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DEFINITIONS AND FORMULAS

RESIDENCE DATA -- data allocated by place of residence of the registrant, or by place of residence of the infant's mother (births, stillbirths)

OCCURRENCE DATA -- data allocated by place where event occurred, regardless of the person's place of residence

LIVE BIRTH -- a birth that shows any sign of life after delivery

(CRUDE) BIRTH RATE -- number of live births per 1,000 population

$$\frac{\text{live births}}{\text{population}} \times 1{,}000$$

FERTILITY RATE -- number of live births per 1,000 women 15-44 years of age

$$\frac{\text{all live births}}{\text{females 15-44}} \times 1{,}000$$

OUT-OF-WEDLOCK BIRTH -- a live birth to a woman who was not married at conception, birth, or anytime between

OUT-OF-WEDLOCK RATE (percent) -- number of out-of-wedlock live births per 100 live births

$$\frac{\text{out-of-wedlock live births}}{\text{live births}} \times 100$$

LOW BIRTH WEIGHT -- a live birth weighing under 2,500 grams (5 ½ pounds or less)

LOW BIRTH WEIGHT RATE (percent) -- number of low birth weight live births per 100 live births with stated birth weight

$$\frac{\text{low birth weight live births}}{\text{live births with stated birth weight}} \times 100$$

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STILLBIRTH -- a spontaneous fetal death of at least 20 weeks gestation or a weight of at least 350 grams (does not include any induced abortions)

STILLBIRTH RATIO -- number of stillbirths per 1,000 live births

$$\frac{\text{stillbirths}}{\text{live births}} \times 1{,}000$$

INFANT DEATH -- death of an infant under 1 year of age

INFANT MORTALITY RATE -- number of infant deaths per 1,000 live births

$$\frac{\text{infant deaths}}{\text{live births}} \times 1{,}000$$

NEONATAL DEATH -- death of an infant within the first 27 days of life

NEONATAL MORTALITY RATE -- number of neonatal deaths per 1,000 live births

$$\frac{\text{neonatal deaths}}{\text{live births}} \times 1{,}000$$

POSTNEONATAL DEATH -- death of an infant 28 days through the first 11 months of life

POSTNEONATAL MORTALITY RATE -- number of postneonatal deaths per 1,000 live births

$$\frac{\text{postneonatal}}{\text{live births}} \times 1{,}000$$

DEFINITIONS AND FORMULAS (continued)

PERINATAL DEATH -- includes stillbirths and deaths of infants within the first 6 days of life

PERINATAL MORTALITY RATIO -- number of perinatal deaths per 1,000 live births

$$\frac{\text{perinatal deaths}}{\text{live births}} \times 1{,}000$$

MATERNAL DEATH -- death attributable to complications of pregnancy, childbirth, or the puerperium based on ICD-10 codes A34, O00-O95, and O98-O99.

MATERNAL MORTALITY RATE -- number of maternal deaths per 100,000 live births

$$\frac{\text{maternal deaths}}{\text{live births}} \times 100{,}000$$

(CRUDE) DEATH RATE -- number of deaths per 1,000 population

$$\frac{\text{deaths}}{\text{population}} \times 1{,}000$$

CAUSE-SPECIFIC DEATH RATE -- number of deaths from a specific cause per 100,000 population

$$\frac{\text{deaths from specific cause}}{\text{population}} \times 100{,}000$$

AGE-ADJUSTED DEATH RATE (DIRECT METHOD) -- number of deaths per 100,000 standard population. Age-adjusted death rates are artificial measurements and should be used only to compare to other age-adjusted death rates calculated using the same standard population. Idaho and U.S. age-adjusted rates shown were calculated using the 2000 population estimate as the standard population.

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$$\frac{\text{sum of (age-specific death rates per 100,000 for selected population x standard population in corresponding age groups)}}{\text{sum of standard population}}$$

INDUCED ABORTION -- a legal medical procedure that is intended to terminate a pregnancy without a live birth

INDUCED ABORTION RATE -- number of induced abortions per 1,000 females 15-44 years of age

$$\frac{\text{induced abortions}}{\text{females 15-44}} \times 1{,}000$$

INDUCED ABORTION RATIO -- number of induced abortions per 1,000 live births

$$\frac{\text{induced abortions}}{\text{live births}} \times 1{,}000$$

DEFINITIONS AND FORMULAS (continued)

In this publication, there are references to provisional U.S. data. If the U.S. statistics are not noted as provisional, they are considered final. In either case, the most recent U.S. information is provided. The following definitions have been added to clarify the differences among the types of U.S. data.

U.S. Provisional Data

Prior to 1996, the National Center for Health Statistics (NCHS) released U.S. vital data and rates in two basic forms: provisional and final. Provisional data are based on monthly summary counts of birth, death, marriage, and divorce records received in state vital registration offices. Rates for 12-month periods, January through December, are the sum of events for the period per population estimated at the midpoint of the period. Provisional divorce rates are based on 44 reporting states and the District of Columbia. Provisional marriage rates are based on 50 reporting states and the District of Columbia. Populations have been estimated by NCHS for the 12-month divorce and marriage rates based on these reporting states. The 2009 U.S. marriage and divorce and select death and infant death rates in this publication are provisional measures[1]. Final data for 2009 may differ from the provisional estimates.

U.S. Final Data

Final U.S. vital statistics are based on events in the 50 states and the District of Columbia. The National Center for Health Statistics believes that more than 99 percent of the births and deaths occurring in this country are registered through the state vital registration system. As of December 2011, the latest U.S. final data available are 2009 for mortality data[2,3,4] and 2009 for birth data[5,6].

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1. "Births, Marriages, Divorces, and Deaths: Provisional Data for 2009," National Vital Statistics Reports, National Center for Health Statistics, Vol. 58, No. 25, August, 27, 2010.
2. “Deaths: Final Data for 2007," National Vital Statistics Reports, National Center for Health Statistics, Vol. 58, No. 19, May 2010.
3. “Deaths: Final Data for 2008," National Vital Statistics Reports, National Center for Health Statistics, Vol. 59, No. 10, December 2011.
4. “Deaths: Final Data for 2009," National Vital Statistics Reports, National Center for Health Statistics, Vol. 60, No. 3, January 2012.
5. "Births: Final Data for 2008," National Vital Statistics Reports, National Center for Health Statistics, Vol. 59, No. 1, December 2010.
6. "Births: Final Data for 2009," National Vital Statistics Reports, National Center for Health Statistics, Vol. 60, No. 1, November 2011.

VITAL REGISTRATION AND DATA COLLECTION

The Idaho Bureau of Vital Records and Health Statistics is responsible for managing Idaho's vital records program and for providing health statistics and analysis. Civil laws of every state provide for a continuous, permanent, and compulsory vital registration system. Idaho is responsible for inspecting each Idaho state record for promptness of filing, completeness, and accuracy of information; querying for missing or inconsistent information; numbering the records; preparing indexes; processing the records; issuing certified copies; and storing the documents for permanent reference and safekeeping.

Births, Deaths, and Stillbirths

Registration of births, deaths, and stillbirths is a legal requirement. The attending physician, midwife, or parent must file the birth certificate with the local registrar within 15 days of the birth. Most certificates of births occurring at Idaho hospitals are filed electronically. Death certificates are usually completed by physicians, coroners, and funeral directors. The certificate must be filed with the county's local registrar within five days from the date of death. A stillbirth certificate must be filed for all spontaneous fetal deaths of at least 20 weeks gestation or with a weight of at least 350 grams.

Unless otherwise stated, birth, death, and stillbirth data contained in this report are provided for Idaho residents, regardless of where the event occurred. There is an agreement among all registration areas in the United States for resident exchange of copies of birth, death, and stillbirth certificates. For data analysis, the cut-off date for 2010 birth records was August 3, 2011; the cut-off date for 2010 stillbirth records was August 3, 2011; and the cut-off date for 2010 death records was August 5, 2011. Records may be sent to Idaho after these dates; they are included in the vital records mainframe database but not in the databases for analysis.

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Marriages and Divorces

Idaho vital statistics law makes marriages and divorces occurring in Idaho reportable events. Marriages are registered with the county recorder in the county where the license was issued; divorces are filed with the clerk of the court where the divorce was granted. These records are then forwarded to the Bureau of Vital Records and Health Statistics. There is no agreement among states to exchange certificates of resident marriages or divorces that occur out of state. Marriage and divorce data provided in this annual report are based on events occurring in Idaho, regardless of the party's residence.

Induced Abortions

The reporting of induced abortions occurring in Idaho has been required by state statute since July 1, 1977. The Bureau of Vital Records and Health Statistics began collecting abortion data in July 1977, with 1978 being the first full year for which abortion statistics are available. In 1984, an interstate data exchange program for abortion data was initiated nationwide, whereby Idaho obtains non-identifying information about abortions occurring to Idaho residents in other states. Data in this report are provided for both Idaho resident abortions, regardless of where the procedure occurred, and abortions occurring in Idaho to either Idaho residents or non-residents.

INDUCED ABORTION

In 2008, the latest year available, 49 out of 52 reporting areas (50 States, District of Columbia, and New York City) provided data to the Centers fro Disease Control and Prevention (CDC) regarding abortions in the United States. A total of 825,564 legal abortions were reported to the CDC by those 49 reporting areas in 2008. In 2008, U.S. abortion ratio (reported abortions per 1,000 live births) was 234. The number of abortions in 2008 represents a 2,045 decrease from 2007, for which 827,609 abortions were reported from the same 49 reporting areas[1].

	INDUCED ABORTIONS	RATIO PER 1,000 LIVE BIRTHS	RATE PER 1,000 FEMALES AGED 15-44
U.S. 2008[1]	825,564	234	16.0
Idaho 2010 (Occurrence)	1,510	66.2	4.9
Idaho 2010 (Residence)	2,123	91.5	6.9

The reporting of induced abortions occurring in Idaho has been required by state statute since July 1, 1977. The reported numbers increased from 708 during the last half of 1977 to a high of 2,706 in 1981. The number of abortions reported in Idaho in 2010 was 1,510, an 8.5 percent decrease from the 1,650 reported in 2009. Abortions occurring in Idaho may be to Idaho residents or non-residents. Of the 1,510 abortion procedures performed in Idaho, 1,435 were to residents of Idaho and 75 were to non-residents.

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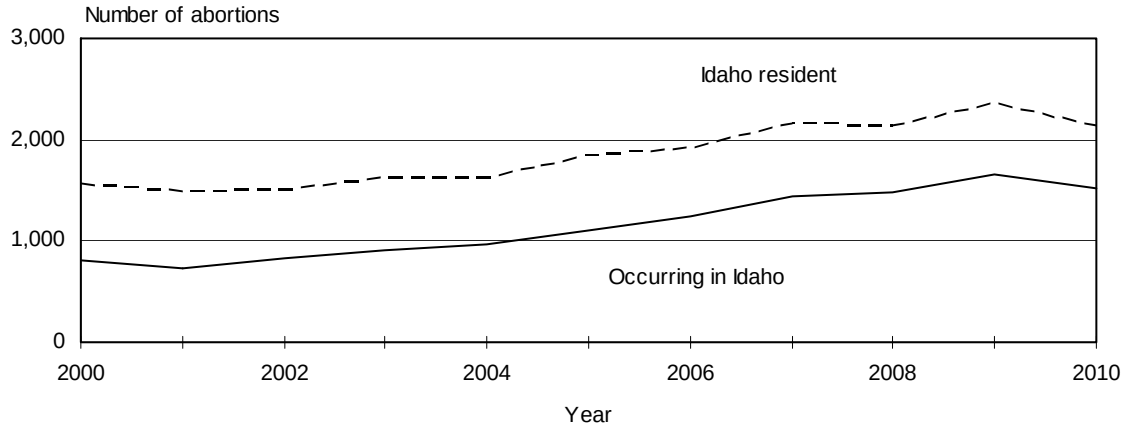
Abortions to Idaho residents decreased 9.6 percent, from 2,348 in 2009 to 2,123 in 2010. Abortions to Idaho residents may occur in Idaho or out of state. In 2010, 1,435 abortions to Idaho residents occurred in Idaho and 688 were performed out of state. Of the 688 abortions obtained by Idaho residents out of state, 438 were performed in Washington, 160 in Utah, 59 in Montana, and 31 in Oregon.

IDAHO INDUCED ABORTIONS
Idaho Residents and Abortions in Idaho
2000-2010



1. "Abortion Surveillance - United States, 2008," Morbidity and Mortality Weekly Report, Centers for Disease Control and Prevention, Vol. 60/No. 15, November 25, 2011.

INDUCED ABORTIONS OCCURRING IN IDAHO
Induced Abortions Occurring to Idaho Residents
2010

	ABORTIONS OCCURRING IN IDAHO			ABORTIONS OCCURRING TO IDAHO RESIDENTS		
	Abortion in Idaho, Place of Occurrence, Total	Place of Occurrence, Resident of Idaho	Place of Occurrence, Resident of Other State	Place of Residence, Total	Place of Residence, Abortion in Idaho	Place of Residence, Abortion in Other State
IDAHO	1,510	1,435	75	2,123	1,435	688
District 1	-	-	-	333	2	331
District 2	-	-	-	126	12	114
District 3	-	-	-	326	314	12
District 4	1,370	1,302	68	851	820	31
District 5	140	133	7	226	210	16
District 6	-	-	-	152	40	112
District 7	-	-	-	109	37	72
Ada	1,370	1,302	68	786	757	29
Adams	-	-	-	-	-	-
Bannock	-	-	-	111	31	80
Bear Lake	-	-	-	3	-	3
Benewah	-	-	-	11	-	11
Bingham	-	-	-	25	7	18
Blaine	-	-	-	39	34	5
Boise	-	-	-	9	9	-
Bonner	-	-	-	55	-	55
Bonneville	-	-	-	75	24	51
Boundary	-	-	-	7	-	7
Butte	-	-	-	-	-	-
Camas	-	-	-	-	-	-
Canyon	-	-	-	264	256	8
Caribou	-	-	-	3	-	3
Cassia	-	-	-	18	15	3
Clark	-	-	-	-	-	-
Clearwater	-	-	-	4	1	3
Custer	-	-	-	3	2	1
Elmore	-	-	-	43	41	2
Franklin	-	-	-	4	-	4
Fremont	-	-	-	1	1	-
Gem	-	-	-	13	13	-
Gooding	-	-	-	23	21	2
Idaho	-	-	-	8	3	5
Jefferson	-	-	-	12	7	5
Jerome	-	-	-	15	15	-
Kootenai	-	-	-	248	2	246
Latah	-	-	-	59	1	58
Lemhi	-	-	-	5	-	5
Lewis	-	-	-	2	-	2
Lincoln	-	-	-	6	5	1
Madison	-	-	-	3	1	2
Minidoka	-	-	-	20	17	3
Nez Perce	-	-	-	53	7	46
Oneida	-	-	-	1	-	1
Owyhee	-	-	-	12	10	2
Payette	-	-	-	31	29	2
Power	-	-	-	5	2	3
Shoshone	-	-	-	12	-	12
Teton	-	-	-	10	2	8
Twin Falls	140	133	7	105	103	2
Valley	-	-	-	13	13	-
Washington	-	-	-	6	6	-

Data for abortions occurring in Idaho and for abortions to Idaho residents are not mutually exclusive.

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INDUCED ABORTIONS TO IDAHO RESIDENTS
Ratios by District and County of Residence
Race/Ethnicity of Patient
2010

RESIDENCE	TOTAL ABORTIONS		RACE						HISPANIC[2]
	Number	Ratio[1]	White	Black	American Indian	Asian/ Pacific Islander	Other Race	Not Stated	
IDAHO	2,123	91.5	1,848	29	33	53	36	124	262
District 1	333	134.4	303	1	3	5	2	19	7
District 2	126	108.1	105	3	6	2	1	9	6
District 3	326	82.8	275	6	2	6	6	31	74
District 4	851	150.3	741	12	9	35	20	34	81
District 5	226	74.9	209	3	1	4	3	6	51
District 6	152	52.9	120	4	9	1	2	16	17
District 7	109	26.8	95	-	3	-	2	9	26
Ada	786	155.8	692	11	8	32	16	27	69
Adams	-	-	-	-	-	-	-	-	-
Bannock	111	77.3	85	4	5	-	2	15	13
Bear Lake	3	33.0	3	-	-	-	-	-	-
Benewah	11	99.1	11	-	-	-	-	-	-
Bingham	25	31.7	19	-	4	1	-	1	2
Blaine	39	159.2	34	-	-	2	1	2	6
Boise	9	214.3	9	-	-	-	-	-	-
Bonner	55	138.9	49	-	1	-	1	4	1
Bonneville	75	37.1	66	-	1	-	1	7	20
Boundary	7	62.5	7	-	-	-	-	-	1
Butte	-	-	-	-	-	-	-	-	-
Camas	-	-	-	-	-	-	-	-	-
Canyon	264	83.7	218	6	2	5	5	28	67
Caribou	3	27.3	3	-	-	-	-	-	-
Cassia	18	44.9	17	-	-	-	-	1	8
Clark	-	-	-	-	-	-	-	-	-
Clearwater	4	69.0	3	-	1	-	-	-	-
Custer	3	88.2	2	-	1	-	-	-	1
Elmore	43	87.0	29	1	1	3	4	5	10
Franklin	4	18.3	4	-	-	-	-	-	-
Fremont	1	4.7	1	-	-	-	-	-	-
Gem	13	71.8	13	-	-	-	-	-	2
Gooding	23	93.9	23	-	-	-	-	-	5
Idaho	8	50.0	6	-	-	-	-	2	1
Jefferson	12	23.2	10	-	-	-	1	1	2
Jerome	15	35.3	12	-	1	-	-	2	8
Kootenai	248	143.9	225	1	2	5	1	14	5
Latah	59	132.9	49	3	1	2	1	3	3
Lemhi	5	61.0	5	-	-	-	-	-	-
Lewis	2	47.6	1	-	-	-	-	1	-
Lincoln	6	65.9	6	-	-	-	-	-	-
Madison	3	2.9	2	-	1	-	-	-	1
Minidoka	20	61.3	19	-	-	-	1	-	6
Nez Perce	53	114.7	46	-	4	-	-	3	2
Oneida	1	15.4	1	-	-	-	-	-	-
Owyhee	12	91.6	12	-	-	-	-	-	-
Payette	31	94.5	26	-	-	1	1	3	3
Power	5	37.0	5	-	-	-	-	-	2
Shoshone	12	88.2	11	-	-	-	-	1	-
Teton	10	61.0	9	-	-	-	-	1	2
Twin Falls	105	83.3	98	3	-	2	1	1	18
Valley	13	156.6	11	-	-	-	-	2	2
Washington	6	52.6	6	-	-	-	-	-	2

1. Induced abortion ratio: Number of induced abortions per 1,000 live births.
2. Race and ethnicity are reported separately on the abortion report; women of Hispanic origin are included in appropriate race totals. In 2010, there were 71 records with ethnicity not stated.

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INDUCED ABORTIONS TO IDAHO RESIDENTS
Rates by District and County of Residence
Age of Patient
2010

RESIDENCE	TOTAL ABORTIONS Number	Rate[1]	AGE OF PATIENT <15	15-19 Total	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45+
IDAHO	2,123*	6.9	13	344	113	231	722	470	333	175	61	4
District 1	333	8.9	3	53	19	34	110	67	55	34	9	2
District 2	126	6.3	-	26	11	15	48	29	10	7	6	-
District 3	326	6.6	4	60	27	33	95	75	56	27	7	2
District 4	851	9.6	2	135	37	98	298	181	142	69	24	-
District 5	226	6.6	-	35	9	26	78	51	30	23	9	-
District 6	152*	4.6	2	19	4	15	53	40	23	9	5	-
District 7	109	2.5	2	16	6	10	40	27	17	6	1	-
Ada	786	9.7	2	122	30	92	275	171	132	63	21	-
Adams	-	-	-	-	-	-	-	-	-	-	-	-
Bannock	111*	6.4	-	13	2	11	39	31	17	8	2	-
Bear Lake	3	3.2	1	1	1	-	1	-	-	-	-	-
Benewah	11	7.7	-	2	-	2	6	-	3	-	-	-
Bingham	25	2.9	-	3	1	2	7	7	4	1	3	-
Blaine	39	10.5	-	3	1	2	12	10	6	7	1	-
Boise	9	9.8	-	3	1	2	4	1	-	1	-	-
Bonner	55	8.8	-	10	3	7	16	9	9	10	1	-
Bonneville	75	3.7	1	12	5	7	31	15	11	4	1	-
Boundary	7	4.1	-	-	-	-	1	3	1	-	2	-
Butte	-	-	-	-	-	-	-	-	-	-	-	-
Camas	-	-	-	-	-	-	-	-	-	-	-	-
Canyon	264	6.8	4	51	22	29	72	65	40	23	7	2
Caribou	3	2.7	1	1	-	1	-	1	-	-	-	-
Cassia	18	4.3	-	2	-	2	7	2	3	2	2	-
Clark	-	-	-	-	-	-	-	-	-	-	-	-
Clearwater	4	3.6	-	2	1	1	-	-	-	2	-	-
Custer	3	4.9	-	-	-	-	1	2	-	-	-	-
Elmore	43	7.7	-	9	6	3	15	6	6	5	2	-
Franklin	4	1.7	-	-	-	-	2	-	2	-	-	-
Fremont	1	0.4	-	-	-	-	1	-	-	-	-	-
Gem	13	4.8	-	3	2	1	2	3	4	1	-	-
Gooding	23	8.5	-	3	-	3	9	4	2	2	3	-
Idaho	8	3.7	-	2	1	1	2	1	2	1	-	-
Jefferson	12	2.4	-	2	1	1	3	5	2	-	-	-
Jerome	15	3.5	-	1	-	1	4	5	1	3	1	-
Kootenai	248	9.6	3	39	14	25	84	52	40	22	6	2
Latah	59	6.5	-	11	3	8	28	13	4	2	1	-
Lemhi	5	4.7	1	-	-	-	-	3	1	-	-	-
Lewis	2	3.9	-	-	-	-	-	2	-	-	-	-
Lincoln	6	6.2	-	1	-	1	2	-	-	2	1	-
Madison	3	0.3	-	-	-	-	2	-	-	1	-	-
Minidoka	20	5.8	-	5	4	1	7	5	2	1	-	-
Nez Perce	53	7.4	-	11	6	5	18	13	4	2	5	-
Oneida	1	1.5	-	-	-	-	1	-	-	-	-	-
Owyhee	12	6.0	-	1	1	-	5	2	4	-	-	-
Payette	31	7.5	-	5	2	3	12	5	8	1	-	-
Power	5	3.6	-	1	-	1	3	1	-	-	-	-
Shoshone	12	6.1	-	2	2	-	3	3	2	2	-	-
Teton	10	4.6	-	2	-	2	2	2	3	1	-	-
Twin Falls	105	7.1	-	20	4	16	37	25	16	6	1	-
Valley	13	8.9	-	1	-	1	4	3	4	-	1	-
Washington	6	3.8	-	-	-	-	4	-	-	2	-	-

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* Total includes one with age not stated in Bannock County (District 6).
1. Abortion rate: Number of induced abortions per 1,000 women 15-44 years of age.

INDUCED ABORTIONS OCCURRING IN IDAHO
Primary Termination Procedure by Length of Gestation
2010

TERMINATION PROCEDURE[1]	TOTAL IN IDAHO	WEEKS OF GESTATION							
		<9	9-10	11-12	13-15	16-20	21-24	25+	Not Stated
TOTAL IN IDAHO	1,510	994	282	163	59	6	5	1	-
Suction curettage	995	509	269	163	54	-	-	-	-
Sharp curettage	2	-	-	-	2	-	-	-	-
Dilation and evacuation (D&E)	6	-	-	-	3	3	-	-	-
Intra-uterine saline/ prostanglandin instillation	1	-	-	-	-	-	1	-	-
Hysterotomy/hysterectomy	-	-	-	-	-	-	-	-	-
Medical (non-surgical)	504	485	13	-	-	3	2	1	-
Other	2	-	-	-	-	-	2	-	-
Not stated	-	-	-	-	-	-	-	-	-

1. Primary termination procedure reported; there may be more than one procedure reported.

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INDUCED ABORTIONS OCCURRING IN IDAHO
Primary Termination Procedure by Reported Complications
2010

TERMINATION PROCEDURE[1]	TOTAL IN IDAHO	REPORTED COMPLICATIONS[2]						
		No Complications	Hemorrhage	Infection	Uterine Perforation	Cervical Laceration	Retained Products	Other
TOTAL IN IDAHO	1,510	1,504	-	-	-	6	-	-
Suction curettage	995	989	-	-	-	6	-	-
Sharp curettage	2	2	-	-	-	-	-	-
Dilation and evacuation (D&E)	6	6	-	-	-	-	-	-
Intra-uterine saline / prostanglandin instillation	1	1	-	-	-	-	-	-
Hysterotomy/hysterectomy	-	-	-	-	-	-	-	-
Medical (non-surgical)	504	504	-	-	-	-	-	-
Other	2	2	-	-	-	-	-	-
Not stated	-	-	-	-	-	-	-	-

1. Primary termination procedure reported; there may be more than one procedure reported.
2. One or more complications may be reported per termination procedure; therefore, the number of reported complications plus no complications may sum to more than total number of procedures.

INDUCED ABORTIONS OCCURRING IN IDAHO
Age of Patient by Marital Status
2010

AGE OF PATIENT	TOTAL IN IDAHO	MARITAL STATUS		
		Married	Not Married	Not Stated
TOTAL	1,510	227	1,283	-
<15	6	-	6	-
15-19	246	6	240	-
15-17	75	1	74	-
18-19	171	5	166	-
20-24	509	57	452	-
25-29	335	58	277	-
30-34	251	56	195	-
35-39	121	34	87	-
40-44	40	16	24	-
45+	2	-	2	-
Not stated	-	-	-	-

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INDUCED ABORTIONS OCCURRING IN IDAHO
Previous Induced Abortions and Number of Living Children
2010

	PREVIOUS INDUCED ABORTIONS		NUMBER OF LIVING CHILDREN	
	Number	Percent	Number	Percent
TOTAL	1,510		1,510	
None	1,055	69.9%	668	44.2%
1	331	21.9	342	22.6
2	85	5.6	299	19.8
3+	39	2.6	201	13.3
Not stated	-	NA	-	NA

Percents based on records with stated number of previous induced abortions or number of living children.

TECHNICAL NOTES

Natality

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.

New Items:

- Mother's height
- Mother's prepregnancy weight and weight at delivery
- Date of first prenatal care visit
- Date of last prenatal care visit
- Did mother get WIC food for herself during this pregnancy?
- Is infant being breastfed?
- Apgar score at 10 minutes
- Is Infant living at time of report?

Revised Items:

- Mother's and father's race
- Mother's and father's ethnicity
- Mother's and father's education
- Cigarette smoking before and during pregnancy
- Principal source of payment for delivery
- Risk factors in this pregnancy
- Infections present and/or treated during this pregnancy
- Obstetric procedures
- Characteristics of labor and delivery
- Method of delivery
- Maternal morbidity (complications of labor and delivery)
- Abnormal conditions of the newborn
- Congenital anomalies of the newborn

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Removed items:

- Month prenatal care began
- Alcohol use during pregnancy
- Weight gain during pregnancy
- Apgar score at 1 minute

Not all states have revised their birth certificates to the 2003 U.S. Standard Certificate. For births to Idaho residents delivered in states with unrevised certificates, unknown and non-compatible data were entered as "not stated" in the Idaho database. For data analysis, only records with known data were used to calculate percents and means.

Overview of New and Revised Items

Height and weight of mother

The 2004 certificate collected data on the mother's height, prepregnancy weight, and weight at delivery for the first time. Height and weight information are needed to calculate maternal body mass index (BMI). BMI is calculated using mother's height and prepregnancy weight:

$$BMI = \frac{mass(lb) \times 703}{(height(in))^2}$$

The body mass index is classified into four categories: *Underweight* (<18.5), *Normal weight* (18.5-24.9), *Overweight* (25.0-29.9), and *Obese* (includes all classes) (>29.9)[1].

Underweight is defined as BMI below 18.5 prior to pregnancy. The lower a woman's weight-for-height or BMI the more likely she is to be undernourished. Women who are underweight prior to pregnancy are at a higher risk for having low birth weight infant, fetal growth problems, perinatal mortality and other pregnancy complications[1].

Normal weight is defined as a BMI between 18.5 and 24.9[1].

Overweight is defined as a BMI greater than between 25.0 and 29.9. Being overweight prior to pregnancy is a risk factor for postpartum weight retention of prenatal weight gain[1].

Obese is defined as a BMI greater than or equal to 30.0. Obese women are at greater risk of delivering a macrosomic infant and experiencing shoulder dystocia and other complications. Obese women are also more likely to develop gestational diabetes[1].

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Date of first prenatal care visit

In 2004, the prenatal care item was revised from collecting the month prenatal care began to collecting the date of the first prenatal care visit. With the revision, the calculation of the trimester prenatal care began is based on the date of the first prenatal care visit and the date of the last menstrual period (LMP). If the 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 the 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 the month or year of prenatal care is missing or implausible, the 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 on the mother's recollection of the month of first visit[2]. 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.

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 the infant being breastfed at the time of birth through the time the birth certificate is completed.

Is Infant living at time of report?

If the infant is not living at time of report, there is follow-up at the Bureau of Vital Records and Health Statistics to obtain a matching infant death certificate from the state of death.

Mother's and father's race

Beginning in 2004, parents may choose multiple races on the Idaho birth certificate. In 2010, there were 420 in-state births and 14 out-of-state 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 National Centers for Health Statistics (NCHS) for NCHS to re-code and provide the bridged-race codes back to Idaho for in-state births. However, bridged-race codes are not provided to Idaho for out-of-state births. Idaho resident birth data provided in the table on page 34 titled "Idaho Resident Live Births by Sex of Child and Race/Ethnicity of Mother, 2010" are based on single-race and bridged-race categories for births in Idaho and single-race categories for births out of state. The 14 out-of-state births with multiple race of mother are included in "other race" category in 2010.

Year	Births to Idaho Mothers in Idaho			Births to Idaho Mothers Out of State		
	Total	Single Race*	Multiple Race	Total	Single Race*	Multiple Race
2008	24,059	23,597	462	1,097	1,085	12
2009	22,647	22,262	385	1,079	1,070	9
2010	22,184	21,764	420	1,018	1,004	14

* Single race or unknown race.

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Prior to 2004, mother's and father's races were 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 allow parents 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.

Race of Mother	2007 Births	2008 Births	2009 Births	2010 Births**
White	22,497	22,250	21,207	20,836
Black	152	177	162	175
American Indian or Alaska Native	398	403	394	407
Asian or Pacific Islander	402	419	377	429
Other race	1,426	1,702	1,437	1,288
Race not stated	149	205	149	67

** 2010 total for "other race" includes 14 records in which the mother reported more than one race and delivered out of state. In-state records were bridged to one single race, but bridged-races were not available for out-of-state births. Prior to 2009, out-of-state births to mother's with more than one race were not included in this table.

Because of the bridged-race code rules implemented in 2004, there has been a large increase in the number of Idaho resident mothers with race coded to “other race”. In 2010, 97.4 percent of the records of mothers with race coded to “other race” were of Hispanic ethnicity; prior to the rule change, these would have been coded to white. Data for white, non-Hispanic mothers are available upon request; these data are comparable for years prior to 2004 to present.

Mother’s and father’s ethnicity

The 2004 Idaho certificate includes check boxes for Hispanic origin and allows the mother and father 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 and father’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 and after are not comparable with data prior to 2004. For birth occurring out of state in states with unrevised birth certificates, years of schooling were entered as close as possible to the highest level of school completed.

Number of Years Schooling Conversion to Highest Degree or Level of School Completed	
Number of Years Schooling	Highest Level of School Completed
0-8 years	8th grade of less (includes none)
9-11 years	9th – 12th grade, but no diploma
12 years	High school graduate or GED completed
13-15 years	Some college credit, but no degree, includes associate’s degree
16 years	Bachelor’s degree
17 or more years	Master’s, doctorate or professional degree

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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 the 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. For births occurring out of state in states with unrevised certificates, if the mother used tobacco during pregnancy, the birth record was coded reflect that the mother smoked cigarettes during all three trimesters of pregnancy. Data for cigarette smoking prior to pregnancy were not collected on the unrevised certificate and were coded to “not stated” for data analysis.

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. Mothers 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 reflect that the mother smoked cigarettes during pregnancy for data analysis.

Medical and health section

The medical and health section for the mother includes risk factors in this pregnancy, infections present and/or treated during this pregnancy, obstetric procedures that applied to this pregnancy, onset of labor, 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 and congenital anomalies of the newborn. There were extensive changes for each of these items on the revised certificate. Every effort was made to code information for out-of-state births in states with unrevised certificates to the appropriate data item in the Idaho database.

Risk factors in this pregnancy

Definitions of risk factors in this pregnancy are provided by the Centers for Disease Control and Prevention (CDC), NCHS[4].

Prepregnancy diabetes – Glucose intolerance requiring treatment diagnosed prior to the onset of 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.

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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 was 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 (an 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) – 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 babies during pregnancy or delivery, as well as through breast-feeding.

Herpes Simplex Virus (HSV) – A sexually-transmitted infection of the skin on the genital area by herpes simplex virus.

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

Listeria - A genus of bacteria of uncertain affiliation, closely resembling those of the family Corynebacteriacese, 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.

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Parvovirus - 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 can 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 sexual 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[4].

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.

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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.

<u>*Maternal morbidity (complications of labor and delivery)*</u>

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[4].

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[4].

Assisted ventilation required immediately following delivery - Infant given manual breaths with bag and mask or bag and endotracheal tube within the first several minutes of 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 medical support in an NICU other 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.

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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.

Congenital anomalies of the newborn

Anomalies which are diagnosable within the first 24 hours following birth using widely available conventional diagnostic techniques. Definitions are provided by the CDC, NCHS[4].

Anencephaly - Absence of the cerebral hemispheres.

Meningomyelocele/spina bifida - Developmental anomaly characterized by defective closure of the bony encasement of the spinal cord, through which the cord and meninges may or may not protrude.

Cyanotic congenital heart disease - Congenital heart defects which cause cyanosis. Includes, but is not limited to, transposition of the great arteries, teratology of Fallot, pulmonary or pulmonic valvular atresia, tricuspid atresia, truncus arteriousus, and total or partial anomalous pulmonary venous return with or without obstruction.

Congenital diaphragmatic hernia - Defects in the formation of the diaphragm allowing herniation of abdominal organs into the thoracic cavity.

Omphalocele - Protrusion of variable amounts of abdominal viscera from a midline defect at the base of the umbilicus.

Gastroschisis - The abdominal viscera protrude through an abdominal wall defect, usually on the right side of the umbilical cord insertion.

Limb reduction defect - Complete or partial absence of a portion of an extremity secondary to failure to develop. Congenital amputation and dwarfing syndromes are excluded.

Cleft lip with or without cleft palate - Refers to incomplete closure of the lip. Cleft lip may be unilateral, bilateral, or median.

Cleft palate alone - Refers to incomplete fusion of the palatal shelves. This may be limited to the soft palate or may also extend into the hard palate.

Down syndrome (karyotype confirmed and karyotype pending - The most common chromosomal defect, with most cases resulting from an extra chromosome (Trisomy 21).

Suspected other chromosomal disorder (karyotype confirmed and karyotype pending) - Includes any constellation of congenital malformations resulting from or compatible with known syndromes caused by detectable defects in chromosome structure.

Hypospadias – Congenital malformations of genital organs.

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[5].

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The formulas for calculating rates by method of delivery are based on mother's delivery history. For mothers with no previous deliveries or with a previous vaginal delivery, the method of delivery for this birth will either be vaginal or primary cesarean. For women with a previous cesarean delivery, the method of delivery for this birth will either be VBAC or repeat cesarean.

Vaginal, non-VBAC rate: Number of vaginal, non-VBAC deliveries per 100 births. Rate is based on records with known data for method of delivery.

Formula: [(vaginal, non-VBAC births)/(total births-births with unknown method of delivery)] x 100

Vaginal birth after previous cesarean (VBAC) rate: Number of vaginal deliveries per 100 births to women with a previous cesarean.

Formula: [(VBAC births) / (VBAC births + repeat cesarean births)] x 100

Total cesarean rate: Number of cesarean deliveries per 100 births. Rate is based on records with known data for method of delivery.

Formula: [(total cesarean births) / (total births - births with unknown method of delivery)] x 100

Primary cesarean rate: Number of cesarean deliveries per 100 births to women who had no previous cesareans. Rate is based on records with known data for method of delivery.

Formula: [(primary cesarean births) / (total births - VBAC's - repeat cesareans - births with unknown method of delivery)] x 100

Repeat cesarean rate: Number of cesarean deliveries per 100 births to women with a previous cesarean.

Formula: [(repeat cesarean births) / (repeat cesarean births + VBAC births)] x 100

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. 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.

Mortality

Revision of the Certificate of Death

A new U.S. Standard Certificate of Death was implemented on January 1, 2003 and at that time five states including Idaho implemented the revision within their states. The revision of the death certificate included three new data fields relating to the cause of death:

1) Did tobacco use contribute to the death?
2) What was the pregnancy status of females aged 10-54?
3) What type of safety device(s) did decedent use/employ (transportation deaths)?

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In addition to the new variables, there were notable changes to existing data fields. One was a revision to the manner in which the decedent's education is collected. Prior to 2003, data collected for decedent's education were based on number of years of school; beginning in 2003, data are based on the education level that best describes the highest degree or level of school completed at time of death.

Another notable change to the death certificate in 2003 was on the decedent's race and ethnicity. In 2003, the Idaho death certificate was revised to allow for more than one race and more than one Hispanic origin of the decedent. To facilitate coding and processing of multiple-race data in a uniform manner for all vital statistics jurisdictions, the National Center for Health Statistics (NCHS) developed a computer system to code and edit reported race and ethnicity data.

Race of decedent

Beginning in 2003, Idaho Vital Statistics transmitted Idaho death records to NCHS, NCHS re-coded multiple-race categories to single-race codes; NCHS returned the records back to Idaho for analysis. The data used for analysis was the "bridged-multiple race" code on each death certificate. The bridging procedure is similar to the procedure used to bridge multiracial population estimates. For Idaho death certificates, multiracial decedents are imputed to a single race using a coding algorithm according to their combination of races, Hispanic origin, sex, and age indicated on the death certificate. The categories for the bridged race codes are the four main categories used by NCHS – White, Black, American Indian or Alaska Native, Asian or Pacific Islander. In addition, there is a fifth category in Idaho for "other race of decedent".

The imputation of multiple-race to single-race procedure is described at the CDC's website at: http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm.

Idaho was one of the first states to adopt a new death certificate in 2003; however, not all states adopted multiple-race options in 2003. In 2003, all records received by Idaho Vital Statistics for Idahoans who died out of state reported single-race. There were four out-of-state death certificates with multiple races of decedent reported in 2010. Bridged-race codes are not provided to Idaho for out-of-state records; therefore not all Idaho resident records have bridged-race codes to be used for data analysis.

Idaho resident death data provided in the table entitled "Idaho Resident Deaths by Sex, Race and Ethnicity, 2010" are based on single-race and bridged-race categories for deaths in Idaho and single-race categories for deaths out of state.

	Deaths to Idaho Residents in Idaho			Deaths to Idaho Residents Out of State		
Year	Total	Single Race*	Multiple Race	Total	Single Race*	Multiple Race
2008	10,396	10,361	35	531	531	0
2009	10,483	10,445	38	582	580	2
2010	10,830	10,789	41	581	581	0

* Single race or unknown race.

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Other race category

Prior to 2003, decedent's race was a write-in response on the death certificate. 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". With the change to check boxes on the certificates and the ability to select one or more race, the race category structure was revised. Prior to use of check boxes, if the term "Hispanic" or "Mexican" was written on the certificate as race, then race was coded to white. Beginning in 2003, if the check box "other race" was checked and the write-in for other race was specified as "Hispanic" or "Mexican", then race was coded to "other race". Therefore, race data for deaths in 2003 and after are not comparable with race data prior to 2003. Data for white, non-Hispanic persons are available upon request; these data are comparable for years prior to 2003 to present.

Prior to 2003, the number of deaths categorized as "other race" was historically low. For example, in 2002, there were four residents deaths reported as "other race". Due to the change in the methodology, the number of records with "other race" of decedent increased from four in 2002 to 58 in 2003, 77 in 2004, 98 in 2005, 103 in 2006, and decreased to 92 in 2007. The number decreased to 62 in 2008, increased to 71 in 2009, and once again decreased to 45 in 2010.

Cause-of-Death Classification

Mortality statistics are compiled in accordance with the World Health Organization (WHO) regulations, which specify that member nations, including the United States, classify and code causes of death in accordance with the International Statistical Classification of Diseases and Related Heath Problems. The tenth revision of the International Classification of Diseases (ICD-10) was

implemented in the United States beginning with deaths occurring in 1999 and replaces the ninth revision of the ICD (ICD-9), which was used from 1979 through 1998. Some changes from ICD-9 to ICD-10 include:

1. ICD-10 is far more detailed, with about 8,000 categories compared with 4,000 categories in ICD-9.
2. ICD-10 uses 4-digit alphanumeric codes, compared to 4-digit numeric codes in ICD-9.
3. Some cause-of-death titles have been changed, and conditions have been regrouped.
4. Some cause-of-death coding rules have been changed.

For more information on ICD, go to the Centers for Disease Control and Prevention website link at http://www.cdc.gov/nchs/about/major/dvs/icd10des.htm

Comparability Ratio

The change from ICD-9 to ICD-10 in 1999 may result in discontinuities in cause-of-death trends. These discontinuities are measured using comparability ratios. NCHS developed comparability ratios to measure the level of agreement between classification systems for causes of death. Go to http://www.cdc.gov/nchs/datawh/nchsdefs/comparabilityratio.htm for more information regarding comparability ratios.

The comparability ratio is the result of a study completed by NCHS in which a sample of U.S. mortality records was coded by both the new (ICD-10) and the old (ICD-9) revision codes.

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$$\text{Comparability ratio:} \quad \frac{\text{Number of deaths for a cause of death based on ICD-10 code(s)}}{\text{Number of deaths for a cause of death based on the most comparable ICD-9 code(s)}}$$

To show trends in data, NCHS has instructed states to treat ICD-10 as the standard and adjust statistics prior to 1999 using Modified ICD-9 codes and comparability ratios. Therefore, mortality statistics provided in this report are NOT comparable to previously published mortality statistics based on non-modified ICD-9 codes. Idaho trend data using Modified ICD-9 codes and comparability ratios are available upon request.

Firearm Injury, Alcohol-Induced, and Drug-Induced Deaths

Deaths attributed to firearm injury, alcohol-induced, and drug-induced causes are sub-sets of mortality categories used to rank leading causes of death such as accidents, intentional self-harm (suicide), and assault (homicide). Firearm injury, alcohol-induced, and drug-induced deaths are not used to rank leading cause of death.

Firearm Injury

Causes of death attributable to firearm-injury deaths include ICD-10 codes: U01.4, W32-W34, X72-X74, X93-X95, Y22-Y24, and Y35.0. Firearm injury deaths include terrorism involving firearms (homicide); accidental discharge of firearms; intentional self-harm (suicide) by discharge of firearms; assault (homicide) by discharge of firearms; discharge of firearms, undetermined intent; and legal intervention involving firearm discharge. Death from injury by firearms exclude deaths due to explosives and other causes indirectly related to firearms.

Alcohol-Induced

The list of ICD-10 codes included in alcohol-induced causes was expanded in 2003 to include the ICD-10 codes of E24.4, G72.1, and K86.0 with the codes used prior to 2003: F10, G31.2, G62.1, I42.6, K29.2, K70, R78.0, X45, X65, and Y15. In 2006, the list was expanded again to include ICD-10 code K85.2. Alcohol-induced deaths include mental and behavioral disorders due to alcohol use; degeneration of nervous system due to alcohol; alcoholic polyneuropathy; alcoholic cardiomyopathy; alcoholic gastritis; alcoholic liver disease; alcohol-induced chronic pancreatitis; alcohol-induced acute pancreatitis; findings of alcohol in blood; accidental poisoning by and exposure to alcohol; intentional self-poisoning (suicide) by exposure to alcohol; poisoning by exposure to alcohol; and poisoning by exposure to alcohol, undetermined intent. Alcohol-induced deaths do not include homicides, accidents such as falls and motor vehicle crashes, and other causes indirectly related to alcohol use. This category also excludes newborn deaths associated with maternal alcohol use.

Drug-Induced

In 2003 and 2006, NCHS expanded the list of ICD-10 codes for drug-induced causes to be more comprehensive. Drug-induced ICD-10 codes include: D52.1, D59.0, D59.2, D61.1, D64.2, E06.4, E16.0, E23.1, E24.2, E27.3, E66.1, F11.0-F11.5, F11.7-F11.9, F12.0-F12.5, F12.7-F12.9, F13.0-F13.5, F13.7-F13.9, F14.0-F14.5, F14.7-F14.9, F15.0-F15.5, F15.7-F15.9, F16.0- F16.5, F16.7-F16.9, F17.0, F17.3-F17.5, F17.7-F17.9, F18.0-F18.5, F18.7-F18.9, F19.0-F19.5, F19.7-F19.9, G21.1, G24.0, G25.1, G25.4, G25.6, G44.4, G62.0, G72.0, I95.2, J70.2-J70.4, K85.3, L10.5, L27.0, L27.1, M10.2, M32.0, M80.4, M81.4, M83.5, M87.1, R50.2, R78.1- R78.5, X40-X44, X60-X64, X85, and Y10-Y14. Drug-induced deaths include deaths due to drug psychosis; drug dependence; nondependent use of drugs not including alcohol and tobacco; drug-induced pancreatitis; drug-induced fever; accidental poisoning by drugs, medicaments, and biologicals; suicide by drugs, medicaments, and biologicals; assault from poisoning by drugs and medicaments; and poisoning by drugs, medicaments, and biologicals, undetermined whether accidental or purposely inflicted. Drug-induced deaths do not include accidents, homicides, and other causes indirectly related to drug use. Also excluded are newborn deaths associated with maternal drug use. Types of drugs listed on the death certificate include prescriptions, over-the-counter drugs, and narcotics.

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Life Expectancy

Data used to calculate Idaho life expectancy are based on July 1, 2005, population estimates from the U.S. Bureau of the Census, age-specific population estimates computed by the Bureau of Vital Records and Health Statistics, and 2005 Idaho resident mortality rates. Average number of years of life remaining ($^{o}e_x$) is the expectation of life for those who survived to age x.

$$^{o}e_x = T_x / l_x$$

T_x is the total time lived beyond age x by all individuals of the life table proportion alive at age x; l_x is the number of persons who survive to the exact age marking the beginning of each age interval. The number alive at age 0 (l_0) is taken arbitrarily as 100,000.

Mortality Rates Age-Adjusted to the Year 2000 U.S. Standard

Age adjustment is a statistical technique used to standardize rates. The technique is employed when comparing two or more populations with different age distributions. Age-adjusted rates are artificial measures for comparison purposes only and should not be used to measure the absolute magnitude of a health issue. To allow for comparison, the same standard population must be used. If different standard populations are used to compute the age-adjusted rates (1940 and 2000, for example), then the age-adjusted rates are NOT comparable. Statistically, it is a weighted average of the age-specific death rates, where the weights represent the fixed population proportions by age.

There are two methods for age-adjusting rates: direct and indirect. In this report, Idaho age-adjusted rates were developed using the following steps for the direct method:

1) Calculate **age-specific rates** for the 11 age groups used in the 2000 standard million: less than 1, 1-4, 5-14, 15-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75-84, and 85 and older.

$$\frac{\text{(Annual number of deaths in age group)}}{\text{(Population of age group for corresponding year)}}$$

2) Calculate **expected number of deaths** for each age group.

(2000 U.S. standard million population of age group)*(Age-specific rate)

3) Calculate **total expected number of deaths**.

(Sum of expected deaths for all age groups)

4) Calculate **age-adjusted rate per 100,000 persons**.

$$\frac{\text{(Total expected deaths)}}{\text{(Standard million)}} * 100{,}000$$

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YEAR 2000 U.S. STANDARD POPULATION			
All ages	1,000,000	35-44 years	162,613
Under 1 year	13,818	45-54 years	134,834
1-4 years	55,317	55-64 years	87,247
5-14 years	145,565	65-74 years	66,037
15-24 years	138,646	75-84 years	44,842
25-34 years	135,573	85+ years	15,508

Years of Potential Life Lost (YPLL)

Years of potential life lost (YPLL) is a statistic used to measure the number of years of life lost in a population when persons in that population die prematurely. YPLL provides valuable information regarding the causes of death that contribute most significantly to premature mortality. For example, in 2010 Accidents was the fourth-leading cause of death of Idahoans and accounted for 5.7 percent of all resident deaths. However, Accidents was the second-leading cause of premature death under age 75 and accounted for 9.9 percent of all YPLL in 2010.

In order to calculate YPLL, a standard must be chosen (e.g., age 75) as a reference point for years of life lost. The number of years of life lost is then calculated for each person dying before the standard age. Assume a standard of 75 years of age is chosen. For calculation purposes, all people are considered half way through the year of their age at death. For example, an infant who dies under one year of age is considered .5 years of age at death, and a child who dies at age one - between its

first and second birthday - is considered 1.5 years of age, and so forth. Therefore, a person dying at 39 has lost 35.5 years of life relative to the standard (i.e., 75 years – 39.5 years = 35.5 years). To obtain YPLL, the number of years of life lost for each person in the population dying before the standard age is summed. Persons dying at 75 years of age or older would be excluded from the analysis, because they have not lost years of life relative to the standard. For this report, a standard of 75 years of age was chosen to calculate YPLL.

Population

The Office of Management and Budget announced revisions to the standards for classification of federal data on race and ethnicity on October 30, 1997. These standards require that agencies offer individuals the opportunity to select one or more races when reporting information on race in federal data collections. The Census in 2000 was the first nationwide implementation of the revised standards.

The files released from the U.S. Census Bureau for April 1, 2010 Census contain data for single race categories (including “other race” category) and multiple race categories. This presents problems for vital rates from two standpoints. First, the file contains counts of persons with more than one race and therefore is not compatible with states’ vital statistics numerators based on single race categories; second, the file contains the “other race” category that is not used to calculate national vital statistics rates. For U.S. vital statistics, “other race” is allocated to the four main race categories.

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Standard Race Categories
April 1, 2010 Census for Idaho

Race	Number	Percent
Total	1,567,582	100.0%
White	1,396,487	89.1%
Black	9,810	0.6%
American Indian/Alaskan Native	21,441	1.4%
Asian	19,069	1.2%
Native Hawaiian/Pacific Islander	2,317	0.1%
Some other race	79,523	5.1%
Two or more races	38,935	2.5%

NCHS contracted with the Census Bureau to produce a "bridged" data set in which all multiple race persons are allocated to a single race, to reproduce what these people would have reported had they not had the option to report more than one race. In November 2011, NCHS released state and county population totals for April 1, 2010. These totals are for the four race groups (White, Black, American Indian or Alaska Native, Asian or Pacific Islander, including Native Hawaiian) by single year of age, sex, and Hispanic origin[6].

Standard Race Categories Idaho Bridged Intercensal 2008 and 2009 Estimates, 2010 Estimates						
	July 1, 2008		July 1, 2009		April 1, 2010	
Race	Number	Percent	Number	Percent	Number	Percent
Total	1,523,816	100.0%	1,545,801	100.0%	1,567,582	100.0%
White	1,458,280	95.7%	1,476,733	95.5%	1,496,784	95.5%
Black	17,878	1.2%	19,238	1.2%	15,104	1.0%
American Indian/ Alaskan Native	25,613	1.7%	26,632	1.7%	29,801	1.9%
Asian/Pacific Islander	22,045	1.4%	23,198	1.5%	25,893	1.7%

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1. "PNSS Health Indicators," CDC Pediatric and Pregnancy Nutrition Surveillance System. December 2010. www.cdc.gov/pednss/what_is/pnss_health_indicators.htm.

2. "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.

3. "Births: Final Data for 2003," National Vital Statistics Reports, National Center for Health Statistics, Vol. 54/No.2, September 8, 2005.

4. "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.

5. "Births: Final Data for 2005," National Vital Statistics Reports, National Center for Health Statistics, Vol. 56/No.6, December 5, 2007.

6. The bridged-race April 1, 2010 population estimates were produced by the Population Estimates Program of the U.S. Census Bureau in collaboration with the National Center for Health Statistics (NCHS). These estimates were released by the Census Bureau on November 3, 2011 and by NCHS on November 17, 2011. http://www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm

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