

2012-2014

**Idaho Resident
Elective Inductions
and Elective Cesarean
Sections**



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



**Idaho Resident Singleton Births
Elective Inductions and Elective Cesarean Sections* Delivered Prior to 39 Weeks Gestation
2005-2014**

Total Singleton Births Delivered Before 39 Completed Weeks Gestation

| | Total | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|--------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Total Births | 76,663 | 8,520 | 8,746 | 9,049 | 9,052 | 7,672 | 7,225 | 6,484 | 6,927 | 6,462 | 6,526 |

Total Number of Inductions and Cesarean Sections Deliveries Before 39 Completed Weeks Gestation*

| | Total | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|-------------------------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Total Inductions | 14,522 | 1,922 | 1,947 | 2,036 | 1,937 | 1,353 | 1,168 | 949 | 1,079 | 1,062 | 1,069 |
| Total Cesareans (without induction) | 18,618 | 2,031 | 1,996 | 2,201 | 2,310 | 1,882 | 1,848 | 1,592 | 1,666 | 1,551 | 1,541 |
| Total Inductions and Cesareans | 33,140 | 3,953 | 3,943 | 4,237 | 4,247 | 3,235 | 3,016 | 2,541 | 2,745 | 2,613 | 2,610 |

Percentage of Births With Inductions and Cesareans That Were Delivered Before 39 Completed Weeks Gestation*

| Percentage of All Births | Total | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|-------------------------------------|-------|------|------|------|------|------|------|------|------|------|------|
| Total Inductions | 18.9 | 22.6 | 22.3 | 22.5 | 21.4 | 17.6 | 16.2 | 14.6 | 15.6 | 16.4 | 16.4 |
| Total Cesareans (without induction) | 24.3 | 23.8 | 22.8 | 24.3 | 25.5 | 24.5 | 25.6 | 24.6 | 24.1 | 24.0 | 23.6 |
| Total Inductions and Cesareans | 43.2 | 46.4 | 45.1 | 46.8 | 46.9 | 42.2 | 41.7 | 39.2 | 39.6 | 40.4 | 40.0 |

Interpretation: In 2014, 2,610 births out of 6,526 singleton births (40.0 percent) delivered before 39 completed weeks gestation were delivered by induction or cesarean section.

Total Number of Elective Deliveries Before 39 Completed Weeks Gestation**

| | Total | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|---------------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Elective induction | 7,120 | 1,150 | 1,102 | 1,051 | 1,011 | 627 | 489 | 385 | 463 | 449 | 393 |
| Elective Cesarean Section | 9,261 | 1,097 | 1,115 | 1,212 | 1,234 | 951 | 874 | 744 | 727 | 673 | 634 |
| Total Elective Deliveries | 16,381 | 2,247 | 2,217 | 2,263 | 2,245 | 1,578 | 1,363 | 1,129 | 1,190 | 1,122 | 1,027 |

Percentage of Births Delivered Before 39 Completed Weeks Gestation That Were Elective Deliveries**

| Percentage of All Births | Total | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|---------------------------|-------|------|------|------|------|------|------|------|------|------|------|
| Elective Induction | 9.3 | 13.5 | 12.6 | 11.6 | 11.2 | 8.2 | 6.8 | 5.9 | 6.7 | 6.9 | 6.0 |
| Elective Cesarean Section | 12.1 | 12.9 | 12.7 | 13.4 | 13.6 | 12.4 | 12.1 | 11.5 | 10.5 | 10.4 | 9.7 |
| Total Elective Deliveries | 21.4 | 26.4 | 25.3 | 25.0 | 24.8 | 20.6 | 18.9 | 17.4 | 17.2 | 17.4 | 15.7 |

Interpretation: In 2014, 1,027 out of 6,526 singleton births (15.7 percent) delivered prior to 39 completed weeks gestation were born by elective deliveries (either vaginal or cesarean section).

* Data for inductions and cesareans are mutually exclusive. If elective delivery was both induced and cesarean, then the elective delivery is considered elective induced delivery.

** Elective delivery: Non-medically indicated delivery before 39 completed weeks gestation. See Notes for information on medically-indicated births.

Note: Data in the tables above are based on the obstetric estimate (OE) of gestational age. Previously published data on gestational age were based on a calculation of the number of completed weeks from the date of the mother's last normal menses (LMP) to the baby's birth date. See Notes for more information.

**Idaho Resident Singleton Births
Elective Inductions and Elective Cesarean Sections* Delivered Prior to 39 Weeks Gestation
Three-Year Aggregate, 2012-2014**

Number of Elective Deliveries by Mother's County of Residence Urban, Rural, or Frontier Designation

| | Total | Urban | Rural | Frontier |
|---------------------------|--------|--------|-------|----------|
| Total Births | 19,915 | 13,791 | 1,068 | 5,056 |
| Elective Induction | 1,305 | 862 | 82 | 361 |
| Elective Cesarean Section | 2,034 | 1,316 | 136 | 582 |
| Total Elective Deliveries | 3,339 | 2,178 | 218 | 943 |

Percentage of Births That Were Elective Deliveries by Mother's County of Residence Urban, Rural, or Frontier Designation

| | Total | Urban | Rural | Frontier |
|---------------------------|-------|-------|-------|----------|
| Elective Induction | 6.6 | 6.3 | 7.7 | 7.1 |
| Elective Cesarean Section | 10.2 | 9.5 | 12.7 | 11.5 |
| Total Elective Deliveries | 16.8 | 15.8 | 20.4 | 18.7 |

Interpretation: From 2012-2014, 15.8 percent of babies delivered prior to 39 completed weeks gestation to mothers in urban counties were elective deliveries compared with 20.4 percent of mothers in rural counties and 18.7 percent of mothers in frontier counties.

Number of Elective Deliveries by Mother's District of Residence

| | Total | District 1 | District 2 | District 3 | District 4 | District 5 | District 6 | District 7 |
|---------------------------|--------|------------|------------|------------|------------|------------|------------|------------|
| Total Births | 19,915 | 1,852 | 909 | 3,523 | 4,679 | 2,907 | 2,719 | 3,326 |
| Elective Induction | 1,305 | 142 | 71 | 129 | 219 | 142 | 301 | 301 |
| Elective Cesarean Section | 2,034 | 231 | 112 | 307 | 312 | 360 | 381 | 331 |
| Total Elective Deliveries | 3,339 | 373 | 183 | 436 | 531 | 502 | 682 | 632 |

Percentage of Births That Were Elective Deliveries by District of Residence

| | Total | District 1 | District 2 | District 3 | District 4 | District 5 | District 6 | District 7 |
|---------------------------|-------|------------|------------|------------|------------|------------|------------|------------|
| Elective Induction | 6.6 | 7.7 | 7.8 | 3.7 | 4.7 | 4.9 | 11.1 | 9.0 |
| Elective Cesarean Section | 10.2 | 12.5 | 12.3 | 8.7 | 6.7 | 12.4 | 14.0 | 10.0 |
| Total Elective Deliveries | 16.8 | 20.1 | 20.1 | 12.4 | 11.3 | 17.3 | 25.1 | 19.0 |

Interpretation: From 2012-2014, 531 out of 4,679 babies (11.3 percent) delivered prior to 39 completed weeks gestation to mothers in District 4 were elective deliveries. In comparison, 25.1 percent of babies born prior to 39 completed weeks gestation to mothers in District 6 were delivered by elective delivery.

Data for induction and cesarean are mutually exclusive. If elective delivery was both induced and cesarean, then the elective delivery is considered elective induced delivery.

Elective delivery: Non-medically indicated delivery before 39 completed weeks gestation.

Note: Data in the tables above are based on the obstetric estimate (OE) of gestational age. Previously published data on gestational age were based on a calculation of the number of completed weeks from the date of the mother's last normal menses (LMP) to the baby's birth date. See Notes for more information.

**Idaho Resident Singleton Births
Elective Inductions and Elective Cesarean Sections* Delivered Prior to 39 Weeks Gestation
Three-Year Aggregate, 2012-2014**

Number of Elective Deliveries by Payment Source for Delivery

| | Total | Self pay | Private Health Insurance | Medicaid | Other Government | Not Applicable/None/Other | Not stated |
|---------------------------|--------|----------|--------------------------|----------|------------------|---------------------------|------------|
| Total Births | 19,915 | 1,216 | 9,165 | 8,662 | 653 | 160 | 59 |
| Elective Induction | 1,305 | 39 | 654 | 562 | 42 | 4 | 4 |
| Elective Cesarean Section | 2,034 | 110 | 968 | 863 | 67 | 19 | 7 |
| Total Elective Deliveries | 3,339 | 149 | 1,622 | 1,425 | 109 | 23 | 11 |

Percentage of Births That Were Elective Deliveries by Payment Source for Delivery

| | Total | Self pay | Private Health Insurance | Medicaid | Other Government | Not applicable/none/other | Not stated |
|---------------------------|-------|----------|--------------------------|----------|------------------|---------------------------|------------|
| Elective Induction | 6.6 | 3.2 | 7.1 | 6.5 | 6.4 | 2.5 | NA |
| Elective Cesarean Section | 10.2 | 9.0 | 10.6 | 10.0 | 10.3 | 11.9 | NA |
| Total Elective Deliveries | 16.8 | 12.3 | 17.7 | 16.5 | 16.7 | 14.4 | NA |

Interpretation: From 2012-2014, 1,622 babies (17.7 percent) delivered prior to 39 completed weeks gestation and paid by private insurance were elective deliveries. In comparison, 16.5 percent of babies born prior to 39 completed weeks gestation and paid by Medicaid were elective deliveries.

Number of Elective Deliveries by Mother's Pre-Pregnancy Body Mass Index (BMI)

| | Total | Underweight | Normal Weight | Overweight | Obese | Morbidly Obese | Not Stated |
|---------------------------|--------|-------------|---------------|------------|-------|----------------|------------|
| Total Births | 19,915 | 862 | 9,502 | 4,677 | 3,901 | 898 | 75 |
| Elective Induction | 1,305 | 70 | 655 | 283 | 252 | 39 | 6 |
| Elective Cesarean Section | 2,034 | 66 | 872 | 518 | 453 | 120 | 5 |
| Total Elective Deliveries | 3,339 | 136 | 1,527 | 801 | 705 | 159 | 11 |

Percentage of Births That Were Elective Deliveries by Mother's Pre-Pregnancy Body Mass Index (BMI)

| | Total | Underweight | Normal Weight | Overweight | Obese | Morbidly Obese | Not Stated |
|---------------------------|-------|-------------|---------------|------------|-------|----------------|------------|
| Elective Induction | 6.6 | 8.1 | 6.9 | 6.1 | 6.5 | 4.3 | NA |
| Elective Cesarean Section | 10.2 | 7.7 | 9.2 | 11.1 | 11.6 | 13.4 | NA |
| Total Elective Deliveries | 16.8 | 15.8 | 16.1 | 17.1 | 18.1 | 17.7 | NA |

Interpretation: From 2012-2014, 18.1 percent of babies delivered prior to 39 completed weeks gestation to mothers with pre-pregnancy body mass index considered obese were elective deliveries. In comparison, 16.1 percent of babies born prior to 39 completed weeks gestation to mothers with normal weight were delivered by elective delivery.

Data for induction and cesarean are mutually exclusive. If elective delivery was both induced and cesarean, then the elective delivery is considered elective induced delivery.

Elective delivery: Non-medically indicated delivery before 39 completed weeks gestation.

Note: Data in the tables above are based on the obstetric estimate (OE) of gestational age. Previously published data on gestational age were based on a calculation of the number of completed weeks from the date of the mother's last normal menses (LMP) to the baby's birth date. See Notes for more information.

**Idaho Resident Singleton Births
Elective Inductions and Elective Cesarean Sections* Delivered Prior to 39 Weeks Gestation
Three-Year Aggregate, 2012-2014**

Number of Elective Deliveries by Mother's Ethnicity

| | Total | Non-Hispanic | Hispanic | Not stated |
|---------------------------|--------|--------------|----------|------------|
| Total Births | 19,915 | 16,284 | 3,583 | 48 |
| Elective Induction | 1,305 | 1,137 | 164 | 4 |
| Elective Cesarean Section | 2,034 | 1,661 | 367 | 6 |
| Total Elective Deliveries | 3,339 | 2,798 | 531 | 10 |

Percentage of Births That Were Elective Deliveries by Mother's Ethnicity

| | Total | Non-Hispanic | Hispanic | Not stated |
|---------------------------|-------|--------------|----------|------------|
| Elective Induction | 6.6 | 7.0 | 4.6 | NA |
| Elective Cesarean Section | 10.2 | 10.2 | 10.2 | NA |
| Total Elective Deliveries | 16.8 | 17.2 | 14.8 | NA |

Interpretation: From 2012-2014, 17.2 percent of babies delivered prior to 39 completed weeks gestation to Non-Hispanic mothers were elective deliveries compared with 14.8 percent of Hispanic mothers.

Number of Elective Deliveries by Mother's Race (Non-Hispanic)

| | Non-Hispanic | | | | | | Not stated |
|---------------------------|--------------------|--------|-------|-----------------|------------------------|-----------------------------|------------|
| | Total Non-Hispanic | White | Black | American Indian | Asian Pacific Islander | Other race or Multiple Race | |
| Total | 16,284 | 15,269 | 152 | 357 | 451 | 41 | 14 |
| Elective Induction | 1,137 | 1,082 | 10 | 22 | 17 | 3 | 3 |
| Elective Cesarean Section | 1,661 | 1,560 | 18 | 42 | 33 | 7 | 1 |
| Total Elective Deliveries | 2,798 | 2,642 | 28 | 64 | 50 | 10 | 4 |

Percentage of Births That Were Elective Deliveries by Mother's Race (Non-Hispanic)

| | Non-Hispanic | | | | | | Not stated |
|---------------------------|--------------------|-------|-------|-----------------|------------------------|-----------------------------|------------|
| | Total Non-Hispanic | White | Black | American Indian | Asian Pacific Islander | Other race or Multiple Race | |
| Elective Induction | 7.0 | 7.1 | 6.6 | 6.2 | 3.8 | 7.3 | NA |
| Elective Cesarean Section | 10.2 | 10.2 | 11.8 | 11.8 | 7.3 | 17.1 | NA |
| Total Elective Deliveries | 17.2 | 17.3 | 18.4 | 17.9 | 11.1 | 24.4 | NA |

Interpretation: From 2012-2014, births to non-Hispanic Asian Pacific Islander mothers had the lowest percentage of elective deliveries (11.1 percent); births to non-Hispanic mothers of other and multiple race had the highest percent of elective deliveries (24.4 percent).

Data for induction and cesarean are mutually exclusive. If elective delivery was both induced and cesarean, then the elective delivery is considered elective induced delivery.

Elective delivery: Non-medically indicated delivery before 39 completed weeks gestation.

Note: Data in the tables above are based on the obstetric estimate (OE) of gestational age. Previously published data on gestational age were based on a calculation of the number of completed weeks from the date of the mother's last normal menses (LMP) to the baby's birth date. See Notes for more information.

**Idaho Resident Singleton Births
Elective Inductions and Elective Cesarean Sections* Delivered Prior to 39 Weeks Gestation
Three-Year Aggregate, 2012-2014**

Number of Elective Deliveries by Birth State

| | Birth State | | | | | | |
|---------------------------|-------------|--------|--------|------|------------|---------|-------------|
| | Total | Idaho | Oregon | Utah | Washington | Montana | Other State |
| Total | 19,915 | 18,717 | 241 | 349 | 497 | 22 | 89 |
| Elective Induction | 1,305 | 1,214 | 21 | 23 | 38 | 3 | 6 |
| Elective Cesarean Section | 2,034 | 1,869 | 49 | 32 | 73 | 2 | 9 |
| Total Elective Deliveries | 3,339 | 3,083 | 70 | 55 | 111 | 5 | 15 |

Percentage of Births That Were Elective Deliveries by Birth State

| | Birth State | | | | | | |
|---------------------------|-------------|-------|--------|------|------------|---------|-------------|
| | Total | Idaho | Oregon | Utah | Washington | Montana | Other State |
| Elective Induction | 6.6 | 6.5 | 8.7 | 6.6 | 7.6 | 13.6 | 6.7 |
| Elective Cesarean Section | 10.2 | 10.0 | 20.3 | 9.2 | 14.7 | 9.1 | 10.1 |
| Total Elective Deliveries | 16.8 | 16.5 | 29.0 | 15.8 | 22.3 | 22.7 | 16.9 |

Interpretation: From 2012-2014, 16.5 percent of deliveries in Idaho prior to 39 weeks gestation were elective deliveries; 29.0 percent of deliveries in Oregon prior to 39 weeks gestation were elective deliveries.

Data for induction and cesarean are mutually exclusive. If elective delivery was both induced and cesarean, then the elective delivery is considered elective induced delivery.

Elective delivery: Non-medically indicated delivery before 39 completed weeks gestation.

Note: Data in the tables above are based on the obstetric estimate (OE) of gestational age. Previously published data on gestational age were based on a calculation of the number of completed weeks from the date of the mother's last normal menses (LMP) to the baby's birth date. See Notes for more information.

Notes: Elective Deliveries:

There is no question on the birth certificate for elective procedures. Elective deliveries are based on singleton deliveries prior to 39 completed weeks gestation that were non-medically indicated by meeting the following criteria:

Selected conditions are absent:

prepregnancy diabetes, gestational diabetes, prepregnancy hypertension, gestational hypertension (preeclampsia, eclampsia) previous poor pregnancy outcome(s), clinical chorioamnionitis diagnosed during labor or maternal temperature $\geq 38^{\circ}\text{C}$ (100.4°F), anencephaly, meningomyelocele/spina bifida, cyanotic congenital heart disease, congenital diaphragmatic hernia, omphalocele, gastroschisis, Down syndrome, suspected chromosomal disorder, hypospadias, premature rupture of the membranes, prolonged labor, fetal intolerance, or non-vertex or other presentation.

Non-medically indicated inductions are considered elective inductions; non-medically indicated cesarean sections that were not induced and did not have an attempt of labor are considered elective cesarean sections. The number of elective inductions plus the number of elective cesarean sections is equal to the total number of elective deliveries.

Body Mass Index (BMI):

Body Mass Index formula: $[\text{weight (lb.)} / [\text{height (in)}]^2] \times 703$. Classifications are from the Center for Disease Control.

Underweight <18.5

Normal weight ≥ 18.5 and ≤ 25

Overweight > 25 and ≤ 30

Obese >30 and <40

Morbidly obese ≥ 40

Length of gestation:

The measure used to determine gestational age is the obstetric estimate of gestation at birth (OE).

For data year 2014, the National Center for Health Statistics (NCHS) transitioned from measuring gestational age based on the last normal menses (LMP) and the date of infant's birth to the new measure, the obstetric estimate of gestation at delivery (OE). This transition was due to increasing evidence of the greater validity of the OE compared with the LMP-based measure.

For more information please see:

http://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_05.pdf

Urban, Rural, and Frontier County Designation (based on 2011 population estimates):

Urban: County with population center of at least 20,000.

Rural: County with ≥ 6.0 persons per square mile (without a population center of 20,000).

Frontier: County with < 6.0 persons per square mile.

Primary Payment Source for Delivery:

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

Source: Bureau of Vital Records and Health Statistics; Division of Public Health; Idaho Department of Health and Welfare (October 2015).