



Perinatal Indicators Report for Washington Residents September 8, 2011

The *Perinatal Indicators Report* provides key information on perinatal health issues to help guide decision-making by the Washington State Department of Health (DOH) and the Department of Social and Health Services (DSHS) Health and Recovery Services Administration. Annual updates for this report provide data for ongoing needs assessment and program evaluation. This report is a collaborative project conducted by the Statewide Perinatal Advisory Committee, the First Steps Database staff from the DSHS Division of Research and Data Analysis, and the DOH Office of Healthy Communities.

Highlights of the Report:

- In 2009, the number of births decreased one percent to 89,242. This is the first drop in the number of births since 2002.
- Medicaid-funded deliveries represented 48.5% of births, a slightly higher percent than in 2008.
- Birth rates and pregnancy rates decreased in 2009, especially among women 15-24.
- Unlike other areas of the country, neither pregnancy-associated nor pregnancy-related deaths to women increased in Washington between 1990 and 2008.
- At 5.7 deaths per 1,000 livebirths, the African American infant mortality rate in 2009 was the lowest it has been in at least 20 years.
- SIDS rates decreased from 1990-2005, and remain low. The decrease is due in part to improved death scene investigation and changing reporting practices.
- First trimester prenatal care initiation increased for the second year in a row in 2009, while late or no prenatal care dropped slightly.
- Smoking just before and after pregnancy has decreased since 1996. In 2008, 20% of women reported smoking in the three months before pregnancy.
- Approximately 94% of new mothers reported ever breastfeeding in 2009.

Areas of concern include:

- Cesarean deliveries have increased since the late 1990s, and represented about 29% of all births in 2009.
- Almost 43% of women were either overweight or obese prior to pregnancy in 2009; 47% of all women gained more than recommended amounts.
- The singleton low birth weight rate overall, and among all race and ethnic groups except African Americans, has increased since 1990.
- The singleton low birth weight rate for African Americans significantly decreased since 1990. In 2009, the rate was less than twice the Non Hispanic white rate.
- The Native American infant mortality rate continued to worsen in 2009 and exceeds the infant mortality rates of other race and ethnic groups.
- Women on Medicaid continued to have lower first trimester prenatal care rates and higher rates of late/no prenatal care than women who did not receive Medicaid.
- Smoking rates during pregnancy continued to be significantly higher for women receiving Medicaid than for women who did not receive Medicaid.
- The unintended pregnancy rate remained high at approximately 50% in 2009.
- Over half of women report not taking a multivitamin at all in the month prior to pregnancy.

For more information, contact Polly Taylor at 360-236-3563.

Please Note: Bulleted statements throughout this report are based on statistical analysis of trends from 1990 (or when data were first available after 1990) to 2009. This analysis accounts for variability in the data. For this reason, statements may not always reflect year to year fluctuations seen in the data presented.

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All rates and percentages are calculated after excluding records with unknown data. In some instances where the amount of unknown data is substantial the amount of unknown data is shown below the calculated rates and percentages. Summaries of the data are based on trend analysis of data from 1990-2009.

Livebirths and Deliveries	1999		2006		2007		2008		2009		HP 2020	WA Rank
Total Livebirths (# of liveborn infants)	79,577		86,845		88,921		90,270		89,242			
Livebirths By Mother's Race/Ethnicity ¹												
Non-Hispanic White	55,354	72.7%	56,782	65.8%	57,105	64.5%	57,781	64.3%	57,137	64.2%		
Non-Hispanic African American	3,067	4.0%	4,014	4.6%	4,105	4.6%	4,139	4.6%	4,192	4.7%		
Native American	1,714	2.3%	1,734	2.0%	1,794	2.0%	1,705	1.9%	1,715	1.9%		
Non-Hispanic Asian	5,679	7.5%	8,034	9.3%	8,632	9.8%	8,923	9.9%	8,747	9.8%		
Hispanic Origin ²	10,318	13.6%	15,793	18.3%	16,839	19.0%	17,340	19.3%	17,178	19.3%		
Unknown	3,445	4.3%	488	0.6%	446	0.5%	382	0.4%	273	0.3%		
Livebirths By Mother's Age												
<20 Years	8,573	10.8%	7,190	8.3%	7,516	8.5%	7,460	8.3%	6,882	7.7%		
20-24 Years	19,302	24.3%	20,680	23.8%	21,044	23.7%	21,283	23.6%	20,445	22.9%		
25-29 Years	22,176	27.9%	24,938	28.7%	25,530	28.7%	26,334	29.2%	26,164	29.3%		
30-34 Years	18,329	23.0%	20,303	23.4%	20,903	23.5%	21,433	23.7%	21,960	24.6%		
35-39 Years	9,149	11.5%	11,097	12.8%	11,357	12.8%	11,077	12.3%	10,974	12.3%		
40+ Years	2,024	2.5%	2,582	3.0%	2,549	2.9%	2,672	2.9%	2,817	3.2%		
Total Deliveries (# of women who delivered livebirths or fetal deaths) ³	78,359		85,453		87,504		88,800		87,841			
Medicaid-Funded Deliveries ⁴	32,830	41.9%	40,317	47.2%	41,392	47.3%	42,629	48.0%	42,643	48.5%		
Multiple Gestation Deliveries ⁵	1,120	1.4%	1,373	1.6%	1,345	1.5%	1,500	1.7%	1,421	1.6%		

- The total number of live births in Washington increased over 12% from about 80,000 births in the early 2000s to over 90,000 in 2008. In 2009, the number of births declined one percent to 89,242.
- The greatest increases in the number of births (over 30%) in this period have been to African American, Asian, and Hispanic women.
- With these changes, the proportions of all births to non-Hispanic white women decreased while births to women of other races/ethnicities increased. In 2009, about 19% of births were to Hispanic women, 64% to Non-Hispanic white women, 5% to Non-Hispanic African American Women, 2% to Non-Hispanic Native American women, and 10% to Non-Hispanic Asian or Pacific Islander women.
- Since the expansion of Medicaid through First Steps in 1989, Medicaid-funded deliveries have increased substantially. Medicaid funded almost half (48.5%) of all deliveries in 2009.
- Multiple gestations have increased since 1990. In 2009, they represented 1.6% of deliveries and 3.2% of live born infants.

1. In 2003, WA introduced a new birth certificate form which allows for designation of multiple races. In order to compare 2003 and later data with previous years, records with multiple race designations (3.6% in 2009) were statistically "bridged" into one of the five major race categories used prior to 2003. This is also the reason why no livebirths show up as "Other"; if selected they were recoded to one of the five categories.

2. Persons of Hispanic origin may be of any race. Those of unknown race were excluded from the denominator.

3. "Total deliveries" includes women who delivered a livebirth or fetal death (stillbirth) greater than 20 weeks gestation. Each woman is counted only once regardless of the plurality of her pregnancy. These data are from the First Steps Database which excludes approximately 500 births per year that are unavailable for matching to Medical Assistance data.

4. "Medicaid-funded deliveries" includes women who delivered a livebirth or fetal death (stillbirth) greater than 20 weeks gestation whose deliveries were covered by Medicaid. Each woman is counted only once regardless of the plurality of her pregnancy. A delivery is considered covered by Medicaid if the mother received Medicaid-paid prenatal or delivery services or if she was enrolled in Medicaid managed care for at least 3 of the 6 months prior to delivery. These data are from the First Steps Database which excludes approximately 500 births per year that are unavailable for matching to Medical Assistance data.

5. "Multiple gestation deliveries" includes women who delivered livebirths or fetal deaths (stillbirths) greater than 20 weeks gestation that were twins, triplets or quadruplets. These data are from the First Steps Database which excludes approximately 500 births per year that are unavailable for matching to Medical Assistance data.

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Birth Rate (Live births per 1,000 women) ⁶	1999	2006	2007	2008	2009	HP 2020	WA Rank ⁷
All Ages ⁸	61.9	65.5	66.4	66.9	65.9		15 (2006)
15-19 years	40.7	31.8	32.6	32.1	29.8		14 (2006)
15-17 years	21.6	15.2	16.1	15.5	13.8		10 (2006)
18-19 years	69.5	57.0	57.9	56.9	52.7		20 (2006)
20-24 years		92.2	92.1	91.9	87.7		
25-29 years		118.5	116.4	115.7	111.9		
30-34 years		100.0	102.9	103.9	104.4		
35-39 years		49.3	50.0	49.0	49.4		
40-44 years		10.2	10.1	10.8	11.4		
Pregnancy Rate [(Live births + fetal deaths \geq 20 weeks + abortions) per 1,000 women] ⁶	1999	2006	2007	2008	2009	HP 2020	WA Rank
All Ages ⁸	82.5	84.6	85.2	85.2	83.0		
15-19 years	66.5	51.8	52.8	51.0	46.6		
15-17 years	38.0	27.6	28.7	26.7	24.0	36.2	
18-19 years	109.6	88.9	89.5	87.3	79.0	105.9	
20-24 years		129.3	128.2	126.8	120.0		
25-29 years		146.2	143.0	141.2	135.5		
30-34 years		116.2	119.3	120.2	119.7		
35-39 years		59.7	59.7	59.1	58.7		
40-44 years		13.4	13.3	14.2	14.8		

- Currently, pregnancy rates and birth rates in Washington are undergoing shifts. Overall, both birth and pregnancy rates decreased from the early 1990s until 2002-2003. Since then, both rates increased through 2007-2008 and declined in 2009.
- Overall rates are being driven by distinct age-specific trends.
- Among younger women 15-24, birth and pregnancy rates decreased substantially until around 2003, remained flat for several years and have declined in the last few years. The number of births and pregnancies among this group dropped around 5% from 2008 to 2009.
- Among women 25-29, the pregnancy rate decreased until 1999 and increased slightly until 2006. Among this group the birth rate increased from 1995 to 2006. Since then, both pregnancy and birth rates appear to be declining.
- Among women over 30, birth and pregnancy rates have increased since the mid 1990s. In the last 2-3 years, rates among 35-39 year olds have flattened.

6. Age-specific rates equal the number of births or pregnancies occurring to women in a specific age group per 1,000 female population in that age group.

7. The WA State Rank is the ranking of Washington among the 50 states based on the National Center for Health Statistics data, with 1 being the best and 50 the worst. Note that the rates reported in this document are based on the Washington State Center for Health Statistics reports and do not always match the federally reported Washington State rates. As of Sept 2011, the most recent data are from 2006. In 2006, the birth rates for women 15-17 years ranged from 7.6 to 39.6 livebirths per 1000 women and for women 18-19 years from 35.9 to 113.5 livebirths per 1000 women. The birth rates for women 15-19 ranged from 18.7 to 68.4 livebirths per 1000 women and for women 15-44 years ranged from 52.2 to 94.1 livebirths per 1000 women.

8. "All Ages" rates are the total births or pregnancies per 1000 women 15-44 years.

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Livebirth Delivery Services (All Births Occurring in WA)	1999		2006		2007		2008		2009		HP 2020	WA Rank
Births Occurring in Washington State (includes residents and non-residents)	79,095		86,799		88,944		90,318		89,200			
Birth Facility												
Hospital (includes Military Hospitals)	77,528	98.0%	84,862	97.8%	86,982	97.8%	88,205	97.7%	86,852	97.4%		
Birth Center	407	0.5%	863	1.0%	904	1.0%	947	1.0%	1,020	1.1%		
Home	1088	1.4%	1,009	1.2%	996	1.1%	1,111	1.2%	1,263	1.4%		
Other (includes Born on Arrival, Other)	72	0.1%	63	0.1%	62	0.1%	55	0.1%	65	0.1%		
Unknown	0		2		0		0		0			
Birth Attendant ⁹												
MD/DO	69,772	88.9%	76,867	88.6%	78,443	88.2%	79,027	87.5%	77,763	87.2%		
Certified Midwife ¹⁰	6,354	8.1%	7,536	8.7%	8,077	9.1%	8,230	9.1%	8,070	9.0%		
Licensed Midwife	1,481	1.9%	1,600	1.8%	1,741	2.0%	1,896	2.1%	2,130	2.4%		
Nurse	424	0.5%	198	0.2%	254	0.3%	155	0.2%	239	0.3%		
Other (includes Other Midwife, Father, Hospital Administrator, and Other)	452	0.6%	573	0.7%	404	0.5%	987	1.1%	972	1.4%		
Unknown	612		25		25		23		26			

- In 2009, 97% of births in Washington State occurred in hospitals. This proportion has remained stable since 1990.
- MDs or DOs were listed as the birth attendant in approximately 87% of births in 2009. The percentage of MDs or DOs listed as the birth attendant has gradually been decreasing.
- Overall, the percent of births delivered by certified (nurse) midwives increased between 1990 and 2009. In 2009, 9% of births were attended by nurse midwives.
- The percent of births delivered by licensed midwives increased significantly from 1996 to 2001. In 2003, rates were lower but may be due to reporting changes with the new birth certificate. Rates have been increasing since 2003., and represent 1.4% of births in 2009.

9. In 2003, Washington introduced a new electronic birth reporting system. To improve reporting, pre-set drop down boxes for completing the birth attendant field were added. Provider qualifications were pre-determined and may have influenced changes observed in the reporting of licensed midwives and nurses as birth attendants.

10. Based on a review of the data, the category "Certified Midwife" refers to Certified Nurse Midwives.

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Livebirth Delivery Services (cont'd)	1999	2006		2007		2008		2009		HP 2020	WA Rank ¹¹
Method of Delivery ¹² from linked hospital discharge and birth certificate information											
Births linked to hospital discharge information		80,291		82,558		82,289		na			
Births occurring in Washington (from birth certificate)								89,200			
Total Vaginal Births		56,297	70.1%	57,280	69.4%	56,463	68.6%	63,106	70.7%		
Vaginal Birth After C-Section (VBAC)		1,272	1.6%	1,314	1.6%	1,307	1.6%	1,278	1.4%		
Total C-Section		23,994	29.9%	25,278	30.6%	25,826	31.4%	26,094	29.3%		17 (2008)
Primary C-Section		15,324	19.1%	14,829	18.0%	15,068	18.3%	17,215	19.3%		
Repeat C-Section		9,670	12.0%	10,449	12.7%	10,758	13.1%	8,879	10.0%		
Primary C-Section per 100 livebirths w/o history of c-section		22.1		20.9		21.5		21.8		23.9	
VBAC per 100 livebirths w/ history of c-section		11.6		11.2		10.8		12.6			8 of 19 (2006)
Method of Delivery from birth certificate information only											
Nulliparous Term Singleton Vertex livebirths (NTSV) ¹³		27,913		29,543		30,409		29,835			
NTSV C-sections		7,122	25.5%	7,622	25.8%	7,954	26.2%	7,792	26.1%		
Total Previous C-Section (among vaginal and cesarean births)		8,586		9,360		9,603		10,148			
One prior C-Section		6,598	77.3%	7,125	76.2%	7,130	74.4%	7,528	74.4%		
Two prior C-Section		1,601	18.7%	1,793	19.2%	1,946	20.3%	2,018	20.0%		
Three or more prior C-Section		341	4.0%	432	4.6%	507	5.3%	569	5.6%		
Don't know number of prior C-Section		46		10		20		33			

- The distribution of the method of delivery has changed in Washington since 1990. In the early 1990s vaginal births increased and both primary and repeat c-sections decreased. Since 1998, these trends have reversed. Vaginal births have decreased and both primary and repeat c-sections have increased.
- In 2008, hospital discharge data linked to birth certificates showed 69% of births were delivered vaginally, and cesarean sections comprised 31% of births. This c-section rate is higher than the 29% rate based on birth certificates alone. Regardless of the source, c-section rates increased over 40% since 2000. Linked data aren't yet available for 2009, but birth certificate data show a c-section rate of 29.3%.
- The increase in c-section deliveries is also evident in the drop in the vaginal birth after c-section (VBAC) rate which decreased from 27.5 VBACs per 100 livebirths with a history of c-section in 2000 to 10.8 in 2008.
- Nulliparous, term, singleton, vertex (NTSV) deliveries are considered lower risk deliveries. They comprised 32% of deliveries in 2009. The cesarean section rate among these deliveries was 25.1 per 100 in 2009. The NTSV C-section rate has increased 21% since 2003.
- The percent of all deliveries with one or more prior cesarean sections has been increasing, and in 2009 represented 11.4% of deliveries. Over 2,500 women had two or more prior cesarean sections.

11. The WA State Rank is the ranking of Washington among the 50 states based on the National Center for Health Statistics data, with 1 being the best and 50 the worst. Note that the rates reported in this document are based on the Washington State Center for Health Statistics reports and do not always match the federally reported Washington State rates. Among states, the cesarean sections rate ranged from 22.0 to 38.7% according to final data from 2008. The VBAC rate for women with a history of c-section ranged from a high of 20.9% to 5.2% among the 19 states using the 2003 US Standard Birth Certificate in 2006 (most recent data available).

12. In 2003, a new birth certificate form was introduced that collected method of delivery differently than the prior form. It appears that this may have affected the reporting of prior cesarean sections, consequently influencing the primary c-section proportion, the repeat c-section proportion, and the VBAC rates in 2003 and later years.

13. NTSV refers to nulliparous, term, singleton, vertex deliveries. This information is from birth certificate and is limited to Washington residents. Deliveries at military hospitals were excluded.

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Maternal Mortality and Morbidity ¹⁴	1999	2006	2007	2008	2009	HP 2020	WA Rank
Maternal Mortality							
Pregnancy - Associated deaths per 100,000 livebirths ¹⁵	42.7	46.1	42.7	35.4	n/a		
Pregnancy - Related deaths per 100,000 livebirths ¹⁵	10.1	12.7	6.7	10.0	n/a		
Maternal Morbidity							
Total Diabetes per 100 livebirths		5.8	6.2	6.0	6.4		
Prepregnancy Diabetes		0.7	0.7	0.7	0.8		
Gestational Diabetes		5.1	5.5	5.3	5.6		
Total Hypertension per 100 livebirths		6.8	6.6	6.4	6.7		
Prepregnancy Hypertension		1.4	1.2	1.3	1.3		
Gestational Hypertension		5.4	5.4	5.1	5.4		
Group B Strep Culture Positive per 100 livebirths		17.5	17.2	17.3	17.7		

- From 1990-2008, there was no significant trend in the pregnancy-associated mortality ratio, despite improvements in ascertaining these deaths. In 2008, the ratio was 35.4 deaths per 100,000 livebirths. These deaths occur within one year of pregnancy and are due to any cause. They are not necessarily related to the pregnancy.
- From 1990-2008, there also was no significant trend in the pregnancy-related mortality ratio. In 2008, the ratio was 10.0 per 100,000 livebirths. These are deaths directly caused by pregnancy or by a condition exacerbated by pregnancy.
- Maternal morbidity as reported on the birth certificate indicates that in 2009 about 6% of women had diabetes, almost 7% of women had hypertension and about 18% of women were Group B Strep culture positive during pregnancy. Rates of diabetes and Group B Strep Culture positive have increased since 2003.

14. In many of the rates presented in this section, single year data are subject to fluctuation due to small numbers.

15. A pregnancy-associated death is a death of a woman while pregnant or within a year of delivery or termination of pregnancy from any cause. A pregnancy-related death is a death of a woman while pregnant or within a year of delivery or termination of pregnancy from any cause related to or aggravated by pregnancy or its management. Cause of death was determined by the Perinatal Advisory Committee Maternal Mortality Subcommittee.

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Maternal Mortality and Morbidity (cont'd)	1999	2006	2007	2008	2009	HP 2020	WA Rank
Prepregnancy Body Mass Index (BMI) per 100 livebirths ¹⁶							
Underweight (BMI < 19.8))		10.0	9.7	9.4	9.0		
Normal Weight (BMI 19.8-26)		49.3	49.0	49.0	48.4		
Overweight (BMI >26-29)		14.7	14.8	14.7	14.9		
Obese (BMI >29)		25.9	26.5	26.9	27.7		
Morbidly Obese (BMI 40+)		3.7	3.8	4.1	4.3		
Unknown BMI (percent of all pregnant women)		12.9%	10.8%	8.3%	7.3%		
Weight Gain per 100 livebirths ¹⁷							
Recommended Weight Gain		31.1	31.5	31.8	31.8		
Less than Recommended Weight Gain		21.9	21.5	21.2	21.5		
Greater than Recommended Weight Gain		47.0	47.0	47.0	46.7		

- In 2009, almost 43% of women began pregnancy either overweight or obese, including over 4% of women who were morbidly obese.
- As in the general population, the rate of overweight and obesity has been increasing among pregnant women. The rate of increase has been greatest among women who are morbidly obese.
- In addition, 47% of women gained more weight during pregnancy than the amount recommended by the 2009 Institute of Medicine Report on weight gain in pregnancy.
- Missing data from the birth certificate inhibit our ability to adequately track obesity among pregnant women in Washington. While the percent missing has improved considerably, over 7% of birth records were still missing prepregnancy weight or height in 2009. We cannot calculate the prepregnancy body mass index and pregnancy weight gain for these women.

16. Prepregnancy body mass index is calculated as 703.1 * (prepregnancy weight in pounds/square of height in inches). As a reference, a woman who is 5'5" tall is underweight if she weighs less than 111 pounds before pregnancy, is normal weight if she weighs 111-149, is overweight if she weighs 150-179 pounds, is obese if she weighs 180 pounds or more, and is morbidly obese if she weighs over 240 pounds.

17. Weight gain is calculated as weight at delivery less prepregnancy weight. Categories of weight gain are based on the 2009 Institute of Medicine recommendations for weight gain in pregnancy and take prepregnancy BMI into account. The recommended pregnancy weight gain by prepregnancy BMI status is underweight (28-40 pounds), normal weight (25-35 pounds), overweight (15-25 pounds) and obese (11-20 pounds).

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Infant Mortality	1999	2006	2007	2008	2009	HP 2020	WA Rank ¹⁸
Fetal deaths per 1,000 livebirths ¹⁹		5.6	5.5	6.0	5.6	5.6	30 (2005)
Perinatal deaths per 1,000 livebirths ²⁰	8.4	8.1	7.7	8.5	7.8	5.9 ²¹	
Infant deaths per 1,000 livebirths (period) ²²	5.0	4.7	4.8	5.4	4.9	6.0	1 (2006)
Neonatal deaths per 1,000 livebirths (period) ²³	3.2	3.0	2.8	3.3	2.8	4.1	2 (2006)
Post Neonatal deaths per 1,000 livebirths (period) ²⁴	1.8	1.7	2.0	2.1	2.1	2.0	
SIDS deaths per 1,000 livebirths (period) ²⁵	0.9	0.6	0.7	0.8	0.7	0.5	

- Washington's infant mortality rate declined substantially throughout most of the 1990s. It fluctuated towards the end of the 1990s, but has declined in the last decade.
- In 2009, the infant mortality rate dropped back to 4.9 per 1000 live births after a one-year increase to 5.4 deaths per 1000 in 2008. We were not able to identify a cause for the increase which was predominantly among neonatal deaths. The increase was only among deaths due to perinatal conditions, not congenital malformations or SIDS.
- Overall, trends in both neonatal mortality and post neonatal mortality decreased from 1990-2009. The decrease in neonatal mortality has been fairly constant over time, while postneonatal mortality declined predominantly during the 1990s.
- SIDS rates decreased from 2.3 per 1,000 in 1990 to 0.5 per 1,000 in 2005. They have fluctuated with no clear trend since, but remain low. Improved death scene investigation and changes in reporting practices of coroners/medical examiners have played a role in this decline.

18. The 2006 WA State Rank is the ranking of Washington among the 50 states based on the National Center for Health Statistics data, with 1 being the best and 50 the worst. For 2006 infant mortality rates range from 4.68 per 1000 livebirths to 10.60 per 1000 livebirths. Neonatal mortality rates range from 2.64 per 1000 livebirths to 7.04 per 1000 livebirths. Fetal death rates in 2005 range from 2.84 per 1000 livebirths to 9.79 per 1000 livebirths.

19. Fetal death reporting in Washington is required when the fetus is 20 weeks gestation or more.

20. Perinatal deaths refer to fetal deaths of 20 weeks gestation or more as well as deaths to infants less than 7 days old.

21. The Healthy People 2020 target for perinatal mortality is defined as 28 weeks or more gestation plus deaths of infants less than 7 days old.

22. Infant deaths refer to deaths to infants from birth through 364 days of age. These are crude infant mortality rates which use infant deaths in a given year as the numerator and infant births in the same year as the denominator. These are also known as period infant mortality rates.

23. Neonatal deaths refer to deaths to infants birth through 27 days of age.

24. Post neonatal deaths refer to deaths to infants from 28 through 364 days of age.

25. Cause of death was coded with ICD-9 in 1990-1998 and with ICD 10 in 1999-2009. Rates prior to 1999 were adjusted by the ICD10-ICD9 comparability ratio for SIDS of 1.0362. See <http://www.doh.wa.gov/ehsphi/chs/chs-data/infdeath/download/InfantF1.xls> for additional information. When interpreting trends in SIDS, the category "unexplained infant death" should be considered to see if that has also changed over time. 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 or medical examiner.

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Mortality (cont'd) ²⁶	1999	2006	2007	2008	2009	HP 2020	WA Rank ²⁶
Race/ethnic-specific Infant deaths per 1,000 livebirths (period) ²⁷							4 (2004-2006) ²⁶
Non-Hispanic White	4.4	3.9	4.3	4.9	4.7	6.0	7 (2004-2006) ²⁶
Non-Hispanic African American	13.0	6.2	9.3	8.7	5.7	6.0	1 of 39 (2004-2006) ²⁶
Non-Hispanic Native American	7.6	11.5	12.8	8.2	11.1	6.0	7 of 13 (2004-2006) ²⁶
Non-Hispanic Asian or Pacific Islander	3.7	3.9	4.4	4.3	3.1	6.0	9 of 31 (2004-2006) ²⁶
Hispanic Origin ²⁸	5.1	5.0	4.3	6.2	5.1		2 of 41 (2004-2006) ²⁶
Infant deaths per 1,000 livebirths (cohort) ²⁹							
Total	5.0	4.7	4.9	5.5	n/a		
Medicaid	6.5	5.9	6.4	7.0	n/a		
Non-Medicaid	3.8	3.7	3.5	4.2	n/a		
Singleton	4.4	4.3	4.5	4.9	n/a		
Twins	21.2	16.8	17.3	22.8	n/a		
Triplets	90.0	38.5	0.0	11.0	n/a		

- In 2009, the Native American infant mortality rate (11.1 per 1,000) exceeded the infant mortality rates of other race/ethnic groups. In contrast to other groups, infant mortality among Native Americans has been increasing since 1994.
- The African American infant mortality rate has significantly decreased since 1990. In 2009, the African American infant mortality rate of 5.7 per 1,000 was the lowest rate in at least 20 years, and approached the non-Hispanic white infant mortality rate of 4.7 per 1000.
- Overall, the Asian infant mortality rate has decreased slightly since 1990.
- The Hispanic infant mortality rate declined from 1990 to 1994, and has not significantly changed since.
- In 2008, the mortality of infants whose mothers received Medicaid-funded maternity care (7.0 per 1,000) continued to exceed the mortality of infants whose mothers did not receive Medicaid-funded maternity care (4.2 per 1,000). While both rates have declined since 1990, the mortality rate of infants whose mothers received Medicaid experienced a greater decline.
- In 2008, the mortality of twins (22.8 per 1,000) greatly exceeded the mortality of singleton infants 4.9 per 1,000).

26. In many of the rates presented in this table, single year data are subject to fluctuation due to small numbers. For comparison, we provide the rankings of race-specific rates from the National Center for Health Statistics for 2004-2006, with 1 being the best and 50 the worst. For whites, the range was 3.66 to 7.68 per 1000 livebirths. For African Americans, the range was 8.12 to 20.85 per 1000 livebirths. For Native Americans the range was 6.30 to 12.28 per 1000 livebirths. For Asian or Pacific Islanders the range was 3.19 to 8.64 per 1000 livebirths. For Hispanics, the range was 4.27 to 7.95 per 1000 livebirths.

27. Race and ethnicity are determined from the birth certificate after matching infant death certificates to the child's birth certificate. There were 39, 52, 40 and 22 deaths from 2005-2008 that were of unknown race/ethnicity. In 2003, WA introduced a new birth certificate form which allows for designation of multiple races. In order to compare 2003 and later data with previous years, records with multiple race designations (3.6% in 2009) were statistically "bridged" into one of the five major race categories used prior to 2003. This is also the reason why no livebirths show up as "Other"; if selected they were recoded to one of the five categories.

28. Persons of Hispanic origin may be of any race.

29. These are cohort infant mortality rates. Cohort mortality rates describe the experience of a birth cohort. The denominator includes all births in a specified year (cohort) and the deaths before 365 days of age among those infants in the numerator. The deaths may occur in the cohort year or the subsequent year. These data come from the First Steps Database and exclude approximately 500 births each year that are unavailable for matching to Medical Assistance data.

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Birth Weight	1999	2006	2007	2008	2009	HP 2020	WA Rank ³⁰
Low Birth Weight Births ³¹							
Low birth weight (LBW) births per 100 livebirths	5.9	6.5	6.3	6.3	6.3	7.8%	3 (2008)
Singleton	4.5	5.0	4.9	4.7	4.8		
Multiple Births	52.8	53.0	52.8	53.1	51.9		
Singleton LBW births per 100 singleton livebirths ³²							
Non-Hispanic White	4.1	4.4	4.4	4.3	4.3		
Non-Hispanic African American	8.6	9.2	8.3	7.5	8.2		
Non-Hispanic Native American	5.4	6.6	6.7	6.8	6.2		
Non-Hispanic Asian or Pacific Islander	6.2	6.4	6.2	5.9	5.6		
Hispanic Origin ³³	4.4	5.4	4.8	4.8	5.0		
Medicaid ³⁴							
Medicaid	5.3	5.8	5.5	5.4	5.5		
Non-Medicaid	3.8	4.3	4.2	4.1	4.0		

- The trend in total low birth weight (LBW) increased steadily from 5.3% in 1990 to 6.5% in 2006. The rate has been constant at 6.3 per 100 births for the last three years. The increase in total low birth weight is in part attributable to the influence of multiple births. However, the singleton low birth weight rate also increased steadily through 2006. Recently, rates have dropped slightly.
- In 2009, the highest singleton LBW rate was for Non-Hispanic African Americans (8.2%), despite this group's significant decrease in singleton LBW since 1990.
- The singleton LBW rates of all race or ethnic groups except African Americans have significantly increased since 1990.
- In 2009, the Medicaid singleton LBW rate (5.5%) continued to exceed the Non-Medicaid singleton LBW rate (4.0%).

30. The 2006 WA State Rank is the ranking of Washington among the 50 states based on the National Center for Health Statistics data, with 1 being the best and 50 the worst. Note that the rates reported in this document are based on the Washington State Center for Health Statistics reports and do not always match the federally reported Washington State rates. Final 2008 data show total LBW rates ranged from 6.0 per 100 livebirths to 11.8 per 100 livebirths.

31. Low birth weight is defined as less than 2,500 grams (5 lbs. 8 oz.).

32. In 2003, WA introduced a new birth certificate form which allows for designation of multiple races. In order to compare data from 2003 and later with previous years, records with multiple race designations (3.6% in 2009) were statistically "bridged" into one of the five major race categories used prior to 2003.

33. Persons of Hispanic origin may be of any race.

34. These data come from the First Steps Database and exclude approximately 500 births each year that are unavailable for matching to Medical Assistance data.

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Birth Weight (cont'd)	1999	2006	2007	2008	2009	HP 2020	WA Rank ³⁵
Very Low Birth Weight Births ³⁶							
Very low birth weight (VLBW) births per 100 livebirths	1.0	1.0	1.1	1.1	1.0	1.4%	7 (2008)
Singleton VLBW births per 100 singleton livebirths ³⁷							
Total	0.8	0.8	0.8	0.8	0.7		
Non-Hispanic White	0.7	0.6	0.7	0.7	0.7		
Non-Hispanic African American	1.7	1.9	1.6	1.3	1.5		
Non-Hispanic Native American	0.9	0.5	0.8	1.4	1.2		
Non-Hispanic Asian or Pacific Islander	1.0	0.7	0.9	0.8	0.5		
Hispanic Origin ³⁸	0.9	0.9	0.8	0.8	0.8		
Medicaid ³⁹	1.0	0.9	0.9	0.9	0.8		
Non-Medicaid	0.6	0.6	0.7	0.6	0.6		
VLBW births at facilities with Level III perinatal services ⁴⁰	n/a	83.1%	81.9%	82.6%	82.4%	83.7%	
Births < 1000 g at facilities with Level III perinatal services ⁴⁰	n/a	81.3%	78.1%	80.2%	83.6%		

- While it is not visible in the rates presented above, the total VLBW rate increased significantly from 1990 to 2009.
- The singleton VLBW rate among African Americans declined significantly from 1990-2009, but remains twice the rate of Whites.
- The singleton VLBW rates among Asian and Pacific Islanders and among Hispanics has increased since 1990.
- One measure used to evaluate the effectiveness of perinatal regionalization is the percent of VLBW births occurring at facilities with Level III perinatal Services. In Washington State, approximately 82% of VLBW infants were born at facilities with Level III perinatal services in 2009.

35. The WA State Rank is the ranking of Washington among the 50 states based on the National Center for Health Statistics data, with 1 being the best and 50 the worst. Note that the rates reported in this document are based on the Washington State Center for Health Statistics reports and do not always match the federally reported Washington State rates. 2008 final VLBW rates ranged from 1.0 per 100 livebirths to 2.1 per 100 livebirths.

36. Very low birth weight is defined as less than 1,500 grams (3 lbs. 4 oz.).

37. In 2003, WA introduced a new birth certificate form which allows for designation of multiple races. In order to compare data from 2003 and later with previous years, records with multiple race designations (3.6% in 2009) were statistically "bridged" into one of the five major race categories used prior to 2003.

38. Persons of Hispanic origin may be of any race.

39. These data come from the First Steps Database and exclude approximately 500 births each year that are unavailable for matching to Medical Assistance data.

40. These data are limited to resident births that occurred in Washington State. Facilities with Level III perinatal services are as recommended by the Perinatal Advisory Committee Subgroup on Perinatal Level of Care.

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Preterm Births ⁴²	1999	2006	2007	2008	2009	HP 2020	WA Rank ⁴¹
Preterm births per 100 livebirths ⁴³	9.2	10.7	10.4	10.5	10.1	11.4%	10 (2008)
Non-Hispanic White		10.0	9.7	9.8	9.3		
Non-Hispanic African American		9.9	13.6	12.6	12.9		
Non-Hispanic Native American		16.5	16.5	16.0	14.5		
Non-Hispanic Asian or Pacific Islander		10.9	10.5	10.8	10.6		
Hispanic Origin ⁴⁴		11.5	11.0	11.4	11.2		
Very preterm (<32 weeks)	1.3	1.5	1.5	1.5	1.5		
Moderately preterm (32-36 weeks)	7.9	9.2	8.8	8.9	8.6		
Singleton preterm births per 100 livebirths ⁴³	8.1	9.4	9.2	9.0	8.8		
Non-Hispanic White		8.6	8.4	8.1	7.9		
Non-Hispanic African American		11.3	12.3	11.3	11.2		
Non-Hispanic Native American		15.2	14.4	15.0	13.8		
Non-Hispanic Asian or Pacific Islander		9.8	9.6	9.6	9.1		
Hispanic Origin ⁴⁴		10.8	10.1	10.4	10.4		
Singleton very preterm (<32 weeks)	1.0	1.2	1.2	1.2	1.2		
Singleton moderately preterm (32-36 weeks)	7.1	8.2	8.0	7.8	7.6		

- Preterm birth rates in Washington were slightly lower in the last three years. Nationally, rates have also decreased for the past three years.
- The trends in total and singleton preterm birth rates increased significantly from 1993 to 2006. Among both groups, rates of moderately preterm birth (32-36 weeks) and very preterm (< 32 wks) showed similar patterns.
- The rate of singleton preterm birth is not quite double the singleton LBW rate. In 2009, approximately two-thirds of singleton preterm infants in Washington State were normal weight (2500 grams or more) at delivery.

41. The WA State Rank is the ranking of Washington among the 50 states based on the National Center for Health Statistics data, with 1 being the best and 50 the worst. Note that the rates reported in this document are based on the Washington State Center for Health Statistics reports and do not always match the federally reported Washington State rates. Final data from 2008 preterm birth rates ranged from 9.5 per 100 livebirths to 18.0 per 100 livebirths.

42. Gestational age is calculated following National Center for Health Statistics methodology. This is documented at <http://www.cdc.gov/nchs/data/dvs/instr12.pdf>.

43. In 2003, WA introduced a new birth certificate form which allows for designation of multiple races. In order to compare data from 2003 and later with previous years, records with multiple race designations (3.6% in 2009) were statistically "bridged" into one of the five major race categories used prior to 2003.

44. Persons of Hispanic origin may be of any race.

Perinatal Indicators Report for Washington Residents

Initiation of Prenatal Care ⁴⁶	1999	2006	2007	2008	2009	HP 2020	WA Rank ⁴⁵
First Trimester Prenatal Care per 100 pregnant women							
Total	83.0	78.6	76.4	77.1	77.7	77.9%	14 of 18 (2006)
Medicaid	71.8	68.4	65.3	66.6	68.7		
Non-Medicaid	90.9	87.7	86.6	87.0	86.2		
Late/No Prenatal Care per 100 pregnant women ⁴⁷							
Total	3.0	5.0	5.5	5.7	5.5		14 of 18 (2006)
Medicaid	5.3	7.5	8.2	8.4	7.7		
Non-Medicaid	1.4	2.7	3.0	3.1	3.5		
Unknown Prenatal Care (percent of all pregnant women)							
Total	9.5%	12.6%	8.7%	7.1%	5.9%		
Medicaid	9.8%	12.1%	8.0%	5.9%	5.4%		
Non-Medicaid	9.3%	13.1%	9.4%	8.1%	6.4%		

- Prenatal care initiation in the first trimester was 77.7% in 2009, up slightly from 2008. Prior to 2008, first trimester prenatal care had declined since 2002 for women on Medicaid and women not on Medicaid.
- First trimester prenatal care initiation for women receiving Medicaid increased at a rate of 5% per year between 1991 and 1994 (First Steps started in August 1989). There was no significant change from 1994-2002, and the rate declined at a rate of 2.2% per year from 2002-2007.
- The percentage of women with late or no prenatal care increased at a rate of 7.1% per year between 1999 and 2009. The rate increased for both women on Medicaid and women not on Medicaid. The overall rate of late or no prenatal care was 5.5% in 2009. This amounts to about 4,600 women, almost 1,300 of whom received no prenatal care.
- The high number (and percent) of birth certificates with missing data for prenatal care became a greater problem in 2003. This is due to changes in the birth certificate reporting form which asks for the exact date of first prenatal visit. The percent missing prenatal care data has improved considerably and for the past three years has been better than it was prior to instituting the new certificate in 2003.

45. Eighteen states, including Washington, used the 2003 revision of the birth certificate in 2006. Among these states, first trimester prenatal care ranged from 61.6% to 83.8%. Late or no prenatal care ranged from 2.4% to 7.1%.

46. These data are from the First Steps Database and reflect prenatal care provided to women who delivered either a livebirth or fetal death. These data exclude approximately 500 births every year that are unavailable for matching to Medical Assistance data. First trimester prenatal care and late/no prenatal care rates are calculated after excluding records missing month prenatal care began. "Unknown prenatal care" represents the proportion of all records missing month prenatal care began.

47. "Late/No prenatal care" refers to women who received prenatal care during their third trimester or received no prenatal care.

Perinatal Indicators Report for Washington Residents

Medicaid Expenditures for Maternal & Infant Services ^{48, 49}	1999	2006	2007	2008	2009	HP 2020	WA Rank
Average costs per client for maternal services (prenatal through end of 2nd month post partum)	\$5,907	\$7,803	\$7,949	\$8,675	\$8,709		
Average costs per client for infant services (first year of life)	\$3,980	\$6,705	\$7,168	\$7,449	\$7,441		
Combined average costs for maternal/infant services	\$9,886	\$14,508	\$15,117	\$16,124	\$16,150		

- Average Medicaid Expenditures per client for maternal services increased 47% from 1999-2009. Average costs for infant services increased 87% over the same time period.

48. Dollars are the actual amounts paid for a given year and have not been adjusted for inflation. These data were reported by the First Steps Database in October 2010. Data are subject to change as claims are paid.

49. Maternity Support Services and Maternity Case Management costs are included in the prenatal and post partum costs.

Perinatal Indicators Report for Washington Residents

Data for the perinatal indicators on this and previous pages come from Washington State birth, fetal death, and death certificate data as well as the First Steps Database. The following perinatal indicators come from the Pregnancy Risk Assessment Monitoring System (PRAMS), an ongoing population based surveillance system sponsored by the Centers for Disease Control and Prevention that surveys new mothers who are representative of all registered births to Washington State residents. The Washington State Department of Health has collected PRAMS data since 1993. For more information on PRAMS data, contact the PRAMS coordinator at 360-236-3576 or visit the website at <http://www.doh.wa.gov/cfh/prams>.

Perinatal Indicators Report for Washington Residents

Pregnancy Smoking	PRAMS 1999		PRAMS 2006		PRAMS 2007		PRAMS 2008		PRAMS 2009	
	Percent	95% CI	Percent	95% CI	Percent	95% CI	Percent	95% CI	Percent	95% CI
Smoking in 3 months before pregnancy per 100 pregnant women										
Total	23	(20,26)	21	(18, 24)	20	(17, 23)	20	(18, 23)	23	(20, 26)
Medicaid	34	(29,40)	31	(26, 36)	28	(24,33)	28	(24, 33)	34	(29,38)
Non-Medicaid	15	(12,20)	13	(10, 17)	14	(10, 17)	12	(9, 16)	11	(8, 15)
Smoking in last 3 months of pregnancy per 100 pregnant women										
Total	12	(9,15)	12	(10, 15)	9	(7, 12)	11	(9, 14)	9	(7, 12)
Medicaid	20	(15,25)	19	(16, 24)	16	(12, 20)	17	(14, 21)	15	(12, 19)
Non-Medicaid	6	(4,10)	6	(4, 9)	5	(3, 7)	6	(4, 8)	3	(2, 5)
Smoking at post partum interview per 100 pregnant women ⁵⁰										
Total	17	(14,20)	15	(12, 18)	13	(11, 16)	14	(12, 17)	12	(10, 14)
Medicaid	26	(21,32)	23	(19, 28)	22	(17, 26)	21	(17, 25)	19	(16, 24)
Non-Medicaid	10	(8,14)	7	(5, 11)	6	(4, 9)	7	(5, 11)	4	(3, 7)

- According to the Pregnancy Risk Assessment Monitoring System (PRAMS), smoking in the three months before pregnancy, in the last three months of pregnancy and at post partum interview (2-6 months after delivery) declined significantly from 1996 to 2008.
- This pattern was similar for both women receiving Medicaid and women not receiving Medicaid. Women receiving Medicaid have higher smoking rates at each time period, and have experienced a slower rate of decrease than women not receiving Medicaid.
- In 2009, women reported higher rates of smoking before pregnancy, but the trend is not yet statistically significant.
- This smoking data is from PRAMS because we observed substantial underreporting of smoking on the birth certificate compared to PRAMS.

50. The Pregnancy Risk Assessment Monitoring System is administered 2-6 months postpartum.

Perinatal Indicators Report for Washington Residents

Unintended Pregnancy	PRAMS 1999		PRAMS 2006		PRAMS 2007		PRAMS 2008		PRAMS 2009	
	Percent	95% CI	Percent	95% CI	Percent	95% CI	Percent	95% CI	Percent	95% CI
Survey Question 11. Thinking back to just before you got pregnant, how did you feel about becoming pregnant?										
I wanted to be pregnant sooner										
Total	21	(18,25)	18	(16, 21)	21	(18, 24)	17	(14, 19)	18	(16, 21)
Medicaid	16	(12,20)	13	(10, 16)	12	(9, 16)	11	(8, 14)	11	(8, 14)
Non-Medicaid	25	(21,29)	23	(19, 27)	27	(23, 32)	22	(19, 27)	26	(22, 30)
I wanted to be pregnant later										
Total	30	(26,33)	28	(25, 32)	29	(26, 32)	29	(26, 32)	32	(29, 36)
Medicaid	46	(40,52)	41	(36, 45)	43	(38, 48)	41	(37, 46)	44	(40, 49)
Non-Medicaid	19	(16,24)	18	(15, 22)	18	(14, 22)	18	(15, 22)	21	(17, 25)
I wanted to be pregnant then										
Total	41	(37,45)	45	(42, 49)	43	(40, 47)	47	(43, 50)	43	(40, 46)
Medicaid	26	(22,32)	36	(32, 41)	34	(30, 39)	38	(33, 42)	37	(33, 42)
Non-Medicaid	50	(45,55)	50	(49, 58)	51	(46, 55)	55	(50, 59)	49	(44, 54)
I didn't want to be pregnant then or at any time in the future										
Total	8	(6,11)	8	(7, 11)	7	(6, 9)	7	(6, 9)	6	(5, 8)
Medicaid	12	(8,16)	11	(8, 15)	11	(8, 15)	10	(8, 13)	8	(5, 10)
Non-Medicaid	6	(4,9)	6	(4, 9)	4	(3, 7)	5	(3, 7)	5	(3, 7)
Estimated births from unintended pregnancies ⁵¹										
Total	38	(34,42)	37	(33, 43)	36	(33, 39)	37	(34, 40)	39	(35, 42)
Medicaid	58	(52,63)	51	(46, 56)	54	(49, 58)	51	(47, 56)	52	(47, 56)
Non-Medicaid	25	(21,30)	24	(20, 28)	22	(18, 26)	23	(19, 27)	25	(21, 30)
Estimated pregnancies that were unintended ⁵²										
	53		51		50		50		51	

■ Approximately 39% of Washington State births resulted from unplanned pregnancies in 2009. This rate is significantly higher for women receiving Medicaid (52%) than for women not receiving Medicaid (25%).

■ The unintended pregnancy rate was approximately 50% in 2009. (This rate includes births and abortions.)

51. Responses to "I wanted to be pregnant later" are referred to as "mistimed" and responses to "I didn't want to be pregnant then or at any time in the future" are referred to as "unwanted." Together these two categories are what is considered "unintended."

52. Estimated pregnancies that are unintended are calculated by taking the estimated births that were unintended from PRAMS and multiplying this by the number of livebirths. The number of abortions is added to this number, and then the sum is divided by the number of livebirths and abortions. This estimate assumes that all reported abortions are due to unintended pregnancies, though a small percentage might be medically indicated.

Perinatal Indicators Report for Washington Residents

Provider Screening	PRAMS 1999		PRAMS 2006		PRAMS 2007		PRAMS 2008		PRAMS 2009	
	Percent	95% CI	Percent	95% CI	Percent	95% CI	Percent	95% CI	Percent	95% CI
Survey Question 22. During any of your prenatal care visits, did a doctor, nurse, or other health care worker do any of the things listed below?										
a. Ask if you were smoking cigarettes										
Total	na		94	(92, 95)	93	(91, 94)	94	(92, 95)	94	(92, 95)
Medicaid			96	(93, 97)	96	(93, 97)	96	(94, 98)	97	(95, 98)
Non-Medicaid			92	(98, 94)	91	(87, 93)	92	(89, 94)	90	(87, 93)
b. Ask how much alcohol you were drinking										
Total	na		87	(85, 89)	88	(86, 90)	87	(84, 89)	88	(85, 90)
Medicaid			85	(81, 89)	90	(87, 93)	87	(83, 90)	90	(87, 93)
Non-Medicaid			89	(85, 91)	86	(83, 89)	87	(83, 90)	85	(81, 88)
c. Ask if someone was hurting you emotionally or physically										
Total	na		75	(72, 78)	73	(69, 75)	73	(70, 76)	77	(74, 79)
Medicaid			80	(75, 83)	81	(77, 85)	83	(79, 86)	88	(85, 91)
Non-Medicaid			71	(67, 75)	66	(61, 70)	64	(59, 69)	65	(60, 70)
d. Ask if you were using illegal drugs (marijuana or hash, cocaine, crack, etc.)										
Total	na		78	(75, 81)	78	(75, 81)	78	(75, 81)	79	(76, 82)
Medicaid			85	(81, 88)	86	(82, 89)	84	(80, 87)	87	(84, 90)
Non-Medicaid			73	(68, 77)	72	(67, 76)	73	(68, 77)	71	(66, 75)
e. Ask if you wanted to be tested for HIV (the virus that causes AIDS)										
Total	na		83	(81, 86)	79	(76, 82)	80	(77, 82)	77	(74, 80)
Medicaid			83	(79, 87)	85	(81, 88)	83	(79, 86)	83	(79, 86)
Non-Medicaid			84	(80, 87)	74	(70, 78)	77	(72, 80)	72	(67, 76)
f. Ask if you planned to use birth control after your baby was born										
Total	na		89	(87, 91)	89	(87, 91)	88	(86, 90)	92	(90, 93)
Medicaid			94	(92, 96)	93	(90, 95)	93	(90, 95)	96	(93, 97)
Non-Medicaid			85	(81, 88)	86	(83, 89)	83	(79, 87)	88	(85, 91)

- New mothers reported provider screening rates over 85% for smoking, alcohol use, and postpartum birth control in 2009.
- In 2009, mothers reported lower provider screening rates for domestic violence (77%), use of illegal drugs (79%), and HIV testing (77%) compared to screening other health issues. However, rates for domestic violence and illegal drug use screening increased significantly since 2000 among all women and women receiving Medicaid.
- Women receiving Medicaid were more likely to report a health care provider asked them about smoking, domestic violence, illegal drug use, if they wanted to be tested for HIV, or post partum birth control use than women not receiving Medicaid.

Perinatal Indicators Report for Washington Residents

Provider Screening (continued)

Survey Question 22. During any of your prenatal care visits, did a doctor, nurse, or other health care worker do any of the things listed below?

	PRAMS 1999		PRAMS 2006		PRAMS 2007		PRAMS 2008		PRAMS 2009	
	Percent	95% CI	Percent	95% CI	Percent	95% CI	Percent	95% CI	Percent	95% CI
a. Talk with you about "Baby blues" or post partum depression										
Total	70	(67,73)	82	(81, 86)	82	(79, 85)	83	(80, 85)	80	(77, 83)
Medicaid	74	(69,79)	87	(83, 99)	87	(84, 90)	87	(83, 89)	88	(84, 90)
Non-Medicaid	68	(63,72)	82	(78, 85)	78	(74, 82)	79	(75, 83)	72	(68, 76)
b. Talk with you about diseases or birth defects that could run in your family or your partner's family										
Total	80	(77,83)	84	(81, 86)	86	(84, 88)	82	(79, 85)	82	(80,85)
Medicaid	78	(73,82)	81	(77, 85)	85	(81, 88)	82	(78, 85)	85	(81, 88)
Non-Medicaid	81	(77,85)	86	(83, 89)	87	(83, 90)	82	(78, 86)	80	(75,83)

Breastfeeding

Survey Question 51. Did you ever breastfeed or pump breast milk to feed to your new baby after delivery even for a short period of time?

	PRAMS 1999		PRAMS 2006		PRAMS 2007		PRAMS 2008		PRAMS 2009	
	Percent	95% CI	Percent	95% CI	Percent	95% CI	Percent	95% CI	Percent	95% CI
Percent of women who responded they ever breastfed										
Total	88	(85,90)	91	(89, 93)	93	(91, 94)	92	(90, 94)	94	(92, 95)
Medicaid	82	(77,87)	86	(82, 89)	90	(86, 93)	89	(86, 92)	91	(88,94)
Non-Medicaid	91	(88,94)	95	(93, 97)	95	(92, 97)	95	(92, 97)	96	(94, 98)
Percent of women who reported breastfeeding at two months post partum										
Total	65	(61,69)	72	(69, 75)	72	(68, 75)	70	(66, 73)	71	(68, 74)
Medicaid	54	(49,60)	62	(57, 67)	62	(57, 67)	58	(53, 63)	62	(57, 67)
Non-Medicaid	72	(68,76)	80	(76, 84)	79	(75, 83)	80	(76, 84)	80	(76, 84)

- Provider screening for postpartum depression increased significantly from 1996 to 2009 among all women and women receiving Medicaid.
- In 2009, initiation of breastfeeding was high in Washington State at approximately 94%. However, rates dropped to approximately 71% by two months
- This decline is greater among women receiving Medicaid. Approximately 91% of women receiving Medicaid reported initiating breastfeeding in 2009, but this rate dropped to approximately 62% by two months postpartum.
- Initiation of breastfeeding continues to increase among all women. The percent of women breastfeeding at two months postpartum which had increased from 1996 through 2005 has not increased since 2005.

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Folic Acid Use Prior to Pregnancy

Survey Question 3. In the month *before* you got pregnant with your new baby, how many times a week did you take a multivitamin , a prenatal vitamin or a folic acid vitamin?

	PRAMS 1999		PRAMS 2006		PRAMS 2007		PRAMS 2008		PRAMS 2009	
	Percent	95% CI	Percent	95% CI	Percent	95% CI	Percent	95% CI	Percent	95% CI
I didn't take a multivitamin at all										
Total	na		54	(51, 57)	52	(48, 55)	57	(54, 60)	54	(50, 57)
Medicaid	na		73	(68, 77)	73	(69, 77)	71	(67, 75)	70	(66, 74)
Non-Medicaid	na		38	(34, 43)	34	(30, 39)	44	(39, 49)	37	(32, 42)
1 to 3 times a week										
Total	na		10	(8, 12)	9	(7, 11)	7	(6, 9)	9	(7, 11)
Medicaid	na		5	(4, 8)	7	(5, 9)	6	(4, 9)	8	(6, 11)
Non-Medicaid	na		14	(11, 17)	10	(8, 14)	9	(6, 12)	10	(8, 14)
4 to 6 times a week										
Total	na		9	(8, 12)	10	(8, 12)	6	(5, 8)	8	(6, 10)
Medicaid	na		7	(5, 10)	6	(4, 9)	4	(3, 7)	5	(3, 7)
Non-Medicaid	na		12	(9, 15)	13	(10, 16)	8	(6, 11)	11	(8, 14)
Every day of the week										
Total	na		27	(23, 30)	30	(27, 33)	29	(26, 32)	30	(27, 33)
Medicaid	na		15	(12, 19)	14	(11, 18)	18	(15, 22)	17	(14, 21)
Non-Medicaid	na		36	(32, 41)	43	(38, 48)	40	(35, 45)	42	(37, 47)

- In 2009, only about 30% of women reported taking a multivitamin every day of the week, and about 54% of women reported not taking any multivitamin at all in the month prior to becoming pregnant.
- Fewer women receiving Medicaid reported daily vitamin use, and more women on Medicaid reported not taking a multivitamin at all in the month prior to becoming pregnant compared to women not on Medicaid.

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Sleep Position	PRAMS 1999		PRAMS 2006		PRAMS 2007		PRAMS 2008		PRAMS 2009	
	Percent	95% CI	Percent	95% CI	Percent	95% CI	Percent	95% CI	Percent	95% CI
Survey Question 51. How do you <i>most often</i> lay your baby down to sleep now?										
On his or her side										
Total	23	(20,26)	10	(8, 12)	9	(7, 11)	9	(7, 11)	11	(9, 14)
Medicaid	30	(25,36)	12	(10, 16)	12	(9, 15)	10	(8, 13)	15	(12, 18)
Non-Medicaid	18	(15,22)	8	(6, 11)	6	(4, 9)	8	(6, 12)	8	(6, 11)
On his or her back										
Total	65	(62,69)	78	(75, 80)	80	(77, 82)	79	(76, 82)	79	(76, 81)
Medicaid	59	(54,65)	75	(70, 79)	76	(72, 80)	77	(73, 80)	74	(70, 78)
Non-Medicaid	69	(65,74)	80	(76, 84)	82	(78, 86)	81	(77, 84)	83	(79, 86)
On his or her stomach										
Total	12	(10,16)	8	(7, 11)	8	(6, 10)	7	(5, 9)	7	(5, 9)
Medicaid	10	(7,15)	8	(5, 11)	6	(4, 9)	5	(3, 8)	6	(4, 8)
Non-Medicaid	12	(10,16)	9	(7, 12)	10	(7, 13)	8	(6, 11)	8	(5, 11)
On his or her side and back										
Total			2	(2, 3)	3	(2, 4)	4	(3, 5)	2	(2, 3)
Medicaid			3	(2, 5)	4	(3, 6)	6	(4, 9)	4	(3,6)
Non-Medicaid			1	(0,1, 3)	1	(0, 3)	2	(1, 4)	0	(0,1)
Other ⁵²										
Total			2	(1,3)	1	(1,2)	1	(1, 2)	1	(0,1)
Medicaid			2	(1,4)	2	(1,4)	2	(1,3)	1	(0,2)
Non-Medicaid			1	(0,3)	0	(0,2)	1	(0, 2)	1	(0,2)

- In 2009, approximately 79% of mothers reported laying their newborns down to sleep most often on their backs.
- Between 2000 and 2009, the percentage of women who reported laying their newborns down to sleep on their back increased significantly. This increase was greater among women who received Medicaid.
- Most of the increase in the rate of infants being placed on their backs occurred prior to 2005.

52. "Other" includes "side and stomach," "back and stomach," and "all 3 positions."

Perinatal Indicators Report for Washington Residents

Post Partum Depression

Survey Question 70a. *Since your new baby was born*, how often have you felt down, depressed, or hopeless?

Always or Often
Total
Medicaid
Non-Medicaid

PRAMS 1999		PRAMS 2006		PRAMS 2007		PRAMS 2008		PRAMS 2009	
Percent	95% CI	Percent	95% CI	Percent	95% CI	Percent	95% CI	Percent	95% CI

na	9	(7, 11)	8	(7, 11)	9	(7, 11)		
na	13	(10, 17)	11	(8, 15)	10	(8, 14)		
na	6	(4, 9)	6	(4, 9)	7	(5, 10)		

New depression questions in 2009. Results on next page

na
na
na

Survey Question 70b. *Since your new baby was born*, how often have you had little interest or little pleasure in doing things?

Always or Often
Total
Medicaid
Non-Medicaid

na	10	(8, 13)	10	(8, 12)	10	(8, 12)		
na	14	(11, 18)	13	(10, 17)	13	(10, 16)		
na	7	(5, 10)	7	(5, 10)	6	(4, 9)		

na
na
na

Post Partum Depression Symptoms

Women who answered "Always" or "Often" to post partum depression screening questions: 70a or 70b

Total
Medicaid
Non-Medicaid

PRAMS 1999		PRAMS 2006		PRAMS 2007		PRAMS 2008		PRAMS 2009	
Percent	95% CI	Percent	95% CI	Percent	95% CI	Percent	95% CI	Percent	95% CI

na	15	(12, 17)	14	(12, 17)	13	(11, 16)		
na	20	(16, 25)	19	(15, 24)	17	(14, 20)		
na	10	(7, 13)	10	(7, 13)	10	(7, 13)		

na
na
na

- In 2008, approximately 9% of mothers reported always or often feeling down, depressed or hopeless, and 10% reported always or often having little interest or pleasure in doing things.
- Research has shown that these two questions combined identify subjects at higher risk for post partum depression. These women should undergo a more complete diagnostic evaluation.⁵³
- In 2008, 13% of women expressed experiencing postpartum depression symptoms. More women on Medicaid reported symptoms than women who did not receive Medicaid.
- In 2009, new questions were used to ask about post partum depression symptoms. These questions are not directly comparable to the questions asked in prior years and are shown on the following page.

53. Prevalence of Self-Reported Postpartum Depressive Symptoms-17 States, 2004-2005. MMWR. 2008;57:361-366.

Perinatal Indicators Report for Washington Residents

Post Partum Depression

Survey Question 60. How often have you felt or experienced things this way *since your new baby was born?*

	PRAMS 1999		PRAMS 2006		PRAMS 2007		PRAMS 2008		PRAMS 2009	
	Percent	95% CI	Percent	95% CI	Percent	95% CI	Percent	95% CI	Percent	95% CI
Always or often felt down, depressed or sad										
Total	na		na		na		na		12	(10,15)
Medicaid									15	(12,19)
Non-Medicaid									9	(7,13)
Always or often felt hopeless										
Total	na		na		na		na		6	(4,7)
Medicaid									7	(5,10)
Non-Medicaid									4	(3,7)
Always or often felt slowed down										
Total	na		na		na		na		20	(17,23)
Medicaid									18	(14,22)
Non-Medicaid									22	(18,22)

- In 2009, 12% of women expressed feeling down, depressed or sad. More women on Medicaid reported symptoms than women who did not receive Medicaid.

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Note: All of the Internet links cited above were current as of Sept 2011.