RESULTS FROM THE PREGNANCY RISK ASSESSMENT TRACKING SYSTEM

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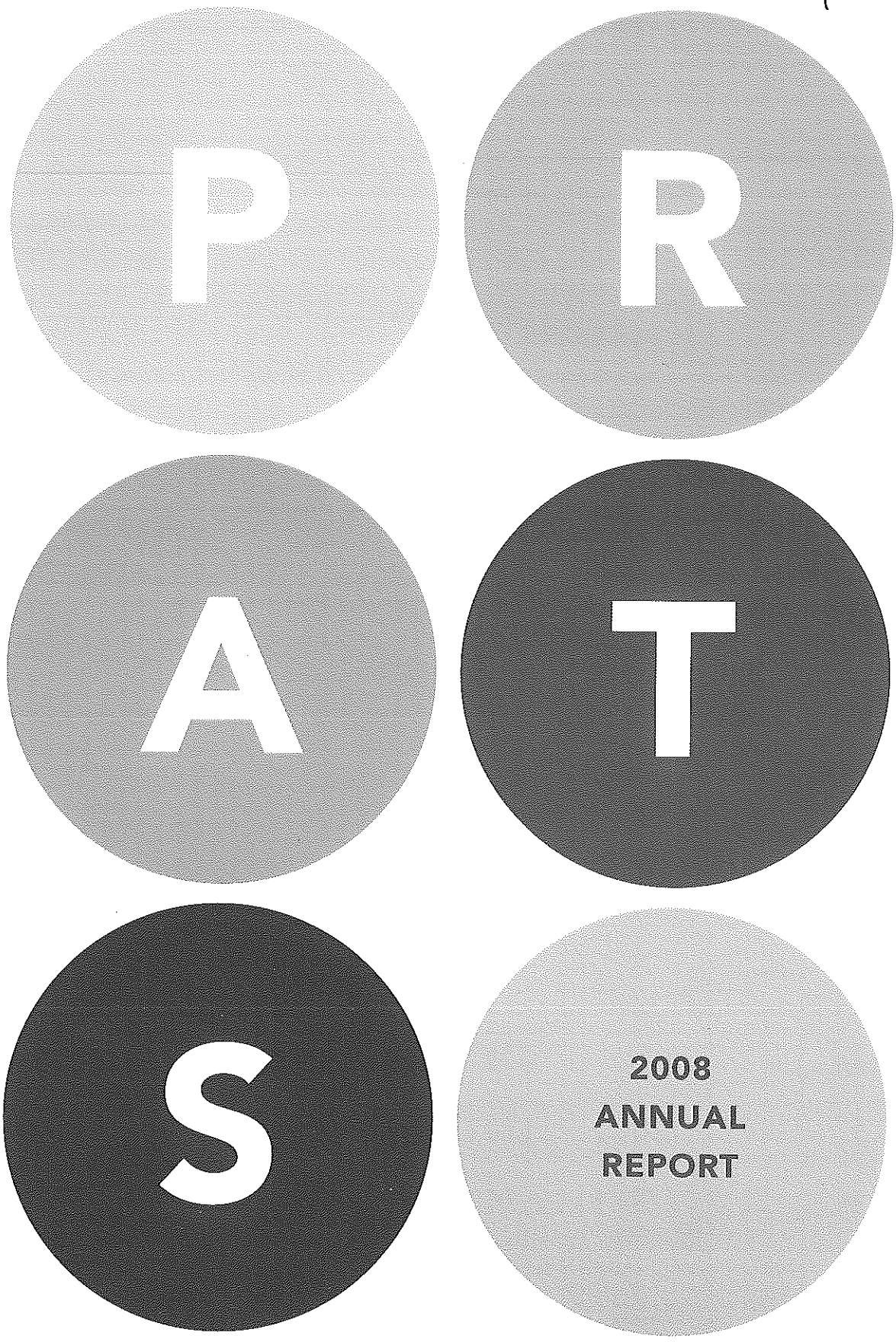


A SURVEY OF THE HEALTH OF MOTHERS AND BABIES IN IDAHO **FEBRUARY 2012**

Overview

What is the Pregnancy Risk Assessment Tracking System?

The Pregnancy Risk Assessment Tracking System (PRATS) is an annual survey of new mothers in Idaho, directed by the Bureau of Vital Records and Health Statistics within the Idaho Department of Health and Welfare. PRATS was first conducted in Idaho in 1999, and has been conducted annually since 2001. PRATS is modeled after the Centers for Disease Control and Prevention's (CDC) Pregnancy Risk Assessment Monitoring System (PRAMS).[1]

PRATS is a population-based tracking system that identifies and examines maternal experiences and health practices surrounding pregnancy which may affect pregnancy outcomes and infant health. PRATS data are supplemental to information obtained from vital records and are used for planning, developing, and assessing perinatal health programs in Idaho. Results from PRATS have been used to determine progress towards goals, assess trends, and target at-risk populations relevant to maternal and child health. PRATS provides information about the intendedness of pregnancy, initiation of prenatal care, content of prenatal care, barriers to services, physical abuse among pregnant women, breastfeeding patterns, and many other important perinatal issues. This report summarizes major maternal health and behavior risk factors associated with maternal, fetal, and infant health outcomes. Results presented in this report are not inclusive of all data that may be provided by PRATS. Therefore, the 2008 PRATS questionnaire appears in its entirety at the end of this report in Appendix B (see page 85).

Methodology

Sample

The study population for PRATS included female residents of Idaho aged 18 or older (at the time of delivery) who had a live birth which occurred in-state (based on birth certificate data). The sampling frame included mothers who gave birth between January 1, 2008 and December 31, 2008. During the data collection period in 2009, babies were between the ages of 5 and 20 months.

Certain records were automatically excluded from the sampling frame, including records of mothers less than 18 years of age at the time of delivery, adopted infants, siblings of adopted infants within a multiple birth (twin, triplet, etc.), infants who had died, and siblings of infants who had died within a multiple birth. Also excluded from the sampling frame were Idaho resident mothers who delivered in another state or died after giving birth. If there was a multiple birth, only the firstborn infant was included in the sampling frame.

The sample design of PRATS was based on a disproportionate stratified systematic random sampling method designed to ensure representation of women from each of Idaho's seven public health districts.

Survey Methods

Between May and September 2009, 4,200 randomly selected mothers from across the state of Idaho were mailed an introductory letter requesting their participation in the PRATS survey. The introductory letter explained the purpose of the survey and provided a toll-free number to call for more information or to request a telephone interview. The mothers were also given the opportunity to decline participation in the study.

Approximately two weeks after the introductory letter was mailed, a full questionnaire packet was sent. Hispanic mothers were mailed both an English and Spanish version of the survey. In order to give women every opportunity to complete the questionnaire, up to two more questionnaire packets were mailed out during the course of a two-month period. Women were able to elect to complete the survey by telephone with a trained interviewer (English or Spanish). For women who did not respond, attempts were made to contact them by telephone. This survey strategy was developed by the CDC PRAMS project and proved to be very successful in achieving higher response rates.

Weighting the Data

Data in this report were weighted to adjust for the disproportionate stratified sampling design and response rate differences. For example, mothers in health districts with smaller populations are more likely to be chosen to respond to the survey than mothers in health districts with larger populations. Weighting procedures correct for this difference and ensure that sample data closely reflect the population from which the sample was obtained.

Analyzing the Data

Statistical testing and calculation of confidence limits were done using SUDAAN® (Survey Data Analysis) software. This software takes into account the complex sampling design methodology of PRATS. Data manipulation and variable creation were done using SAS® software. All missing (blank and "don't know") observations were excluded from analysis.

Reporting the Data

For purposes of this report, the terms "mothers" or "women" are used to refer to Idaho resident adult mothers (18 and older) who gave birth (live birth) in Idaho. PRATS data are only representative of Idaho resident women aged 18 and older whose

pregnancies resulted in a live birth occurring in Idaho. Therefore, PRATS data are not generalizable to all pregnant women.

Prevalence estimates based on denominators with fewer than 30 respondents have been suppressed and are indicated in the data tables with an asterisk (*). PRATS has adopted this standard to maintain a high degree of reliability. Differences between estimates are reported throughout the report. Any difference determined to be statistically significantly different through statistical testing has been designated using the terms "statistically" or "significantly."

Data Limitations

The self-reported nature of PRATS data allows for potential information bias and error in estimation. Women may not have been able to accurately recall events surrounding their pregnancies because the timing of the survey was several months following delivery. In addition, women may be hesitant to report behaviors perceived to be risky or socially undesirable. The result of this bias would likely be an underestimation of the actual prevalence of these behaviors. Also, confidentiality concerns may have impacted how likely women were to honestly respond to survey questions. Because women were given the option of responding to the survey by mail or by phone, differences in interpretation may have existed between those who were read the question by a trained interviewer versus reading the question themselves.

References

1. *Pregnancy Risk Assessment Monitoring System (PRAMS),* Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Reproductive Health, See website at: www.cdc.gov/PRAMS

Definition of Terms

AGE OF MOTHER
Age of mother at time of delivery is a calculated field from the birth certificate based on mother's date of birth and birth date of infant.

ETHNICITY OF MOTHER
Mother's ethnicity is based on the "mother of Hispanic origin" question on the birth certificate.

MARITAL STATUS OF MOTHER
Marital status indicates whether the mother was married at the time of conception, at the time of delivery, or at any time between conception and delivery. The marital status field must be completed on the Idaho Certificate of Live Birth.

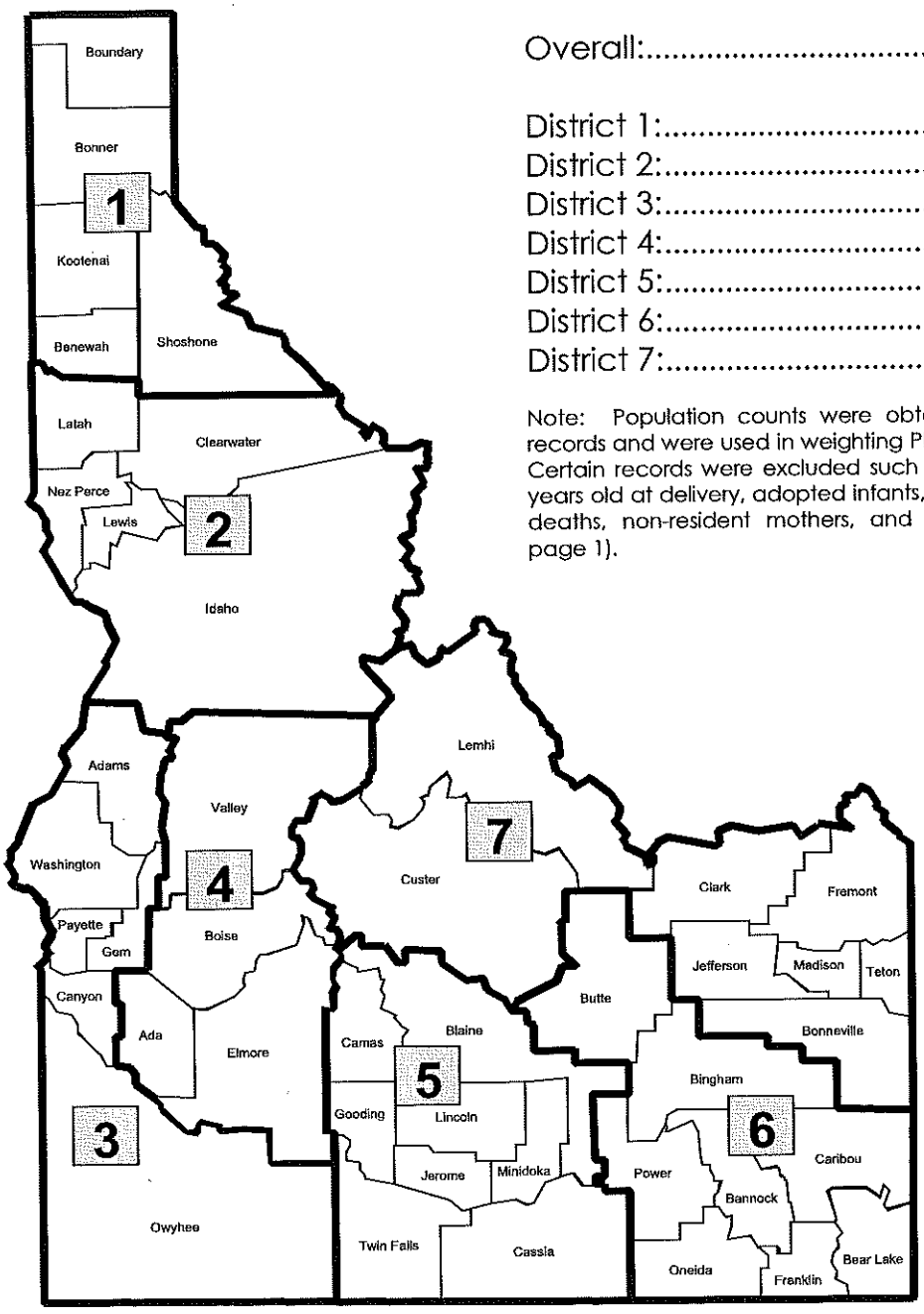
Idaho Public Health Districts

Idaho is divided into seven public health districts, with each of the districts containing four to eight counties. The seven health districts are independent agencies governed by a local board appointed by the county commissioners within the district.

Number of Idaho Resident Mothers Aged 18 and Older Who Gave Birth In Idaho 2008

Overall:	22,802
District 1:	2,215
District 2:	1,097
District 3:	3,867
District 4:	6,092
District 5:	2,888
District 6:	2,666
District 7:	3,977

Note: Population counts were obtained from Idaho birth records and were used in weighting PRATS data (see page 2). Certain records were excluded such as mothers less than 18 years old at delivery, adopted infants, infant deaths, maternal deaths, non-resident mothers, and out-of-state births (see page 1).



Demographic Profile

The following table provides a demographic profile of Idaho adult mothers by public health district for 2008.

Demographic Characteristics of Idaho Mothers By Health District
PRATS 2008

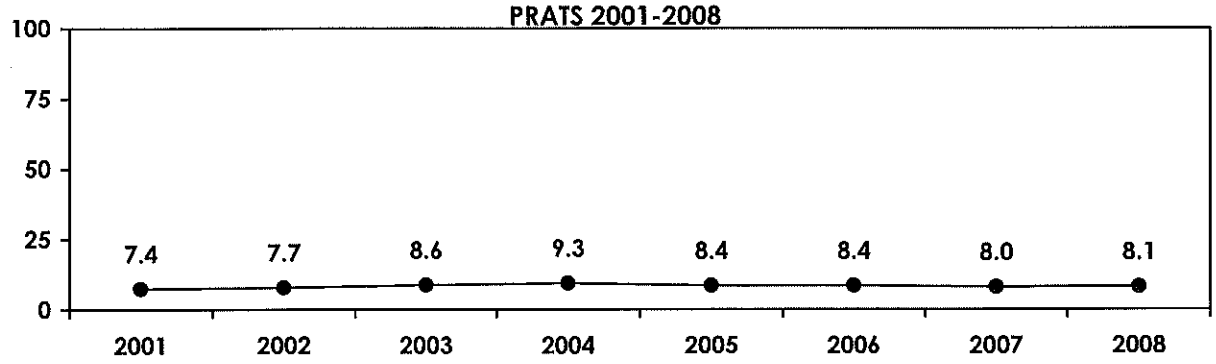
	Idaho	Public Health District						
		1	2	3	4	5	6	7
AGE								
18-19	5.6%	8.8%	4.9%	6.3%	3.9%	8.9%	4.7%	3.9%
20-24	26.5	26.9	28.0	26.0	19.6	26.3	31.5	33.7
25-29	34.8	35.1	35.8	36.8	33.3	31.5	33.3	38.2
30-34	22.1	19.1	21.7	21.8	26.8	22.7	18.9	18.8
35+	11.0	10.1	9.7	9.1	16.3	10.6	11.6	5.5
ETHNICITY								
Non-Hispanic	86.6	97.0	97.9	76.4	89.8	74.1	89.8	89.8
Hispanic	13.4	3.0	2.1	23.7	10.2	25.9	10.2	10.2
MARITAL STATUS								
Not Married	23.4	30.0	27.0	28.5	21.2	27.7	21.9	14.8
Married	76.6	70.0	73.0	71.5	78.8	72.3	78.1	85.2
INCOME								
Less than $15,000	22.4	26.6	27.7	28.6	13.2	22.5	23.3	25.5
$15,000 - $24,999	15.6	15.3	12.8	17.8	13.7	18.6	14.2	16.1
$25,000 - $34,999	13.8	17.2	16.2	10.9	9.9	15.4	17.5	16.2
$35,000 - $49,999	15.2	10.9	9.4	15.4	17.0	12.4	17.0	17.2
$50,000+	33.1	30.0	33.9	27.3	46.2	31.1	28.0	25.1
EDUCATION								
K-11th Grade	10.1	8.0	3.0	17.4	6.3	19.5	8.7	6.5
High School or GED	22.8	31.7	25.0	32.3	17.0	16.3	26.0	19.5
Some College	38.0	39.0	37.2	27.4	38.2	44.1	40.7	41.1
College Graduate+	29.1	21.3	34.8	23.0	38.6	20.0	24.6	33.0

Note: The percentages are based on weighted PRATS data (see the *Weighting the Data* section on page 2 for further explanation).

Smoking

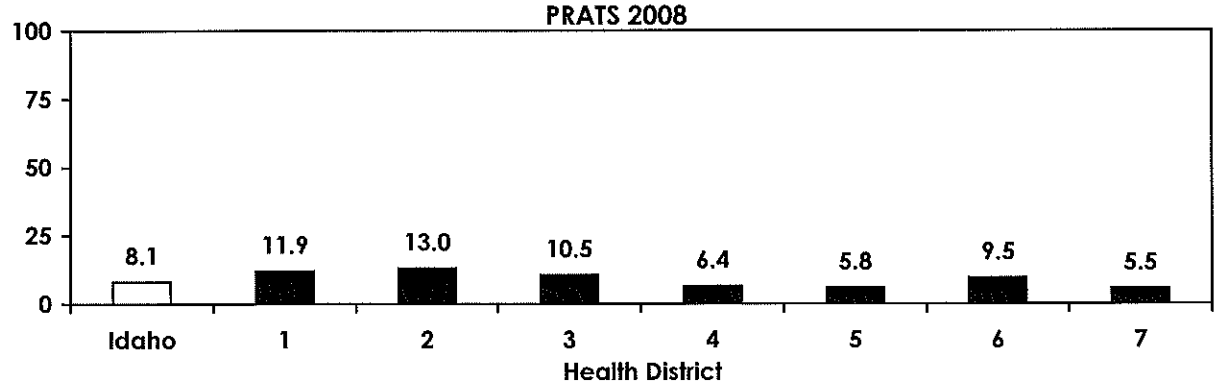
Of Idaho mothers who gave birth in 2008, 8.1 percent reported smoking cigarettes during the third trimester of pregnancy. Prevalence of smoking during pregnancy has not significantly changed since 2001.

Percentage of Idaho Mothers Who Smoked During the Third Trimester by Year PRATS 2001-2008



Mothers residing in District 2 were significantly more likely to have smoked during the third trimester when compared with the entire state.

Percentage of Idaho Mothers Who Smoked During the Third Trimester by Health District PRATS 2008



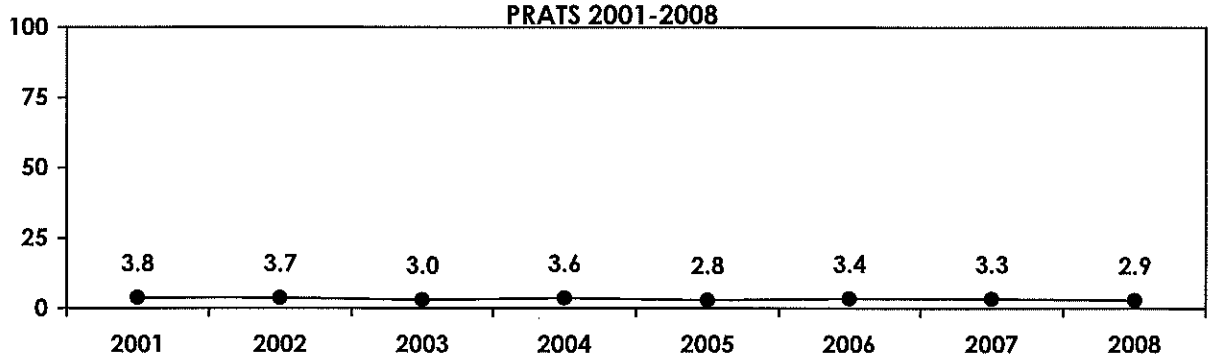
The prevalence of smoking during pregnancy was significantly higher among:

- Mothers aged 18 to 19 than older mothers.
- Non-Hispanic mothers compared with Hispanic mothers.
- Unmarried mothers versus married mothers.
- Women with annual household incomes of less than $15,000 compared with those with higher incomes.
- Women who never attended college versus those with more education.
- Unintended pregnancies compared with intended pregnancies.
- Women who experienced physical abuse during pregnancy.
- Mothers who utilized Medicaid just before pregnancy or to pay for pregnancy expenses (prenatal care and/or delivery).
- Mothers with a high level of prenatal stress.

Alcohol Use

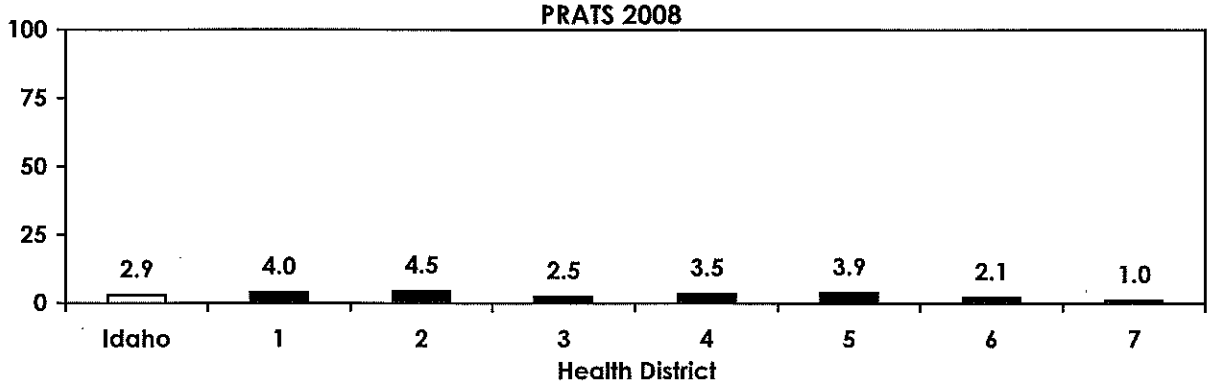
Among Idaho mothers who gave birth in 2008, 2.9 percent reported drinking alcohol during the last trimester of pregnancy. The percentage of women drinking during pregnancy has remained steady at about 3 percent since 2001.

Percentage of Idaho Mothers Who Drank Alcohol During the Third Trimester by Year PRATS 2001-2008



Although the percentage of mothers who drank during the third trimester ranged from a high of 4.5 percent in District 2 to a low of 1.0 percent in District 7, these differences were not statistically significant.

Percentage of Idaho Mothers Who Drank Alcohol During the Third Trimester by Health District PRATS 2008



The prevalence of drinking alcohol during the third trimester was significantly higher among:

- Mothers aged 35 and older compared with mothers aged 20 to 29.
- Mothers with an annual household income of $50,000 or more compared with mothers with lower incomes.
- Mothers with health insurance just before pregnancy or to pay for pregnancy expenses (prenatal care and/or delivery) than those who utilized Medicaid during the same time.
- Mothers who were uninsured just before and during pregnancy than those who utilized Medicaid during the same time.

Smoking

Idaho mothers who smoked during the third trimester[1], 2008

	Statewide				Public Health District											
					District 1				District 2				District 3			
	%	95% CI		n	%	95% CI		n	%	95% CI		n	%	95% CI		n
TOTAL	8.1	6.9	9.4	2,326	11.9	8.7	16.1	304	13.0	10.2	16.4	341	10.5	7.4	14.8	292
AGE																
18-19	21.2	14.3	30.3	115	*	*	*	*	*	*	*	*	*	*	*	*
20-24	11.4	8.9	14.5	616	10.8	5.5	20.0	77	26.3	19.3	34.6	91	15.6	8.8	26.2	71
25-29	5.6	4.2	7.5	838	12.0	7.2	19.4	110	9.3	5.8	14.8	125	7.5	3.9	14.0	113
30-34	5.3	3.5	8.1	509	6.1	2.1	16.1	61	6.2	2.8	13.3	76	5.5	1.9	15.3	66
35+	6.7	3.9	11.3	248	11.8	4.8	26.0	34	2.8	0.6	13.3	34	*	*	*	*
ETHNICITY																
Non-Hispanic	8.8	7.5	10.3	2,045	12.1	8.8	16.3	293	12.9	10.1	16.4	334	12.9	9.0	18.2	222
Hispanic	3.9	2.0	7.4	256	*	*	*	*	*	*	*	*	1.9	0.3	11.5	64
MARITAL STATUS																
Not Married	22.1	18.2	26.5	437	25.7	17.4	36.3	70	27.6	20.1	36.7	76	24.6	15.9	36.0	65
Married	3.8	3.0	4.8	1,889	6.0	3.7	9.5	234	7.6	5.3	10.7	265	4.9	2.8	8.4	227
INCOME																
Less than $15,000	21.3	17.6	25.6	483	22.9	14.8	33.8	68	28.3	20.9	37.1	85	23.7	15.3	34.8	70
$15,000 - $24,999	7.8	5.3	11.1	340	14.7	7.1	28.0	44	19.0	11.0	30.9	42	10.8	4.7	22.9	50
$25,000 - $34,999	8.5	5.5	12.8	342	16.7	9.0	29.0	53	6.4	2.5	15.3	53	14.3	5.7	31.7	32
$35,000 - $49,999	2.7	1.3	5.6	333	6.9	1.9	22.2	34	9.0	3.6	21.1	32	0.0	0.0	0.0	45
$50,000+	2.1	1.2	3.6	753	1.0	0.2	6.1	95	2.5	1.0	6.2	119	2.4	0.6	8.6	84
EDUCATION																
K-11th Grade	16.3	11.6	22.5	204	*	*	*	*	*	*	*	*	11.5	5.0	24.2	47
High School or GED	15.1	12.1	18.6	527	18.7	12.0	27.9	91	24.8	17.8	33.5	83	17.5	10.8	27.0	88
Some College	7.1	5.4	9.2	900	8.3	4.5	14.6	119	9.5	5.9	15.0	125	8.1	3.7	16.5	81
College Graduate+	0.6	0.2	2.3	684	0.0	0.0	0.0	70	3.6	1.6	8.0	124	0.0	0.0	0.0	70

*Figure not reliable by PRATS standards (n < 30)

1. Smoking one or more cigarettes during the last three months of pregnancy.

Smoking

Idaho mothers who smoked during the third trimester[1], 2008

	Public Health District														
	District 4				District 5				District 6				District 7			
	%	95% CI		n	%	95% CI		n	%	95% CI		n	%	95% CI		n
TOTAL	6.4	4.0	9.9	319	5.8	3.7	8.9	323	9.5	6.8	13.2	355	5.5	3.7	8.1	392
AGE																
18-19	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20-24	12.3	5.7	24.6	55	4.8	1.9	11.6	83	14.5	8.9	22.6	107	6.2	3.2	11.5	132
25-29	3.1	1.0	9.1	109	4.0	1.6	9.9	108	6.1	2.9	12.4	123	3.4	1.5	7.6	150
30-34	4.4	1.4	12.5	89	8.0	3.5	17.2	75	3.4	0.9	11.9	68	5.5	2.2	13.2	74
35+	6.3	2.1	17.5	55	5.6	1.5	18.5	34	6.5	1.8	20.7	43	*	*	*	*
ETHNICITY																
Non-Hispanic	6.9	4.3	10.9	276	7.2	4.6	11.3	245	8.9	6.2	12.7	323	5.8	3.9	8.6	352
Hispanic	*	*	*	*	1.6	0.3	9.6	78	14.8	6.1	31.5	32	2.7	0.4	15.2	39
MARITAL STATUS																
Not Married	19.2	10.4	32.5	47	10.6	5.4	19.9	66	36.2	25.6	48.3	58	18.2	10.4	29.9	55
Married	2.9	1.5	5.7	272	3.9	2.2	6.9	257	2.0	1.0	4.2	297	3.3	1.9	5.6	337
INCOME																
Less than $15,000	23.9	12.1	41.8	32	14.3	7.6	25.4	61	32.9	23.3	44.2	72	10.8	6.1	18.3	95
$15,000 - $24,999	4.6	1.2	16.1	39	5.5	1.9	15.1	55	3.8	1.0	12.7	49	6.7	2.7	15.8	61
$25,000 - $34,999	12.5	4.2	31.8	30	1.9	0.3	11.1	48	5.9	2.1	15.8	63	3.2	0.9	11.1	63
$35,000 - $49,999	2.8	0.4	16.5	52	2.4	0.4	13.6	42	0.0	0.0	0.0	63	4.6	1.6	12.7	65
$50,000+	2.6	1.0	6.6	151	3.9	1.5	9.3	103	0.0	0.0	0.0	103	1.0	0.2	6.3	98
EDUCATION																
K-11th Grade	*	*	*	*	8.6	3.7	18.5	58	*	*	*	*	*	*	*	*
High School or GED	11.1	5.1	22.5	51	2.6	0.4	14.6	51	19.8	12.7	29.7	87	13.3	7.5	22.3	76
Some College	6.9	3.4	13.7	122	8.3	4.8	14.1	144	4.1	1.8	9.0	149	6.4	3.6	11.2	160
College Graduate+	1.2	0.2	7.5	130	0.0	0.0	0.0	70	0.0	0.0	0.0	92	0.0	0.0	0.0	128

*Figure not reliable by PRATS standards (n < 30)

1. Smoking one or more cigarettes during the last three months of pregnancy.

Alcohol Use

Idaho mothers who drank alcohol during the third trimester[1], 2008

	Statewide				Public Health District											
					District 1				District 2				District 3			
	%	95% CI		n	%	95% CI		n	%	95% CI		n	%	95% CI		n
TOTAL	2.9	2.2	3.7	2,323	4.0	2.4	6.7	303	4.5	3.0	6.7	339	2.5	1.2	5.0	291
AGE																
18-19	1.0	0.2	5.8	115	*	*	*	*	*	*	*	*	*	*	*	*
20-24	0.8	0.4	1.7	616	1.1	0.2	6.6	77	4.3	1.9	9.4	90	1.2	0.2	7.6	71
25-29	2.0	1.2	3.2	836	4.1	1.7	10.0	110	4.6	2.4	8.8	124	2.1	0.5	7.6	112
30-34	4.4	2.8	7.0	508	10.2	4.9	20.1	60	2.5	0.8	7.7	76	3.5	0.9	12.5	66
35+	8.6	5.4	13.4	248	2.9	0.5	16.2	34	11.4	5.1	23.4	34	*	*	*	*
ETHNICITY																
Non-Hispanic	2.9	2.2	3.8	2,043	4.1	2.4	6.9	292	4.6	3.1	6.9	332	2.3	1.0	5.2	222
Hispanic	3.3	1.5	7.1	255	*	*	*	*	*	*	*	*	3.3	0.9	11.9	63
MARITAL STATUS																
Not Married	3.5	2.0	6.1	434	4.3	1.5	11.6	70	1.3	0.3	6.5	75	3.1	0.8	11.1	64
Married	2.7	2.0	3.6	1,889	3.9	2.1	7.0	233	5.7	3.8	8.5	264	2.2	1.0	5.0	227
INCOME																
Less than $15,000	0.5	0.1	1.9	481	0.0	0.0	0.0	68	2.4	0.7	7.3	84	1.6	0.2	9.9	69
$15,000 - $24,999	3.3	1.7	6.3	340	6.9	2.4	18.4	44	4.4	1.4	13.1	42	4.5	1.2	15.7	50
$25,000 - $34,999	3.6	2.1	6.3	341	4.4	1.2	14.8	53	5.3	2.1	12.9	53	3.0	0.5	17.3	32
$35,000 - $49,999	1.0	0.3	3.1	334	4.1	0.7	21.3	34	6.0	1.9	17.4	32	0.0	0.0	0.0	45
$50,000+	5.0	3.5	7.0	752	5.2	2.3	11.3	94	5.9	3.2	10.6	118	3.6	1.2	10.1	84
EDUCATION																
K-11th Grade	1.7	0.7	4.2	205	*	*	*	*	*	*	*	*	0.0	0.0	0.0	47
High School or GED	2.2	1.1	4.4	524	1.9	0.5	6.6	91	2.2	0.7	6.8	82	2.4	0.6	8.9	87
Some College	2.2	1.5	3.4	901	6.4	3.2	12.3	119	3.2	1.4	7.1	125	4.0	1.3	11.5	81
College Graduate+	4.7	3.2	6.9	682	4.3	1.5	11.6	69	8.0	4.8	12.9	123	2.8	0.7	10.1	70

*Figure not reliable by PRATS standards (n < 30)

1. Consuming one or more alcoholic beverages during the last three months of pregnancy.

Alcohol Use

Idaho mothers who drank alcohol during the third trimester[1], 2008

	Public Health District														
	District 4				District 5				District 6				District 7			
	%	95% CI		n	%	95% CI		n	%	95% CI		n	%	95% CI		n
TOTAL	3.5	2.0	6.2	320	3.9	2.4	6.5	323	2.1	1.0	4.1	355	1.0	0.4	2.6	392
AGE																
18-19	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20-24	0.0	0.0	0.0	57	2.1	0.6	7.6	82	0.0	0.0	0.0	107	0.0	0.0	0.0	132
25-29	0.9	0.1	5.7	108	3.5	1.4	8.6	109	0.8	0.1	4.7	123	1.4	0.4	4.9	150
30-34	4.4	1.4	12.5	89	4.3	1.5	12.0	75	4.8	1.7	13.2	68	2.8	0.7	9.8	74
35+	12.4	6.1	23.4	55	8.3	2.9	21.8	34	7.8	2.7	20.4	43	*	*	*	*
ETHNICITY																
Non-Hispanic	3.2	1.7	6.0	277	4.6	2.6	7.9	245	2.3	1.2	4.6	323	0.9	0.3	2.6	352
Hispanic	*	*	*	*	2.2	0.6	7.6	78	0.0	0.0	0.0	32	2.5	0.4	14.5	39
MARITAL STATUS																
Not Married	4.3	1.1	15.0	47	3.0	0.8	10.6	66	3.5	1.0	11.8	58	3.7	1.0	12.8	54
Married	3.3	1.8	6.1	273	4.3	2.5	7.3	257	1.7	0.8	3.8	297	0.6	0.2	2.2	338
INCOME																
Less than $15,000	0.0	0.0	0.0	33	0.0	0.0	0.0	61	0.0	0.0	0.0	72	0.0	0.0	0.0	94
$15,000 - $24,999	3.6	0.5	20.6	38	1.6	0.2	9.3	55	1.9	0.3	10.8	49	1.6	0.3	9.6	62
$25,000 - $34,999	3.1	0.5	18.1	30	4.8	1.3	16.5	47	5.2	1.8	14.2	63	1.7	0.3	10.0	63
$35,000 - $49,999	1.8	0.3	11.1	53	0.0	0.0	0.0	42	0.0	0.0	0.0	63	0.0	0.0	0.0	65
$50,000+	5.6	2.8	10.7	151	10.0	5.6	17.1	104	3.3	1.1	9.2	103	1.0	0.2	6.3	98
EDUCATION																
K-11th Grade	*	*	*	*	1.4	0.2	8.6	58	*	*	*	*	*	*	*	*
High School or GED	4.3	1.1	15.5	51	4.4	1.2	15.1	50	0.0	0.0	0.0	87	0.0	0.0	0.0	76
Some College	0.8	0.1	4.9	122	3.8	1.8	7.9	145	0.6	0.1	3.9	149	0.7	0.1	4.1	160
College Graduate+	6.5	3.3	12.3	130	6.4	2.5	15.2	70	5.9	2.6	12.7	92	0.8	0.1	4.9	128

*Figure not reliable by PRATS standards (n < 30)

1. Consuming one or more alcoholic beverages during the last three months of pregnancy.