

**BIRTH ATTENDANT DATA SUMMARY**

**IDAHO**

**Births Occurring in Idaho**

**2004-2006**

**Bureau of Vital Records and Health Statistics  
Division of Health  
Idaho Department of Health and Welfare**

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**DEFINITION, LIMITATIONS, AND SUMMARY**  
**Births Occurring in Idaho by Birth Attendant**  
**2004-2006**

**Definition**

Live births occurring in Idaho include all reported live births occurring in Idaho, regardless of the mother's state of residence. Data based on births occurring in Idaho are not comparable with data based on Idaho resident live births.

**Limitations**

Due to revisions in the database, data may differ slightly from those previously published by the Bureau of Vital Records and Health Statistics. The reader is cautioned that the database contains small numbers; therefore, percents tend to randomly fluctuate. It is recommended to show the number of live births with the percent.

"Other birth attendant" includes births attended by a nurse, naturopath, or other attendant. This category was formed due to the small number of live births attended by nurses and naturopaths. Nurse and naturopath data may be based on a small number of providers. If one provider no longer practices, for example, they retired or moved out of the state, the data will fluctuate.

The following are checkboxes on the birth certificate for birth place: hospital, freestanding birthing center, home birth (planned to deliver at home: yes or no), clinic/doctor's office, and other. There is no way to determine if a mother intended to (a) deliver at home or in a freestanding birthing center or (b) deliver with a non-physician, but was transferred to a hospital prior to birth or during the birthing process and delivered with a physician because of some type of complication.

**Summary**

The number of births attended by physicians, certified nurse midwives, nurses, and lay midwives increased from 2004 to 2006. The only attendant type that delivered fewer babies in 2006 than in 2004 was naturopaths. The number of births attended increased 7.9 percent (1,636 births) for physicians, 4.9 percent (34 births) for certified nurse midwives, 45.8 percent (11 births) for nurses, and 30.4 percent (119 births) for lay midwives from 2004 to 2006. The number of births attended by naturopaths decreased 81.1 percent from 37 in 2004 to 7 in 2006.

**District of Occurrence:**

The number of live births occurring in a district from 2004 through 2006 ranged from a low of 3,974 births in District 2 to a high of 23,850 births in District 4. Physicians were significantly less likely to deliver infants in District 1 (82.1 percent) than physicians in the remaining districts (95.9 percent). Certified nurse midwives were significantly more likely to deliver infants in District 1 (10.3 percent) than certified nurse midwives in the remaining districts (2.2 percent). Lay midwives were significantly more likely to deliver infants in District 1 (6.4 percent) than lay midwives in the remaining districts (1.5 percent).

**Birth Year:**

From 2004 to 2006, the number of live births occurring in Idaho increased 8.1 percent from 21,949 in 2004 to 23,719 in 2006. The number of live births attended by lay midwives increased significantly from 1.8 percent in 2004 to 2.2 percent in 2006.

**Residence:**

Of the 68,194 live births occurring in Idaho from 2004 through 2006, 66,496 were to Idaho residents and 1,695 were to out-of-state residents. Idaho residents were significantly more likely to have a certified nurse midwife deliver their infant (3.0 percent) than out-of-state residents (1.1 percent). Out-of-state residents were significantly more likely to have a lay midwife deliver their infant (3.0 percent) than Idaho residents (1.9 percent).

**Place of Birth:**

From 2004 to 2006, 97.2 percent of the babies born in Idaho were delivered in hospitals, 1.2 percent in a freestanding birthing center, and 1.6 percent at home. The majority of births delivered by physicians and certified nurse midwives occurred in a hospital, 99.3 and 99.8 percent, respectively. Lay midwives and other attendants were more likely to deliver to at home, 64.9 and 63.0 percent, respectively.

**Method of Delivery:**

From 2004 to 2006, 77.9 percent of the babies born in Idaho were delivered vaginally and 22.1 percent were delivered through Cesarean section. Of the 53,038 vaginal deliveries, 1,170 were vaginal birth after previous cesarean delivery (VBAC). Lay midwives had a higher percentage of VBAC deliveries (4.4 percent) than physicians (1.7 percent) and certified nurse midwives (1.3 percent). Nearly all of the cesarean section deliveries were by physicians (15,056 out of 15,078).

**Payment Source:**

From 2004 to 2006, 50.7 percent of the deliveries in Idaho were paid by private insurance, 33.2 percent by Medicaid, 10.3 percent were self-pay, 4.0 percent were by other government, and 1.7 percent were not applicable or other form of payment. Medicaid paid for 33.6 percent of physician births, 43.1 percent of certified nurse midwife deliveries, 2.3 percent of lay midwife deliveries, and 24.1 percent of other attendant deliveries.

**Mother's Age:**

From 2004 to 2006, 9.0 percent of the mothers were aged 15-19, 31.6 percent were 20-24, 30.8 percent were 25-29, 18.9 percent were 30-34, and 9.7 percent were 35 and older. The mean age for all mothers delivering in Idaho from 2004 to 2006 was 26.5. The mean age of mothers whose birth was attended by a physician was 26.5, 25.9 for a certified nurse midwife, 28.4 for a lay midwife, and 27.4 for other attendants.

**Mother's Education:**

From 2004 to 2006, 16.2 percent of mothers were not high school graduates, 26.3 percent had a GED or diploma, 36.8 percent had some college, but no degree, and 20.7 percent had a Bachelor's, Masters, doctorate, or professional degree.

**Marital Status:**

From 2004 to 2006, 76.5 percent of births occurred to women who were married at birth, conception, or any time between. Babies who were delivered by a lay midwife were significantly more likely to be born to married mothers (91.4 percent) than infants delivered by physicians (76.2 percent) or certified nurse midwives (76.7 percent).

**Mother's Race:**

From 2004 to 2006, 92.4 percent of the births occurring in Idaho were to mother's who were White, 0.5 percent were Black, 1.6 percent were American Indian, 1.5 percent were Asian or Pacific Islander, and 4.0 percent reported other race.

**Mother's Ethnicity:**

From 2004 to 2006, 15.2 percent of the births occurring in Idaho were to mothers who were Hispanic. Babies who were delivered by a lay midwife were significantly less likely to be born to Hispanic mothers (3.5 percent) than infants delivered by physicians (15.6 percent), certified nurse midwives (7.4 percent), or other attendants (13.7 percent).

**Birth Weight:**

From 2004 to 2006, 6.5 percent of the births occurring in Idaho were born low birth weight (<2,500 grams). Babies who were delivered by a lay midwife were significantly less likely to be born low birth weight (2.6 percent) than infants delivered by physicians (6.7 percent). The percent of low birth weight infants born in singleton deliveries was 5.0 when delivered by a physician and 2.4 percent when delivered by a lay midwife.

**Gestational Age:**

From 2004 to 2006, 11.0 percent of the births occurring in Idaho were born preterm (less than 37 completed weeks of gestation). Babies who were delivered by a lay midwife were significantly less likely to be born preterm (4.0 percent) than infants delivered by physicians (11.3 percent) or certified nurse midwives (5.9 percent). The percent of infants born preterm in singleton deliveries was 9.6 when delivered by a physician, 5.6 percent for certified nurse midwives, and 3.5 percent for lay midwives.

**Plurality:**

From 2004 to 2006, 97.0 percent of the births occurring in Idaho were singletons, 2.9 percent were twins, and 0.2 percent were born in triplet/+ deliveries (triplet, quadruplet, and other higher order multiple birth deliveries). Physicians delivered 98.6 percent of twins and 100.0 percent of the infants born in triplet/+ deliveries.

**Parity:**

From 2004 to 2006, 3.0 percent of all the births occurring in Idaho were to women who had high parity for age. Babies who were delivered by a lay midwife were significantly more likely to be born to mothers with a high parity for age (11.4 percent) than infants delivered by physicians (2.8 percent) or certified nurse midwives (2.3 percent).

### **Status of Mother:**

From 2004 to 2006, there were 25,148 first time mothers, 41,936 non first-time mothers, and 64 births with unknown status for mother for a total of 67,148 mothers delivering in Idaho. Lay midwives were significantly more likely to deliver to non-first time mothers (75.4 percent) compared with certified nurse midwives (61.9 percent) or physicians (62.2 percent). Other attendants were significantly more likely to deliver to non-first time mothers (84.5 percent) compared with lay midwives (75.4 percent).

### **Trimester Prenatal Care Began:**

From 2004 to 2006, 71.3 percent of the births occurring in Idaho were to mothers who sought prenatal care during the first trimester. Babies who were delivered by a lay midwife were significantly less likely to be born to mothers whose first prenatal care visit was during the first trimester (52.5 percent) than infants delivered by physicians (71.8 percent) or certified nurse midwives (70.0 percent). Nearly ten percent of the babies delivered by a lay midwife did not receive any prenatal care, compared with those delivered by a physician at 0.7 percent.

### **Adequacy of Prenatal Care:**

From 2004 to 2006, 74.5 percent of mothers who had a physician deliver their baby received adequate/+ prenatal care, compared with 68.2 percent for certified nurse midwives and 64.2 percent for lay midwife deliveries. A total of 27.9 percent of mothers who had a lay midwife deliver their baby received inadequate or no prenatal care, compared with 15.9 percent for physicians and 17.4 percent for certified nurse midwife deliveries.

### **WIC Participation:**

From 2004 to 2006, 38.1 percent of all the births occurring in Idaho were to women who received WIC food for herself during pregnancy. Babies who were delivered by a lay midwife were significantly less likely to be born to mothers who participated in WIC (13.4 percent) than infants delivered by physicians (38.5 percent) or certified nurse midwives (44.4 percent).

### **Breastfed:**

From 2004 to 2006, 88.4 percent of all the births occurring in Idaho were breastfed. Babies who were delivered by a lay midwife were significantly more likely to be breastfed (97.7 percent) than infants delivered by physicians (88.1 percent) or certified nurse midwives (91.9 percent).

### **Risk Factors:**

From 2004 to 2006, 22.4 percent of all the births occurring in Idaho were born to mothers who had one or more risk factor(s). Babies who were delivered by a lay midwife were significantly less likely to be born to mothers with one or more risk factor(s) (9.7 percent) than infants delivered by physicians (23.0 percent). The most common risk factor to mothers was previous cesarean delivery (9.6 percent), followed by hypertension (6.4 percent total, 0.7 percent prepregnancy hypertension and 5.7 percent gestational hypertension), diabetes (4.2 percent total, 0.6 percent prepregnancy diabetes and 3.6 percent gestational diabetes).

### **Infections:**

From 2004 to 2006, 21.6 percent of all the births occurring in Idaho were born to mothers who had one or more infection(s) present and/or treated during this pregnancy. Babies who were delivered by a lay midwife were significantly less likely to be born to mothers with one or more infection(s) (7.8 percent) than infants delivered by physicians (21.9 percent) or certified nurse midwives (23.2 percent). The most common infection reported among mothers was group B streptococcus (17.6 percent). Babies who were delivered by a lay midwife were significantly less likely to be born to mothers who had or were treated for group B streptococcus during pregnancy (6.4 percent) than infants delivered by physicians (17.9 percent) or certified nurse midwives (16.4 percent).

### **Cigarette Smoking:**

From 2004 to 2006, 17.4 percent of all the births occurring in Idaho were born to mothers who had smoked cigarettes three months before pregnancy. Babies delivered by a lay midwife were significantly less likely to be born to mothers who had smoked cigarettes three months before pregnancy (4.3 percent) than infants delivered by physicians (17.6 percent) or certified nurse midwives (19.7 percent). The percentage of mothers who smoked any time during pregnancy was 13.2 percent. Babies delivered by a lay midwife were significantly less likely to be born to mothers who had smoked cigarettes any time during pregnancy (3.0 percent) than infants delivered by physicians (13.4 percent) or certified nurse midwives (15.2 percent).

### **Maternal Morbidity:**

From 2004 to 2006, 1.8 percent of all the births occurring in Idaho were born to mothers who had one or more maternal morbidity(ies). The leading complications reported were: third or fourth degree perineal laceration (1.2 percent), maternal transfusion (0.3 percent), and unplanned operating room procedure following delivery (0.3 percent).

### **Characteristics of Labor and Delivery:**

From 2004 to 2006, 83.1 percent of all the live births occurring in Idaho were born to mothers with one or more characteristic(s) of labor and delivery reported. The most common characteristics reported were: epidural or spinal anesthesia during labor (68.0 percent), induction of labor (27.1 percent), and augmentation of labor (20.8 percent).

### **Abnormal Conditions of Newborn:**

From 2004 to 2006, 14.0 percent of all the live births occurring in Idaho had one or more abnormal condition(s) reported. The most common abnormal condition reported was Neonatal Intensive Care Unit (NICU) admission (8.3 percent), followed by assisted ventilation required immediately following delivery (4.2 percent), and failed newborn hearing test (3.6 percent).

TABLE 1A  
Births Occurring in Idaho  
Number by Birth Attendant by District of Occurrence, Birth Year, and Residence  
2004-2006

	TOTAL LIVE BIRTHS	BIRTH ATTENDANT						
		Physician M.D., D.O.	Certified Nurse Midwife	Lay Midwife	Nurse	Naturopath	Other	Not Stated
<b>Total, all births</b>								
Number	68,194	64,504	2,030	1,326	95	70	157	12
Percent	100.0%	94.6%	3.0%	1.9%	0.1%	0.1%	0.2%	**
<b>Occurrence</b>								
District 1	6,283	5,160	645	400	62	-	16	-
District 2	3,974	3,845	-	111	2	-	10	6
District 3	6,735	6,496	-	178	5	15	38	3
District 4	23,850	22,804	546	431	5	34	28	2
District 5	8,499	8,301	58	81	17	14	28	-
District 6	7,438	6,949	436	39	3	2	8	1
District 7	11,415	10,949	345	86	1	5	29	-
<b>Birth Year</b>								
2004	21,949	20,751	689	391	24	37	56	1
2005	22,526	21,366	618	425	36	26	50	5
2006	23,719	22,387	723	510	35	7	51	6
<b>Residence</b>								
Idaho Resident	66,496	62,883	2,011	1,275	92	68	155	12
Non-Idaho Resident	1,695	1,618	19	51	3	2	2	-
Unknown	3	3	-	-	-	-	-	-

\*\* Represents a percent that rounds to less than 0.1%. Dash (-) represents zero.

TABLE 1B  
 Births Occurring in Idaho  
 Percent Distribution, by Birth Attendant According to District of Occurrence, Birth Year, and Residence<sup>1</sup>  
 2004-2006

	TOTAL LIVE BIRTHS	BIRTH ATTENDANT						
		Physician M.D., D.O.	Certified Nurse Midwife	Lay Midwife	Nurse	Naturopath	Other	Not Stated
<b>Occurrence</b>								
District 1	100.0%	82.1%	10.3%	6.4%	1.0%	-	0.3%	NA
District 2	100.0	96.9	-	2.8	0.1	-	0.3	NA
District 3	100.0	96.5	-	2.6	0.1	0.2	0.6	NA
District 4	100.0	95.6	2.3	1.8	**	0.1	0.1	NA
District 5	100.0	97.7	0.7	1.0	0.2	0.2	0.3	NA
District 6	100.0	93.4	5.9	0.5	**	**	0.1	NA
District 7	100.0	95.9	3.0	0.8	**	**	0.3	NA
<b>Birth Year</b>								
2004	100.0%	94.5%	3.1%	1.8%	0.1%	0.2	0.3%	NA
2005	100.0	94.9	2.7	1.9	0.2	0.1	0.2	NA
2006	100.0	94.4	3.0	2.2	0.1	0.0	0.2	NA
<b>Residence</b>								
Idaho Resident	100.0%	94.6%	3.0%	1.9%	0.1%	0.1	0.2%	NA
Non-Idaho Resident	100.0	95.5	1.1	3.0	0.2	0.1	0.1	NA
Unknown	NA	NA	NA	NA	NA	NA	NA	NA

1. Percents are based on records with stated information. Percent distribution according to birth attendant at delivery. NA: not applicable.

\*\* Represents a percent that rounds to less than 0.1%. Dash (-) represents zero.

TABLE 2A  
Births Occurring in Idaho  
Number by Birth Attendant by Place of Birth, Method of Delivery, and Payment Source  
2004-2006

	TOTAL LIVE BIRTHS	BIRTH ATTENDANT				
		Physician M.D., D.O.	Certified Nurse Midwife	Lay Midwife	Other <sup>1</sup>	Not Stated
<b>Total, all births</b>	68,194	64,504	2,030	1,326	322	12
<b>Place of Birth</b>						
Hospital	66,247	64,082	2,025	25	115	-
Freestanding birthing center	852	414	1	437	-	-
Clinic/Doctor's office	2	2	-	-	-	-
Home	1,074	6	4	861	203	-
Other	7	-	-	3	4	-
Not stated	12	-	-	-	-	12
<b>Method of Delivery</b>						
Vaginal	51,868	48,309	1,982	1,267	310	-
VBAC <sup>2</sup>	1,170	1,078	27	58	7	-
Primary Cesarean	9,734	9,715	18	1	-	-
Repeat Cesarean	5,344	5,341	3	-	-	-
Not stated	78	61	-	-	5	12
<b>Payment Source<sup>3</sup></b>						
Private insurance	34,533	33,320	991	155	67	-
Medicaid	22,600	21,621	873	30	76	-
Self pay	7,019	5,797	136	972	114	-
Other government <sup>4</sup>	2,727	2,698	20	3	6	-
Not applicable or other	1,175	951	7	164	53	-
Not stated	140	117	3	2	6	12

1. Other includes births attended by a nurse, naturopath, or other attendant.

2. VBAC: Vaginal birth after previous cesarean.

3. Payment source for delivery at time birth record is filed with the State. Payment source may change after record is filed with the State. Data for Medicaid-paid deliveries may differ from Medicaid statistics.

4. 'Other Government' includes Indian Health Services, CHAMPUS/TRICARE, and other government (federal, state, local).

TABLE 2B  
Births Occurring in Idaho  
Percent by Birth Attendant by Place of Birth, Method of Delivery, and Payment Source<sup>1</sup>  
2004-2006

	TOTAL LIVE BIRTHS	BIRTH ATTENDANT				
		Physician M.D., D.O.	Certified Nurse Midwife	Lay Midwife	Other <sup>2</sup>	Not Stated
<b>Total, all births</b>	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Place of Birth</b>						
Hospital	97.2	99.3	99.8	1.9	35.7	-
Freestanding birthing center	1.2	0.6	**	33.0	-	-
Clinic/Doctor's office	**	**	-	-	-	-
Home	1.6	**	0.2	64.9	63.0	-
Other	**	-	-	0.2	1.2	-
Not stated	NA	NA	NA	NA	NA	NA
<b>Method of Delivery</b>						
Vaginal	76.1	75.0	97.6	95.6	97.8	-
VBAC <sup>3</sup>	1.7	1.7	1.3	4.4	2.2	-
Primary Cesarean	14.3	15.1	0.9	0.1	-	-
Repeat Cesarean	7.8	8.3	0.1	-	-	-
Not stated	NA	NA	NA	NA	NA	NA
<b>Payment Source<sup>4</sup></b>						
Private insurance	50.7	51.7	48.9	11.7	21.2	-
Medicaid	33.2	33.6	43.1	2.3	24.1	-
Self pay	10.3	9.0	6.7	73.4	36.1	-
Other government <sup>5</sup>	4.0	4.2	1.0	0.2	1.9	-
Not applicable or other	1.7	1.5	0.3	12.4	16.8	-
Not stated	NA	NA	NA	NA	NA	NA

1. Percents are based on records with stated information. NA: not applicable.
  2. Other includes births attended by a nurse, naturopath, or other attendant.
  3. VBAC: Vaginal birth after previous cesarean.
  4. Payment source for delivery at time birth record is filed with the State. Payment source may change after record is filed with the State. Data for Medicaid-paid statistics may differ from Medicaid statistics.
  5. 'Other Government' includes Indian Health Services, CHAMPUS/TRICARE, and other government (federal, state, local).
- \*\* Represents a percent that rounds to less than 0.1%. Dash (-) represents zero.

TABLE 3A  
Births Occurring in Idaho  
Number by Birth Attendant by Age, Education, Marital Status, Race, and Ethnicity  
2004-2006

	TOTAL LIVE BIRTHS	BIRTH ATTENDANT				
		Physician M.D., D.O.	Certified Nurse Midwife	Lay Midwife	Other <sup>1</sup>	Not Stated
<b>Total, all births</b>	68,194	64,504	2,030	1,326	322	12
<b>Mother's Age</b>						
<15	47	46	1	-	-	-
15-17	1,626	1,577	36	7	6	-
18-19	4,489	4,272	153	44	20	-
20-24	21,537	20,429	694	314	100	-
25-29	21,012	19,814	694	430	74	-
30-34	12,870	12,158	314	327	71	-
35-39	5,408	5,105	122	137	44	-
40-44	1,113	1,034	15	58	6	-
45+	77	68	1	7	1	-
Not stated	15	1	-	2	-	12
<b>Mother's Education<sup>2</sup></b>						
8th grade or less	2,614	2,513	24	56	21	-
9th-12th grade, but no diploma	8,265	7,934	192	104	35	-
GED or diploma	17,598	16,574	561	366	97	-
Some college, no degree <sup>3</sup>	24,688	23,292	794	493	109	-
Bachelors degree	11,209	10,569	355	242	43	-
Masters, doctorate or professional degree	2,647	2,505	78	59	5	-
Not stated	1,173	1,117	26	6	12	12
<b>Marital Status</b>						
Married	52,171	49,134	1,557	1,212	256	12
Not married	16,023	15,370	473	114	66	-
<b>Mother's Race<sup>2,4</sup></b>						
White	62,403	58,904	1,922	1,281	296	-
Black	361	351	6	4	-	-
American Indian	1,107	1,071	21	10	5	-
Asian or Pacific Islander	993	949	27	12	5	-
Other race	2,697	2,645	29	15	8	-
Not stated	633	584	25	4	8	12
<b>Mother's Ethnicity<sup>2,4</sup></b>						
Hispanic	10,260	10,023	148	46	43	-
Non-Hispanic	57,428	54,034	1,848	1,276	270	-
Not stated	506	447	34	4	9	12

1. Other includes births attended by a nurse, naturopath, or other attendant.

2. The Idaho birth certificate was revised in 2004. Education and race/ethnicity data for 2004 through 2006 are not comparable to data prior to 2004. For more information, see Technical Notes.

3. Some college, no degree includes mothers who received an associates degree.

4. Race and Hispanic origin are reported separately on the birth certificate; Hispanic origin are included in appropriate race totals.

TABLE 3B  
Births Occurring in Idaho  
Percent by Birth Attendant by Age, Education, Marital Status, Race, and Ethnicity<sup>1</sup>  
2004-2006

	TOTAL LIVE BIRTHS	BIRTH ATTENDANT				
		Physician M.D., D.O.	Certified Nurse Midwife	Lay Midwife	Other <sup>2</sup>	Not Stated
<b>Total, all births</b>	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Mother's Age</b>						
<15	0.1	0.1	**	-	-	-
15-17	2.4	2.4	1.8	0.5	1.9	-
18-19	6.6	6.6	7.5	3.3	6.2	-
20-24	31.6	31.7	34.2	23.7	31.1	-
25-29	30.8	30.7	34.2	32.5	23.0	-
30-34	18.9	18.8	15.5	24.7	22.0	-
35-39	7.9	7.9	6.0	10.3	13.7	-
40-44	1.6	1.6	0.7	4.4	1.9	-
45+	0.1	0.1	**	0.5	0.3	-
Not stated	NA	NA	NA	NA	NA	NA
<b>Mean age</b>	26.5	26.5	25.9	28.4	27.4	NA
<b>Mother's Education<sup>3</sup></b>						
8th grade or less	3.9	4.0	1.2	4.2	6.8	-
9th-12th grade, but no diploma	12.3	12.5	9.6	7.9	11.3	-
GED or diploma	26.3	26.1	28.0	27.7	31.3	-
Some college, no degree <sup>4</sup>	36.8	36.7	39.6	37.3	35.2	-
Bachelors degree	16.7	16.7	17.7	18.3	13.9	-
Masters, doctorate or professional degree	3.9	4.0	3.9	4.5	1.6	-
Not stated	NA	NA	NA	NA	NA	NA
<b>Marital Status</b>						
Married	76.5	76.2	76.7	91.4	79.5	100.0
Not married	23.5	23.8	23.3	8.6	20.5	-
<b>Mother's Race<sup>3,5</sup></b>						
White	92.4	92.2	95.9	96.9	94.3	-
Black	0.5	0.5	0.3	0.3	-	-
American Indian	1.6	1.7	1.0	0.8	1.6	-
Asian or Pacific Islander	1.5	1.5	1.3	0.9	1.6	-
Other race	4.0	4.1	1.4	1.1	2.5	-
Not stated	NA	NA	NA	NA	NA	NA
<b>Mother's Ethnicity<sup>3,5</sup></b>						
Hispanic	15.2	15.6	7.4	3.5	13.7	-
Non-Hispanic	84.8	84.4	92.6	96.5	86.3	-
Not stated	NA	NA	NA	NA	NA	NA

1. Percents are based on records with stated information. NA: not applicable.

2. Other includes births attended by a nurse, naturopath, or other attendant.

3. The Idaho birth certificate was revised in 2004. Education and race/ethnicity data for 2004 through 2006 are not comparable to data prior to 2004. For more information, see Technical Notes.

4. Some college, no degree includes mothers who received an associates degree.

5. Race and Hispanic origin are reported separately on the birth certificate; Hispanic origin are included in appropriate race totals.

\*\* Represents a percent that rounds to less than 0.1%. Dash (-) represents zero.

TABLE 4A  
Births Occurring in Idaho  
Number by Birth Attendant by Birth Weight, Gestational Age, Plurality, Parity, and Status of Mother  
2004-2006

	TOTAL LIVE BIRTHS	BIRTH ATTENDANT				
		Physician M.D., D.O.	Certified Nurse Midwife	Lay Midwife	Other <sup>1</sup>	Not Stated
<b>Total, all births</b>	68,194	64,504	2,030	1,326	322	12
<b>Birth Weight</b>						
<1,500 grams	676	661	2	5	8	-
1,500-2,499 grams	3,776	3,671	58	29	18	-
2,500+ grams	63,701	60,150	1,969	1,289	293	-
Not stated	41	22	1	3	3	12
<b>Gestational Age<sup>2</sup></b>						
Preterm (<37 completed weeks)	7,515	7,303	119	53	40	-
Term (37+ completed weeks)	60,604	57,167	1,910	1,260	267	-
Not stated	75	34	1	13	15	12
<b>Plurality</b>						
Singleton	66,133	62,470	2,024	1,309	318	12
Twin	1,954	1,927	6	17	4	-
Triplet/+	107	107	-	-	-	-
<b>Parity<sup>3</sup></b>						
High for age	2,053	1,817	46	151	39	-
Not high for age	66,074	62,645	1,983	1,168	278	-
Not stated	67	42	1	7	5	12
<b>Status of Mother<sup>4</sup></b>						
First time mom	25,148	24,004	772	323	49	-
Non-first time mom	41,936	39,426	1,254	989	267	-
Unknown	64	41	1	5	5	12

1. Other includes births attended by a nurse, naturopath, or other attendant.

2. The primary measure used to determine the gestation age of the newborn is the interval between the first day of mother's last normal menstrual period (LMP) and the date of birth. If LMP is less than 16 completed weeks, greater than 48 completed week's, not stated, or implausible with birth weight, then the obstetric estimate of completed weeks gestation is used. Gestational age based on LMP and obstetric estimate are comparable with data based on LMP and obstetric estimate only.

3. High parity for age: one or more previous live births for females 17 years of age or younger; three or more previous live births for females 18-21 years of age; four or more previous live births for females 22-24 years of age; and five or more previous live births for females aged 25 years and older. Not high parity for age: includes all other combinations of parity and age of mother.

4. Status of mother is based on the live birth order for this birth (one, two, three, etc.), the infant's plurality (singleton, twin, triplet, etc.), and the birth order of multiple births (first, second, third, etc.). Births to first-time mothers include singletons and first-live born infants of multiple births where live birth order is one. Births to non first-time mothers include singletons and first-live born infants of multiple births where live birth order is greater than one. From 2004 to 2006, there were 64 births with unknown live birth order and these births were excluded from analysis. If a mother had multiple births, then the second- and third-live born infants were excluded from analysis. From 2004 to 2006, there were 25,148 first time mothers, 41,936 non first-time mothers, and 64 births with unknown status for mother for a total of 67,148 mothers delivering in Idaho.

TABLE 4B  
Births Occurring in Idaho  
Percent by Birth Attendant by Birth Weight, Gestational Age, Plurality, Parity, and Status of Mother<sup>1</sup>  
2004-2006

	TOTAL LIVE BIRTHS	BIRTH ATTENDANT				
		Physician M.D., D.O.	Certified Nurse Midwife	Lay Midwife	Other <sup>2</sup>	Not Stated
<b>Total, all births</b>	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Birth Weight</b>						
<1,500 grams	1.0	1.0	0.1	0.4	2.5	-
1,500-2,499 grams	5.5	5.7	2.9	2.2	5.6	-
2,500+ grams	93.5	93.3	97.0	97.4	91.8	-
Not stated	NA	NA	NA	NA	NA	NA
<b>Gestational Age<sup>3</sup></b>						
Preterm (<37 completed weeks)	11.0	11.3	5.9	4.0	13.0	-
Term (37+ completed weeks)	89.0	88.7	94.1	96.0	87.0	-
Not stated	NA	NA	NA	NA	NA	NA
<b>Plurality</b>						
Singleton	97.0	96.8	99.7	98.7	98.8	100.0
Twin	2.9	3.0	0.3	1.3	1.2	-
Triplet/+	0.2	0.2	-	-	-	-
<b>Parity<sup>4</sup></b>						
High for age	3.0	2.8	2.3	11.4	12.3	-
Not high for age	97.0	97.2	97.7	88.6	87.7	-
Not stated	NA	NA	NA	NA	NA	NA
<b>Status of Mother<sup>5</sup></b>						
First time mom	37.5	37.8	38.1	24.6	15.5	-
Non-first time mom	62.5	62.2	61.9	75.4	84.5	-
Unknown	NA	NA	NA	NA	NA	NA

1. Percents are based on records with stated information. NA: not applicable.

2. Other includes births attended by a nurse, naturopath, or other attendant.

3. The primary measure used to determine the gestation age of the newborn is the interval between the first day of mother's last normal menstrual period (LMP) and the date of birth. If LMP is less than 16 completed weeks, greater than 48 completed week's, not stated, or implausible with birth weight, then the obstetric estimate of completed weeks gestation is used. Gestational age based on LMP and obstetric estimate are comparable with data based on LMP and obstetric estimate only.

4. High parity for age: one or more previous live births for females 17 years of age or younger; three or more previous live births for females 18-21 years of age; four or more previous live births for females 22-24 years of age; and five or more previous live births for females aged 25 years and older. Not high parity for age: includes all other combinations of parity and age of mother.

5. Status of mother is based on the live birth order for this birth (one, two, three, etc.), the infant's plurality (singleton, twin, triplet, etc.), and the birth order of multiple births (first, second, third, etc.). Births to first-time mothers include singletons and first-live born infants of multiple births where live birth order is one. Births to non first-time mothers include singletons and first-live born infants of multiple births where live birth order is greater than one. From 2004 to 2006, there were 64 births with unknown live birth order and these births were excluded from analysis. If a mother had multiple births, then the second- and third-live born infants were excluded from analysis. From 2004 to 2006, there were 25,148 first time mothers, 41,936 non first-time mothers, and 64 births with unknown status for mother for a total of 67,148 mothers delivering in Idaho.

TABLE 5A  
Births Occurring in Idaho  
Number by Birth Attendant by Trimester Prenatal Care Began, Adequacy of Prenatal Care, WIC Participation, and Breastfed  
2004-2006

	TOTAL LIVE BIRTHS	BIRTH ATTENDANT				
		Physician M.D., D.O.	Certified Nurse Midwife	Lay Midwife	Other <sup>1</sup>	Not Stated
<b>Total, all births</b>	68,194	64,504	2,030	1,326	322	12
<b>Trimester Prenatal Care Began<sup>2</sup></b>						
First	48,176	45,909	1,419	693	155	-
Second	15,457	14,439	487	445	86	-
Third	3,282	3,093	113	57	19	-
No prenatal care	660	479	7	126	48	-
Not stated	619	584	4	5	14	12
<b>Adequacy of Prenatal Care<sup>2</sup></b>						
Intensive	21,546	20,891	383	208	64	-
Adequate	28,221	26,508	995	640	78	-
Intermediate	6,544	6,112	291	104	37	-
Inadequate	10,305	9,638	346	242	79	-
No prenatal care	660	479	7	126	48	-
Not stated	918	876	8	6	16	12
<b>WIC Participation<sup>3</sup></b>						
Yes	25,510	24,371	866	177	96	-
No	41,381	38,935	1,085	1,145	216	-
Not stated	1,303	1,198	79	4	10	12
<b>Breastfed<sup>4</sup></b>						
Yes	59,704	56,272	1,860	1,294	278	-
No	7,859	7,629	165	31	34	-
Not stated	631	603	5	1	10	12

1. Other includes births attended by a nurse, naturopath, or other attendant.

2. The Idaho birth certificate was revised in 2004. Prenatal care data for 2004 through 2006 are not comparable to data prior to 2004. For more information, see Technical Notes.

3. WIC participation: Did mother get WIC food for herself during this pregnancy? WIC is a supplemental nutritional program for women, infants, and children. Data from birth certificate may differ from data from the WIC program.

4. Breastfed: Is infant being breastfed? Data are based on infant being breastfed at the time of birth through the time the birth certificate was completed (yes or no)?

TABLE 5B  
Births Occurring in Idaho  
Percent by Birth Attendant by Trimester Prenatal Care Began, Adequacy of Prenatal Care, WIC Participation, and Breastfed<sup>1</sup>  
2004-2006

	TOTAL LIVE BIRTHS	BIRTH ATTENDANT				
		Physician M.D., D.O.	Certified Nurse Midwife	Lay Midwife	Other <sup>2</sup>	Not Stated
<b>Total, all births</b>	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Trimester Prenatal Care Began<sup>3</sup></b>						
First	71.3	71.8	70.0	52.5	50.3	-
Second	22.9	22.6	24.0	33.7	27.9	-
Third	4.9	4.8	5.6	4.3	6.2	-
No prenatal care	1.0	0.7	0.3	9.5	15.6	-
Not stated	NA	NA	NA	NA	NA	NA
<b>Adequacy of Prenatal Care<sup>3</sup></b>						
Intensive	32.0	32.8	18.9	15.8	20.9	-
Adequate	41.9	41.7	49.2	48.5	25.5	-
Intermediate	9.7	9.6	14.4	7.9	12.1	-
Inadequate	15.3	15.1	17.1	18.3	25.8	-
No prenatal care	1.0	0.8	0.3	9.5	15.7	-
Not stated	NA	NA	NA	NA	NA	NA
<b>WIC Participation<sup>4</sup></b>						
Yes	38.1	38.5	44.4	13.4	30.8	-
No	61.9	61.5	55.6	86.6	69.2	-
Not stated	NA	NA	NA	NA	NA	NA
<b>Breastfed<sup>5</sup></b>						
Yes	88.4	88.1	91.9	97.7	89.1	-
No	11.6	11.9	8.1	2.3	10.9	-
Not stated	NA	NA	NA	NA	NA	NA

1. Percents are based on records with stated information. NA: not applicable.

2. Other includes births attended by a nurse, naturopath, or other attendant.

3. The Idaho birth certificate was revised in 2004. Prenatal care data for 2004 through 2006 are not comparable to data prior to 2004. For more information, see Technical Notes.

4. WIC participation: Did mother get WIC food for herself during this pregnancy? WIC is a supplemental nutritional program for women, infants, and children. Data from birth certificate may differ from data from the WIC program.

5. Breastfed: Is infant being breastfed? Data are based on infant being breastfed at the time of birth through the time the birth certificate was completed (yes or no)?

TABLE 6A  
Births Occurring in Idaho  
Number by Birth Attendant by Risk Factor(s), Infection(s), and Cigarette Smoking  
2004-2006

	TOTAL LIVE BIRTHS	BIRTH ATTENDANT				
		Physician M.D., D.O.	Certified Nurse Midwife	Lay Midwife	Other <sup>1</sup>	Not Stated
<b>Total, all births</b>	68,194	64,504	2,030	1,326	322	12
<b>Births with Risk Factor(s) Reported<sup>2,3</sup></b>	15,180	14,794	212	128	46	-
Prepregnancy diabetes	418	412	4	2	-	-
Gestational diabetes	2,431	2,379	40	2	10	-
Prepregnancy hypertension	486	476	6	3	1	-
Gestational hypertension	3,840	3,764	60	11	5	-
Previous preterm birth	1,323	1,246	44	23	10	-
Other previous poor pregnancy outcome <sup>4</sup>	757	708	18	26	5	-
Vaginal bleeding prior to onset of labor	1,268	1,217	20	21	10	-
Pregnancy resulted from infertility treatment	515	506	6	2	1	-
Mother had a previous cesarean	6,515	6,420	30	58	7	-
None of the above	52,716	49,441	1,812	1,196	267	-
Not Stated	298	269	6	2	9	12
<b>Births with Infection(s) Reported<sup>2,3</sup></b>	14,664	14,059	470	103	32	-
Gonorrhea	39	39	-	-	-	-
Syphilis	29	28	1	-	-	-
HIV Infection	17	16	1	-	-	-
Herpes Simplex Virus (HSV)	1,164	1,098	56	8	2	-
Chlamydia	820	768	46	2	4	-
Listeria	30	30	-	-	-	-
Group B Streptococcus	11,935	11,497	332	85	21	-
Cytomegalovirus	29	27	2	-	-	-
Parvovirus	51	49	1	1	-	-
Toxoplasmosis	7	6	-	-	1	-
Hepatitis B	84	79	4	-	1	-
Hepatitis C	111	107	2	-	2	-
Other infection not elsewhere specified	1,110	1,024	75	8	3	-
None of the above	53,128	50,074	1,555	1,222	277	-
Not Stated	402	371	5	1	13	12
<b>Cigarette Smoking<sup>2</sup></b>						
Three months before pregnancy	11,831	11,327	399	56	49	-
Any time during pregnancy	9,002	8,613	308	40	41	-
First three months of pregnancy	8,727	8,355	293	40	39	-
Second three months of pregnancy	7,109	6,807	235	34	33	-
Third three months of pregnancy	6,689	6,398	228	31	32	-

1. Other includes births attended by a nurse, naturopath, or other attendant.

2. The Idaho birth certificate was revised in 2004. Risk factor, infection, and cigarette smoking data for 2004 through 2006 are not comparable to data prior to 2004. For more information, see Technical Notes.

3. More than one type of risk factor or infection may be reported for a live birth.

4. Includes perinatal death, small-for-gestaional age/intrauterine growth restricted birth.

TABLE 6B  
Births Occurring in Idaho  
Percent by Birth Attendant by Risk Factor(s), Infection(s), and Cigarette Smoking<sup>1</sup>  
2004-2006

	TOTAL LIVE BIRTHS	BIRTH ATTENDANT				
		Physician M.D., D.O.	Certified Nurse Midwife	Lay Midwife	Other <sup>2</sup>	Not Stated
<b>Total, all births</b>	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Births with Risk Factor(s) Reported<sup>3,4</sup></b>	22.4	23.0	10.5	9.7	14.7	-
Prepregnancy diabetes	0.6	0.6	0.2	0.2	-	-
Gestational diabetes	3.6	3.7	2.0	0.2	3.2	-
Prepregnancy hypertension	0.7	0.7	0.3	0.2	0.3	-
Gestational hypertension	5.7	5.9	3.0	0.8	1.6	-
Previous preterm birth	1.9	1.9	2.2	1.7	3.2	-
Other previous poor pregnancy outcome <sup>5</sup>	1.1	1.1	0.9	2.0	1.6	-
Vaginal bleeding prior to onset of labor	1.9	1.9	1.0	1.6	3.2	-
Pregnancy resulted from infertility treatment	0.8	0.8	0.3	0.2	0.3	-
Mother had a previous cesarean	9.6	10.0	1.5	4.4	2.2	-
None of the above	77.6	77.0	89.5	90.3	85.3	-
Not Stated	NA	NA	NA	NA	NA	NA
<b>Births with Infection(s) Reported<sup>3,4</sup></b>	21.6	21.9	23.2	7.8	10.4	-
Gonorrhea	0.1	0.1	-	-	-	-
Syphilis	**	**	**	-	-	-
HIV Infection	**	**	**	-	-	-
Herpes Simplex Virus (HSV)	1.7	1.7	2.8	0.6	0.6	-
Chlamydia	1.2	1.2	2.3	0.2	1.3	-
Listeria	**	**	-	-	-	-
Group B Streptococcus	17.6	17.9	16.4	6.4	6.8	-
Cytomegalovirus	**	**	0.1	-	-	-
Parvovirus	0.1	0.1	**	0.1	-	-
Toxoplasmosis	**	**	-	-	0.3	-
Hepatitis B	0.1	0.1	0.2	-	0.3	-
Hepatitis C	0.2	0.2	0.1	-	0.6	-
Other infection not elsewhere specified	1.6	1.6	3.7	0.6	1.0	-
None of the above	78.4	78.1	76.8	92.2	89.6	-
Not Stated	NA	NA	NA	NA	NA	NA
<b>Cigarette Smoking<sup>3</sup></b>						
Three months before pregnancy	17.4	17.6	19.7	4.3	15.9	-
Any time during pregnancy	13.2	13.4	15.2	3.0	13.3	-
First three months of pregnancy	12.8	13.0	14.5	3.0	12.6	-
Second three months of pregnancy	10.5	10.6	11.6	2.6	10.7	-
Third three months of pregnancy	9.8	10.0	11.3	2.4	10.4	-

1. Percents are based on records with stated information. NA: not applicable.

2. Other includes births attended by a nurse, naturopath, or other attendant.

3. The Idaho birth certificate was revised in 2004. Risk factor, infection, and cigarette smoking data for 2004 through 2006 are not comparable to data prior to 2004. For more information, see Technical Notes.

4. More than one type of risk factor or infection may be reported for a live birth.

5. Includes perinatal death, small-for-gestaional age/intrauterine growth restricted birth.

\*\* Represents a percent that rounds to less than 0.1%. Dash (-) represents zero.

TABLE 7A  
Births Occurring in Idaho  
Number by Birth Attendant by Maternal Morbidity(ies), Characteristic(s) of Labor and Delivery, and Abnormal Condition(s)  
2004-2006

	TOTAL LIVE BIRTHS	BIRTH ATTENDANT				
		Physician M.D., D.O.	Certified Nurse Midwife	Lay Midwife	Other <sup>1</sup>	Not Stated
<b>Total, all births</b>	68,194	64,504	2,030	1,326	322	12
<b>Births with Maternal Morbidity(ies) Reported<sup>2,3</sup></b>	1,250	1,202	26	12	10	-
Maternal transfusion	209	201	2	4	2	-
Third or fourth degree perineal laceration	834	811	16	1	6	-
Ruptured uterus	11	11	-	-	-	-
Unplanned hysterectomy	14	13	1	-	-	-
Admission to ICU	57	56	1	-	-	-
Unplanned O.R. procedure following delivery <sup>4</sup>	215	196	9	8	2	-
None of the above	66,714	63,094	2,004	1,313	303	-
Not Stated	230	208	-	1	9	12
<b>Births with Characteristic(s) Reported<sup>2,3</sup></b>	56,499	54,789	1,530	119	61	-
Induction of labor	18,409	17,884	481	24	20	-
Augmentation of labor	14,117	13,508	566	30	13	-
Non-vertex presentation	1,057	1,037	3	15	2	-
Steroids for fetal lung maturation <sup>5</sup>	1,210	1,206	4	-	-	-
Antibiotics received by mother during labor	13,028	12,547	452	12	17	-
Chorioamnionitis or high maternal temperature <sup>6</sup>	774	763	10	-	1	-
Meconium staining of the amniotic fluid <sup>7</sup>	2,685	2,496	135	45	9	-
Fetal intolerance to labor <sup>8</sup>	4,867	4,674	179	6	8	-
Epidural or spinal anesthesia during labor	46,226	45,118	1,065	19	24	-
None of the above	11,520	9,565	497	1,205	253	-
Not Stated	175	150	3	2	8	12
<b>Births with Abnormal Condition(s) Reported<sup>2,3</sup></b>	9,504	9,126	258	81	39	-
Assisted ventilation immediately following delivery	2,876	2,715	77	71	13	-
Assisted ventilation for more than six hours	1,161	1,146	10	1	4	-
NICU admission	5,591	5,417	133	13	28	-
Newborn given surfactant replacement therapy	575	568	2	1	4	-
Antibiotics received for suspected neonatal sepsis	1,926	1,882	27	8	9	-
Seizure or serious neurologic dysfunction	34	31	2	-	1	-
Significant birth injury	74	70	4	-	-	-
Failed newborn hearing test	2,473	2,401	64	1	7	-
None of the above	58,262	54,986	1,757	1,241	278	-
Not Stated	428	392	15	4	5	12

1. Other includes births attended by a nurse, naturopath, or other attendant.

2. The Idaho birth certificate was revised in 2004. Maternal morbidity, characteristics of labor and delivery, and abnormal conditions of newborn data for 2004 through 2006 are not comparable to data prior to 2004. For more information, see Technical Notes.

3. More than one type of morbidity, characteristic, or abnormal condition may be reported for a live birth.

4. Unplanned operating room procedure following procedure.

5. Steroids (glucocorticoids) for fetal lung maturation received by the mother prior to delivery.

6. Clinical chorioamnionitis diagnosed during labor or maternal temperature  $\geq 38^{\circ}\text{C}$  ( $100.4^{\circ}\text{F}$ ).

7. Moderate/heavy meconium staining of the amniotic fluid.

8. Fetal intolerance of labor such that one or more of the following actions was taken: in-utero resuscitative measures, further fetal assessment, or operative delivery.

TABLE 7B  
Births Occurring in Idaho  
Percent by Birth Attendant by Maternal Morbidity(ies), Characteristic(s) of Labor and Delivery, and Abnormal Condition(s)<sup>1</sup>  
2004-2006

	TOTAL LIVE BIRTHS	BIRTH ATTENDANT				
		Physician M.D., D.O.	Certified Nurse Midwife	Lay Midwife	Other <sup>2</sup>	Not Stated
<b>Total, all births</b>	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Births with Maternal Morbidity(ies) Reported<sup>3,4</sup></b>	1.8	1.9	1.3	0.9	3.2	-
Maternal transfusion	0.3	0.3	0.1	0.3	0.6	-
Third or fourth degree perineal laceration	1.2	1.3	0.8	0.1	1.9	-
Ruptured uterus	**	**	-	-	-	-
Unplanned hysterectomy	**	**	**	-	-	-
Admission to ICU	0.1	0.1	**	-	-	-
Unplanned O.R. procedure following delivery <sup>5</sup>	0.3	0.3	0.4	0.6	0.6	-
None of the above	98.2	98.1	98.7	99.1	96.8	-
Not Stated	NA	NA	NA	NA	NA	NA
<b>Births with Characteristic(s) Reported<sup>3,4</sup></b>	83.1	85.1	75.5	9.0	19.4	-
Induction of labor	27.1	27.8	23.7	1.8	6.4	-
Augmentation of labor	20.8	21.0	27.9	2.3	4.1	-
Non-vertex presentation	1.6	1.6	0.1	1.1	0.6	-
Steroids for fetal lung maturation <sup>6</sup>	1.8	1.9	0.2	-	-	-
Antibiotics received by mother during labor	19.2	19.5	22.3	0.9	5.4	-
Chorioamnionitis or high maternal temperature <sup>7</sup>	1.1	1.2	0.5	-	0.3	-
Meconium staining of the amniotic fluid <sup>8</sup>	3.9	3.9	6.7	3.4	2.9	-
Fetal intolerance to labor <sup>9</sup>	7.2	7.3	8.8	0.5	2.5	-
Epidural or spinal anesthesia during labor	68.0	70.1	52.5	1.4	7.6	-
None of the above	16.9	14.9	24.5	91.0	80.6	-
Not Stated	NA	NA	NA	NA	NA	NA
<b>Births with Abnormal Condition(s) Reported<sup>2,3</sup></b>	14.0	14.2	12.8	6.1	12.3	-
Assisted ventilation immediately following delivery	4.2	4.2	3.8	5.4	4.1	-
Assisted ventilation for more than six hours	1.7	1.8	0.5	0.1	1.3	-
NICU admission	8.3	8.4	6.6	1.0	8.8	-
Newborn given surfactant replacement therapy	0.8	0.9	0.1	0.1	1.3	-
Antibiotics received for suspected neonatal sepsis	2.8	2.9	1.3	0.6	2.8	-
Seizure or serious neurologic dysfunction	0.1	**	0.1	-	0.3	-
Significant birth injury	0.1	0.1	0.2	-	-	-
Failed newborn hearing test	3.6	3.7	3.2	0.1	2.2	-
None of the above	86.0	85.8	87.2	93.9	87.7	-
Not Stated	NA	NA	NA	NA	NA	NA

1. Percents are based on records with stated information. NA: not applicable.

2. Other includes births attended by a nurse, naturopath, or other attendant.

3. The Idaho birth certificate was revised in 2004. Maternal morbidity, characteristics of labor and delivery, and abnormal conditions of newborn data for 2004 through 2006 are not comparable to data prior to 2004.

4. More than one type of morbidity, characteristic, or abnormal condition may be reported for a live birth.

5. Unplanned operating room procedure following procedure.

6. Steroids (glucocorticoids) for fetal lung maturation received by the mother prior to delivery.

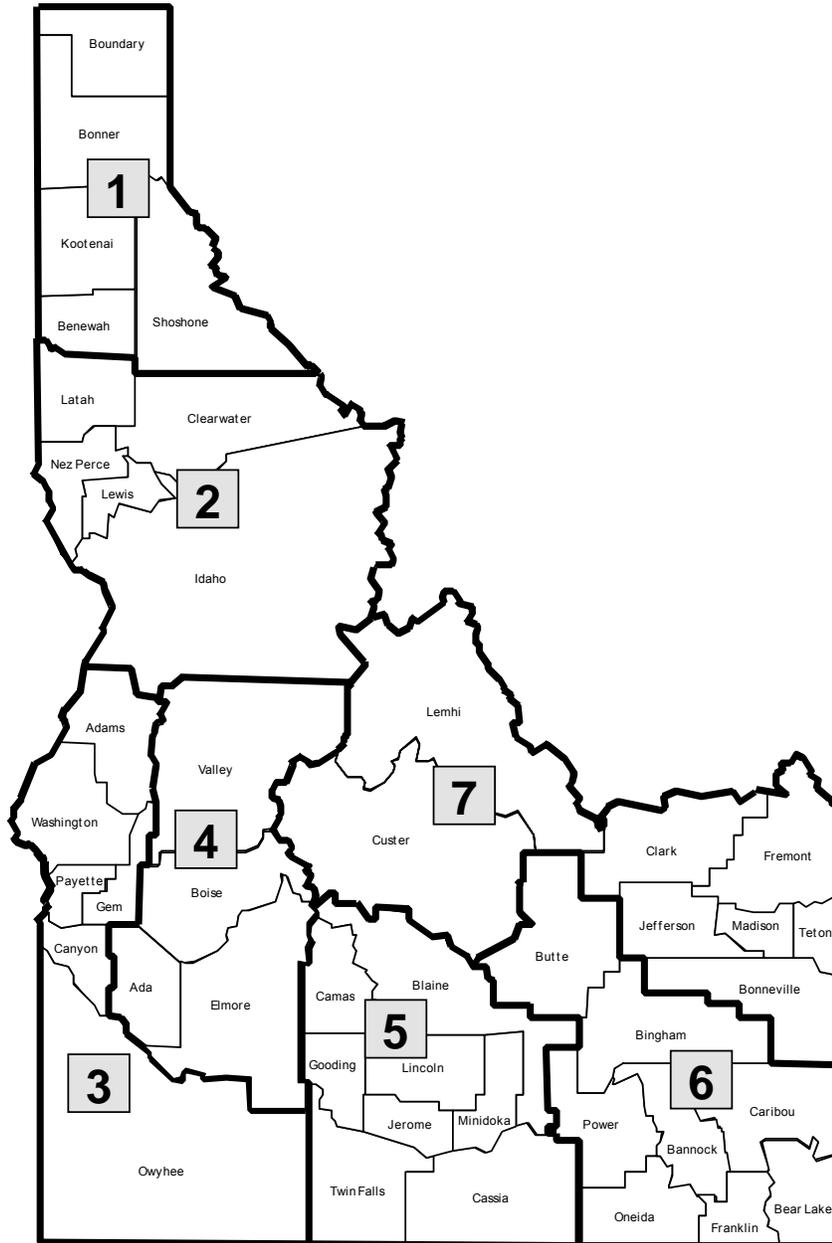
7. Clinical chorioamnionitis diagnosed during labor or maternal temperature  $\geq 38^{\circ}\text{C}$  ( $100.4^{\circ}\text{F}$ ).

8. Moderate/heavy meconium staining of the amniotic fluid.

9. Fetal intolerance of labor such that one or more of the following actions was taken: in-utero resuscitative measures, further fetal assessment, or operative delivery.

\*\* Represents a percent that rounds to less than 0.1%. Dash (-) represents zero.

## Counties Comprising Idaho Public Health Districts



District 1	District 2	District 3	District 4	District 5	District 6	District 7
Benewah	Clearwater	Adams	Ada	Blaine	Bannock	Bonneville
Bonner	Idaho	Canyon	Boise	Camas	Bear Lake	Clark
Boundary	Latah	Gem	Elmore	Cassia	Bingham	Custer
Kootenai	Lewis	Owyhee	Valley	Gooding	Butte	Fremont
Shoshone	Nez Perce	Payette		Jerome	Caribou	Jefferson
		Washington		Lincoln	Franklin	Lemhi
				Minidoka	Oneida	Madison
				Twin Falls	Power	Teton

**TECHNICAL NOTES**  
**Births Occurring in Idaho by Birth Attendant**  
**2004-2006**

**Definitions**

Parity for age of mother

Parity refers to the number of previous live births to a mother. Parity is determined from two items on the birth certificate, “live births now living” and “live births now dead”; fetal deaths are excluded.

High parity for age: one or more previous live births for females 17 years of age or younger; three or more previous live births for females 18-21 years of age; four or more previous live births for females 22-24 years of age; and five or more previous live births for females aged 25 years and older.

Not high parity for age: all parities (except “unknown”) for mother’s age not included in “high parity for age.”

Gestational age

The primary measure used to determine the gestation age of the newborn is the interval between the first day of mother’s last normal menstrual period (LMP) and the date of birth. If LMP is less than 16 completed weeks, greater than 48 completed week’s, not stated, or implausible with birth weight, then the obstetric estimate of completed weeks gestation is used. Gestational age based on LMP and obstetric estimate are comparable with data based on LMP and obstetric estimate only.

Status of mother

Status is based on the live birth order for this birth (one, two, three, etc.), the infant’s plurality (singleton, twin, triplet, etc.), and the birth order of multiple births (first, second, third, etc.). Births to first-time mothers include singletons and first-live born infants of multiple births where live birth order is one. Births to non first-time mothers include singletons and first-live born infants of multiple births where live birth order is greater than one.

**Revision of the Certificate of Live Birth**

The U.S. Standard Certificate of Live Birth was revised in 2003. In 2003, Pennsylvania and Washington were the first two states to implement the 2003 revision. In 2004, Idaho implemented the 2003 U.S. Standard Certificate of Live Birth. Some items on the certificate were added or changed from previous years and some items were removed from the Idaho certificate in 2004.

**Overview of New and Revised Items**

Date of first prenatal care visit

In 2004, the prenatal care item was revised from collecting month prenatal care began to collecting date of first prenatal care visit. With the revision, the calculation of trimester prenatal care began is based on date of the first prenatal care visit and the date of the last menstrual period (LMP). If LMP date is not stated, the date of first prenatal care visit, the clinical length of gestation in weeks, and the baby’s birth date are used to estimate the onset of prenatal care. If the day of first prenatal visit is missing, the day is imputed for statistical purposes based on the previous birth record with the same month of first prenatal care visit. If either month or year of prenatal care is missing or implausible, date of visit is coded to unknown.

According to the National Center for Health Statistics (NCHS), the change in data collection yields more accurate data because the timing for care is based on a date in the mother's medical record rather than based on mother's recollection of month of first visit<sup>1</sup>. Because of the changes in sources for these data, prenatal care based on date of first visit is not comparable to prenatal care based on month prenatal care began.

One measure of prenatal care in which classifications of the adequacy of prenatal care are based on the onset of prenatal care, the number of prenatal visits, and the length of gestation is the Adequacy of Prenatal Care Utilization (APNCU) Index. The APNCU Index is based on full recommendations set forth by the American College of Obstetricians and Gynecologists (ACOG). This index classifies care as intensive, adequate, intermediate, inadequate, or no care by comparing the number of actual prenatal care visits to the number of visits that a woman was expected to receive, given the onset of prenatal care and the length of gestation.

#### *Did mother get WIC food for herself during this pregnancy?*

WIC is the Idaho Health and Welfare program for women, infants, and children that provides nutritional education, monetary checks for food, and health referrals. Data on WIC from the birth certificate may differ from data from the WIC Program.

#### *Is infant being breastfed?*

The NCHS recommended adding this item to the birth certificate because the information is important for the Maternal and Child Health program to track breast feeding levels. Data are based on infant being breastfed at the time of birth through the time the birth certificate is completed.

#### *Mother's race*

Beginning in 2004, mothers may choose multiple races on the Idaho birth certificate. From 2004 to 2006, there were 631 births in which the mother reported more than one race. For statistical analysis, Idaho birth records with more than one race were provided to the NCHS for them to re-code and provide the bridged-race codes back to Idaho.

Prior to 2004, mother's race was written on the birth certificate. For statistical analysis, races listed on the certificate were collapsed into five race categories: White, Black, American Indian or Alaskan Native, Asian or Pacific Islander, or "other race". In 2004, the birth certificate was revised to include check boxes for races and parents had the ability to select one or more race. At the same time, the race category structure was revised. Prior to use of check boxes, write-ins of "Hispanic" or "Mexican" for race were coded to white. Beginning with 2004 births, check boxes of "other race" with write-ins of "Hispanic" or "Mexican" were coded to "other race". Therefore, race data in and after 2004 are not comparable with race data for births prior to 2004.

Because of the bridged-race code rules implemented in 2004, there was a large increase in the number of mothers with race coded to "other race" in 2004-2006. Nearly 96 percent of the records to mothers with race coded to "other race" were of Hispanic ethnicity.

#### *Mother's ethnicity*

The 2004 Idaho certificate includes check boxes for Hispanic origin and allows the mother to choose more than one Hispanic origin. Origin is then categorized as Hispanic or non-Hispanic. Race and Hispanic origin are reported separately on the birth certificate. Data shown for Hispanic mothers may be of any race.

### Mother's education

The 2004 birth certificate was revised to report the highest degree or level of school completed at delivery. Prior to 2004, education was reported as years of school completed. Because of this change, data in 2004-2006 are not comparable with data prior to 2004.

### Cigarette smoking before and during pregnancy

Prior to 2004, tobacco use during pregnancy (yes or no) and average number of cigarettes per day were reported on the birth certificate. Beginning in 2004, the Idaho birth certificate includes four data items for cigarette smoking before and during pregnancy. The revised certificate collects data on average number of cigarettes smoked per day during the three months before pregnancy, the first three months of pregnancy, the second three months of pregnancy, and the third three months of pregnancy.

Data based on mother's cigarette smoking status during the three trimesters of pregnancy were used to generate a data item for mother smoking during pregnancy. Mother's who smoked during the first three months of pregnancy, the second three months of pregnancy, or the third three months of pregnancy were coded to "yes" smoked cigarettes during pregnancy for data analysis. Because of changes in the method data are collected for smoking during pregnancy, Idaho data for 2004-2006 are not comparable with Idaho data prior to 2004 or other data based on tobacco use during pregnancy.

### Medical and health section

The medical and health section for mother includes risk factors in this pregnancy, infections present and/or treated during this pregnancy, characteristics of labor and delivery, method of delivery, and maternal morbidity (complications of labor and delivery). The medical and health section for the infant includes abnormal conditions of the newborn. There were extensive changes for each of these items on the revised certificate.

### Risk factors in this pregnancy

Definitions of risk factors in this pregnancy are provided by the Centers for Disease Control and Prevention (CDC), NCHS<sup>2</sup>.

*Prepregnancy diabetes* – Glucose intolerance requiring treatment diagnosed prior to this pregnancy.

*Gestational diabetes* - Glucose intolerance requiring treatment diagnosed during this pregnancy.

*Prepregnancy hypertension* – Elevation of blood pressure above normal for age, gender, and physiological condition diagnosed prior to the onset of this pregnancy.

*Gestational hypertension* - Elevation of blood pressure above normal for age, gender, and physiological condition diagnosed during this pregnancy.

*Previous preterm birth* – History of pregnancy(ies) terminating in a live birth of less than 37 completed weeks of gestation.

*Other previous poor pregnancy outcome* – History of pregnancy(ies) with fetal and neonatal death, small for gestational age, and/or intrauterine growth restricted birth.

*Vaginal bleeding during pregnancy* – Any reported or observed bleeding per vaginum at any time in the pregnancy presenting prior to the onset of labor.

*Infertility treatment*- Any assisted reproduction technique whether artificial insemination, drugs, or any technical procedures (in-vitro fertilization) used to initiate the pregnancy.

*Previous cesarean delivery* - Previous operative delivery in which the fetus is extracted through an incision in the maternal abdominal and uterine walls.

*Infections present and/or treated during this pregnancy*

The revised U.S. birth certificate includes six infections which are known to cause concomitant fetal and/or subsequent neonatal infection. The infections listed on the U.S. revised certificate are Gonorrhea, Syphilis, Herpes Simplex Virus (HSV), Chlamydia, Hepatitis B, and Hepatitis C. In addition to the infections listed on the revised U.S. certificate, the Idaho birth certificate includes HIV, Listeria, group B streptococcus, Cytomegalovirus, Parvovirus, and Toxoplasmosis. The CDC provides more information on these infections at <http://www.cdc.gov/>.

*Gonorrhea* - Infection due to *Neisseria gonorrhoeae* transmitted sexually (a STD) in most cases, but also by contact with infected exudates in neonatal infants at birth.

*Syphilis* - A subacute to chronic infectious disease caused by the spirochete *Treponema pallidum*, which is usually transmitted sexually or acquired in utero.

*HIV (Human immunodeficiency virus)* – HIV is the virus that causes AIDS (acquired immune deficiency syndrome). HIV may be transmitted sexually or through infected blood or contact with an infected person's broken skin or mucous membranes. In addition, infected pregnant women can pass HIV to their baby during pregnancy or delivery, as well as through breast-feeding.

*Herpes Simplex Virus (HSV)* – Infection of the skin on the genital area by herpes simplex virus and is transmitted sexually.

*Chlamydia* - A disease transmitted sexually that is caused by the bacterium *Chlamydia trachomatis*.

*Listeria* - A genus of bacteria of uncertain affiliation, closely resembling those of the family *Corynebacteriaceae*, made up of small, coccoid gram-positive rods that have a tendency to form chains and palisades; they are found in the feces of humans and other animals, on vegetation, and in silage.

*Group B Streptococcus (GBS)* - A type of bacteria that can cause serious illness and death in newborns. Group B streptococcus is the most common cause of sepsis (blood infection) and meningitis (infection of the fluid and lining around the brain) in newborns. It is not spread by the consumption of water or food or transmitted sexually.

*Cytomegalovirus (CMV)* – A common virus of the subfamily *Betaherpesvirinae* that can be present in the body without causing infection. It is spread from person to person by contact with urine, saliva, breast milk, blood, semen, and possibly other body fluids. The virus can be spread from an infected mother to her fetus or newborn baby.

*Parvovirus* - Parvovirus B19 is a virus that commonly infects humans; about 50 percent of all adults have been infected sometime during childhood or adolescence. Parvovirus B19 infects only humans. There are also animal parvoviruses, but they do not infect humans. Therefore, a person cannot catch parvovirus B19 from a dog or cat.

*Toxoplasmosis* - A disease caused by a single-cell parasite called *Toxoplasma gondii*. The *Toxoplasma* infection could cause serious health problems in pregnant women. *Toxoplasma* infection occurs from contaminated food or drinking water and cat feces from a *Toxoplasma*-infected cat. Most infants are infected while still in the womb. They have no symptoms at birth, but they may develop symptoms later in life.

*Hepatitis B (HBV)* - A serious disease caused by a virus that attacks the liver. This virus can cause lifelong infection, cirrhosis (scarring) of the liver, liver cancer, liver failure, and death. The Hepatitis virus may be transmitted sexually, through contaminated blood, or from infected mothers to their infants at birth.

*Hepatitis C* - A disease caused by the Hepatitis C virus which results in infection of the liver. The Hepatitis C virus is spread by contact with contaminated blood or plasma. The role of person-to-person contact and sexually transmission is unclear, but it may be transmitted from an infected mother to her baby during birth.

#### Characteristics of labor and delivery

Characteristic of labor and delivery include information about the course of the delivery. Definitions of characteristics of labor are provided by the CDC, NCHS<sup>2</sup>.

*Induction of labor* - Initiation of uterine contractions by medical and/or surgical means for the purpose of delivery before the spontaneous onset of labor.

*Augmentation of labor* - Stimulation of uterine contractions by drug or manipulative technique with the intent to reduce the time to delivery.

*Non-vertex presentation* - Includes any non-vertex fetal presentation, e.g., breech, shoulder, brow, face presentations, and transverse lie in the active phase of labor or at delivery other than vertex.

*Steroids (glucocorticoids) for fetal lung maturation* - Steroids received by the mother prior to delivery including betamethasone, dexamethasone, or hydrocortisone specifically given to accelerate fetal lung maturation in anticipation of preterm delivery. Excludes steroid medication given to the mother as an anti-inflammatory treatment.

*Antibiotics during labor* - Includes antibacterial medications given systemically (intravenous or intramuscular) to the mother in the interval between the onset of labor and the actual delivery.

*Chorioamnionitis or Maternal temp. >100.4 degrees F* - A clinical diagnosis of chorioamnionitis during labor made by the delivery attendant. Usually includes more than one of the following: fever, uterine tenderness and/or irritability, leukocytosis, and fetal tachycardia.

*Moderate/heavy meconium staining of amniotic fluid* - Staining of the amniotic fluid caused by passage of fetal bowel contents during labor and/or delivery which is more than enough to cause a greenish color change of the fluid.

*Fetal intolerance of labor* - In-utero resuscitation measure (maternal position change, oxygen administration to the mother, IV fluid, amnioinfusion, support of maternal blood pressure, uterine relaxing agents), further fetal assessment (scalp pH, scalp stimulation, acoustic stimulation), operative delivery/intervention to shorten time to deliver the fetus.

*Epidural or spinal anesthesia during labor* - Administration of a regional anesthetic to the mother for control of the pain of labor, i.e., delivery of an agent into a limited space with the distribution of the analgesic effect limited to the lower body.

#### Maternal morbidity (complications of labor and delivery)

Maternal morbidity includes serious complications experienced by the mother associated with the labor and delivery. Definitions of maternal morbidity are provided by the CDC, NCHS<sup>2</sup>.

*Maternal transfusion* - Includes infusion of whole blood or packed red blood cells within the period specified.

*Third or fourth degree perineal laceration* - Third degree laceration extends completely through the perineal skin, vaginal mucosa, perineal body, and anal sphincter. Fourth degree laceration is all of the above with extension through the rectal mucosa.

*Ruptured uterus* - Tearing of the uterine wall.

*Unplanned hysterectomy* - Surgical removal of the uterus that was not planned prior to admission for delivery. Includes an anticipated or possible but not definitively planned procedure.

*ICU admission* - Any admission, planned or unplanned, of the mother to a facility/unit designated as providing intensive care (ICU).

*Unplanned operating room procedure following delivery* - Any transfer of the mother back to a surgical area for an operative procedure that was not planned prior to the admission for delivery. This complication excludes postpartum tubal ligations.

*Abnormal conditions of the newborn*

Abnormal conditions of the newborn include disorders or significant morbidity experienced by the newborn infant. Definitions of abnormal conditions are provided by the CDC, NCHS<sup>2</sup>.

*Assisted ventilation required immediately following delivery* - Infant given manual breaths with bag and mask or bag and endotracheal tube within the first several minutes from birth for any duration.

*Assisted ventilation required for more than six hours* – Infant given mechanical ventilation (breathing assistance) by any method for more than six hours.

*Seizure or serious neurologic dysfunction* - Seizure defined as any involuntary repetitive, convulsive movement or behavior. Serious neurologic dysfunction defined as severe alteration of alertness such as obtundation, stupor, or coma.

*Significant birth injury* (injury present immediately following delivery or manifesting following delivery) - Any bone fracture or weakness or loss of sensation. This condition excludes fractured clavicles and transient facial nerve palsy.

*NICU admission* – NICU (neonatal intensive care unit) is defined as a facility or unit staffed and equipped to provide continuous mechanical ventilatory support for the newborn. The infant may require additional or other medical support in an NICU than continuous mechanical ventilatory support.

*Newborn given surfactant replacement therapy* - Treatment of surfactant deficiency either due to preterm birth or pulmonary injury resulting in decreased lung compliance.

*Antibiotics received by the newborn for suspected neonatal sepsis* - Any antibacterial drug given systemically.

*Failed newborn hearing test* - Failure of the newborn hearing screening test in one or both ears. Data are based on infants given the test in which test results were available prior to the birth certificate being filed with the state. Newborn hearing screening tests may vary by birth facility.

*Method of delivery*

In 2004, the Idaho birth certificate was revised to collect additional data for cesarean births. The revised certificate asks for two additional data items regarding cesarean deliveries, 1) was a trial of labor attempted, and 2) number of previous cesarean deliveries. The number of previous cesarean deliveries is calculated from the response to a question under “risk factors in this pregnancy” which asks if the mother had a previous cesarean delivery and if so, the number of previous cesarean deliveries. As a result, data on vaginal birth after previous cesarean (VBAC), primary, and repeat cesarean deliveries are not directly comparable between revisions<sup>3</sup>.

*Principal source of payment for delivery*

In 2004, the Idaho birth certificate included eight check boxes for the principle source of payment for this delivery: private insurance, Medicaid, self-pay, Indian Health Services, CHAMPUS/TRICARE, other government, other, and none. If no check box was selected, payment source was coded to “not

stated". For data analysis, records with Indian Health Services, CHAMPUS/TRICARE, or other government selected were categorized as "other government". Principal source for payment was added to the Idaho certificate in 1996. The categories listed from 1996 to 2003 were: HMO, self-pay, other health insurance, Medicaid, and other government. Data from 1996 to 2003 are not comparable with data in 2004 and after for payment source for delivery. Data for Medicaid-paid births from the birth certificate may not match data from the Medicaid Program. In addition, the principal source for payment may change after the certificate is filed with the state.

1. "Report of the Panel to Evaluate the U.S. Standard Certificates," National Center for Health Statistics, Division of Vital Statistics, April 2000, Addenda, November 2001.
2. "Birth Edit Specifications for the 2003 Revision of the U.S. Standard Certificate of Birth" National Center for Health Statistics, Division of Vital Statistics, April 2004, Updated March 18, 2005.
3. "Births: Final Data for 2005," National Vital Statistics Reports, National Center for Health Statistics, Vol. 56/No.6, December 5, 2007.

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