b>	<b>(823)</b>	<b>(13.3)</b>	<b>(216)</b>	<b>(3.5)</b>	<b>(110)</b>	<b>(1.8)</b>	<b>(8)</b>	<b>(0.1)</b>
Cut/Pierce	50	0.8	2	*	15	0.2	33	0.5	0	*	0	*
Drowning	(118)	(1.9)	(97)	(1.6)	(11)	(0.2)	(1)	(*)	(9)	(0.1)	--	--
Boating-Related	15	0.2	15	0.2	--	--	--	--	--	--	--	--
Other	103	1.7	82	1.3	11	0.2	1	*	9	0.1	--	--
Fall/Jump/Push	567	9.2	540	8.8	22	0.4	0	*	5	0.1	--	--
Fire/Hot Object or Substance	(59)	(1.0)	(47)	(0.8)	(4)	(*)	(5)	(0.1)	(3)	(*)	(0)	(*)
Fire/Flame	59	1.0	47	0.8	4	*	5	0.1	3	*	--	--
Hot Object/Substance	0	*	0	*	0	*	0	*	0	*	--	--
Firearm	567	9.2	12	0.2	421	6.8	122	2.0	4	*	8	0.1
Machinery	28	0.5	28	0.5	--	--	--	--	--	--	--	--
All Transport	(729)	(11.8)	(719)	(11.7)	(9)	(0.1)	(0)	(*)	(1)	(*)	(0)	(*)
Motor Vehicle Traffic	(647)	(10.5)	(647)	(10.5)	--	--	--	--	--	--	--	--
Occupant	437	7.1	437	7.1	--	--	--	--	--	--	--	--
Motorcyclist	90	1.5	90	1.5	--	--	--	--	--	--	--	--
Pedal Cyclist	7	0.1	7	0.1	--	--	--	--	--	--	--	--
Pedestrian	61	1.0	61	1.0	--	--	--	--	--	--	--	--
Other	0	*	0	*	--	--	--	--	--	--	--	--
Unspecified	52	0.8	52	0.8	--	--	--	--	--	--	--	--
Pedal Cyclist, Other	5	0.1	5	0.1	--	--	--	--	--	--	--	--
Pedestrian, Other	20	0.3	20	0.3	--	--	--	--	--	--	--	--
Other Land Transport	29	0.5	19	0.3	9	0.1	0	*	1	*	--	--
Watercraft/Air/Space	28	0.5	28	0.5	--	--	--	--	--	--	0	*
Natural/Environmental	(26)	(0.4)	(26)	(0.4)	--	--	--	--	--	--	--	--
Bites/Stings	3	*	3	*	--	--	--	--	--	--	--	--
Other	23	0.4	23	0.4	--	--	--	--	--	--	--	--
Overexertion	1	*	1	*	--	--	--	--	--	--	--	--
Poisoning	866	14.0	626	10.1	174	2.8	4	*	62	1.0	0	*
Struck By or Against	25	0.4	23	0.4	0	*	2	*	0	*	0	*
Suffocation	287	4.7	109	1.8	163	2.6	11	0.2	4	*	--	--
Other Specified, Classifiable	(46)	(0.7)	(35)	(0.6)	(2)	(*)	(8)	(0.1)	(1)	(*)	(0)	(*)
Sequelae (Late Effects)	22	0.4	22	0.4	--	--	--	--	--	--	--	--
Other	24	0.4	13	0.2	2	*	8	0.1	1	*	0	*
Other Specified, NEC <sup>4</sup>	(37)	(0.6)	(27)	(0.4)	(1)	(*)	(3)	(*)	(6)	(0.1)	(0)	(*)
Sequelae (Late Effects)	34	0.6	27	0.4	1	*	3	*	3	*	--	--
Other	3	*	0	*	0	*	0	*	3	*	0	*
Unspecified	77	1.2	34	0.6	1	*	27	0.4	15	0.2	0	*
Adverse Effects <sup>5</sup>	(47)	(0.8)	--	--	--	--	--	--	--	--	--	--
Drugs	13	0.2	--	--	--	--	--	--	--	--	--	--
Medical Care	34	0.6	--	--	--	--	--	--	--	--	--	--

<sup>1</sup> 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.

<sup>2</sup> Rate per 100,000 population.

<sup>3</sup> Group totals are shown in parentheses. Adverse Effects are not included in the total of All Injuries.

<sup>4</sup> 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, 2004**

Cause	Total		Unintentional or Accident		Suicide		Homicide		Undetermined		Legal Intervention & War <sup>1</sup>	
	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>
<b>All Injuries<sup>3</sup></b>	<b>(3,483)</b>	<b>(56.2)</b>	<b>(2,326)</b>	<b>(37.6)</b>	<b>(823)</b>	<b>(13.2)</b>	<b>(216)</b>	<b>(3.5)</b>	<b>(110)</b>	<b>(1.8)</b>	<b>(8)</b>	<b>(0.1)</b>
Cut/Pierce	50	0.8	2	*	15	0.2	33	0.5	0	*	0	*
Drowning	(118)	(1.9)	(97)	(1.6)	(11)	(0.2)	(1)	(*)	(9)	(0.1)	--	--
Boating-Related	15	0.2	15	0.2	--	--	--	--	--	--	--	--
Other	103	1.7	82	1.3	11	0.2	1	*	9	0.1	--	--
Fall/Jump/Push	567	9.4	540	9.0	22	0.4	0	*	5	0.1	--	--
Fire/Hot Object or Substance	(59)	(1.0)	(47)	(0.8)	(4)	(*)	(5)	(0.1)	(3)	(*)	(0)	(*)
Fire/Flame	59	1.0	47	0.8	4	*	5	0.1	3	*	--	--
Hot Object/Substance	0	*	0	*	0	*	0	*	0	*	--	--
Firearm	567	9.2	12	0.2	421	6.8	122	2.0	4	*	8	0.1
Machinery	28	0.5	28	0.5	--	--	--	--	--	--	--	--
All Transport	(729)	(11.7)	(719)	(11.5)	(9)	(0.1)	(0)	(*)	(1)	(*)	(0)	(*)
Motor Vehicle Traffic	(647)	(10.4)	(647)	(10.4)	--	--	--	--	--	--	--	--
Occupant	437	7.0	437	7.0	--	--	--	--	--	--	--	--
Motorcyclist	90	1.4	90	1.4	--	--	--	--	--	--	--	--
Pedal Cyclist	7	0.1	7	0.1	--	--	--	--	--	--	--	--
Other	61	1.0	61	1.0	--	--	--	--	--	--	--	--
Pedestrian	0	*	0	*	--	--	--	--	--	--	--	--
Unspecified	52	0.8	52	0.8	--	--	--	--	--	--	--	--
Pedal Cyclist, Other	5	0.1	5	0.1	--	--	--	--	--	--	--	--
Pedestrian, Other	20	0.3	20	0.3	--	--	--	--	--	--	--	--
Other Land Transport	29	0.5	19	0.3	9	0.1	0	*	1	*	--	--
Watercraft/Air/Space	28	0.4	28	0.4	--	--	--	--	--	--	0	*
Natural/Environmental	(26)	(0.4)	(26)	(0.4)	--	--	--	--	--	--	--	--
Bites/Stings	3	*	3	*	--	--	--	--	--	--	--	--
Other	23	0.4	23	0.4	--	--	--	--	--	--	--	--
Overexertion	1	*	1	*	--	--	--	--	--	--	--	--
Poisoning	866	13.6	626	9.8	174	2.7	4	*	62	1.0	0	*
Struck By or Against	25	0.4	23	0.4	0	*	2	*	0	*	0	*
Suffocation	287	4.7	109	1.8	163	2.6	11	0.2	4	*	--	--
Other Specified, Classifiable	(46)	(0.8)	(35)	(0.6)	(2)	(*)	(8)	(0.1)	(1)	(*)	(0)	(*)
Sequelae (Late Effects)	22	0.4	22	0.4	--	--	--	--	--	--	--	--
Other	24	0.4	13	0.2	2	*	8	0.1	1	*	0	*
Other Specified, NEC <sup>4</sup>	(37)	(0.6)	(27)	(0.4)	(1)	(*)	(3)	(*)	(6)	(0.1)	(0)	(*)
Sequelae (Late Effects)	34	0.5	27	0.4	1	*	3	*	3	*	--	--
Other	3	*	0	*	0	*	0	*	3	*	0	*
Unspecified	77	1.3	34	0.6	1	*	27	0.4	15	0.2	0	*
Adverse Effects <sup>5</sup>	(47)	(0.8)	--	--	--	--	--	--	--	--	--	--
Drugs	13	0.2	--	--	--	--	--	--	--	--	--	--
Medical Care	34	0.6	--	--	--	--	--	--	--	--	--	--

<sup>1</sup> 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.

<sup>2</sup> Rate per 100,000 population age-adjusted to U.S. 2000 population.

<sup>3</sup> Group totals are shown in parentheses. Adverse Effects are not included in the total of All Injuries.

<sup>4</sup> NEC: Not elsewhere classified.

<sup>5</sup> 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 of Injuries* for the website address.

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

Cause	Unintentional or Accident	Suicide	Homicide	Undetermined	Legal Intervention & War
<b>All Injuries</b>	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, 2004**

Place of Injury <sup>1</sup>	Total	Unintentional Injury (Accident), Non-Transport	Unintentional Injury (Accident), Transport	Intentional Self-Harm (Suicide)	Assault (Homicide)	Undetermined	Other
<b>State Total</b>	<b>3,530</b>	<b>1,570</b>	<b>756</b>	<b>823</b>	<b>216</b>	<b>110</b>	<b>55</b>
Home	1,766	992	7	596	101	68	2
Nursing Home	145	136	0	4	2	2	1
Agriculture	11	4	3	2	2	0	0
Industry	58	35	0	13	6	3	1
Prison	9	0	0	8	1	0	0
Public	1,267	232	717	186	96	30	6
Unknown	274	171	29	14	8	7	45

<sup>1</sup> 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, 2004**

Intent	Total			Handgun			Rifle or Shotgun			Other & Unspecified		
	No.	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>	No.	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>	No.	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>	No.	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>
<b>Total</b>	<b>567</b>	<b>9.2</b>	<b>9.2</b>	<b>350</b>	<b>5.7</b>	<b>5.6</b>	<b>134</b>	<b>2.2</b>	<b>2.2</b>	<b>83</b>	<b>1.3</b>	<b>1.3</b>
Unintentional Injury (Accident)	12	0.2	0.2	7	0.1	0.1	3	*	*	2	*	*
Self-Harm (Suicide)	421	6.8	6.8	296	4.8	4.8	115	1.9	1.9	10	0.2	0.2
Assault (Homicide)	122	2.0	2.0	45	0.7	0.7	15	0.2	0.2	62	1.0	1.0
Undetermined	4	*	*	2	*	*	1	*	*	1	*	*
Legal Intervention	8	0.1	0.1	0	*	*	0	*	*	8	0.1	0.1

<sup>1</sup> Rate per 100,000 population.

<sup>2</sup> 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, 2004**

Substance and ICD-10 Code	Total			Unintentional Injury (Accident)			Self-Harm (Suicide)			Undetermined		
	No.	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>	No.	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>	No.	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>	No.	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>
<b>Total</b>	<b>862</b>	<b>14.0</b>	<b>13.6</b>	<b>626</b>	<b>10.1</b>	<b>9.8</b>	<b>174</b>	<b>2.8</b>	<b>2.7</b>	<b>62</b>	<b>1.0</b>	<b>1.0</b>
Drugs (X40-X44,X60-X64,Y10-Y14) <sup>3</sup>	(796)	(12.9)	(12.5)	(603)	(9.8)	(9.5)	(136)	(2.2)	(2.1)	(57)	(0.9)	(0.9)
Non-Opioid Analgesics, Anti-Pyretics & Anti-Rheumatics (e.g., nonsteroidal anti-inflammatory drugs, salicylates, etc.) (X40, X60, Y10)	16	0.3	0.3	5	0.1	0.1	9	0.1	0.1	2	*	*
Anti-Epileptic, Sedative-Hypnotic, Anti-Parkinson & Psychotropic (e.g., antidepressants, barbiturates, psychostimulants, etc.) (X41, X61, Y11)	99	1.6	1.6	58	0.9	0.9	33	0.5	0.5	8	0.1	0.1
Narcotics & Psychodysleptics (e.g., cannabis, cocaine, heroin, etc.) (X42, X62, Y12)	297	4.8	4.7	275	4.5	4.3	12	0.2	0.2	10	0.2	0.2
Other Drugs Acting on Autonomic Nervous System (e.g., anticholinergics, cholinergics, antiadrenergics, etc.) (X43, X63, Y13)	0	*	*	0	*	*	0	*	*	0	*	*
Other, Unspecified, or Mixtures of Any of the Above (e.g., anaesthetics, hormones, antibiotics, etc.) (X44, X64, Y14)	384	6.2	6.0	265	4.3	4.2	82	1.3	1.3	37	0.6	0.6
Alcohol (X45, X65, Y15)	9	0.1	0.1	9	0.1	0.1	0	*	*	0	*	*
Organic Solvents, Halogenated												
Hydrocarbons, Vapors (e.g., benzene, petroleum, etc.) (X46, X66, Y16)	4	*	*	0	*	*	4	*	*	0	*	*
Other Gases & Vapors(e.g., carbon monoxide, nitrogen oxides, etc.) (X47, X67, Y17)	46	0.7	0.7	10	0.2	0.2	32	0.5	0.5	4	*	*
Pesticides (e.g., fumigants,												
herbicides, insecticides, wood preservatives, etc.) (X48, X68, Y18)	0	*	*	0	*	*	0	*	*	0	*	*
Other & Unspecified Chemicals & Noxious Substances (e.g., acids, glues, paints, soaps, etc.) (X49, X69, Y19)	7	0.1	0.1	4	*	*	2	*	*	1	*	*

<sup>1</sup> Rate per 100,000 population.

<sup>2</sup> Rate per 100,000 age-adjusted to U.S. 2000 population. Does not include deaths where age is unknown.

<sup>3</sup> 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, 2004**

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 <sup>1</sup>	Age-Adj Rate <sup>2</sup>	Number	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>	Number	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>
<b>State Total</b>	<b>823</b>	<b>13.3</b>	<b>13.2</b>	<b>216</b>	<b>3.5</b>	<b>3.5</b>	<b>110</b>	<b>1.8</b>	<b>1.8</b>
Adams	1	*	*	0	*	*	0	*	*
Asotin	4	*	*	0	*	*	0	*	*
Benton	23	14.8	15.3	5	3.2	3.1	0	*	*
Chelan	6	8.8	8.8	2	*	*	1	*	*
Clallam	16	24.3	21.7	2	*	*	3	*	*
Clark	49	12.8	12.9	14	3.7	3.5	2	*	*
Columbia	2	*	*	0	*	*	0	*	*
Cowlitz	15	15.7	16.6	4	*	*	6	6.3	6.5
Douglas	3	*	*	1	*	*	1	*	*
Ferry	1	*	*	0	*	*	1	*	*
Franklin	4	*	*	4	*	*	2	*	*
Garfield	0	*	*	0	*	*	0	*	*
Grant	9	11.5	12.7	6	7.7	8.1	2	*	*
Grays Harbor	12	17.3	16.5	0	*	*	4	*	*
Island	9	12.0	12.6	2	*	*	1	*	*
Jefferson	9	33.3	35.8	0	*	*	1	*	*
King	211	11.8	11.4	68	3.8	3.8	34	1.9	1.9
Kitsap	19	7.9	7.8	2	*	*	2	*	*
Kittitas	4	*	*	0	*	*	0	*	*
Klickitat	7	36.3	36.3	0	*	*	0	*	*
Lewis	16	22.6	22.3	1	*	*	0	*	*
Lincoln	2	*	*	0	*	*	0	*	*
Mason	7	13.8	13.6	2	*	*	1	*	*
Okanogan	10	25.3	26.5	3	*	*	3	*	*
Pacific	4	*	*	0	*	*	2	*	*
Pend Oreille	6	50.4	61.1	0	*	*	0	*	*
Pierce	84	11.3	11.3	38	5.1	5.0	11	1.5	1.5
San Juan	3	*	*	0	*	*	0	*	*
Skagit	12	11.0	10.7	3	*	*	1	*	*
Skamania	1	*	*	2	*	*	0	*	*
Snohomish	85	13.2	13.4	17	2.6	2.6	13	2.0	2.1
Spokane	91	21.1	20.8	14	3.2	3.3	10	2.3	2.4
Stevens	10	24.6	27.8	1	*	*	0	*	*
Thurston	33	15.1	15.1	8	3.7	3.7	4	*	*
Wahkiakum	3	*	*	0	*	*	0	*	*
Walla Walla	10	17.6	18.6	0	*	*	0	*	*
Whatcom	22	12.4	12.3	4	*	*	5	2.8	3.0
Whitman	1	*	*	0	*	*	0	*	*
Yakima	19	8.4	8.8	13	5.7	6.3	0	*	*

<sup>1</sup> Rate per 100,000 population.

<sup>2</sup> 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, 2004**

County	Drug-Induced			Alcohol-Induced		
	Number	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>	Number	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>
<b>State Total</b>	<b>876</b>	<b>14.2</b>	<b>13.8</b>	<b>619</b>	<b>10.0</b>	<b>9.7</b>
Adams	1	*	*	1	*	*
Asotin	3	*	*	3	*	*
Benton	17	11.0	10.1	13	8.4	9.2
Chelan	14	20.5	19.7	7	10.2	9.1
Clallam	15	22.8	21.8	16	24.3	17.7
Clark	42	11.0	11.0	35	9.1	9.2
Columbia	1	*	*	0	*	*
Cowlitz	25	26.2	26.8	19	19.9	17.3
Douglas	2	*	*	3	*	*
Ferry	1	*	*	2	*	*
Franklin	8	14.0	16.6	4	*	*
Garfield	0	*	*	1	*	*
Grant	15	19.2	21.9	12	15.3	16.6
Grays Harbor	24	34.7	35.7	11	15.9	14.3
Island	10	13.4	14.1	6	8.0	6.5
Jefferson	3	*	*	9	33.3	22.0
King	241	13.5	12.5	137	7.7	7.4
Kitsap	24	10.0	9.9	34	14.2	14.0
Kittitas	1	*	*	2	*	*
Klickitat	0	*	*	2	*	*
Lewis	14	19.8	21.6	7	9.9	8.3
Lincoln	1	*	*	1	*	*
Mason	10	19.7	19.6	5	9.8	7.5
Okanogan	2	*	*	17	42.9	37.3
Pacific	2	*	*	2	*	*
Pend Oreille	1	*	*	1	*	*
Pierce	79	10.6	10.5	53	7.1	7.2
San Juan	2	*	*	0	*	*
Skagit	16	14.7	15.0	13	11.9	10.8
Skamania	0	*	*	2	*	*
Snohomish	110	17.1	16.4	70	10.9	11.0
Spokane	86	19.9	19.7	51	11.8	11.4
Stevens	10	24.6	29.3	6	14.7	12.5
Thurston	31	14.2	13.2	27	12.4	11.8
Wahkiakum	0	*	*	2	*	*
Walla Walla	9	15.9	15.7	5	8.8	8.7
Whatcom	25	14.1	14.5	16	9.0	8.7
Whitman	1	*	*	1	*	*
Yakima	30	13.2	14.7	23	10.1	11.1

<sup>1</sup> Rate per 100,000 population.

<sup>2</sup> 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-F11.5,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;

Alcohol-Induced: F10,G31.2,G62.1,I42.6, K29.2,K70, R78.0,X45,X65,Y15.

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, 2004**

County	Unintentional Injury (Accident)(V01-X59,Y85-Y86)			Motor Vehicle Traffic <sup>1</sup>			Falls (W00-W19)		
	Number	Crude Rate <sup>2</sup>	Age-Adj Rate <sup>3</sup>	Number	Crude Rate <sup>2</sup>	Age-Adj Rate <sup>3</sup>	Number	Crude Rate <sup>2</sup>	Age-Adj Rate <sup>3</sup>
<b>State Total</b>	<b>2,326</b>	<b>37.7</b>	<b>37.6</b>	<b>647</b>	<b>10.5</b>	<b>10.4</b>	<b>540</b>	<b>8.8</b>	<b>9.0</b>
Adams	5	29.9	28.7	3	*	*	0	*	*
Asotin	7	33.8	28.1	3	*	*	1	*	*
Benton	58	37.4	38.6	21	13.5	13.7	9	5.8	6.6
Chelan	30	43.9	41.6	10	14.6	15.3	7	10.2	8.2
Clallam	39	59.2	49.3	14	21.2	19.1	10	15.2	8.7
Clark	125	32.6	33.9	30	7.8	7.8	23	6.0	7.2
Columbia	1	*	*	0	*	*	1	*	*
Cowlitz	53	55.6	54.4	10	10.5	10.5	12	12.6	11.0
Douglas	15	43.9	43.4	6	17.5	17.4	4	*	*
Ferry	3	*	*	2	*	*	0	*	*
Franklin	16	28.1	32.5	5	8.8	9.2	2	*	*
Garfield	0	*	*	0	*	*	0	*	*
Grant	38	48.5	52.7	15	19.2	20.7	2	*	*
Grays Harbor	41	59.2	58.8	11	15.9	15.4	10	14.5	11.8
Island	29	38.8	38.7	7	9.4	9.5	10	13.4	12.9
Jefferson	12	44.4	42.4	8	29.6	26.6	0	*	*
King	574	32.1	31.8	136	7.6	7.6	137	7.7	8.2
Kitsap	80	33.4	34.0	18	7.5	7.5	26	10.9	11.3
Kittitas	14	39.1	40.6	2	*	*	6	16.8	17.8
Klickitat	12	62.2	58.1	3	*	*	4	*	*
Lewis	41	58.0	54.1	12	17.0	17.4	11	15.6	11.5
Lincoln	2	*	*	1	*	*	0	*	*
Mason	29	57.1	59.0	16	31.5	31.6	3	*	*
Okanogan	34	85.9	85.4	16	40.4	41.0	5	12.6	11.4
Pacific	9	42.9	37.6	1	*	*	5	23.8	14.1
Pend Oreille	9	75.6	71.6	1	*	*	5	42.0	44.7
Pierce	257	34.5	35.7	82	11.0	11.0	56	7.5	8.6
San Juan	4	*	*	1	*	*	1	*	*
Skagit	58	53.3	50.6	18	16.5	15.5	12	11.0	8.8
Skamania	6	59.4	69.5	0	*	*	4	*	*
Snohomish	214	33.2	34.8	46	7.1	7.3	44	6.8	8.4
Spokane	217	50.2	47.4	46	10.6	10.5	67	15.5	13.6
Stevens	32	78.6	78.0	6	14.7	13.3	7	17.2	15.6
Thurston	74	33.9	33.3	22	10.1	9.7	18	8.2	8.6
Wahkiakum	1	*	*	1	*	*	0	*	*
Walla Walla	28	49.4	41.9	8	14.1	14.1	10	17.6	11.2
Whatcom	52	29.3	29.8	16	9.0	8.9	14	7.9	7.6
Whitman	7	16.8	20.2	3	*	*	1	*	*
Yakima	100	44.0	45.2	47	20.7	21.0	13	5.7	5.8

<sup>1</sup> 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

<sup>2</sup> Rate per 100,000 population.

<sup>3</sup> 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, 2004**

County	Drownings (V90,V92,W65-W74)			Fires (X00-X09)			Other Unintentional Injury (Accident) (remainder)		
	Number	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>	Number	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>	Number	Crude Rate <sup>1</sup>	Age-Adj Rate <sup>2</sup>
<b>State Total</b>	<b>97</b>	<b>1.6</b>	<b>1.6</b>	<b>47</b>	<b>0.8</b>	<b>0.8</b>	<b>995</b>	<b>16.1</b>	<b>15.8</b>
Adams	0	*	*	0	*	*	2	*	*
Asotin	1	*	*	0	*	*	2	*	*
Benton	1	*	*	2	*	*	25	16.1	16.2
Chelan	1	*	*	0	*	*	12	17.5	16.3
Clallam	0	*	*	1	*	*	14	21.2	20.3
Clark	8	2.1	2.1	4	*	*	60	15.7	15.7
Columbia	0	*	*	0	*	*	0	*	*
Cowlitz	3	*	*	0	*	*	28	29.4	29.6
Douglas	0	*	*	0	*	*	5	14.6	14.4
Ferry	0	*	*	0	*	*	1	*	*
Franklin	1	*	*	0	*	*	8	14.0	17.4
Garfield	0	*	*	0	*	*	0	*	*
Grant	5	6.4	5.8	0	*	*	16	20.4	23.3
Grays Harbor	0	*	*	1	*	*	19	27.5	29.7
Island	0	*	*	0	*	*	12	16.0	16.3
Jefferson	2	*	*	0	*	*	2	*	*
King	23	1.3	1.3	12	0.7	0.7	266	14.9	14.1
Kitsap	2	*	*	1	*	*	33	13.8	13.9
Kittitas	1	*	*	0	*	*	5	14.0	12.9
Klickitat	0	*	*	1	*	*	4	*	*
Lewis	2	*	*	1	*	*	15	21.2	21.3
Lincoln	0	*	*	0	*	*	1	*	*
Mason	0	*	*	2	*	*	8	15.7	17.0
Okanogan	1	*	*	1	*	*	11	27.8	27.5
Pacific	1	*	*	0	*	*	2	*	*
Pend Oreille	0	*	*	0	*	*	3	*	*
Pierce	15	2.0	2.1	6	0.8	0.9	98	13.2	13.2
San Juan	0	*	*	0	*	*	2	*	*
Skagit	1	*	*	1	*	*	26	23.9	24.7
Skamania	1	*	*	0	*	*	1	*	*
Snohomish	8	1.2	1.3	4	*	*	112	17.4	17.0
Spokane	7	1.6	1.6	5	1.2	1.2	92	21.3	20.6
Stevens	0	*	*	2	*	*	17	41.8	44.6
Thurston	2	*	*	1	*	*	31	14.2	13.6
Wahkiakum	0	*	*	0	*	*	0	*	*
Walla Walla	3	*	*	0	*	*	7	12.3	11.9
Whatcom	2	*	*	0	*	*	20	11.3	12.0
Whitman	1	*	*	0	*	*	2	*	*
Yakima	5	2.2	2.1	2	*	*	33	14.5	15.3

<sup>1</sup> Rate per 100,000 population.

<sup>2</sup> 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, 2004**

<b>County of Injury</b>	<b>Intentional Self-Harm (Suicide) (X60-X84, Y87.0)</b>	<b>Assault (Homicide) (X85- Y09, Y87.1)</b>	<b>Undetermined (Y10-Y34, Y87.2, Y89.9)</b>
<b>State Total</b>	<b>823</b>	<b>216</b>	<b>110</b>
Adams	0	0	0
Asotin	4	0	0
Benton	22	5	1
Chelan	6	2	1
Clallam	17	2	3
Clark	43	9	2
Columbia	3	0	0
Cowlitz	14	2	5
Douglas	4	1	0
Ferry	1	0	1
Franklin	3	3	1
Garfield	0	0	0
Grant	7	6	2
Grays Harbor	14	0	2
Island	9	1	1
Jefferson	7	0	0
King	211	63	39
Kitsap	19	2	2
Kittitas	4	1	0
Klickitat	7	0	0
Lewis	16	0	0
Lincoln	2	0	0
Mason	6	2	2
Okanogan	10	3	2
Pacific	6	0	2
Pend Oreille	5	0	0
Pierce	79	38	9
San Juan	3	0	0
Skagit	11	3	1
Skamania	2	3	0
Snohomish	76	20	12
Spokane	89	12	9
Stevens	8	1	0
Thurston	29	7	4
Wahkiakum	4	0	0
Walla Walla	9	0	0
Whatcom	24	3	5
Whitman	1	0	0
Yakima	19	11	0
Unknown	2	4	2
Out of State	27	12	2

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, 2004**

County of Injury	All Unintentional	Motor Vehicle				Other
	Injury (Accident)	Traffic	Falls	Drownings	Fires	Accidents
<b>State Total</b>	<b>2,326</b>	<b>647</b>	<b>540</b>	<b>97</b>	<b>47</b>	<b>995</b>
Adams	7	4	0	1	0	2
Asotin	3	1	1	1	0	0
Benton	45	18	7	0	2	18
Chelan	35	13	8	1	0	13
Clallam	32	12	7	1	1	11
Clark	70	11	16	4	2	37
Columbia	1	0	1	0	0	0
Cowlitz	41	7	7	3	0	24
Douglas	19	9	4	0	0	6
Ferry	6	5	0	0	0	1
Franklin	10	4	2	1	0	3
Garfield	0	0	0	0	0	0
Grant	38	14	2	5	0	17
Grays Harbor	41	8	9	0	2	22
Island	26	3	10	0	0	13
Jefferson	11	7	0	2	0	2
King	490	118	125	16	10	221
Kitsap	69	21	25	0	1	22
Kittitas	28	10	6	1	1	10
Klickitat	7	5	1	0	1	0
Lewis	38	16	11	0	1	10
Lincoln	1	1	0	0	0	0
Mason	24	10	4	0	1	9
Okanogan	33	13	6	2	1	11
Pacific	7	1	3	3	0	0
Pend Oreille	11	4	5	0	0	2
Pierce	219	65	55	10	6	83
San Juan	3	1	1	0	0	1
Skagit	60	24	12	1	1	22
Skamania	6	1	1	1	0	3
Snohomish	184	30	48	8	4	94
Spokane	176	24	65	5	5	77
Stevens	29	6	6	0	2	15
Thurston	61	21	15	2	1	22
Wahkiakum	2	0	1	0	0	1
Walla Walla	20	5	9	2	0	4
Whatcom	44	12	13	2	0	17
Whitman	8	5	1	0	0	2
Yakima	77	32	12	4	2	27
Unknown	63	32	5	3	1	22
Out of State	281	74	36	18	2	151

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, 1995-2004**

Year	Total All Causes		Perinatal Conditions		Congenital Malformations		SIDS		External Causes	
	Number	Rate <sup>1</sup>	Number	Rate <sup>1</sup>	Number	Rate <sup>1</sup>	Number	Rate <sup>1</sup>	Number	Rate <sup>1</sup>
1995	449	5.8	173	2.2	118	1.5	101	1.3	19	0.2
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

<sup>1</sup>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 Malformations: 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.

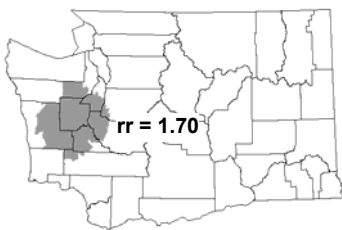
**Mortality Figure 11. Infant Mortality**

**High relative risk (rr) regions by year**

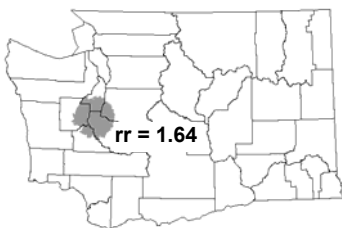
**2000**



**2001**



**2002**



**2003**



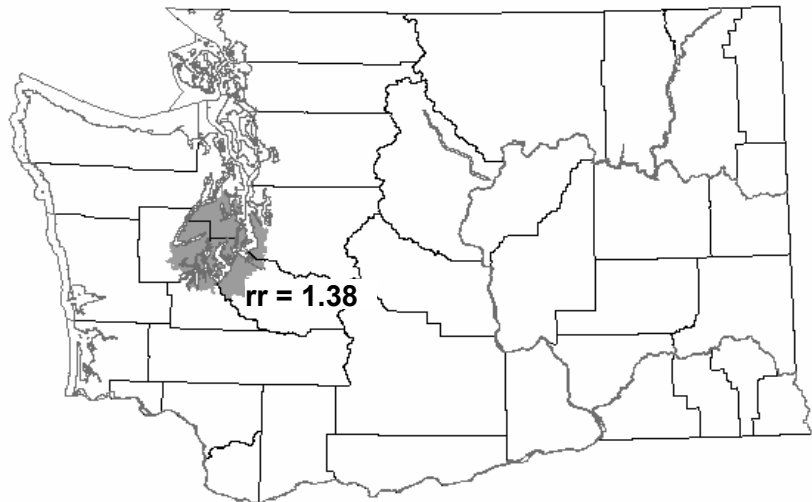
**2004**



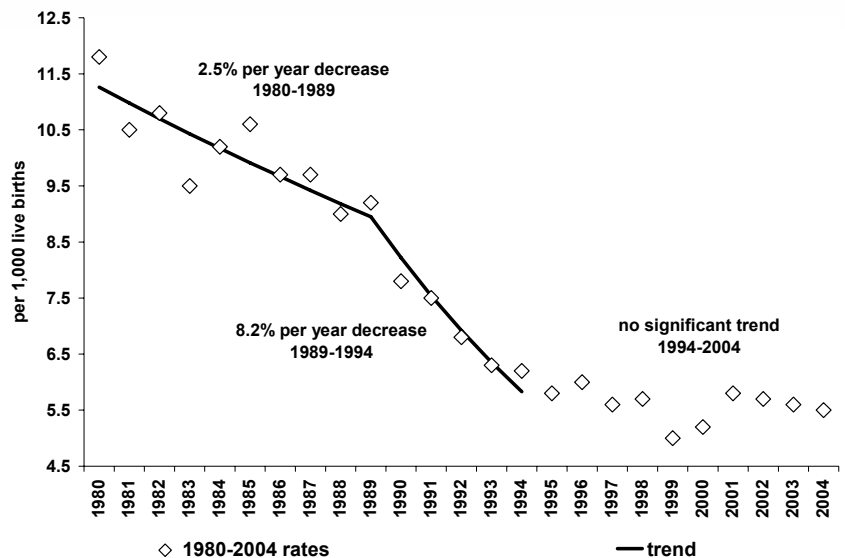
**Regions:** In 2001 and 2002 infant mortality rates in the south Puget Sound region were significantly higher than expected; in 2000, 2003 and 2004 no such pattern was observed. For 2000-2004 combined the south Puget Sound region was identified as having a relative risk (rr) of 1.38, or 38% higher than 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**

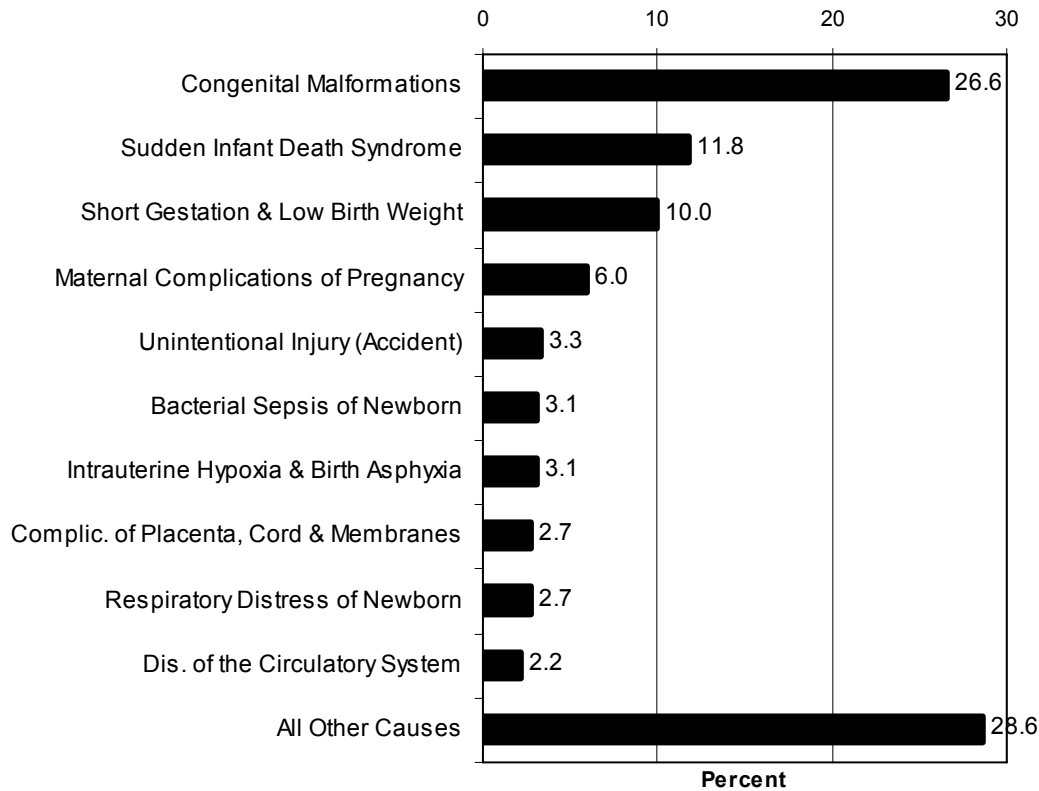


**Mortality Table F2. Leading Causes of Infant (Age < 1 Year) Death for Residents, 2004**

Rank	Causes of Death and ICD-10 Codes	Number	Percent <sup>1</sup>	Cumulative Percent
	<b>State Total</b>	<b>451</b>	<b>100.0</b>	.
1	Congenital Malformations (Q00-Q99)	120	26.6	26.6
2	Sudden Infant Death Syndrome (R95)	53	11.8	38.4
3	Short Gestation & Low Birth Weight (P07)	45	10.0	48.3
4	Maternal Complications of Pregnancy (P01)	27	6.0	54.3
5	Unintentional Injury (Accident) (V01-X59,Y85-Y86)	15	3.3	57.6
6	Bacterial Sepsis of Newborn (P36)	14	3.1	60.8
7	Intrauterine Hypoxia & Birth Asphyxia (P20-P21)	14	3.1	63.9
8	Complic. of Placenta, Cord & Membranes (P02)	12	2.7	66.5
9	Respiratory Distress of Newborn (P22)	12	2.7	69.2
10	Dis. of the Circulatory System (I00-I99)	10	2.2	71.4
	All Other Causes	129	28.6	100.0

<sup>1</sup> Percents may not add to 100% due to rounding.

**Mortality Figure 12. Leading Causes of Infant (Age < 1 Year) Death for Residents, 2004**





**Mortality Table F3. Birth Weight and Age for Infant (Age < 1 Year) Residents, 2004**

Birth Weight in Grams	Total		1 Day to	7 Days to	28 Days to	6 Months to	
	Number	Rate <sup>1</sup>	< 1 Day	< 7 Days	<28 Days	< 6 Months	< 12 Months
<b>State Totals</b>	<b>451</b>	<b>5.5</b>	<b>164</b>	<b>43</b>	<b>66</b>	<b>146</b>	<b>32</b>
Under 500	77	828.0	68	3	2	4	0
500 - 749	74	465.4	40	8	16	9	1
750 - 999	27	147.5	8	4	7	4	4
1,000 - 1,499	30	69.0	10	2	8	9	1
1,500 - 1,999	25	26.0	7	5	5	5	3
2,000 - 2,499	35	10.8	12	3	5	15	0
2,500 - 2,999	50	4.2	6	5	5	30	4
3,000 - 3,499	75	2.5	4	6	10	40	15
3,500 - 3,999	33	1.3	3	3	6	18	3
4,000 - 4,499	12	1.5	1	1	1	9	0
4,500 and over	2	*	0	0	0	1	1
Unknown	11	32.4	5	3	1	2	0

<sup>1</sup> 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, 2004**

Cause and ICD-10 Code	Total			Under 1 Day			1 Day to Under 7 Days		
	Total	Male	Fem.	Total	Male	Fem.	Total	Male	Fem.
<b>Total All Causes<sup>1</sup></b>	<b>(451)</b>	<b>(258)</b>	<b>(193)</b>	<b>(164)</b>	<b>(85)</b>	<b>(79)</b>	<b>(43)</b>	<b>(21)</b>	<b>(22)</b>
<b>Infectious &amp; Parasitic Diseases (A00-B99)</b>	1	1	0	0	0	0	0	0	0
<b>Diseases of the Nervous System (G00-G98)</b>	4	3	1	0	0	0	0	0	0
<b>Diseases of the Circulatory System (I00-I99)</b>	10	6	4	0	0	0	2	2	0
<b>Diseases of the Respiratory System (J00-J98)</b>	12	10	2	0	0	0	0	0	0
<b>Conditions Originating in Perinatal Period(P00-P96)</b>	(189)	(97)	(92)	(107)	(54)	(53)	(24)	(10)	(14)
Newborn Affected by Maternal Factors (P00-P04)	(53)	(24)	(29)	(46)	(23)	(23)	(3)	(0)	(3)
Incompetent Cervix (P01.0)	8	5	3	8	5	3	0	0	0
Premature Rupture of Membranes (P01.1)	13	6	7	13	6	7	0	0	0
Other Maternal Complic. of Pregnancy (P01.2-P01.9)	6	0	6	3	0	3	2	0	2
Complications Involving Placenta (P02.0-P02.3)	6	2	4	5	2	3	1	0	1
Complications of Cord & Membranes (P02.4-P02.9)	6	4	2	6	4	2	0	0	0
Other (P00,P03,P04)	14	7	7	11	6	5	0	0	0
Short Gestation & Low Birth Weight (P07)	45	27	18	39	23	16	2	1	1
Intrauterine Hypoxia & Birth Asphyxia (P20-P21)	14	5	9	4	0	4	4	2	2
Respiratory Distress of Newborn (P22)	12	7	5	7	3	4	3	2	1
Other Respiratory Conditions (P23-P28)	16	9	7	4	3	1	2	0	2
Infections Specific to Perinatal Period (P35-P39)	14	9	5	0	0	0	4	3	1
Neonatal Hemorrhage (P50-P52,P54)	6	3	3	0	0	0	2	1	1
Necrotizing Enterocolitis of Newborn (P77)	9	6	3	0	0	0	0	0	0
Hydrops Fetalis Not Due to Hemolytic Disease (P83.2)	4	1	3	1	0	1	2	0	2
Other (Residual)	16	6	10	6	2	4	2	1	1
<b>Congenital Malformations (Q00-Q99)</b>	(120)	(70)	(50)	(54)	(30)	(24)	(13)	(7)	(6)
Anencephaly and Similar Malformations (Q00)	5	2	3	4	1	3	1	1	0
Malformations of Heart (Q20-Q24)	33	17	16	8	3	5	2	0	2
Other Malformations of Circulatory System (Q25-Q28)	7	5	2	0	0	0	0	0	0
Malformations of Respiratory System (Q30-Q34)	13	7	6	8	5	3	3	1	2
Malformations of Genitourinary System (Q50-Q64)	3	2	1	3	2	1	0	0	0
Malform. of Musculoskeletal Sys. & Skin (Q65-Q85)	7	5	2	4	2	2	0	0	0
Down's Syndrome (Q90)	6	3	3	4	2	2	0	0	0
Edward's Syndrome (Q91.0-Q91.3)	7	4	3	4	2	2	0	0	0
Patau's Syndrome (Q91.4-Q91.7)	8	6	2	3	1	2	3	3	0
Other (Q01-Q18,Q35-Q45,Q86-Q89)	24	15	9	12	9	3	4	2	2
Other Chromosomal Abnormalities (Q92-Q99)	7	4	3	4	3	1	0	0	0
<b>Sudden Infant Death Syndrome (R95)</b>	53	33	20	0	0	0	2	2	0
<b>Other(C00-F99,H00-H99,K00-N99,R00-R94,R96-R99)</b>	33	19	14	2	1	1	2	0	2
<b>External Causes of Mortality (V01-Y89)</b>	(29)	(19)	(10)	(1)	(0)	(1)	(0)	(0)	(0)
Accidents (V01-X59, Y85-Y86)	(15)	(10)	(5)	(0)	(0)	(0)	(0)	(0)	(0)
Suffocation & Strangulation (W75-W77,W81-W84)	13	9	4	0	0	0	0	0	0
Other (V00-W74,W78-W80,W85-X59,Y85-Y86)	2	1	1	0	0	0	0	0	0
Assault (homicide) (X85-Y09, Y87.1)	9	7	2	1	0	1	0	0	0
Other (X60-X84,Y10-Y84,Y87.0,Y87.2-Y89)	5	2	3	0	0	0	0	0	0

<sup>1</sup> 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, 2004**

Cause and ICD-10 Code	7 Days to Under 28			28 Days to Under 6			6 Months to Under 12		
	Days			Months			Months		
	Total	Male	Fem.	Total	Male	Fem.	Total	Male	Fem.
<b>Total All Causes<sup>1</sup></b>	<b>(66)</b>	<b>(38)</b>	<b>(28)</b>	<b>(146)</b>	<b>(90)</b>	<b>(56)</b>	<b>(32)</b>	<b>(24)</b>	<b>(8)</b>
<b>Infectious &amp; Parasitic Diseases (A00-B99)</b>	0	0	0	1	1	0	0	0	0
<b>Diseases of the Nervous System (G00-G98)</b>	0	0	0	2	2	0	2	1	1
<b>Diseases of the Circulatory System (I00-I99)</b>	1	0	1	5	3	2	2	1	1
<b>Diseases of the Respiratory System (J00-J98)</b>	1	0	1	7	6	1	4	4	0
<b>Conditions Originating in Perinatal Period(P00-P96)</b>	(40)	(20)	(20)	(16)	(11)	(5)	(2)	(2)	(0)
Newborn Affected by Maternal Factors (P00-P04)	(1)	(0)	(1)	(3)	(1)	(2)	(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	1	0	1	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)	0	0	0	0	0	0	0	0	0
Other (P00,P03,P04)	1	0	1	2	1	1	0	0	0
Short Gestation & Low Birth Weight (P07)	3	2	1	1	1	0	0	0	0
Intrauterine Hypoxia & Birth Asphyxia (P20-P21)	5	2	3	0	0	0	1	1	0
Respiratory Distress of Newborn (P22)	1	1	0	1	1	0	0	0	0
Other Respiratory Conditions (P23-P28)	3	1	2	6	4	2	1	1	0
Infections Specific to Perinatal Period (P35-P39)	9	5	4	1	1	0	0	0	0
Neonatal Hemorrhage (P50-P52,P54)	4	2	2	0	0	0	0	0	0
Necrotizing Enterocolitis of Newborn (P77)	6	4	2	3	2	1	0	0	0
Hydrops Fetalis Not Due to Hemolytic Disease (P83.2)	1	1	0	0	0	0	0	0	0
Other (Residual)	7	2	5	1	1	0	0	0	0
<b>Congenital Malformations (Q00-Q99)</b>	(19)	(14)	(5)	(30)	(16)	(14)	(4)	(3)	(1)
Anencephaly and Similar Malformations (Q00)	0	0	0	0	0	0	0	0	0
Malformations of Heart (Q20-Q24)	6	5	1	15	7	8	2	2	0
Other Malformations of Circulatory System (Q25-Q28)	2	2	0	4	2	2	1	1	0
Malformations of Respiratory System (Q30-Q34)	2	1	1	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	3	0	0	0	0	0	0	0
Down's Syndrome (Q90)	0	0	0	2	1	1	0	0	0
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	1	1	0	0	0	0
Other (Q01-Q18,Q35-Q45,Q86-Q89)	3	0	3	5	4	1	0	0	0
Other Chromosomal Abnormalities (Q92-Q99)	1	1	0	1	0	1	1	0	1
<b>Sudden Infant Death Syndrome (R95)</b>	3	2	1	45	26	19	3	3	0
<b>Other(C00-F99,H00-H99,K00-N99,R00-R94,R96-R99)</b>	2	2	0	24	15	9	3	1	2
<b>External Causes of Mortality (V01-Y89)</b>	(0)	(0)	(0)	(16)	(10)	(6)	(12)	(9)	(3)
Accidents (V01-X59, Y85-Y86)	(0)	(0)	(0)	(9)	(5)	(4)	(6)	(5)	(1)
Suffocation & Strangulation (W75-W77,W81-W84)	0	0	0	8	5	3	5	4	1
Other (V00-W74,W78-W80,W85-X59,Y85-Y86)	0	0	0	1	0	1	1	1	0
Assault (homicide) (X85-Y09, Y87.1)	0	0	0	5	5	0	3	2	1
Other (X60-X84,Y10-Y84,Y87.0,Y87.2-Y89)	0	0	0	2	0	2	3	2	1

<sup>1</sup> 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, 2004**

County	Total All Causes	Maternal Factors	Hypoxia & Respiratory Conditions	Other Perinatal Conditions	Congenital Malformations	Sudden Infant Death	External Causes	All Other Causes
<b>State Total</b>	<b>451</b>	<b>53</b>	<b>42</b>	<b>94</b>	<b>120</b>	<b>53</b>	<b>29</b>	<b>60</b>
Adams	4	0	1	0	2	1	0	0
Asotin	4	0	1	1	1	0	0	1
Benton	9	0	3	1	3	1	1	0
Chelan	2	0	0	0	2	0	0	0
Clallam	4	1	0	0	2	0	0	1
Clark	27	2	3	2	7	5	4	4
Columbia	0	0	0	0	0	0	0	0
Cowlitz	8	1	0	1	1	0	4	1
Douglas	2	0	1	0	1	0	0	0
Ferry	0	0	0	0	0	0	0	0
Franklin	6	0	3	1	2	0	0	0
Garfield	0	0	0	0	0	0	0	0
Grant	13	2	1	1	2	3	1	3
Grays Harbor	3	0	1	0	0	1	0	1
Island	9	2	0	3	2	1	1	0
Jefferson	0	0	0	0	0	0	0	0
King	101	14	4	19	40	10	5	9
Kitsap	14	1	1	1	4	3	1	3
Kittitas	4	0	0	2	0	2	0	0
Klickitat	0	0	0	0	0	0	0	0
Lewis	8	2	0	4	1	1	0	0
Lincoln	0	0	0	0	0	0	0	0
Mason	7	0	0	4	2	0	0	1
Okanogan	6	0	1	0	0	1	0	4
Pacific	2	1	0	0	0	0	0	1
Pend Oreille	0	0	0	0	0	0	0	0
Pierce	60	4	9	16	10	2	2	17
San Juan	0	0	0	0	0	0	0	0
Skagit	11	1	1	2	2	3	1	1
Skamania	1	0	0	0	0	0	0	1
Snohomish	40	3	3	13	8	9	2	2
Spokane	37	7	1	10	8	5	3	3
Stevens	4	0	1	0	2	0	0	1
Thurston	18	2	2	3	4	3	2	2
Wahkiakum	0	0	0	0	0	0	0	0
Walla Walla	2	0	0	0	2	0	0	0
Whatcom	9	1	0	1	2	1	1	3
Whitman	2	0	1	0	1	0	0	0
Yakima	34	9	4	9	9	1	1	1

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<sup>1</sup> by Infant (Age < 1 Year) County of Residence<sup>2</sup>, 2004**

County	Total	White	African American	Native American	Asian	Pacific Islander	More Than One Race Given	Race Unknown
<b>State Total</b>	<b>451</b>	<b>321</b>	<b>32</b>	<b>14</b>	<b>29</b>	<b>6</b>	<b>15</b>	<b>34</b>
<b>State Rate<sup>3</sup></b>	<b>5.5</b>	<b>4.9</b>	<b>10.7</b>	<b>8.9</b>	<b>4.6</b>	<b>8.9</b>	<b>n/a</b>	<b>17.2</b>
Adams	4	4	0	0	0	0	0	0
Asotin	4	2	0	0	0	0	0	2
Benton	9	7	1	0	0	0	0	1
Chelan	2	2	0	0	0	0	0	0
Clallam	4	3	0	0	0	0	0	1
Clark	27	15	1	0	1	0	1	9
Columbia	0	0	0	0	0	0	0	0
Cowlitz	8	6	0	0	1	0	0	1
Douglas	2	2	0	0	0	0	0	0
Ferry	0	0	0	0	0	0	0	0
Franklin	6	6	0	0	0	0	0	0
Garfield	0	0	0	0	0	0	0	0
Grant	13	11	0	2	0	0	0	0
Grays Harbor	3	2	0	0	1	0	0	0
Island	9	6	2	0	0	0	1	0
Jefferson	0	0	0	0	0	0	0	0
King	101	60	13	2	14	4	2	6
Kitsap	14	9	2	0	2	0	1	0
Kittitas	4	2	0	0	1	0	1	0
Klickitat	0	0	0	0	0	0	0	0
Lewis	8	7	1	0	0	0	0	0
Lincoln	0	0	0	0	0	0	0	0
Mason	7	7	0	0	0	0	0	0
Okanogan	6	3	0	3	0	0	0	0
Pacific	2	0	0	0	0	0	0	2
Pend Oreille	0	0	0	0	0	0	0	0
Pierce	60	41	9	0	3	2	2	3
San Juan	0	0	0	0	0	0	0	0
Skagit	11	9	0	1	1	0	0	0
Skamania	1	0	0	0	0	0	0	1
Snohomish	40	30	1	1	4	0	1	3
Spokane	37	30	1	0	1	0	2	3
Stevens	4	3	0	1	0	0	0	0
Thurston	18	15	1	0	0	0	1	1
Wahkiakum	0	0	0	0	0	0	0	0
Walla Walla	2	2	0	0	0	0	0	0
Whatcom	9	7	0	1	0	0	0	1
Whitman	2	2	0	0	0	0	0	0
Yakima	34	28	0	3	0	0	3	0

<sup>1</sup> Infant deaths are matched with births to find mother's race/ethnicity.

<sup>2</sup> Residence is the infant's at the time of death.

<sup>3</sup> Rate per 1,000 live births.

<sup>4</sup> 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<sup>1</sup> by Infant (Age < 1 Year) by Place of Residence<sup>2</sup>, 2004**

County	Under										Age Unk
	All Ages	15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45 and Over	
<b>State Total</b>	<b>451</b>	<b>4</b>	<b>20</b>	<b>42</b>	<b>132</b>	<b>83</b>	<b>85</b>	<b>57</b>	<b>24</b>	<b>0</b>	<b>4</b>
<b>State Rate<sup>3</sup></b>	<b>5.5</b>	<b>*</b>	<b>10.0</b>	<b>8.9</b>	<b>6.6</b>	<b>3.7</b>	<b>4.3</b>	<b>5.7</b>	<b>10.7</b>	<b>*</b>	<b>n/a</b>
Adams	4	0	1	0	1	1	1	0	0	0	0
Asotin	4	0	1	0	1	1	0	0	0	0	1
Benton	9	0	0	1	3	0	1	4	0	0	0
Chelan	2	0	0	1	0	0	1	0	0	0	0
Clallam	4	0	0	1	1	0	1	1	0	0	0
Clark	27	0	0	2	5	6	8	4	1	0	1
Columbia	0	0	0	0	0	0	0	0	0	0	0
Cowlitz	8	0	2	0	4	1	1	0	0	0	0
Douglas	2	0	0	1	1	0	0	0	0	0	0
Ferry	0	0	0	0	0	0	0	0	0	0	0
Franklin	6	0	1	0	1	3	0	0	1	0	0
Garfield	0	0	0	0	0	0	0	0	0	0	0
Grant	13	1	2	2	6	2	0	0	0	0	0
Grays Harbor	3	0	0	0	2	1	0	0	0	0	0
Island	9	0	0	0	6	1	0	1	1	0	0
Jefferson	0	0	0	0	0	0	0	0	0	0	0
King	101	1	1	5	22	19	22	21	10	0	0
Kitsap	14	0	1	2	4	1	4	1	1	0	0
Kittitas	4	0	0	0	2	0	0	1	1	0	0
Klickitat	0	0	0	0	0	0	0	0	0	0	0
Lewis	8	0	0	2	2	1	3	0	0	0	0
Lincoln	0	0	0	0	0	0	0	0	0	0	0
Mason	7	0	0	2	1	0	2	2	0	0	0
Okanogan	6	0	0	1	3	1	1	0	0	0	0
Pacific	2	0	0	0	1	0	0	0	0	0	1
Pend Oreille	0	0	0	0	0	0	0	0	0	0	0
Pierce	60	0	3	9	14	9	12	9	3	0	1
San Juan	0	0	0	0	0	0	0	0	0	0	0
Skagit	11	0	0	0	5	3	2	1	0	0	0
Skamania	1	0	0	0	0	0	1	0	0	0	0
Snohomish	40	0	1	3	12	13	7	3	1	0	0
Spokane	37	1	2	6	9	7	5	5	2	0	0
Stevens	4	0	0	1	1	1	0	0	1	0	0
Thurston	18	0	0	2	7	4	4	0	1	0	0
Wahkiakum	0	0	0	0	0	0	0	0	0	0	0
Walla Walla	2	0	0	0	0	0	1	1	0	0	0
Whatcom	9	0	2	0	4	2	1	0	0	0	0
Whitman	2	0	0	0	1	0	1	0	0	0	0
Yakima	34	1	3	1	13	6	6	3	1	0	0

<sup>1</sup> Infant deaths are matched with births to find mother's age.

<sup>2</sup> Residence is the infant's at the time of death.

<sup>3</sup> 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, 2004**

County and City	Fetal Deaths		Perinatal Mortality		Neonatal Mortality		Infant Mortality	
	Number	Ratio <sup>1</sup>	Number	Rate <sup>2</sup>	Number	Rate <sup>3</sup>	Number	Rate <sup>4</sup>
<b>State Total</b>	<b>432</b>	<b>5.3</b>	<b>639</b>	<b>7.8</b>	<b>273</b>	<b>3.3</b>	<b>451</b>	<b>5.5</b>
Adams	1	*	2	*	3	*	4	*
Asotin	0	*	3	*	3	*	4	*
Benton	8	3.7	12	5.5	5	2.3	9	4.1
Kennewick	5	4.4	7	6.2	3	*	3	*
Richland	2	*	4	*	2	*	2	*
Chelan	6	6.7	7	7.7	1	*	2	*
Wenatchee	3	*	3	*	0	*	0	*
Clallam	3	*	6	9.9	3	*	4	*
Port Angeles	1	*	2	*	1	*	1	*
Clark	24	4.3	32	5.8	12	2.2	27	4.9
Camas	0	*	0	*	0	*	0	*
Vancouver	19	5.2	22	5.9	6	1.6	19	5.2
Columbia	0	*	0	*	0	*	0	*
Cowlitz	5	4.1	7	5.7	3	*	8	6.5
Longview	2	*	3	*	1	*	4	*
Douglas	2	*	3	*	2	*	2	*
Ferry	0	*	0	*	0	*	0	*
Franklin	8	6.0	10	7.5	6	4.5	6	4.5
Pasco	6	5.4	8	7.2	5	4.5	5	4.5
Garfield	0	*	0	*	0	*	0	*
Grant	6	4.2	12	8.3	7	4.9	13	9.0
Moses Lake	1	*	3	*	2	*	4	*
Grays Harbor	5	6.0	6	7.2	1	*	3	*
Aberdeen	0	*	0	*	0	*	1	*
Island	4	*	10	10.1	6	6.1	9	9.1
Oak Harbor	1	*	5	9.6	4	*	4	*
Jefferson	3	*	3	*	0	*	0	*
King	145	6.3	193	8.4	67	2.9	101	4.4
Auburn	9	9.1	11	11.1	2	*	3	*
Bellevue	7	5.0	9	6.4	3	*	4	*
Bothell part	2	*	3	*	1	*	2	*
Burien	0	*	0	*	1	*	2	*
Covington	1	*	3	*	2	*	2	*
Des Moines	1	*	2	*	1	*	1	*
Federal Way	8	6.5	9	7.3	2	*	3	*
Issaquah	2	*	2	*	0	*	0	*
Kenmore	1	*	1	*	0	*	1	*
Kent	8	4.7	10	5.9	7	4.1	14	8.3
Kirkland	6	7.5	6	7.5	0	*	0	*
Maple Valley	1	*	1	*	0	*	0	*
Mercer Island	0	*	1	*	1	*	1	*
Redmond	8	8.4	9	9.4	1	*	2	*
Renton	13	9.1	20	13.9	7	4.9	11	7.7
Sammamish	4	*	4	*	0	*	0	*
SeaTac	4	*	4	*	1	*	2	*
Seattle	50	6.9	68	9.4	25	3.5	36	5.0
Shoreline	1	*	2	*	1	*	1	*



**Mortality Table F8. (Continued) Fetal Deaths, Perinatal, Neonatal, and Infant Mortality by County/City of Residence, 2004**

County and City	Fetal Deaths		Perinatal Mortality		Neonatal Mortality		Infant Mortality	
	Number	Ratio <sup>1</sup>	Number	Rate <sup>2</sup>	Number	Rate <sup>3</sup>	Number	Rate <sup>4</sup>
Tukwila	2	*	3	*	2	*	2	*
Kitsap	13	4.3	19	6.3	8	2.7	14	4.7
Bainbridge Island	0	*	0	*	0	*	0	*
Bremerton	4	*	6	6.0	3	*	4	*
Kittitas	1	*	3	*	2	*	4	*
Ellensburg	0	*	1	*	1	*	2	*
Klickitat	2	*	2	*	0	*	0	*
Lewis	6	7.1	10	11.7	6	7.1	8	9.4
Centralia	4	*	5	17.9	2	*	4	*
Lincoln	0	*	0	*	0	*	0	*
Mason	2	*	9	16.0	7	12.5	7	12.5
Okanogan	3	*	4	*	1	*	6	12.0
Pacific	0	*	1	*	1	*	2	*
Pend Oreille	0	*	0	*	0	*	0	*
Pierce	45	4.4	66	6.4	33	3.2	60	5.8
Lakewood	6	6.5	7	7.5	1	*	1	*
Puyallup	6	5.8	8	7.6	4	*	6	5.8
Tacoma	16	4.3	23	6.2	11	3.0	15	4.0
University Place	2	*	2	*	0	*	2	*
San Juan	1	*	1	*	0	*	0	*
Skagit	7	4.9	11	7.7	6	4.2	11	7.8
Anacortes	2	*	2	*	0	*	0	*
Mount Vernon	1	*	2	*	1	*	3	*
Skamania	0	*	0	*	0	*	1	*
Snohomish	47	5.4	61	7.0	22	2.5	40	4.6
Edmonds	2	*	2	*	1	*	2	*
Everett	8	3.6	13	5.9	7	3.2	13	5.9
Lynnwood	4	*	6	5.7	3	*	4	*
Marysville	6	9.3	6	9.2	0	*	2	*
Monroe	2	*	2	*	0	*	0	*
Mountlake Terrace	1	*	2	*	1	*	2	*
Mukilteo	2	*	2	*	0	*	1	*
Spokane	29	5.3	49	8.9	22	4.0	37	6.8
Spokane (city)	14	4.1	25	7.3	12	3.5	19	5.6
Stevens	2	*	2	*	0	*	4	*
Thurston	16	6.1	26	9.9	11	4.2	18	6.9
Lacey	6	11.0	7	12.7	1	*	1	*
Olympia	4	*	9	9.0	5	5.0	6	6.1
Wahkiakum	0	*	0	*	0	*	0	*
Walla Walla	0	*	2	*	2	*	2	*
Walla Walla (city)	0	*	1	*	1	*	1	*
Whatcom	10	4.9	13	6.3	3	*	9	4.4
Bellingham	4	*	6	7	2	*	6	7.1
Whitman	1	*	2	*	1	*	2	*
Pullman	1	*	2	*	1	*	1	*
Yakima	27	6.4	52	12.3	29	6.9	34	8.1
Yakima (city)	7	4.1	18	10.4	12	7	13	7.5

<sup>1</sup> Fetal death ratio = fetal deaths per 1,000 live births.

<sup>2</sup> Perinatal mortality rate = fetal deaths plus deaths to infants within first 6 days of life per 1,000 live births plus fetal deaths.

<sup>3</sup> Neonatal mortality rate = deaths to infants within first 27 days of life per 1,000 live births.

<sup>4</sup> 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, 1995-2004**

Year	Total All Causes		Fetus Affected by Maternal Complications of Pregnancy		Complications of Placenta, Cord, & Membrane		Other Perinatal Conditions		Congenital Anomalies	
	Number	Ratio <sup>1</sup>	Number	Ratio <sup>1</sup>	Number	Ratio <sup>1</sup>	Number	Ratio <sup>1</sup>	Number	Ratio <sup>1</sup>
1995	419	5.4	44	0.6	145	1.9	171	2.2	59	0.8
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

<sup>1</sup>Ratio per 1,000 live births.

Note:

Causes of death were coded with ICD-9 through 1998 and with ICD-10 beginning 1999. Comparability 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 2003 ratio was higher than in the past decade; however the 2004 ratio (5.3) is back down to 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, 2004**

County	All Ages	Under 15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45 and Over	Unk
<b>State Total</b>	<b>432</b>	<b>3</b>	<b>11</b>	<b>19</b>	<b>100</b>	<b>96</b>	<b>113</b>	<b>66</b>	<b>16</b>	<b>0</b>	<b>8</b>
<b>State Ratio<sup>1</sup></b>	<b>5.3</b>	<b>.</b>	<b>5.5</b>	<b>4.0</b>	<b>5.0</b>	<b>4.2</b>	<b>5.7</b>	<b>6.6</b>	<b>7.2</b>	<b>.</b>	<b>n/a</b>
Adams	1	0	0	1	0	0	0	0	0	0	0
Asotin	0	0	0	0	0	0	0	0	0	0	0
Benton	8	1	0	0	3	2	2	0	0	0	0
Chelan	6	0	1	0	2	1	1	1	0	0	0
Clallam	3	0	0	1	0	1	1	0	0	0	0
Clark	24	0	1	3	7	7	5	1	0	0	0
Columbia	0	0	0	0	0	0	0	0	0	0	0
Cowlitz	5	0	0	1	1	1	1	1	0	0	0
Douglas	2	0	0	0	0	2	0	0	0	0	0
Ferry	0	0	0	0	0	0	0	0	0	0	0
Franklin	8	0	1	0	2	2	2	1	0	0	0
Garfield	0	0	0	0	0	0	0	0	0	0	0
Grant	6	0	0	0	2	1	2	1	0	0	0
Grays Harbor	5	0	0	0	0	1	4	0	0	0	0
Island	4	0	0	0	1	2	1	0	0	0	0
Jefferson	3	0	0	0	0	1	0	2	0	0	0
King	145	2	2	4	21	26	42	38	6	0	4
Kitsap	13	0	0	0	4	4	3	1	1	0	0
Kittitas	1	0	0	0	0	0	0	0	1	0	0
Klickitat	2	0	0	0	1	0	0	1	0	0	0
Lewis	6	0	0	1	3	1	1	0	0	0	0
Lincoln	0	0	0	0	0	0	0	0	0	0	0
Mason	2	0	0	0	1	1	0	0	0	0	0
Okanogan	3	0	0	0	2	1	0	0	0	0	0
Pacific	0	0	0	0	0	0	0	0	0	0	0
Pend Oreille	0	0	0	0	0	0	0	0	0	0	0
Pierce	45	0	2	2	13	7	13	4	4	0	0
San Juan	1	0	0	0	0	0	1	0	0	0	0
Skagit	7	0	0	2	2	1	0	1	1	0	0
Skamania	0	0	0	0	0	0	0	0	0	0	0
Snohomish	47	0	0	0	9	10	19	5	2	0	2
Spokane	29	0	0	1	10	6	8	3	0	0	1
Stevens	2	0	1	0	0	0	0	1	0	0	0
Thurston	16	0	1	1	4	5	3	2	0	0	0
Wahkiakum	0	0	0	0	0	0	0	0	0	0	0
Walla Walla	0	0	0	0	0	0	0	0	0	0	0
Whatcom	10	0	0	0	2	4	2	1	0	0	1
Whitman	1	0	0	0	0	1	0	0	0	0	0
Yakima	27	0	2	2	10	8	2	2	1	0	0

<sup>1</sup> 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, 2004**

<b>Cause with ICD-10 Code</b>	<b>Number</b>
<b>All causes<sup>1</sup></b>	<b>432</b>
<b>Perinatal conditions (P00-P96)</b>	<b>339</b>
Fetus Affected by Maternal Conditions (P00) <sup>2</sup>	(34)
Maternal Hypertensive Disorders (P00.0)	24
Maternal Injury (P00.5)	1
Other Maternal Conditions (P00.1-P00.4,P00.6-P00.9)	9
Fetus Affected by Maternal Complications of Pregnancy (P01)	(74)
Incompetent Cervix (P01.0)	14
Premature Rupture of Membranes (P01.1)	47
Multiple Pregnancy (P01.5)	7
Other (P01.2-P01.4,P01.6-P01.9)	6
Fetus Affected by Complications of Placenta, Cord & Membrane (P02)	(114)
Other Forms of Placental Separation & Hemorrhage (P02.1)	27
Other Morphological & Functional Abnormalities of Placenta (P02.2)	14
Placental Transfusion Syndrome (P02.3)	5
Other Compression of Umbilical Cord (P02.5)	35
Other & Unspecified Conditions of Umbilical Cord (P02.6)	10
Chorioamnionitis (P02.7)	14
Other (P02.0,P02.4,P02.8-P02.9)	9
Fetus Affected by Complications of Labor & Delivery (P03)	5
Fetus Affected by Noxious Influences Via Placenta (P04)	6
Slow Fetal Growth & Fetal Malnutrition (P05)	5
Disorders Related to Short Gestation, Low Birth Weight (P07)	8
Disorders Related to Long Gestation & High Birth Weight (P08)	0
Birth Trauma (P10-P15)	0
Intrauterine Hypoxia and Birth Asphyxia (P20-P21)	2
Fetal Hemorrhage (P50-P54)	2
Hydrops Fetalis Due to Hemolytic Disease (P56)	0
Transitory Endocrine & Metabolic Disorders (P70-P74)	9
Fetal Death of Unspecified Cause (P95)	72
All other (P22-P26,P28,P30-P49,P55,P57-P69,P75-P94,P96)	8
<b>Congenital Malformations &amp; Chromosomal Abnormalities (Q00-Q99)</b>	<b>85</b>
Congenital Malformations of Nervous System (Q00-Q07)	(12)
Anencephaly & Similar Malformations (Q00)	5
Other (Q01-Q07)	7
Congenital Malformations of Heart (Q20-Q24)	11
Congenital Malformations of Urinary System (Q60-Q64)	7
Congenital Malformations Musculoskeletal & Integument (Q65-Q85)	15
Chromosomal Abnormalities Not Elsewhere Classified, (Q90-Q99)	(27)
Down's Syndrome (Q90)	9
Edward's Syndrome (Q91.0-Q91.3)	6
Other (Q91.4-Q99)	12
Other (Q08-Q18,Q25-Q56,Q86-Q89)	13
<b>All Other Causes (A00-O00,R00-R99,V01-V84)</b>	<b>8</b>

<sup>1</sup> Group totals are shown in bold.

<sup>2</sup> Sub-group totals are shown in parentheses.

**Mortality Table G4. Fetal Deaths by Weight and Sex for Residents, 2004**

<b>Weight in Grams</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>	<b>Unknown</b>
<b>State Totals</b>	<b>432</b>	<b>231</b>	<b>198</b>	<b>3</b>
Under 250	31	15	16	0
250 - 499	90	42	48	0
500 - 749	51	31	19	1
750 - 999	19	13	6	0
1,000 - 1,499	24	13	11	0
1,500 - 1,999	21	12	9	0
2,000 - 2,499	25	17	8	0
2,500 - 2,999	29	18	11	0
3,000 - 3,499	32	21	11	0
3,500 - 3,999	19	11	8	0
4,000 - 4,499	5	4	1	0
4,500 and over	4	2	2	0
Unknown	82	32	48	2



# 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<sup>1</sup>, 2004**

County	Occurrence		Wife's Residence		Husband's Residence	
	Number	Rate <sup>2, 3</sup>	Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>
<b>State Total</b>	<b>40,169</b>	<b>6.5</b>	<b>37,043</b>	<b>6.0</b>	<b>36,581</b>	<b>5.9</b>
Adams	123	7.4	91	5.4	99	5.9
Asotin	119	5.7	66	3.2	64	3.1
Benton	961	6.2	906	5.8	896	5.8
Chelan	804	11.8	428	6.3	399	5.8
Clallam	468	7.1	378	5.7	380	5.8
Clark	2,261	5.9	1,988	5.2	1,934	5.0
Columbia	25	6.1	21	5.1	20	4.9
Cowlitz	693	7.3	546	5.7	546	5.7
Douglas	127	3.7	201	5.9	188	5.5
Ferry	42	5.8	35	4.8	36	4.9
Franklin	365	6.4	337	5.9	320	5.6
Garfield	17	7.1	9	3.8	12	5.0
Grant	430	5.5	460	5.9	438	5.6
Grays Harbor	576	8.3	443	6.4	429	6.2
Island	644	8.6	486	6.5	527	7.0
Jefferson	272	10.1	128	4.7	137	5.1
King	11,403	6.4	11,015	6.2	10,785	6.0
Kitsap	1,815	7.6	1,604	6.7	1,668	7.0
Kittitas	218	6.1	229	6.4	224	6.3
Klickitat	123	6.4	78	4.0	78	4.0
Lewis	510	7.2	465	6.6	446	6.3
Lincoln	50	4.9	35	3.4	37	3.6
Mason	372	7.3	326	6.4	327	6.4
Okanogan	258	6.5	151	3.8	158	4.0
Pacific	189	9.0	108	5.1	108	5.1
Pend Oreille	73	6.1	44	3.7	40	3.4
Pierce	5,209	7.0	4,822	6.5	4,873	6.5
San Juan	410	27.2	71	4.7	73	4.8
Skagit	853	7.8	705	6.5	712	6.5
Skamania	135	13.4	51	5.0	45	4.5
Snohomish	3,454	5.4	4,057	6.3	4,008	6.2
Spokane	2,248	5.2	2,073	4.8	2,017	4.7
Stevens	214	5.3	190	4.7	188	4.6
Thurston	1,502	6.9	1,485	6.8	1,447	6.6
Wahkiakum	25	6.6	17	4.5	20	5.3
Walla Walla	355	6.3	303	5.3	279	4.9
Whatcom	1,269	7.2	1,159	6.5	1,142	6.4
Whitman	143	3.4	171	4.1	177	4.2
Yakima	1,413	6.2	1,361	6.0	1,304	5.7
Tribal Authority	1	*	*	*	*	*
Out of State	—	—	—	—	—	—
	*	*	3,125	*	3,587	*
Unknown	*	*	1	*	1	*

<sup>1</sup> Does not include marriages to Washington residents performed in other states or countries.

<sup>2</sup> Rates per 1,000 population.

<sup>3</sup> 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, 2004**

County	Total	Under										65 and Over	Unk
		20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64		
<b>State Total</b>	<b>40,169</b>	<b>2,795</b>	<b>11,073</b>	<b>8,546</b>	<b>5,393</b>	<b>3,610</b>	<b>2,877</b>	<b>2,328</b>	<b>1,497</b>	<b>885</b>	<b>526</b>	<b>534</b>	<b>105</b>
Adams	123	22	46	25	16	6	3	2	1	0	0	2	0
Asotin	119	7	32	24	19	7	8	9	5	5	0	3	0
Benton	961	95	352	183	88	67	63	50	25	14	8	12	4
Chelan	804	53	228	153	94	73	74	52	28	20	9	13	7
Clallam	468	29	109	88	59	40	45	35	25	13	16	9	0
Clark	2,261	197	615	395	293	205	174	156	88	65	42	31	0
Columbia	25	0	9	7	3	1	0	5	0	0	0	0	0
Cowlitz	693	46	202	149	88	51	48	47	21	19	10	11	1
Douglas	127	14	45	22	15	7	9	6	4	2	2	0	1
Ferry	42	2	11	6	4	7	5	2	2	2	1	0	0
Franklin	365	55	116	71	39	26	27	16	8	0	1	5	1
Garfield	17	1	7	4	2	0	0	0	1	0	1	1	0
Grant	430	65	149	81	45	15	23	18	15	9	2	8	0
Grays Harbor	576	52	143	106	65	57	48	41	24	18	6	9	7
Island	644	61	168	120	93	54	47	32	26	16	10	14	3
Jefferson	272	4	37	58	40	34	26	25	17	17	9	5	0
King	11,403	446	2,580	2,888	1,969	1,214	777	611	418	240	137	98	25
Kitsap	1,815	185	604	332	190	151	125	89	50	38	24	22	5
Kittitas	218	13	78	35	23	16	15	19	8	4	4	2	1
Klickitat	123	12	35	21	15	13	7	6	5	1	5	3	0
Lewis	510	50	142	96	65	33	36	30	15	13	18	8	4
Lincoln	50	1	18	6	6	4	4	5	2	0	0	3	1
Mason	372	30	87	59	46	33	36	29	16	13	9	9	5
Okanogan	258	15	48	51	52	29	18	18	8	10	2	5	2
Pacific	189	13	40	34	21	9	16	20	16	11	6	3	0
Pend Oreille	73	8	27	8	6	4	6	3	5	2	0	4	0
Pierce	5,209	428	1,538	1,076	593	459	372	303	188	114	60	72	6
San Juan	410	4	41	93	96	61	37	39	15	15	5	4	0
Skagit	853	77	234	163	106	68	64	50	39	19	13	20	0
Skamania	135	4	28	24	18	8	14	17	12	6	2	2	0
Snohomish	3,454	230	972	687	449	325	272	211	127	80	45	47	9
Spokane	2,248	139	793	486	240	157	153	119	87	28	14	32	0
Stevens	214	27	70	32	14	13	17	14	9	9	5	4	0
Thurston	1,502	106	435	317	183	126	97	93	73	20	20	18	14
Wahkiakum	25	1	10	0	5	1	4	1	2	0	0	1	0
Walla Walla	355	36	136	64	26	23	16	16	11	8	9	10	0
Whatcom	1,269	81	364	283	155	107	82	76	48	28	17	21	7
Whitman	143	4	66	34	9	9	7	0	5	3	3	2	1
Yakima	1,413	182	458	264	143	97	102	63	48	23	11	21	1
Tribal Authority	1	0	0	1	0	0	0	0	0	0	0	0	0

**Table 3. Marriages by Man's Age and County where Ceremony was Performed, 2004**

County	Total	Under										65 and Over	Unk
		20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64		
<b>State Total</b>	<b>40,169</b>	<b>990</b>	<b>9,080</b>	<b>9,063</b>	<b>6,215</b>	<b>4,098</b>	<b>3,170</b>	<b>2,537</b>	<b>1,953</b>	<b>1,254</b>	<b>774</b>	<b>947</b>	<b>88</b>
Adams	123	8	49	29	11	8	4	2	7	1	2	2	0
Asotin	119	4	26	25	12	12	8	12	5	6	3	6	0
Benton	961	33	309	208	106	75	57	62	41	32	13	17	8
Chelan	804	16	148	193	120	80	73	61	53	22	14	19	5
Clallam	468	6	93	92	73	41	54	29	25	18	16	20	1
Clark	2,261	68	504	467	325	227	182	177	110	88	55	58	0
Columbia	25	1	6	6	2	2	2	4	2	0	0	0	0
Cowlitz	693	21	159	164	101	73	49	40	34	19	15	17	1
Douglas	127	2	34	31	15	14	8	7	10	3	0	3	0
Ferry	42	3	10	6	3	3	2	5	6	3	1	0	0
Franklin	365	18	110	90	53	31	22	15	13	4	3	6	0
Garfield	17	0	6	5	2	0	0	0	2	0	0	2	0
Grant	430	25	153	88	44	30	24	22	12	12	9	10	1
Grays Harbor	576	26	119	110	86	54	55	41	33	20	11	17	4
Island	644	27	164	127	88	61	44	36	33	23	17	21	3
Jefferson	272	0	29	48	40	28	32	18	27	22	12	15	1
King	11,403	134	1,885	2,753	2,211	1,440	986	720	518	348	199	193	16
Kitsap	1,815	65	585	374	227	164	104	103	69	46	30	44	4
Kittitas	218	5	63	43	31	15	15	14	13	10	5	3	1
Klickitat	123	2	35	21	13	13	11	7	5	5	5	5	1
Lewis	510	23	132	111	63	41	43	34	16	15	12	19	1
Lincoln	50	1	14	7	6	8	6	0	1	2	0	5	0
Mason	372	10	87	57	51	45	33	25	19	18	10	16	1
Okanogan	258	4	48	52	42	31	25	15	13	11	6	9	2
Pacific	189	5	29	43	23	13	14	22	19	9	6	6	0
Pend Oreille	73	7	21	8	7	8	3	3	7	4	2	3	0
Pierce	5,209	160	1,311	1,164	763	473	408	330	222	143	97	127	11
San Juan	410	1	27	76	89	65	45	45	19	18	10	11	4
Skagit	853	19	226	169	120	69	66	63	43	32	15	31	0
Skamania	135	1	17	25	20	17	6	13	19	10	4	2	1
Snohomish	3,454	74	796	726	519	360	305	228	197	94	70	78	7
Spokane	2,248	45	616	565	311	183	152	127	98	67	39	44	1
Stevens	214	7	65	40	24	22	9	6	17	8	6	10	0
Thurston	1,502	37	340	364	199	157	109	93	86	40	34	33	10
Wahkiakum	25	0	4	7	1	2	4	2	2	1	0	2	0
Walla Walla	355	14	124	72	40	16	22	19	12	13	10	13	0
Whatcom	1,269	43	276	329	186	102	81	64	80	41	22	42	3
Whitman	143	2	44	42	19	8	6	3	4	5	5	5	0
Yakima	1,413	73	416	326	168	107	101	70	61	41	16	33	1
Tribal Authority	1	0	0	0	1	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<sup>1</sup>, 2004**

County	Occurrence		Wife's Residence		Husband's Residence	
	Number	Rate <sup>2, 3</sup>	Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>
<b>State Total</b>	25,930	4.2	23,922	3.9	22,884	3.7
Adams	43	2.6	40	2.4	44	2.6
Asotin	102	4.9	95	4.6	93	4.5
Benton	654	4.2	646	4.2	585	3.8
Chelan	315	4.6	237	3.5	245	3.6
Clallam	307	4.7	307	4.7	297	4.5
Clark	1,595	4.2	1,581	4.1	1,472	3.8
Columbia	13	3.2	15	3.7	16	3.9
Cowlitz	451	4.7	440	4.6	420	4.4
Douglas	18	0.5	113	3.3	98	2.9
Ferry	19	2.6	21	2.9	25	3.4
Franklin	167	2.9	146	2.6	171	3
Garfield	12	5	9	3.8	6	2.5
Grant	209	2.7	210	2.7	199	2.5
Grays Harbor	294	4.2	295	4.3	300	4.3
Island	250	3.3	275	3.7	283	3.8
Jefferson	127	4.7	125	4.6	121	4.5
King	5,494	3.1	6,303	3.5	6,054	3.4
Kitsap	984	4.1	974	4.1	933	3.9
Kittitas	113	3.2	119	3.3	124	3.5
Klickitat	84	4.4	79	4.1	83	4.3
Lewis	290	4.1	283	4	304	4.3
Lincoln	3,895	381.9	31	3	26	2.5
Mason	201	4	226	4.4	227	4.5
Okanogan	108	2.7	120	3	106	2.7
Pacific	81	3.9	83	4	90	4.3
Pend Oreille	56	4.7	52	4.4	43	3.6
Pierce	2,487	3.3	3,152	4.2	3,083	4.1
San Juan	48	3.2	48	3.2	49	3.2
Skagit	509	4.7	465	4.3	457	4.2
Skamania	49	4.9	34	3.4	35	3.5
Snohomish	2,421	3.8	2,658	4.1	2,468	3.8
Spokane	1,700	3.9	1,834	4.2	1,740	4
Stevens	135	3.3	168	4.1	161	4
Thurston	943	4.3	1,030	4.7	917	4.2
Wahkiakum	10	2.6	13	3.4	12	3.2
Walla Walla	213	3.8	202	3.6	197	3.5
Whatcom	614	3.5	635	3.6	588	3.3
Whitman	118	2.8	117	2.8	106	2.5
Yakima	773	3.4	741	3.3	706	3.1
Tribal Authority	28	*	*	*	*	*
Out-of-State	—	—	—	—	—	—
	*	*	1,528	*	2,307	*
Unknown	*	*	480	*	739	*

<sup>1</sup> Does not include divorces to Washington residents obtained in other states or countries.

<sup>2</sup> Rates per 1,000 population.

<sup>3</sup> 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, 2004**

<b>County</b>	<b>Total</b>	<b>Divorce</b>	<b>Annulment</b>	<b>Legal Separation<sup>1</sup></b>
<b>State Total</b>	<b>25,930</b>	<b>25,113</b>	<b>817</b>	<b>744</b>
Adams	43	43	0	0
Asotin	102	99	3	2
Benton	654	649	5	8
Chelan	315	299	16	27
Clallam	307	304	3	6
Clark	1,595	1,483	112	32
Columbia	13	13	0	0
Cowlitz	451	431	20	6
Douglas	18	18	0	0
Ferry	19	19	0	1
Franklin	167	165	2	7
Garfield	12	12	0	0
Grant	209	193	16	0
Grays Harbor	294	286	8	3
Island	250	249	1	11
Jefferson	127	125	2	0
King	5,494	5,206	288	183
Kitsap	984	886	98	41
Kittitas	113	112	1	3
Klickitat	84	80	4	2
Lewis	290	278	12	7
Lincoln	3,895	3,860	35	105
Mason	201	193	8	7
Okanogan	108	108	0	1
Pacific	81	78	3	3
Pend Oreille	56	56	0	0
Pierce	2,487	2,440	47	85
San Juan	48	48	0	3
Skagit	509	485	24	12
Skamania	49	49	0	0
Snohomish	2,421	2,350	71	70
Spokane	1,700	1,696	4	54
Stevens	135	134	1	5
Thurston	943	928	15	35
Wahkiakum	10	10	0	0
Walla Walla	213	213	0	4
Whatcom	614	610	4	8
Whitman	118	116	2	2
Yakima	773	765	8	10
Tribal Authority	28	24	4	1

<sup>1</sup>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, 2004**

County	Total	Under										65 and Over	Unk
		20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64		
<b>State Total</b>	<b>25,930</b>	<b>115</b>	<b>2,072</b>	<b>3,716</b>	<b>4,148</b>	<b>4,102</b>	<b>4,002</b>	<b>3,340</b>	<b>2,012</b>	<b>1,124</b>	<b>489</b>	<b>338</b>	<b>472</b>
Adams	43	0	3	6	7	11	10	1	2	1	0	2	0
Asotin	102	0	9	15	10	15	20	11	8	7	3	2	2
Benton	654	3	71	112	102	92	100	84	41	28	9	6	6
Chelan	315	1	23	47	51	53	48	44	21	9	8	4	6
Clallam	307	0	24	39	48	46	47	34	34	13	10	4	8
Clark	1,595	9	115	241	268	276	237	185	137	66	29	19	13
Columbia	13	0	1	1	3	2	2	3	1	0	0	0	0
Cowlitz	451	2	40	64	74	65	78	46	39	26	11	6	0
Douglas	18	0	2	2	2	3	2	5	2	0	0	0	0
Ferry	19	0	2	1	1	5	3	3	3	1	0	0	0
Franklin	167	0	13	36	25	27	24	13	10	10	3	2	4
Garfield	12	0	2	5	1	3	0	1	0	0	0	0	0
Grant	209	3	27	41	31	34	25	13	7	13	5	6	4
Grays Harbor	294	1	22	37	48	49	40	44	28	9	10	2	4
Island	250	6	44	43	31	29	27	25	25	8	5	5	2
Jefferson	127	0	9	18	14	15	21	21	8	10	6	4	1
King	5,494	5	247	658	900	933	901	796	514	282	112	64	82
Kitsap	984	6	151	156	125	127	141	128	72	41	13	11	13
Kittitas	113	1	9	17	12	18	24	15	7	6	3	0	1
Klickitat	84	1	8	15	9	9	8	13	9	4	4	3	1
Lewis	290	1	26	43	45	45	45	29	19	22	8	3	4
Lincoln	3,895	28	337	613	708	604	577	462	258	149	66	54	39
Mason	201	0	21	29	31	26	30	24	17	14	2	3	4
Okanogan	108	0	9	17	15	18	12	12	10	7	4	0	4
Pacific	81	0	6	11	8	8	11	11	4	6	8	4	4
Pend Oreille	56	0	1	7	7	9	9	13	4	3	1	1	1
Pierce	2,487	13	246	406	393	401	368	297	141	88	45	24	65
San Juan	48	0	2	3	5	4	7	7	8	10	1	1	0
Skagit	509	6	44	43	76	77	92	75	47	24	12	10	3
Skamania	49	0	1	5	7	8	9	8	5	2	3	1	0
Snohomish	2,421	9	156	314	369	413	380	334	186	76	36	24	124
Spokane	1,700	13	167	267	282	245	264	204	122	60	22	29	25
Stevens	135	0	12	17	12	15	21	25	17	11	3	1	1
Thurston	943	3	91	136	148	140	149	129	75	31	15	12	14
Wahkiakum	10	0	0	2	0	1	3	1	1	0	1	1	0
Walla Walla	213	0	17	22	28	35	44	21	21	10	9	5	1
Whatcom	614	2	40	71	105	98	103	93	55	31	6	5	5
Whitman	118	1	9	14	22	22	20	15	7	4	4	0	0
Yakima	773	1	60	137	119	117	98	92	46	42	12	19	30
Tribal Authority	28	0	5	5	6	4	2	3	1	0	0	1	1

**Table 4. Divorces and Annulments by Husband's Age and County of Decree, 2004**

County	Total	Under										65 and Over	Unk
		20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64		
<b>State Total</b>	<b>25,930</b>	<b>34</b>	<b>1,251</b>	<b>2,976</b>	<b>3,980</b>	<b>4,022</b>	<b>4,148</b>	<b>3,557</b>	<b>2,531</b>	<b>1,544</b>	<b>762</b>	<b>734</b>	<b>391</b>
Adams	43	0	0	6	7	10	10	4	2	1	0	2	1
Asotin	102	0	6	8	13	14	21	11	8	9	5	6	1
Benton	654	1	43	93	110	103	93	79	70	28	15	14	5
Chelan	315	0	13	35	55	46	51	48	33	16	9	7	2
Clallam	307	0	12	33	43	45	38	54	37	16	17	9	3
Clark	1,595	2	67	200	254	269	244	209	151	99	50	35	15
Columbia	13	0	0	1	2	3	4	1	2	0	0	0	0
Cowlitz	451	0	25	57	67	64	70	53	44	42	17	9	3
Douglas	18	0	1	3	0	1	5	2	4	2	0	0	0
Ferry	19	0	0	0	4	2	1	5	6	0	1	0	0
Franklin	167	0	9	27	25	34	21	22	8	8	2	5	6
Garfield	12	0	1	2	3	3	2	1	0	0	0	0	0
Grant	209	1	16	33	34	36	24	23	20	7	7	6	2
Grays Harbor	294	0	13	31	43	41	47	41	37	24	5	8	4
Island	250	0	38	33	47	25	28	21	19	19	4	12	4
Jefferson	127	0	7	11	16	13	21	16	18	7	5	12	1
King	5,494	5	102	500	800	904	933	869	565	392	183	176	65
Kitsap	984	1	112	152	135	100	159	128	84	53	26	26	8
Kittitas	113	0	7	12	17	15	19	15	7	5	6	7	3
Klickitat	84	1	3	10	12	9	7	16	10	8	2	4	2
Lewis	290	0	12	32	48	48	54	30	22	22	9	12	1
Lincoln	3,895	10	222	465	665	676	575	477	350	204	110	102	39
Mason	201	0	13	19	35	22	37	25	21	9	9	8	3
Okanogan	108	0	7	15	14	18	13	14	7	11	3	1	5
Pacific	81	0	2	8	7	8	9	6	14	9	9	7	2
Pend Oreille	56	0	0	4	5	6	8	9	8	7	4	3	2
Pierce	2,487	3	168	323	406	384	397	340	194	114	61	52	45
San Juan	48	0	0	3	5	5	5	7	10	7	3	3	0
Skagit	509	1	24	56	67	78	83	80	52	37	13	17	1
Skamania	49	0	0	6	5	8	3	9	9	2	3	4	0
Snohomish	2,421	1	81	250	338	386	431	335	250	129	51	55	114
Spokane	1,700	6	110	222	272	236	288	223	148	88	42	50	15
Stevens	135	0	9	10	15	11	20	21	26	15	3	4	1
Thurston	943	2	52	109	154	141	143	123	103	58	29	21	8
Wahkiakum	10	0	0	1	1	0	2	3	1	1	0	1	0
Walla Walla	213	0	6	21	29	32	30	35	27	14	6	10	3
Whatcom	614	0	20	57	80	92	105	98	84	33	21	19	5
Whitman	118	0	7	10	21	16	21	16	16	6	3	2	0
Yakima	773	0	41	115	122	112	123	88	62	40	28	24	18
Tribal Authority	28	0	2	3	4	6	3	0	2	2	1	1	4

**Table 5. Divorces and Annulments by Number of Children<sup>1</sup> and County of Wife's Residence<sup>2</sup>, 2004**

County	Total	0	1	2	3	4 +	Unknown <sup>3</sup>
<b>State Total</b>	<b>25,930</b>	<b>12,315</b>	<b>5,316</b>	<b>5,478</b>	<b>1,816</b>	<b>686</b>	<b>319</b>
Adams	40	18	3	12	1	4	2
Asotin	95	50	18	20	5	1	1
Benton	646	286	143	144	51	19	3
Chelan	237	111	34	60	21	10	1
Clallam	307	136	65	64	33	8	1
Clark	1,581	676	376	345	134	32	18
Columbia	15	5	2	7	0	1	0
Cowlitz	440	198	98	95	30	15	4
Douglas	113	51	22	29	8	1	2
Ferry	21	10	7	3	0	1	0
Franklin	146	50	29	37	14	12	4
Garfield	9	2	3	4	0	0	0
Grant	210	91	32	48	24	11	4
Grays Harbor	295	134	60	58	24	10	9
Island	275	140	52	58	16	6	3
Jefferson	125	69	28	20	4	1	3
King	6,303	3,224	1,162	1,343	374	162	38
Kitsap	974	466	200	219	65	19	5
Kittitas	119	60	26	17	11	2	3
Klickitat	79	35	14	20	5	3	2
Lewis	283	127	58	56	27	11	4
Lincoln	31	14	5	8	0	3	1
Mason	226	82	68	44	18	6	8
Okanogan	120	59	25	25	6	5	0
Pacific	83	41	13	19	8	1	1
Pend Oreille	52	30	8	7	2	5	0
Pierce	3,152	1,446	759	651	222	64	10
San Juan	48	30	8	6	2	2	0
Skagit	465	201	96	121	35	8	4
Skamania	34	12	9	6	3	3	1
Snohomish	2,658	1,194	559	584	207	72	42
Spokane	1,834	790	407	436	144	47	10
Stevens	168	87	27	32	8	12	2
Thurston	1,030	459	221	216	88	27	19
Wahkiakum	13	8	2	3	0	0	0
Walla Walla	202	86	48	48	13	5	2
Whatcom	635	261	144	157	43	18	12
Whitman	117	48	29	31	6	3	0
Yakima	741	278	146	175	81	43	18
Out-of-State	1,528	995	249	182	64	23	15
Unknown	480	255	61	68	19	10	67

<sup>1</sup>Certificate of dissolution records, "Children born alive of this marriage." All children are counted regardless of age.

<sup>2</sup>Does not include residents who obtain divorces or annulments outside of Washington State.

<sup>3</sup>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*

2004, we conducted formal trend analysis for two time periods using the death data for 1980 through 1998 separately from data for 1999 through 2004. (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 2000-2004 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 *Nativity 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 2004, 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 2004 births, the percent of fathers with less than a high school education is 13.8% if unknowns are included in the total, but is 16.7% 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/ehsphil/chs/chs-data/public/sup90\\_99.pdf](http://www.doh.wa.gov/ehsphil/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, 2004* 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 2005. 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: 1980-2004*, October 2005.

#### *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:  $BMI = 703.1 \times (\text{prepregnancy weight in lb} / \text{square of height in inches})$ . 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., 1<sup>st</sup>, 2<sup>nd</sup>, 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 (Nativity 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](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 are 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  $\geq 42$  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 Table 1). 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 previous 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).

$$\text{(Crude) Birth Rate} = \frac{\# \text{ Live Births}}{\text{Total Population}} \times 1,000$$

$$\text{Age - Specific Birth Rate} = \frac{\# \text{ Births for Specific Age Group}}{\text{Population for Same Age Group}} \times 1,000$$

$$\text{(Crude) Death Rate} = \frac{\# \text{ Deaths}}{\text{Total Population}} \times 1,000$$

$$\text{Age - Specific Death Rate} = \frac{\# \text{ Deaths for Specific Age Group}}{\text{Population for Same Age Group}} \times 100,000$$

$$\text{Cause - Specific Death Rate} = \frac{\# \text{ Deaths for Specific Cause}}{\text{Total Population}} \times 100,000$$

$$\text{Age - adjusted Death Rate} = \sum_i W_i \cdot \frac{\# \text{ Deaths}_i}{\text{Population}_i} \times 100,000$$

$$\text{where } W_i = \frac{\text{Standard Population}_i}{\text{Total Standard Population}}$$

and  $_i$  = agegroup

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

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

$$\text{Infant Death Rate} = \frac{\# \text{ Infant Deaths}}{\text{Total Live Births}} \times 1,000$$

$$\text{Neonatal Death Rate} = \frac{\# \text{ Neonatal Deaths}}{\text{Total Live Births}} \times 1,000$$

$$\text{Postneonatal Death Rate} = \frac{\# \text{ Postneonatal Deaths}}{\text{Total Live Births}} \times 1,000$$

$$\text{Maternal Death Rate} = \frac{\# \text{ Maternal Deaths}}{\text{Total Live Births}} \times 10,000$$

$$\text{Fetal Death Ratio} = \frac{\# \text{ Fetal Deaths}}{\text{Total Live Births}} \times 1,000$$

$$\text{Perinatal Death Rate} = \frac{\# \text{ Perinatal Deaths}}{\text{Live Births} + \text{Fetal Deaths}} \times 1,000$$

## 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**

<b>Age Group</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>
<b>Total</b>	6,167,800	3,072,237	3,095,563
Under 1 Year <sup>1</sup>	81,715	42,106	39,609
1 - 4	319,507	163,301	156,206
5 - 14	856,088	439,088	417,000
15 - 19	442,824	226,829	215,995
20 - 24	439,726	226,281	213,445
25 - 34	833,519	427,217	406,302
35 - 44	942,069	476,271	465,798
45 - 54	929,610	462,008	467,602
55 - 64	625,754	309,608	316,146
65 - 74	351,519	166,468	185,051
75 - 84	246,303	101,256	145,047
<b>85 and Over</b>	<b>99,166</b>	<b>31,804</b>	<b>67,362</b>

<sup>1</sup>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: 1980-2004, October 2005.

## Appendix D. Estimated Population of Counties and Cities of 15,000 Population and Over, April 1, 2004

Name	City	County	Name	City	County
<b>State Total</b>	6,167,800		Kenmore	19,170	
			Sammamish	36,560	
Adams		16,700	Kitsap		239,500
Asotin		20,700	Bremerton	37,520	
Benton		155,100	Bainbridge Island	21,760	
Kennewick	58,970		Kittitas		35,800
Richland	42,660		Ellensburg	16,390	
Chelan		68,400	Klickitat		19,300
Wenatchee	28,760		Lewis		70,700
Clallam		65,900	Centralia	15,200	
Port Angeles	18,530		Lincoln		10,200
Clark		383,300	Mason		50,800
Vancouver	152,900		Okanogan		39,600
Camas	15,360		Pacific		21,000
Columbia		4,100	Pend Oreille		11,900
Cowlitz		95,300	Pierce		744,000
Longview	35,340		Tacoma	196,800	
Douglas		34,200	Puyallup	35,690	
Ferry		7,300	Lakewood	59,010	
Franklin		57,000	University Place	30,800	
Pasco	40,840		San Juan		15,100
Garfield		2,400	Skagit		108,800
Grant		78,300	Anacortes	15,470	
Moses Lake	16,110		Mount Vernon	27,720	
Grays Harbor		69,200	Skamania		10,100
Aberdeen	16,410		Snohomish		644,800
Island		74,800	Everett	96,840	
Oak Harbor	20,940		Edmonds	39,620	
Jefferson		27,000	Lynnwood	34,540	
King		1,788,300	Marysville	28,800	
Seattle	572,600		Mountlake Terrace	20,390	
Renton	55,360		Monroe	15,480	
Auburn	43,670		Mukilteo	19,220	
Kent	84,560		Spokane		432,000
Kirkland	45,800		Spokane (city)	197,400	
Bellevue	116,500		Spokane Valley	83,950	
Mercer Island	21,830		Stevens		40,700
Redmond	46,900		Thurston		218,500
Bothell part	16,250		Olympia	43,040	
Des Moines	29,020		Lacey	32,530	
Issaquah	15,510		Wahkiakum		3,800
Tukwila	17,240		Walla Walla		56,700
Federal Way	83,590		Walla Walla (city)	30,500	
SeaTac	25,130		Whatcom		177,300
Burien	31,130		Bellingham	71,080	
Shoreline	52,740		Whitman		41,700
Covington	15,190		Pullman	25,905	
Maple Valley	16,280		Yakima		227,500
			Yakima (city)	79,480	

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: 1980-2004, October 2005.

## Appendix E. Comparison Between Current and Previous Table Numbers

### Table Numbers

2003+	2000-2002	1999 <sup>1</sup>	1980-1998 <sup>2</sup>	Current Title	Comments
<b>Nativity A: Demographics</b>					
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 <sup>3</sup>	
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
<b>Nativity B: Behavioral and Health Characteristics</b>					
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
<b>Nativity C: Health Service Utilization</b>					
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	
<b>Nativity D: Infant Health</b>					
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 <sup>1</sup>	1980-1998 <sup>2</sup>	Current Title	Comments
<b>Old Natality Tables Not Included in Current Report</b>				
---	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
<b>Mortality A: Demographics</b>				
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	
<b>Mortality B: Autopsy and Disposition</b>				
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
<b>Mortality C: Leading Causes of Death, Overview and Selected Causes of Death</b>				
C1	--	--	Age-Adjusted Rates <sup>1</sup> 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 & Pneumonia, Chronic Lower Respiratory Disease, and Chronic Liver Disease & Cirrhosis by County of Residence	

**Table Numbers**

2000	1999 <sup>1</sup>	1980-1998 <sup>2</sup>	Current Title	Comments
<b>Mortality D: Cancer</b>				
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	
<b>Mortality E: External Causes or Injuries</b>				
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
<b>Mortality F: Infant Deaths</b>				
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	
<b>Mortality G: Fetal Deaths</b>				
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	
<b>Mortality Tables Not Included in Current Report</b>				
--	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 <sup>1</sup>	1980-1998 <sup>2</sup>	Current Title	Comments
<b>continued Mortality Tables Not Included in Current Report</b>				
--	--	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

<sup>1</sup>From *Washington State Vital Statistics, 1999*

<sup>2</sup>From *Washington State Vital Statistics Reports, 1980-1998*

<sup>3</sup>Also published as Table 19 in *Washington State Pregnancy and Induced Abortion Statistics*

## Appendix F. Sample Certificates

## Washington State Birth Filing Form

Child's Information			
*1. Child's Name First		*2. Date of Birth (MM/DD/YYYY) / /	
Middle		*3. Time of Birth (24 Hrs)	
LAST		Suffix (Sr., Jr., II, III, etc.)	
4a. Type of Birthplace (Specify Type) 1 <input type="checkbox"/> Hospital    2 <input type="checkbox"/> Enroute    3 <input type="checkbox"/> Freestanding Birth Center 4 <input type="checkbox"/> Clinic/Doctor's Office    5 <input type="checkbox"/> Home-Planned <input type="checkbox"/> Yes <input type="checkbox"/> No 6 <input type="checkbox"/> Other(Specify):		4b. Planned Birth Place, if different Specify:	5. Sex <input type="checkbox"/> Male <input type="checkbox"/> 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		*10. Date of Birth (MM/DD/YYYY) / /	
Middle		*11. Birthplace (State, Territory, or Foreign Country)	
LAST		*12. Mother's Social Security Number	
13. Mother's Current Legal Last Name, if different from above		*14. Social Security Number Requested for Child? <input type="checkbox"/> Yes <input type="checkbox"/> No	
15. Is Mother Married to the Father? <input type="checkbox"/> Yes <input type="checkbox"/> No		; If NO: Was Mother Married to anyone during this pregnancy? Has the Paternity affidavit been signed? <input type="checkbox"/> Yes <input type="checkbox"/> No	
16a. Residence: Number and Street (e.g., 624 SE 5 <sup>th</sup> 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? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk			
17. Telephone Number ( )		18. How Long at Current Residence? Years:                      Months:	
19. Mother's Mailing Address, if different:      Number & Street:		Apt No.	Zip Code:
City or Town:		State:	
20. Mother's Education-(Check the box that best describes the highest degree or level of school completed at the time of delivery.) 1 <input type="checkbox"/> 8 <sup>th</sup> grade or less (Specify): 2 <input type="checkbox"/> 9 <sup>th</sup> - 12 <sup>th</sup> grade; no diploma 3 <input type="checkbox"/> High school graduate or GED completed 4 <input type="checkbox"/> Some college credit, but no degree 5 <input type="checkbox"/> Associate degree(e.g., AA, AS) 6 <input type="checkbox"/> Bachelor's degree(e.g., BA, AB, BS) 7 <input type="checkbox"/> Master's degree(e.g., MA, MS, MEng, MEd, MSW, MBA) 8 <input type="checkbox"/> 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 <input type="checkbox"/> No, not Spanish/Hispanic/Latina 2 <input type="checkbox"/> Yes, Mexican, Mexican American, Chicana 3 <input type="checkbox"/> Yes, Puerto Rican 4 <input type="checkbox"/> Yes, Cuban 5 <input type="checkbox"/> Yes, other Spanish/Hispanic/Latina (Specify):	22. Mother's Race (Check one or more races to indicate what the mother considers herself to be.) <input type="checkbox"/> White <input type="checkbox"/> Black or African American <input type="checkbox"/> American Indian or Alaska Native (Name of the enrolled or principal tribe) <input type="checkbox"/> Asian Indian <input type="checkbox"/> Chinese <input type="checkbox"/> Filipino <input type="checkbox"/> Japanese <input type="checkbox"/> Korean <input type="checkbox"/> Vietnamese <input type="checkbox"/> Other Asian(Specify): <input type="checkbox"/> Native Hawaiian <input type="checkbox"/> Guamanian or Chamorro <input type="checkbox"/> Samoan <input type="checkbox"/> Other Pacific Islander(Specify): <input type="checkbox"/> 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		*26. Date of Birth (MM/DD/YYYY) / /	
Middle		*27. Birthplace (State, Territory, or Foreign Country)	
LAST		*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 <input type="checkbox"/> 8 <sup>th</sup> grade or less (Specify): 2 <input type="checkbox"/> 9 <sup>th</sup> - 12 <sup>th</sup> grade; no diploma 3 <input type="checkbox"/> High school graduate or GED completed 4 <input type="checkbox"/> Some college credit, but no degree 5 <input type="checkbox"/> Associate degree(e.g., AA, AS) 6 <input type="checkbox"/> Bachelor's degree(e.g., BA, AB, BS) 7 <input type="checkbox"/> Master's degree(e.g., MA, MS, MEng, MEd, MSW, MBA) 8 <input type="checkbox"/> 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 <input type="checkbox"/> No, not Spanish/Hispanic/Latino 2 <input type="checkbox"/> Yes, Mexican, Mexican American, Chicano 3 <input type="checkbox"/> Yes, Puerto Rican 4 <input type="checkbox"/> Yes, Cuban 5 <input type="checkbox"/> Yes, other Spanish/Hispanic/Latino (Specify):	31. Father's Race (Check one or more races to indicate what the father considers himself to be.) <input type="checkbox"/> White <input type="checkbox"/> Black or African American <input type="checkbox"/> American Indian or Alaska Native (Name of the enrolled or principal tribe) <input type="checkbox"/> Asian Indian <input type="checkbox"/> Chinese <input type="checkbox"/> Filipino <input type="checkbox"/> Japanese <input type="checkbox"/> Korean <input type="checkbox"/> Vietnamese <input type="checkbox"/> Other Asian(Specify): <input type="checkbox"/> Native Hawaiian <input type="checkbox"/> Guamanian or Chamorro <input type="checkbox"/> Samoan <input type="checkbox"/> Other Pacific Islander(Specify): <input type="checkbox"/> 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).



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? <input type="checkbox"/> Yes <input type="checkbox"/> 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 _____ <input type="checkbox"/> None Number Now Dead _____ <input type="checkbox"/> None	41a. Number of Other Pregnancy Outcomes (Spontaneous or induced losses or ectopic pregnancies) Number of Other Outcomes _____ <input type="checkbox"/> 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) <input type="checkbox"/> 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? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, name of facility mother was transferred from: _____	46. Principal Source of Payment for this Delivery <input type="checkbox"/> Medicaid <input type="checkbox"/> Self Pay <input type="checkbox"/> Private Insurance <input type="checkbox"/> Indian Health <input type="checkbox"/> CHAMPUS <input type="checkbox"/> Other Gov't <input type="checkbox"/> Other (Specify)
Newborn's Statistical Information		
47. Newborn Medical Record Number	48. Birth Weight lbs: _____ ozs: _____ or grams: _____	49. Infant Head Circumference (cm)
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 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> , etc. (Specify)
54. Was infant transferred within 24 hours of delivery? If yes, name of facility infant was transferred to: _____ <input type="checkbox"/> Yes <input type="checkbox"/> No	55. Is infant living at the time of report? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Transferred, Status Unknown	56. Is infant being breastfed? <input type="checkbox"/> Yes <input type="checkbox"/> No
Medical and Health Information		
57. Risk Factors in this Pregnancy (Check all that apply): 1 <input type="checkbox"/> Diabetes <input type="checkbox"/> Prepregnancy (Diagnosis prior to this pregnancy) <input type="checkbox"/> Gestational (Diagnosis in this pregnancy) 2 <input type="checkbox"/> Hypertension <input type="checkbox"/> Prepregnancy (Chronic) <input type="checkbox"/> Gestational (PIH, preeclampsia, eclampsia) 3 <input type="checkbox"/> Previous preterm births 4 <input type="checkbox"/> Other previous poor pregnancy outcome (includes perinatal death, small-for-gestational age/intrauterine growth restricted birth) 5 <input type="checkbox"/> Vaginal bleeding during this pregnancy prior to the onset of labor 6 <input type="checkbox"/> Pregnancy resulted from infertility treatment 7 <input type="checkbox"/> Mother had a previous cesarean delivery? If Yes, how many _____ 8 <input type="checkbox"/> Group B Streptococcus culture positive 9 <input type="checkbox"/> None of the above	58. Method of Delivery A. Was delivery with forceps attempted but unsuccessful? <input type="checkbox"/> Yes <input type="checkbox"/> No B. Was delivery with vacuum extraction attempted but unsuccessful? <input type="checkbox"/> Yes <input type="checkbox"/> No C. Fetal presentation at birth <input type="checkbox"/> Cephalic <input type="checkbox"/> Breech <input type="checkbox"/> Other D. Final route and method of delivery (Check One) Vaginal: <input type="checkbox"/> Spontaneous <input type="checkbox"/> Forceps <input type="checkbox"/> Vacuum Or, Cesarean: <input type="checkbox"/> If cesarean, was a trial of labor attempted? <input type="checkbox"/> Yes <input type="checkbox"/> No	59. Infections Present and/or Treated During this Pregnancy (Check all that apply): 1 <input type="checkbox"/> Gonorrhea 2 <input type="checkbox"/> Syphilis 3 <input type="checkbox"/> Herpes Simplex Virus (HSV) 4 <input type="checkbox"/> Chlamydia 5 <input type="checkbox"/> Hepatitis B 6 <input type="checkbox"/> Hepatitis C 7 <input type="checkbox"/> HIV Infection 8 <input type="checkbox"/> Other Specify: _____ 9 <input type="checkbox"/> None of the above
61. Abnormal Conditions of the Newborn (Occurring within 24 hours of delivery) (Check all that apply): 1 <input type="checkbox"/> Assisted ventilation required immediately following delivery 2 <input type="checkbox"/> Assisted ventilation required for more than six hours 3 <input type="checkbox"/> NICU admission 4 <input type="checkbox"/> Newborn given surfactant replacement therapy 5 <input type="checkbox"/> Antibiotics received by the newborn for suspected neonatal sepsis 6 <input type="checkbox"/> Seizure or serious neurologic dysfunction 7 <input type="checkbox"/> Significant birth injury (skeletal fracture(s), peripheral nerve injury, soft tissue or solid organ hemorrhage which requires intervention) 8 <input type="checkbox"/> None of the above	62. Characteristics of Labor and Delivery (Check all that apply): 1 <input type="checkbox"/> Induction of labor 2 <input type="checkbox"/> Augmentation of labor 3 <input type="checkbox"/> Non-vertex presentation 4 <input type="checkbox"/> Epidural or spinal anesthesia during labor 5 <input type="checkbox"/> Steroids (glucocorticoids) for fetal lung maturation received by the mother prior to delivery 6 <input type="checkbox"/> Antibiotics received by the mother during labor 7 <input type="checkbox"/> Clinical chorioamnionitis diagnosed during labor or maternal temperature $\geq 38^{\circ}\text{C}$ ( $100.4^{\circ}\text{F}$ ) 8 <input type="checkbox"/> Moderate/heavy meconium staining of the amniotic fluid 9 <input type="checkbox"/> 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 <input type="checkbox"/> None of the above	60. Obstetric procedures (Check all that apply): 1 <input type="checkbox"/> Cervical cerclage 2 <input type="checkbox"/> Tocolysis 3 <input type="checkbox"/> External cephalic version: <input type="checkbox"/> Successful <input type="checkbox"/> Failed 4 <input type="checkbox"/> None of the above 63. Congenital Anomalies of the Newborn (Observed within 24 hours of delivery) (Check all that apply): 1 <input type="checkbox"/> Anencephaly 2 <input type="checkbox"/> Meningocele / Spina bifida 3 <input type="checkbox"/> Cyanotic congenital heart disease 4 <input type="checkbox"/> Congenital diaphragmatic hernia 5 <input type="checkbox"/> Omphalocele 6 <input type="checkbox"/> Gastroschisis 7 <input type="checkbox"/> Limb reduction defect (excluding congenital amputation and dwarfing syndrome) 8 <input type="checkbox"/> Cleft Lip with or without Cleft Palate 9 <input type="checkbox"/> Cleft Palate alone 10 <input type="checkbox"/> Down Syndrome <input type="checkbox"/> Karyotype confirmed <input type="checkbox"/> Karyotype pending 11 <input type="checkbox"/> Chromosomal disorder <input type="checkbox"/> Karyotype confirmed <input type="checkbox"/> Suspected, Karyotype pending 12 <input type="checkbox"/> Hypospadias 13 <input type="checkbox"/> None of the above
64. Maternal Morbidity (complications associated with labor and delivery) (Check all that apply): 1 <input type="checkbox"/> Maternal transfusion 2 <input type="checkbox"/> Third or fourth degree perineal laceration 3 <input type="checkbox"/> Ruptured uterus 4 <input type="checkbox"/> Unplanned hysterectomy 5 <input type="checkbox"/> Admission to intensive care unit 6 <input type="checkbox"/> Unplanned operating room procedure following delivery 7 <input type="checkbox"/> None of the above	65. Onset of Labor (Check all that apply): 1 <input type="checkbox"/> Premature rupture of the membranes (prolonged, $\geq 12\text{hr}$ ) 2 <input type="checkbox"/> Precipitous Labor ( $< 3\text{hr}$ ) 3 <input type="checkbox"/> Prolonged Labor ( $\geq 20\text{hr}$ ) 4 <input type="checkbox"/> 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:	

Certificate of Death

Local File Number **Washington State Certificate of Death** State File Number

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 5 <sup>th</sup> 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? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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					
<b>Cause of Death (See instructions and examples)</b>					
34. Enter the <u>chain of events</u> - 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):					Interval between Onset & Death
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):					Interval between Onset & Death
c.					Interval between Onset & Death
Due to (or as a consequence of):					Interval between Onset & Death
d.					Interval between Onset & Death
35. Other significant conditions contributing to death but not resulting in the underlying cause given above				36. Autopsy? <input type="checkbox"/> Yes <input type="checkbox"/> No	37. Were autopsy findings available to complete the Cause of Death? <input type="checkbox"/> Yes <input type="checkbox"/> No
38. Manner of Death <input type="checkbox"/> Natural <input type="checkbox"/> Homicide <input type="checkbox"/> Accident <input type="checkbox"/> Undetermined <input type="checkbox"/> Suicide <input type="checkbox"/> Pending		39. If female <input type="checkbox"/> Not pregnant within past year <input type="checkbox"/> Not pregnant, but pregnant within 42 days before death <input type="checkbox"/> Pregnant at time of death <input type="checkbox"/> Not pregnant, but pregnant 43 days to 1 year before death <input type="checkbox"/> Unknown if pregnant within the past year		40. Did tobacco use contribute to death? <input type="checkbox"/> Yes <input type="checkbox"/> Probably <input type="checkbox"/> No <input type="checkbox"/> 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? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk	
45. Location of Injury: Number & Street:				Apt No.	
City or Town:		County:		State:	
46. Describe how injury occurred				47. If transportation injury, specify: <input type="checkbox"/> Driver/Operator <input type="checkbox"/> Pedestrian <input type="checkbox"/> Passenger <input type="checkbox"/> 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? <input type="checkbox"/> Yes <input type="checkbox"/> No					
57. Registrar Signature X				58. Date Received (MM/DD/YYYY)	
59. Amendments					

DOH/CHS 003 Rev 2/06/2004

# Certificate of Fetal Death

## Washington State Fetal Death Certificate

Local File Number		State File Number	
<b>Delivery Information</b>			
1. Name of Fetus - First Middle LAST		Suffix	
2. Sex (M/F/A/Nk)	3. Date of Delivery (MM/DD/YYYY)	4. Time of Delivery (24 Hrs)	
5a. Type of Birthplace (Specify Type) <input type="checkbox"/> Hospital <input type="checkbox"/> Enroute <input type="checkbox"/> Freestanding Birth Center <input type="checkbox"/> Clinic/Doctor's Office <input type="checkbox"/> Home - Planned <input type="checkbox"/> Other (Specify):		5b. Planned Birth Place, if different Specify: <input type="checkbox"/> Yes <input type="checkbox"/> No	
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
<b>Parent's Information</b>			
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. 674 SE 5 <sup>th</sup> St)		15b. City or Town	
15c. County		15d. State or Foreign Country	15e. Zip Code + 4
16a. Inside City Limits? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		16b. How Long at Current Residence? <input type="checkbox"/> Less than 1 year <input type="checkbox"/> 1-5 years <input type="checkbox"/> 6-12 months <input type="checkbox"/> 13-24 months <input type="checkbox"/> 25-36 months <input type="checkbox"/> 37-48 months <input type="checkbox"/> 49-60 months <input type="checkbox"/> More than 60 months	
17. Father's Current Legal Name (First, Middle, Last, Suffix)		18. Date of Birth (MM/DD/YYYY)	19. Birthplace (State, Territory, or Foreign Country)
<b>Disposition Information</b>			
20. Name and Title of Person Completing Cause of Death		Signature	
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 <input type="checkbox"/> 1 Burial <input type="checkbox"/> 2 Cremation <input type="checkbox"/> 3 Removal from State <input type="checkbox"/> 4 Donation <input type="checkbox"/> 5 Hospital Disposition <input type="checkbox"/> 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	
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) <input type="checkbox"/> 1 Maternal Conditions/Diseases (Specify) <input type="checkbox"/> 2 Complications of Placenta, Cord or Membranes <input type="checkbox"/> Rupture of membranes prior to onset of labor <input type="checkbox"/> Abruptio placenta <input type="checkbox"/> Placental insufficiency <input type="checkbox"/> Prolapsed cord <input type="checkbox"/> Chorioamnionitis <input type="checkbox"/> Other (Specify) <input type="checkbox"/> 3 Other Obstetrical or Pregnancy Complications (Specify) <input type="checkbox"/> 4 Fetal Anomaly (Specify) <input type="checkbox"/> 5 Fetal Injury (Specify) <input type="checkbox"/> 6 Fetal Infection (Specify) <input type="checkbox"/> 7 Other Fetal Conditions/Disorders (Specify) <input type="checkbox"/> 8 Unknown		31. Other Significant Causes or Conditions (Select or specify all other conditions contributing to death) <input type="checkbox"/> Maternal Conditions/Diseases (Specify) <input type="checkbox"/> Complications of Placenta, Cord or Membranes <input type="checkbox"/> Rupture of membranes prior to onset of labor <input type="checkbox"/> Abruptio placenta <input type="checkbox"/> Placental insufficiency <input type="checkbox"/> Prolapsed cord <input type="checkbox"/> Chorioamnionitis <input type="checkbox"/> Other (Specify) <input type="checkbox"/> Other Obstetrical or Pregnancy Complications (Specify) <input type="checkbox"/> Fetal Anomaly (Specify) <input type="checkbox"/> Fetal Injury (Specify) <input type="checkbox"/> Fetal Infection (Specify) <input type="checkbox"/> Other Fetal Conditions/Disorders (Specify) <input type="checkbox"/> Unknown	
32. Estimated Time of Fetal Death <input type="checkbox"/> 1 Dead at first assessment, no labor ongoing <input type="checkbox"/> 2 Dead at first assessment, labor ongoing <input type="checkbox"/> 3 Died during labor, after first assessment <input type="checkbox"/> 4 Unknown time of fetal death		33. Was an autopsy performed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Planned	
34. Registrar Signature		35. Were autopsy or histological placental examination results used in determining the cause of death? <input type="checkbox"/> Yes <input type="checkbox"/> No	
		36. Date Received (MM/DD/YYYY)	

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Please complete side two →

**Confidential Portion**

<b>38. Weight of Fetus</b> lbs. _____ or grams. _____ (Completed Weeks)		<b>39. Obstetric estimate of Gestation</b> _____
<b>40. Fertility - Single, Twin, Triplet, etc. (Specify)</b> _____		<b>41. If not Single Birth - Born First, Second, Third, etc.</b> _____
<b>Mother's Information</b>		
<b>42. Mother's Education - Check the box that best describes the highest degree or level of school completed at the time of delivery.</b> 1 <input type="checkbox"/> 8 <sup>th</sup> grade or less (Specify) _____ 2 <input type="checkbox"/> 9 <sup>th</sup> - 12 <sup>th</sup> grade, no diploma 3 <input type="checkbox"/> High school graduate or GED completed 4 <input type="checkbox"/> Some college credit, but no degree 5 <input type="checkbox"/> Associate degree (e.g., AA, AS) 6 <input type="checkbox"/> Bachelor's degree (e.g., BA, AB, BS) 7 <input type="checkbox"/> Masters degree (e.g., MA, MS, MEd, MEd, MSW, MBA) 8 <input type="checkbox"/> Doctorate (e.g., PhD EdD) or Professional degree (e.g., MD, DDS, DVM, LLB, JD)	<b>43. Mother of Hispanic Origin?</b> 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 <input type="checkbox"/> No, not Spanish/Hispanic/Latina 1 <input type="checkbox"/> Yes, Mexican, Mexican American, Chicana 2 <input type="checkbox"/> Yes, Puerto Rican 3 <input type="checkbox"/> Yes, Cuban 4 <input type="checkbox"/> Yes, other Spanish/Hispanic/Latina (Specify) _____	<b>44. Mother's Race (Check one or more races to indicate what the mother considers herself to be)</b> 1 <input type="checkbox"/> White      2 <input type="checkbox"/> Black or African American 3 <input type="checkbox"/> American Indian or Alaska Native (Name of the enrolled or principal tribe) _____ 4 <input type="checkbox"/> Asian Indian      5 <input type="checkbox"/> Chinese 6 <input type="checkbox"/> Filipino      7 <input type="checkbox"/> Japanese 8 <input type="checkbox"/> Korean      9 <input type="checkbox"/> Vietnamese 10 <input type="checkbox"/> Other Asian (Specify) _____ 11 <input type="checkbox"/> Native Hawaiian      12 <input type="checkbox"/> Guamanian or Chamorro 13 <input type="checkbox"/> Samoan 14 <input type="checkbox"/> Other Pacific Islander (Specify) _____ 15 <input type="checkbox"/> Other (Specify) _____
<b>45. Occupation (Indicate type of work done during last year.)</b> _____		<b>46. Kind of Business/Industry (Do not use Company Name)</b> _____
<b>47. Mother Married? (At delivery, conception, or any time between)</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>48. Mother's Height</b> Feet _____ Inches _____	<b>49. Did Mother get WIC food for herself during this Pregnancy?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>50. Mother's Prepregnancy Weight</b> _____ (Pounds)	<b>51. Mother's Weight at Delivery</b> _____ (Pounds)	<b>52. Date Last Normal Menses Began (MM/DD/YYYY)</b> ____/____/____
<b>53. Date of First Prenatal Care Visit (MM/DD/YYYY)</b> ____/____/____ <input type="checkbox"/> No Prenatal Care	<b>54. Date of Last Prenatal Care Visit (MM/DD/YYYY)</b> ____/____/____	<b>55. Total Number of Prenatal Visits for this Pregnancy</b> _____ (If none enter 0)
<b>56a. Number of Previous Live Births (Do not include this child)</b> Now Living Number _____ <input type="checkbox"/> None Now Dead Number _____ <input type="checkbox"/> None	<b>57a. Number of Other Pregnancy Outcomes (Spontaneous or induced losses or ectopic pregnancies)</b> Other Outcomes Number _____ <input type="checkbox"/> None	<b>58. Cigarette Smoking Before and During Pregnancy</b> If none enter 0 Average number of cigarettes or packs per day Three months before pregnancy _____ OR _____ First three months of pregnancy _____ OR _____ Second three months of pregnancy _____ OR _____ Last three months of pregnancy _____ OR _____
<b>56b. Date of Last Live Birth (MM/YYYY)</b> ____/____		<b>57b. Date of Last Other Pregnancy Outcome (MM/YYYY)</b> ____/____
<b>59. Was mother transferred to higher level care for maternal medical or fetal indications for delivery?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No      If yes, name of facility mother was transferred from: _____		
<b>Father's Information</b>		
<b>60. Father's Education - Check the box that best describes the highest degree or level of school completed at the time of delivery.</b> 1 <input type="checkbox"/> 8 <sup>th</sup> grade or less (Specify) _____ 2 <input type="checkbox"/> 9 <sup>th</sup> - 12 <sup>th</sup> grade, no diploma 3 <input type="checkbox"/> High school graduate or GED completed 4 <input type="checkbox"/> Some college credit, but no degree 5 <input type="checkbox"/> Associate degree (e.g., AA, AS) 6 <input type="checkbox"/> Bachelor's degree (e.g., BA, AB, BS) 7 <input type="checkbox"/> Masters degree (e.g., MA, MS, MEd, MEd, MSW, MBA) 8 <input type="checkbox"/> Doctorate (e.g., PhD EdD) or Professional degree (e.g., MD, DDS, DVM, LLB, JD)	<b>61. Father of Hispanic Origin?</b> 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 <input type="checkbox"/> No, not Spanish/Hispanic/Latino 1 <input type="checkbox"/> Yes, Mexican, Mexican American, Chicano 2 <input type="checkbox"/> Yes, Puerto Rican 3 <input type="checkbox"/> Yes, Cuban 4 <input type="checkbox"/> Yes, other Spanish/Hispanic/Latino (Specify) _____	<b>62. Father's Race (Check one or more races to indicate what the father considers himself to be)</b> 1 <input type="checkbox"/> White      2 <input type="checkbox"/> Black or African American 3 <input type="checkbox"/> American Indian or Alaska Native (Name of the enrolled or principal tribe) _____ 4 <input type="checkbox"/> Asian Indian      5 <input type="checkbox"/> Chinese 6 <input type="checkbox"/> Filipino      7 <input type="checkbox"/> Japanese 8 <input type="checkbox"/> Korean      9 <input type="checkbox"/> Vietnamese 10 <input type="checkbox"/> Other Asian (Specify) _____ 11 <input type="checkbox"/> Native Hawaiian      12 <input type="checkbox"/> Guamanian or Chamorro 13 <input type="checkbox"/> Samoan 14 <input type="checkbox"/> Other Pacific Islander (Specify) _____ 15 <input type="checkbox"/> Other (Specify) _____
<b>63. Occupation (Indicate type of work done during last year.)</b> _____		<b>64. Kind of Business/Industry (Do not use Company Name)</b> _____
<b>Medical and Health Information</b>		
<b>66. Risk Factors in this Pregnancy (Check all that apply):</b> 1 <input type="checkbox"/> Diabetes <input type="checkbox"/> Prepregnancy (Diagnosis prior to this pregnancy) <input type="checkbox"/> Gestational (Diagnosis in this pregnancy) 2 <input type="checkbox"/> Hypertension <input type="checkbox"/> Prepregnancy (Chronic) <input type="checkbox"/> Gestational (PIH, preeclampsia, eclampsia) 3 <input type="checkbox"/> Previous preterm birth 4 <input type="checkbox"/> Other previous poor pregnancy outcome (includes perinatal death, small-for-gestational age/Intrauterine growth restricted birth) 5 <input type="checkbox"/> Vaginal bleeding during this pregnancy prior to the onset of labor 6 <input type="checkbox"/> Pregnancy resulted from infertility treatment 7 <input type="checkbox"/> Mother had a previous cesarean delivery? If Yes, how many _____ 8 <input type="checkbox"/> None of the above	<b>67. Method of Delivery</b> A. Was delivery with forceps attempted but unsuccessful? <input type="checkbox"/> Yes <input type="checkbox"/> No B. Was delivery with vacuum extraction attempted but unsuccessful? <input type="checkbox"/> Yes <input type="checkbox"/> No C. Fetal presentation at birth <input type="checkbox"/> Cephalic <input type="checkbox"/> Breech <input type="checkbox"/> Other D. Final route and method of delivery (Check One) Vaginal: <input type="checkbox"/> Spontaneous <input type="checkbox"/> Forceps <input type="checkbox"/> Vacuum Or, Cesarean: <input type="checkbox"/> If cesarean, was a trial of labor attempted? <input type="checkbox"/> Yes <input type="checkbox"/> No E. Hysterotomy/Hysterectomy <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>67. Congenital Anomalies of the Fetus</b> 1 <input type="checkbox"/> Anencephaly 2 <input type="checkbox"/> Meningocele / Spina bifida 3 <input type="checkbox"/> Cyanotic congenital heart disease 4 <input type="checkbox"/> Congenital diaphragmatic hernia 5 <input type="checkbox"/> Omphalocele 6 <input type="checkbox"/> Gastroschisis 7 <input type="checkbox"/> Limb reduction defect (excluding congenital amputation and dwarfing syndrome) 8 <input type="checkbox"/> Cleft Lip with or without Cleft Palate 9 <input type="checkbox"/> Cleft Palate alone 10 <input type="checkbox"/> Down Syndrome <input type="checkbox"/> Karyotype confirmed <input type="checkbox"/> Karyotype pending 11 <input type="checkbox"/> Suspected chromosomal disorder <input type="checkbox"/> Karyotype confirmed <input type="checkbox"/> Karyotype pending 12 <input type="checkbox"/> Hypospadias 13 <input type="checkbox"/> None of the above
<b>68. Maternal Morbidity (complication associated with labor and delivery) (Check all that apply):</b> 1 <input type="checkbox"/> Maternal transfusion 2 <input type="checkbox"/> Third or fourth degree perineal laceration 3 <input type="checkbox"/> Ruptured uterus 4 <input type="checkbox"/> Unplanned hysterectomy 5 <input type="checkbox"/> Admission to intensive care unit 6 <input type="checkbox"/> Unplanned operating room procedure following delivery 7 <input type="checkbox"/> None of the above	<b>69. Infections Present and/or Treated During this Pregnancy (Check all that apply):</b> 1 <input type="checkbox"/> Gonorrhea 2 <input type="checkbox"/> Syphilis 3 <input type="checkbox"/> Herpes Simplex Virus (HSV) 4 <input type="checkbox"/> Chlamydia 5 <input type="checkbox"/> Listeria 6 <input type="checkbox"/> Group B Streptococcus 7 <input type="checkbox"/> Cytomegalovirus 8 <input type="checkbox"/> Parvovirus 9 <input type="checkbox"/> Toxoplasmosis 10 <input type="checkbox"/> HIV Infection 11 <input type="checkbox"/> Other _____ 12 <input type="checkbox"/> None of the above	

Certificate of Dissolution



**Certificate of Dissolution  
Declaration of Invalidation of Marriage  
or Legal Separation**

Please Type or Print in Permanent Black Ink

<b>Court File Number</b>		<b>State File Number</b>	
30. Husband's Social Security Number	<b>Decree</b> I certify the marriage of the persons named below was ordered as a...		
	1. <input type="checkbox"/> Legal Separation <input type="checkbox"/> Dissolution of Marriage <input type="checkbox"/> Declaration of Invalidation		2. Date of Decree (Month/Day/4 Digit Year) /      /
	3. County of Decree		
	4. Signature of Superior Court Clerk  <b>X</b>		
<b>To be Completed by Petitioner's Attorney or PRO SE</b>			
29. Wife's Social Security Number	<b>Husband</b>		
	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 <input type="checkbox"/> Yes <input type="checkbox"/> No		11. County
	12. State		
	<b>Wife</b>		
	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 <input type="checkbox"/> Yes <input type="checkbox"/> 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 <input type="checkbox"/> Husband <input type="checkbox"/> Wife <input type="checkbox"/> Both <input type="checkbox"/> Other (Specify)	
27. Name of Petitioner's Attorney or PRO SE		28. Petitioner's Address	

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Certificate of Marriage



**CERTIFICATE OF MARRIAGE**

Please type or print clearly in permanent black ink.

**State File Number**

COUNTY OF LICENSE		DATE VALID	NOT VALID AFTER
<b>OFFICIANT - I certify the persons named below were married on . . . .</b>			
1. DATE OF MARRIAGE(MO/DAY/YR)	2. COUNTY OF CEREMONY	3. TYPE OF CEREMONY <input type="checkbox"/> Religious <input type="checkbox"/> Civil	4. DATE SIGNED(MO/DAY/YR)
5. OFFICIANT'S NAME (PRINT)		6. OFFICIANT'S SIGNATURE <b>X</b>	
7. OFFICIANT'S ADDRESS (STREET, CITY, STATE & ZIP)			
<b>GROOM</b>			
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 <input type="checkbox"/> Yes <input type="checkbox"/> No	14. COUNTY 15. STATE
16. FATHER'S NAME (FIRST/LAST)		17. BIRTH STATE(IF NOT USA GIVE COUNTRY)	
18. MOTHER'S MAIDEN NAME (FIRST/LAST)		19. BIRTH STATE(IF NOT USA GIVE COUNTRY)	
20. GROOM'S SIGNATURE <b>X</b>		21. DATE SIGNED (MO/DAY/YR)	
<b>BRIDE</b>			
22. BRIDE'S NAME	FIRST	MIDDLE	LAST
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 <input type="checkbox"/> Yes <input type="checkbox"/> No	29. COUNTY 30. STATE
31. FATHER'S NAME (FIRST/LAST)		32. BIRTH STATE(IF NOT USA GIVE COUNTRY)	
33. MOTHER'S MAIDEN NAME (FIRST/LAST)		34. BIRTH STATE(IF NOT USA GIVE COUNTRY)	
35. BRIDE'S SIGNATURE <b>X</b>		36. DATE SIGNED (MO/DAY/YR)	
37. WITNESS' SIGNATURE <b>X</b>		38. WITNESS' SIGNATURE <b>X</b>	
39. COUNTY AUDITOR'S SIGNATURE <b>X</b>			40. DATE RECEIVED (MO/DAY/YR)

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Social Security Number for Applicants	
<p><b>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.</b></p>	
41. GROOMS SOCIAL SECURITY NUMBER	42. BRIDE'S SOCIAL SECURITY NUMBER

Declaration in Absence of a Social Security Number
<p><i>I have not furnished a Social Security Number on my application for registration of a marriage certificate, because <b>I do not have a Social Security Number.</b></i></p> <p><i>I declare under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.</i></p> <p>Groom's Signature _____ Date _____</p> <p>Bride's Signature _____ Date _____</p>

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 of 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.*

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