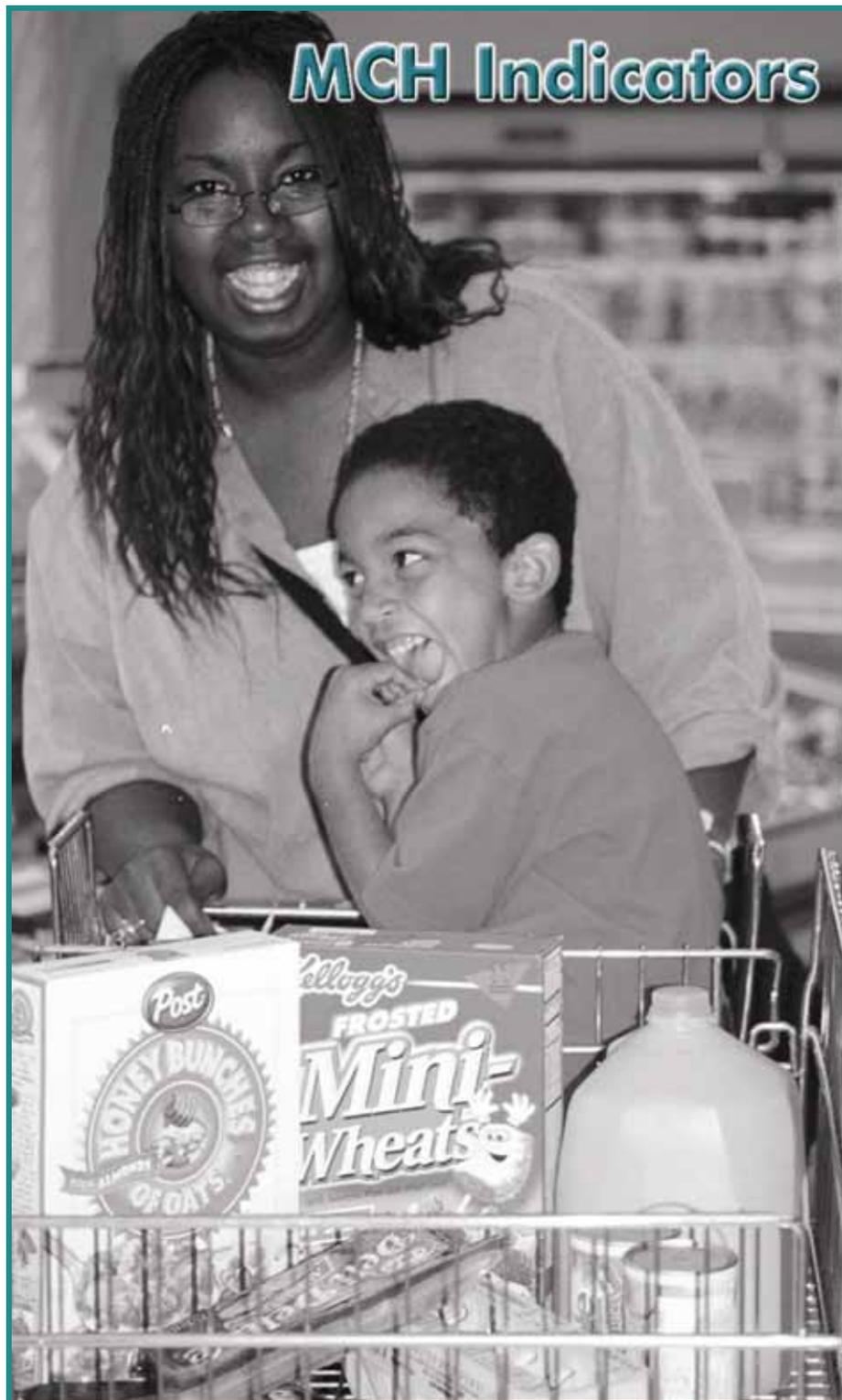


# MCH Indicators



# Maternal Child Health Indicators

Indicator	Year(s)				
	1989-91	1990-92	1991-93	1992-94	1993-95
Infant mortality per 1,000 live births*	9.6	9.4	8.6	8.1	8.0
Alaska Natives*	16.6	14.8	13.2	12.5	12.2
Post-neonatal mortality*	5.3	5.2	4.6	4.2	3.7
Child mortality (age 1 - 4 years) per 100,000*	-	50.9	51.9	54.5	55.3
Fetal Alcohol syndrome (FAS) cases per 1,000 live births*					
Overall*	DNC	DNC	DNC	DNC	DNC
Alaska Native*	DNC	DNC	DNC	DNC	DNC
White*	DNC	DNC	DNC	DNC	DNC
Fetal Alcohol syndrome (FAS) cases per 1,000 live births**	1977-80	1981-84	1985-88	1989-92	-
Alaska Native**	1.4	3.8	4.1	2.5	-
Non-Native**	0.1	0.1	0.2	0.3	-
<b>Risk Factors</b>	1991	1992	1993	1994	1995
Percent of mothers putting infants to sleep on their backs	DNC	DNC	DNC	DNC	DNC
Percent of mothers of newborns experiencing physical abuse in last 2 years	15.7	13.1	14.1	13.3	15.5
Percent low birth weight infants (< 2500 grams) among low income women	7.4	---	---	6.8	6.9
Teenage births per 1,000 females					
Ages 15 - 17 years	37.8	35.2	34.2	33.7	30.6
Ages 18 - 19 years	126.0	123.3	112.5	111.9	101.2
Percent of prenatal substance use					
Tobacco (last trimester only)	23.2	21.3	20.9	20.8	18.2
Alcohol (last trimester only)	10.3	10.9	7.7	7.4	6.6
Marijuana, prenatal	5.8	5.5	5.0	3.7	5.1
Cocaine, prenatal	0.6	0.6	0.7	0.6	0.8
Percent of mothers receiving a adequate prenatal care					
Overall	75.5	76.5	77.4	77.9	77.5
Teenage mothers	64.6	66.7	66.9	68.1	65.3
Alaska Native mothers	61.4	65.0	65.3	66.4	65.5
Percent of children ages < 18 years without health insurance	---	---	---	---	---
Percent of children with special needs with a medical home	---	---	---	---	---

\*HA—Healthy Alaskans; HP—Healthy People

# Healthy Alaskans 2000

Year(s)					HA <sup>1</sup> 2000 Target	HP <sup>1</sup> 2000 Target	U.S. Value (Year)
1994-96	1995-97	1996-98	1997-99	1998-00			
7.7	7.7	7.0	6.5	6.1	<9.1	7.0	6.9 (2000)
11.3	11.1	9.8	9.4	9.5	<12.0	8.5	8.3 (2000)
3.7	3.6	3.6	3.4	3.0	<4.0	2.5	2.3 (2000)
52.0	56.0	48.3	45.7	45.4	---	---	32.9 (2000)
DNC	1.7	1.6	1.2	-	<0.25	0.1	0.67 (1993)
DNC	5.9	5.3	4.1	-	---	2.0	DNA
DNC	0.4	0.4	0.3	-	---	---	DNA
-	-	-	-	-			
-	-	-	-	-	---	2.0	DNA
-	-	-	-	-	---	---	DNA
1996	1997	1998	1999	2000			
40.8	48.2	59.6	60.5	64.7	---	---	35 (1996)
16.5	DNC	DNC	DNC	DNC	---	---	---
7.2	7.2	7.5	7.0	7.0	<6.5	5.0	7.3 (1995)
26.9	26.2	26.4	26.5	24.3	---	---	27.4 (2000)
96.4	94.2	88.3	85.0	97.3	---	---	79.2 (2000)
21.5	17.6	18.3	16.6	16.8	<15	10.0	14 (1995)
6.4	6.6	4.3	4.4	5.3	<5	5.0	19 (1993)
5.5	5.4	4.2	5.4	4.5	<4	0.0	3 (1993)
1.5	0.4	0.3	0.4	0.7	0.0	0.0	1 (1993)
73.3	72.2	73.3	71.5	72.8	>90	90.0	83 (2000)
61.3	62.0	62.5	59.2	61.3	>80	---	69 (2000)
60.3	57.2	55.8	52.9	56.4	>80	90.0	69 (2000)
10.9	---	---	15.1	17.3	8.0	---	---
---	2.0	3.5	5.9	6.8	8.0	---	---

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# Family Planning Indicators

Indicator	Year				
	1991	1992	1993	1994	1995
Percent of live births due to unintended pregnancies	43.0	46.0	43.0	43.0	41.0
Teenage births per 1,000 females					
Ages 15 - 17 years	37.8	35.2	34.2	33.7	30.6
Ages 18 - 19 years	126.0	123.3	112.5	111.9	101.2
Teenage births (ages 15 - 19 years) per 1,000 females					
Overall	70.9	68.0	62.4	61.6	55.6
White adolescents	57.1	55.8	48.5	50.0	41.3
Alaska Native adolescents	120.3	114.6	104.3	99.5	98.3
Percent of high school youth (grades 9-12) who have ever engaged in sexual intercourse					
Boys	---	---	---	---	47.8
Girls	---	---	---	---	46.4
Ages ≤ 15 years	---	---	---	---	34.8
Ages 16 - 17 years	---	---	---	---	49.6
Ages 18+ years	---	---	---	---	68.4
Percent of middle school youth (grades 7-8) who have ever engaged in sexual intercourse	---	---	---	---	23
Percent of sexually active high school youth that used contraception at most recent intercourse					
Boys	---	---	---	---	75.0
Girls	---	---	---	---	66

1 HA—Healthy Alaskans; HP—Healthy People

# Healthy Alaskans 2000

Year					HA <sup>1</sup> 2000 Target	HP <sup>1</sup> 2000 Target	U.S. Value (Year)
1996	1997	1998	1999	2000			
42.0	41.0	43.0	42.5	43.2	<25	30.0%	49 (1995)
26.9	26.2	26.4	26.5	24.3	<25	---	26.9 (2000)
96.4	94.2	88.3	85.0	97.3	<90	---	78.1 (2000)
51.6	50.3	48.4	47.8	49.0	<50	---	47.7 (2000)
39.8	38.4	36.9	33.8	---	---	---	43.2 (2000)
89.3	83.7	86.0	85.5	---	---	---	58.3 (2000)
---	---	---	42.2	---	---		52.2 (1999)
---	---	---	43.8	---	---		47.7 (1999)
---	---	---	27	---	35		---
---	---	---	51	---	40		---
---	---	---	59	---	---		---
---	---	---	16	---	---		---
---	---	---	71.0	---	>80		81 (1997)
---	---	---	73.0	---	>80		85 (1997)

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# Healthy People 2010

Indicator Objectives	Data Source	Estimate Year(s)	Alaska 2010 Target <sup>1</sup>
Reduce fetal and infant deaths	BVS		
Fetal deaths at 20 or more weeks of gestation per 1,000 live births and fetal deaths		4.2 (1994-98)	3.8
Reduce infant deaths	BVS		
All infant deaths (within 1 year)		7.4 (1994-98)	4.5
Neonatal deaths (within the first 28 days of life)		3.7 (1994-98)	2.5
Postneonatal deaths (between 28 days and 1 year)		3.7 (1994-98)	2.3
Reduce infant deaths due to:	MIMR		
All reportable birth defects		1.8 (1993-7)	1.5
SIDS and unexplained asphyxial deaths (SUIDS)		1.7 (1993-97)	1.0
Reduce child deaths	BVS		
Children ages 1 - 4 years		50.4 (1994-98)	34.0
Children ages 5 - 9 years		23.2 (1994-98)	17.0
Reduce adolescent and young adult deaths	BVS		
Adolescents ages 10 - 14 years		31.0 (1994-98)	14.0
Adolescents ages 15 - 19 years		112.9 (1994-98)	70.0
Young adults ages 20 - 24 years		170.6 (1994-98)	90.0
Reduce maternal deaths	MIMR		
Pregnancy - associated deaths		53.1 (1990-99)	50.0
Pregnancy - related deaths		7.4 (1990-99)	4.0
Increase maternal prenatal care	BVS		
Beginning in first trimester of pregnancy		80.5 (1998)	85.0
Adequate prenatal care* (APNCU index)		80.5 (1998)	75.0
Reduce low and very low birth weight	BVS		
Low birth weight (LBW)		4.6 (1994-98)	4.0
Very low birth weight (VLBW)		1.1 (1994-98)	0.8
Reduce preterm births	BVS		
Total preterm (<37 wks gestation)		9.6 (1994-98)	8.6
Increase percentage of infants put down to sleep on their backs	PRAMS		
Total infants put down to sleep on their backs		59 (1998)	70.0
Reduce spina bifida and other neural tube defects	ABDR		
Neural tube defects per 10,000 live births		8.3 (1996-98)	5.0
Increase in the proportion of women who take folic acid in vitamins, pills or supplements	Alaska Folic Acid Survey #1		
Women of childbearing age, aged 15 - 44 years, who know they consume vitamin supplements containing folic acid		41 (1999)	75.0

# Healthy People 2010

Indicator	Data Source	Estimate Year(s)	Alaska 2010 Target <sup>1</sup>
Objectives			
Cigarette smoking (last 3 months of pregnancy)	PRAMS	18.7 (1998)	15.0
Marijuana (during pregnancy)		4.1 (1998)	3.5
Cocaine (during pregnancy)		.2 (1998)	0.0
Reduce fetal alcohol syndrome	FAASP		
Children with fetal alcohol syndrome		1.2 (1996-98)	0.5
Increase mothers who breastfeed	PRAMS		
Ever initiated breastfeeding		88 (1998)	95.0
Breastfeeding at 1 month postpartum		75 (1998)	
Decrease the proportion of live births that occur as a result of an unintended pregnancy	PRAMS		80.0
Live births resulting from unintended pregnancy		43 (1998)	35.0
Reduce the proportion of births occurring within 24 months of a previous birth.	BVS		
Increase the proportion of people who use contraception that are over age 18 and at risk of unintended pregnancies	BRFSS		
Females over 18 using contraception		70 (1998)	85.0
Reduce the proportion of females delivering live births despite use of a reversible contraceptive method	PRAMS		
Females delivering live births despite using a reversible contraception method		23 (1998)	10.0
Increase access to emergency contraception through health care providers, pharmacies and telephone protocol.	Alaska Emergency Contraception Project		
Reduce births among adolescent females	BVS		
Births to females ages 15 - 17 years		26.5 (1998)	25.0
Increase adolescents never engaging in sexual intercourse before age 15	YRBS		
High school students		77 (1999)	85.0
Middle school students		84 (1999)	90.0
Increase percent of adolescents never engaging in sexual intercourse	YRBS		
High school students		57 (1999)	65.0
Increase contraceptive use at last intercourse by high school students	YRBS		
Percent of high school students using condom at last intercourse		56 (1999)	75.0
Percent of high school students using condom or hormonal method at last intercourse		70 (1999)	85.0

\*Three-year moving average for Alaska data

\*\*Four year average for Alaska data

<sup>1</sup> Healthy People 2010 targets were adjusted to better reflect Alaska goals.

# MCHB Reporting Requirements

State Performance Measures		
State Performance Measure #	Indicator	Estimate (Year)
1	Percentage of Unintended Births (Risk Factor)	42.5 (1999)
2	Rate of substantiated reports of harm to children per hundred children age 0 to 18. (Risk Factor)	20.6 (2001)
3	Percentage of Women Who Smoke Prenatally. (Risk Factor)	16.6 (1999)
4	Percentage of Women Who Drink Prenatally. (Risk Factor)	4.4 (1999)
5	Percentage of Women experiencing Physical Abuse by husbands/partners surrounding prenatal period. (Risk Factor)	5.5 (1999)
6	Percentage of mother putting infant down to sleep in the supine position (on their backs). (Risk Factor)	60.5 (1999)
7	Percentage of people experiencing intimate partner violence during their lifetime. (Risk Factor)	23 (1999)
8	Percentage of people who eat five or more daily servings of vegetables and fruits. (Risk Factor)	23.7 (2000)
9	The prevalence at of birth of neural tube defects per 10,000 live births. (Risk Factor)	9.4 (2000)
10	Percentage of high school youth who feel supported at school. (Risk Factor)	42.6 (1998)

National Outcome Measures		
National Outcome Measure #	Indicator	Estimate (Year)
1	Infant mortality rate per 1,000 live births.	6.6 (1996-2000)
2	The ratio of the black infant mortality rate to the white infant mortality rate.	1.7 (1996-2000)
3	Neonatal mortality rate per 1,000 live births.	3.3 (1996-2000)
4	Postneonatal mortality rate per 1,000 live births.	3.4 (1996-2000)
5	Perinatal mortality rate per 1,000 live births plus fetal deaths.	7.2 (1996-2000)
6	Child death rate per 100,000 children aged 1 through 14.	30.2 (1996-2000)

# MCHB Reporting Requirements

National Performance Measures		
National Performance Measure #	Indicator	Estimate (Year)
1	Percent of State SSI beneficiaries less than 16 years old receiving rehabilitative services from the State CSHCN* Program. (Capacity)	0.0 (2001)
2	The degree to which the State CSHCN* Program provides or pays for specialty and sub-specialty services, including care coordination, not otherwise accessible or affordable to its clients. (Capacity)	6 (2001)
3	Percent of CSHCN* in the State who have a "medical/health home". (Capacity)	9.6 (2001)
4	Percent of newborns in the State with at least one screening for each of PKU, hypothyroidism, galactosemia, hemoglobinopathies [(e.g. the sickle cell disease) (combined)]. (Risk Factor)	99.7 (2001)
5	Percent of children through age 2 who have completed immunizations for Measles, Mumps, Rubella, Polio, Diphtheria, Tetanus, Pertussis, Haemophilus Influenza, Hepatitis B. (Risk Factor)	70.6 (2000)
6	Birth rate for teenagers ages 15 through 17 (per 1,000). (Risk Factor)	24.1 (2000)
7	Percent of third grade children who have received protective sealants on at least one permanent molar tooth. (Risk Factor)	17.2 (2001)
8	Death rate to children ages 14 years and younger caused by motor vehicle crashes (per 100,000). (Risk Factor)	5.3 (1998-2000)
9	Percent of mothers who breastfeed their infants at hospital discharge. (Risk Factor)	89 (1999)
10	Percent of newborns who have been screened for hearing impairment before hospital discharge. (Risk Factor)	61.2 (2001)
11	Percent of CSHCN* in the State CSHCN* program with a source of insurance for primary and specialty care. (Capacity)	86.1 (2001)
12	Percent of children without health insurance. (Capacity)	17.3 (2000)
13	Percent of potentially Medicaid-eligible children who have received a service paid by the Medicaid Program. (Process)	83.7 (2001)
14	The degree to which the State assures family participation in program and policy activities in the State CSHCN* program. (Process)	15 (2001)
15	Percent of very low birth weight births. (Risk Factor)	0.8 (2000)
16	Suicide rate for youths ages 15 through 19 (per 100,000). (Risk Factor)	40.3 (1998-2000)
17	Percent of very low birth weight infants delivered at facilities for high-risk deliveries. (Risk Factor)	69.6 (2000)
18	Percent of infants born to pregnant women receiving prenatal care beginning in the first trimester. (Risk Factor)	80.5 (2000)

\*Children with Special Health Care Needs



# Appendix



# Acronyms

ABDR: Alaska Birth Defects Registry

AFASSP: Alaska Fetal Alcohol Syndrome Surveillance Project

APNCU: Adequate Prenatal Care Utilization

BCHC: Breast and Cervical Health Check

BMI: Body Mass Index

BRFSS: Behavioral Risk Factor Surveillance System

BVS: Alaska Bureau of Vital Statistics

CSHCN: Children with special health care needs

DNA: Data not available

DNC: Data not collected

DTP: Diphtheria, tetanus, pertussis

EPSDT: Early and Periodic Screening, Diagnosis and Treatment

ETS: Environmental Tobacco Smoke

FAS: Fetal Alcohol Syndrome

FASSP: Alaska Fetal Alcohol Syndrome Surveillance Project

FASSNET: Fetal Alcohol Syndrome Surveillance Network

HA: Healthy Alaskans

HiB: Haemophilus influenza

HIV: Human Immunodeficiency Virus

HP: Healthy People

HRSA: Health Resources and Services Administration

LBW: Low Birth Weight

MCFH: Alaska Section of Maternal, Child and Family Health

MCH: Maternal and Child Health

MCHB: Federal Maternal and Child Health Bureau

MIMR: Alaska Maternal - Infant Mortality Review

MMR: Measles, mumps, rubella

NCHS: National Center for Health Statistics

NTD: Neural tube defect

OPV: Oral polio vaccine

PRAMS: Pregnancy Risk Assessment Monitoring System

SIDS: Sudden Infant Death Syndrome

VLBW: Very Low Birth Weight

WIC: Supplemental Nutrition Program for Women, Infants and Children

YRBS: Youth Risk Behavior Survey

# Glossary

**Adequate Prenatal Care:** This measure is calculated using the Kotelchuck Index, also known as the Adequate Prenatal Care Utilization (APNCU) Index. It assesses prenatal care based upon the following birth certificate information: trimester of entry, number of prenatal visits, and gestational age of infant at birth.

**Adolescent:** Age from 10 through 14 years.

**Alaska Native:** This race category includes Alaska Natives and American Indians for purposes of this publication.

**Binge Drinking:** Five or more alcoholic drinks in a sitting.

**Body Mass Index:** Body Mass Index (BMI) measures one's height to weight ratio. It is calculated by the person's weight in kilograms divided by the square of the height in meters. Specific classifications are given below.

Underweight	$\text{BMI} < 19.8 \text{ kg/m}^2$
Normal weight	$19.8 \leq \text{BMI} < 25 \text{ kg/m}^2$
Overweight	$25 \leq \text{BMI} < 30 \text{ kg/m}^2$
Obese	$\text{BMI} \geq 30 \text{ kg/m}^2$

**Child:** Age from one through nine years.

**Childbearing Age:** Women who are between the ages of 15 through 44 years.

**Children with special health care needs (CSHCN):** Those children who have or are at increased risk for chronic physical, developmental, behavioral, or emotional conditions and who require health and related services of a type or amount beyond that required by children generally. Includes children from birth to 21 years old.

**Controlling partner:** Husband or partner threatens the woman, limits activities against the woman's will, or makes the woman feel unsafe in any other way.

**Death Year Cohort:** This method is used to calculate all infant mortality rates. This method uses the number of deaths to infants <1 year as a numerator and the number of births for the same year as a denominator.

**Fetal Alcohol Syndrome (FAS):** FAS is caused by maternal alcohol use during pregnancy and diagnosed on the basis of a combination of growth deficiency, central nervous system dysfunction, facial dysmorphology and maternal alcohol use during pregnancy. In this publication FAS is defined using the Fetal Alcohol Syndrome Surveillance Network (FASSNet) criteria for a case and probable case of FAS. The surveillance case definition was based on criteria from the 1996 Institute

of Medicine report on FAS and adapted for use by FASSNet.

**Fetal Period:** Period of time from 20 weeks gestation to 7 days after birth.

**Infant:** Age from birth up to one year.

**Low Birth Weight (LBW):** An infant, at time of birth, weighing less than 2500 grams, or 5.5 pounds.

**Moving Average:** Using moving averages helps to smooth out the year to year variability that is often observed when dealing with small numbers. This smoothing technique increases the stability of the rate so that trends can be more easily detected and more meaningful comparisons can be made. An example of a three-year moving average for the year 1991, the rate is comprised of data from 1989-1991; 1992 is comprised of data from 1990-1992, and so forth.

**Neonatal Period:** Period of time from birth up to 28 days after birth.

**Normal weight:** See Body Mass Index

**Obese/ Obesity:** See Body Mass Index

**Overweight:** See Body Mass Index

**Physical abuse:** Pushing, hitting, slapping, kicking, or any other way of physically hurting someone. (Definition used for the PRAMS Phase 3 data source during 1996-1999. Data collection in 2000 added the term “choke”. Data collection from 1991-1996 [Phase 2 data only] left the burden of interpretation of being “physically hurt” up to the respondent.)

**Post-neonatal Period:** Period of time from 28 days up to 1 year of age.

**Postpartum Period:** The period of time from birth up to 6-weeks after birth.

**Pregnancy-Associated Death:** Female death that occurs during pregnancy or within one year of pregnancy, due to any cause.

**Pregnancy-Related Death:** A pregnancy-associated death that is caused by conditions directly related to pregnancy and childbirth.

**Pregnancy Risk Assessment Monitoring System (PRAMS):** PRAMS is a

# Glossary

population-based survey of Alaska resident women who have recently delivered a live-born infant. It was initiated by the State of Alaska Division of Public Health, Section of Maternal, Child and Family Health in late 1990. PRAMS was developed by the Centers for Disease Control and Prevention (CDC) Division of Reproductive Health to gather information on the health risk behaviors and circumstances of pregnant and postpartum women. It is currently active in 33 states.

A systematic, stratified sampling approach is used to select approximately 160 mothers of newborns each month from the State of Alaska's live birth records for infants between two and six months of age. Questions cover the prenatal and postpartum period. Up to three mailed questionnaires are used to solicit a response. Phone follow-up for women who do not respond by mail was first initiated in 1997. Prevalences reflect statewide estimates for Alaska-resident women delivering a live-born infant during the specified time period. The response rate for the year 2000 was 80%.

**Prenatal Care:** Health care services provided to a woman between conception and delivery that are pregnancy-related.

**Preterm Birth:** Birth occurring at less than 37 weeks gestation.

**Prevalence:** Prevalence measures the number of people in a specified population that have the given characteristic at a given time.

**Rate Ratio:** The rate ratio expresses the relationship between two rates in the form of  $x : y$  or  $x/y$ . A rate ratio equal to one indicates that there is no difference in the two rates being compared.

**Rate:** A rate is defined as the number of events in a specified time period divided by the number of people in the population in a specified period.

**Sexual assault:** Someone close to the woman forced her to have sexual activities when she did not want to.

**Sudden Infant Death Syndrome (SIDS):** Sudden, unexplained death of an infant from an unknown cause.

**Teen:** Age from 15 through 19 years.

**Underweight:** See Body Mass Index

**Very Low Birth Weight (VLBW):** An infant, at time of birth, weighing less than

1500 grams, or 3.3 pounds.

# Indicator Definitions

## **Crude Birth Rate**

Crude birth rate is expressed as the number of births to females in the population per 1,000.

*Numerator:* Number of births to females.

*Denominator:* Total number of females.

*Data Source:* Alaska Bureau of Vital Statistics, 1980-2000.

## **Fertility (ages 15-44 years)**

Fertility rate is expressed as the number of births to females of childbearing age (ages 15-44 years) per 1,000 females in that age group.

*Numerator:* Number of live births to females of childbearing age (15-44 years).

*Denominator:* Total number of females in age group.

*Data Source:* Alaska Bureau of Vital Statistics, 1980-2000.

## **Live Births Despite Use of a Contraceptive Method**

Percent of mothers of newborns who indicated that they were doing something to keep from getting pregnant when they got pregnant with their new baby. Methods defined for the respondent were rhythm, use of the pill, Norplant®, shots (Depo-Provera®), condoms, diaphragm, foam, IUD, having their tubes tied, or their partners having a vasectomy.

*Numerator:* Number of women who indicated that they were doing something to keep from getting pregnant when they got pregnant with their new baby.

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 2000.

## **Unintended Pregnancies**

Percent of women who delivered a live-born infant who had a mistimed or unwanted pregnancy.

*Numerator:* Number of women who indicated, postpartum, that just before getting pregnant, they wanted to be pregnant either later or never.

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS),

1991-2000.

### **Mothers Receiving Adequate Prenatal Care**

Percent of mothers receiving adequate prenatal care. This measure is calculated using the Adequate Prenatal Care Utilization (APNCU) Index. It assesses prenatal care based upon the following birth certificate information: trimester of entry into prenatal care, number of prenatal visits, and gestational age of infant at birth.

*Numerator:* Number of women receiving adequate prenatal care as defined by APNCU Index.

*Denominator:* Total number of live births.

*Data Source:* Alaska Bureau of Vital Statistics, 1991-2000.

### **Mothers Receiving Prenatal Care in the First Trimester**

The percent of mothers receiving prenatal care in the first trimester.

*Numerator:* Number of women receiving prenatal care in the first trimester.

*Denominator:* Total number of live births.

*Data Source:* Alaska Bureau of Vital Statistics, 1991-2000.

### **Prenatal Screening for Domestic Violence**

Percent of women who were screened prenatally for domestic violence.

*Numerator:* Number of women who indicated, postpartum, that their prenatal care provider ever asked whether they had been hurt or threatened by their partner.

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-1999.

### **Medicaid Coverage for Prenatal Care**

Percent of women who indicated Medicaid paid for a portion of their prenatal care.

*Numerator:* Number of women who indicated Medicaid paid either in part or in whole for their prenatal care.

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1991-2000.

# Indicator Definitions

## **Prenatal WIC Participation**

Percent of women who participated in the WIC program during their pregnancy.

*Numerator:* Number of women who indicated that they were on WIC (the special supplemental nutrition program for women, infants, and children) during their pregnancy.

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1991-2000.

## **Knowledge of Folic Acid Benefits**

Percent of women who had heard or read that taking the vitamin folic acid can help prevent some birth defects.

*Numerator:* Number of women who indicated they had heard or read that taking the vitamin folic acid can help prevent some birth defects.

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-2000.

## **Prenatal Physical Abuse by Husband/Partner**

Percent of women who were physically abused by their husband or partner during their pregnancy.

*Numerator:* Number of women who indicated their husband or partner physically abused them (i.e. pushed, hit, slapped, kicked, or otherwise hurt them) during their pregnancy. (NOTE: Data collection in 2000 added the term “choked”.)

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-2000.

## **Prenatal Substance Use**

### **Alcohol (Any Use)**

Percent of women who consumed any alcohol during the last 3 months of their pregnancy.

*Numerator:* Number of women who drank any alcohol during the last 3 months of their pregnancy.

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1991-2000.

### **Alcohol (Binge)**

Percent of women who consumed 5 or more alcoholic drinks in one sitting during the last 3 months of their pregnancy.

*Numerator:* Number of women who drank 5 alcoholic drinks or more in one sitting during the last 3 months of their pregnancy.

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-2000.

### **Tobacco**

Percent of women who smoked cigarettes during the last 3 months of their pregnancy.

*Numerator:* Number of women who smoked cigarettes during the last 3 months of their pregnancy. (NOTE: The question was asked of women who had smoked at least 100 cigarettes in their lifetime. Data collection in 2000 changed the time frame for smoking at least 100 cigarettes ever to the past two years.)

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1991-2000.

### **Smokeless Tobacco**

Percent of women who used smokeless tobacco (chew or snuff) during pregnancy.

*Numerator:* Number of women who used smokeless tobacco (chew or snuff) during pregnancy.

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS),

# Indicator Definitions

1996-2000.

## **Marijuana**

Percent of women who used marijuana during pregnancy.

*Numerator:* Number of women who used marijuana during pregnancy.

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1991-2000.

*(Percentages presented for 1996 are Phase 3 data.)*

## **Cocaine**

Percent of women who used cocaine during pregnancy.

*Numerator:* Number of women who used cocaine during pregnancy.

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1991-2000.

*(Percentages presented for 1996 are Phase 3 data.)*

## **Infant Mortality**

Infant mortality is expressed as the number of deaths to infants less than one year of age per 1,000 live births. All infant mortality rates were calculated using the death year cohort method. Due to the small number of events experienced in Alaska, infant mortality rates are presented in three-year moving averages. Infant's race is determined by mother's race as listed on the infant's birth certificate. If race is unknown it is excluded from the denominator.

*Numerator:* Number of deaths to infants less than one year of age.

*Denominator:* Total number of live births.

*Data Source:* Alaska Bureau of Vital Statistics, 1989-2000.

## **Neonatal Mortality**

Neonatal mortality is expressed as the number of deaths to infants from birth up to 28 days of age per 1,000 live births. All infant mortality rates were calculated using the death year cohort method. Due to the small number of events experienced in Alaska, neonatal mortality rates are presented in three-year moving

averages. If race is unknown it is excluded from the denominator.

*Numerator:* Number of deaths to infants from birth up to 28 days of age.

*Denominator:* Total number of live births.

*Data Source:* Alaska Bureau of Vital Statistics, 1989-2000.

### **Post-neonatal Mortality**

Post-neonatal mortality is expressed as the number of deaths to infants from 28 days to less than one year of age per 1,000 live births. All infant mortality rates were calculated using the death year cohort method. Due to the small number of events experienced in Alaska, post-neonatal mortality rates are presented in three-year moving averages. If race is unknown it is excluded from the denominator.

*Numerator:* Number of deaths to infants ages 28 days to less than one year.

*Denominator:* Total number of live births.

*Data Source:* Alaska Bureau of Vital Statistics, 1989-2000.

### **Fetal Mortality**

Fetal mortality is expressed as the number of deaths from 20 weeks gestation up to 7 days of age per 1,000 live births. All infant mortality rates were calculated using the death year cohort method. Due to the small number of events experienced in Alaska, fetal mortality rates are presented in three-year moving averages. If race is unknown it is excluded from the denominator.

*Numerator:* Number of deaths from 20 weeks gestation up to 7 days of age.

*Denominator:* Total number of live births.

*Data Source:* Alaska Bureau of Vital Statistics, 1989-2000.

### **Low Birth Weight (LBW)**

The percent of infants born weighing less than 2,500 grams (5.5 pounds).

*Numerator:* Number of infants born weighing less than 2,500 grams.

*Denominator:* Total number of live births.

*Data Source:* Alaska Bureau of Vital Statistics, 1991-2000.

### **Very Low Birth Weight (VLBW)**

The percent of infants born weighing less than 1,500 grams (3.3 pounds).

# Indicator Definitions

*Numerator:* Number of infants born weighing less than 1,500 grams.

*Denominator:* Total number of live births.

*Data Source:* Alaska Bureau of Vital Statistics, 1991-2000.

## **Preterm Births**

The percent of infants born at less than 37 weeks gestation.

*Numerator:* Number of infants born at less than 37 weeks gestation.

*Denominator:* Total number of live births.

*Data Source:* Alaska Bureau of Vital Statistics, 1991-2000.

## **Fetal Alcohol Syndrome (FAS)**

The prevalence for FAS in Alaska is expressed as the number of cases of FAS per 1,000 live births. Infant's race is determined by mother's race as listed on the infant's birth certificate. Due to the small number of events experienced in Alaska, prevalence of FAS is presented in three-year moving averages.

Note: For the overall rate, approximately 18% of the total number of confirmed and probable FAS cases from 1995-1999 could not be matched to birth certificates, but were not excluded from the numerator when calculating the prevalence of FAS in Alaska. Possible reasons for the inability to match a birth certificate to a case in the database are out-of-state births, adoptions and duplications of children in the database.

*Numerator:* Number of confirmed or probable cases of FAS that meet the Fetal Alcohol Syndrome Surveillance Network (FASSNet) case definition.

*Denominator:* Total number of live births.

*Data Source:* Alaska Fetal Alcohol Syndrome Surveillance Project, 1995-1999.

## **Breastfeeding (Initiation)**

Percent of mothers of newborns who indicated that they had ever breast fed their newborn.

*Numerator:* Number of women who indicated they had ever breast fed their newborn.

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS),

1991-2000.

### **Breastfeeding (4 weeks)**

Percent of mothers of newborns who indicated that they had breastfed their newborn for at least 4 weeks.

*Numerator:* Number of women who indicated they had breastfed their newborn for at least 4 weeks.

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1991-2000.

### **Back-sleeping Infants**

Percent of mothers of newborns who indicated (on average, 3.5 months postpartum) that they most regularly put their infant down on his/her back.

*Numerator:* Number of women who indicated they most regularly put their infant down to sleep on his/her back.

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-2000.

### **Mother-Infant Co-sleeping**

Percent of mothers of newborns who indicated that they always or almost always, sometimes or never sleep with their infant in the same bed.

*Numerator:* Number of women who indicated they sleep with their infant in the same bed. (NOTE: Data collection in 2000 asks how often the mother or anyone else sleeps with the baby).

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1991-2000.

### **Exposure to Tobacco Smoke**

Percent of mothers of newborns who indicated (on average, 3.5 months postpartum) that their newborn was in the same room with someone who is smoking for any

# Indicator Definitions

positive length of time on an average day.

*Numerator:* Number of women who indicated that their newborn was in the same room with someone who is smoking for any positive length of time on an average day.

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-2000.

## **Child Mortality (ages 1-4 and 5-9 years)**

Mortality by manner of death for children ages 1-4 and 5-9 years is expressed as the number of deaths due to a specific cause to children per 100,000 children in these age groups. Due to the small number of events experienced in Alaska, child mortality rates are presented in three-year moving averages.

*Numerator:* Number of deaths among children ages 1-4 or 5-9 years.

*Denominator:* Total number of children ages 1-4 or 5-9 years.

*Data Source:* Alaska Bureau of Vital Statistics, 1989-2000.

## **Adolescent Mortality (ages 10-14 years)**

Mortality by manner of death for adolescents ages 10-14 years is expressed as the number of deaths due to a specific cause to children per 100,000 children in this age group. Due to the small number of events experienced in Alaska, adolescent mortality rates are presented in three-year moving averages.

*Numerator:* Number of deaths due to a specific cause among children ages 10-14 years.

*Denominator:* Total number of children ages 10-14 years.

*Data Source:* Alaska Bureau of Vital Statistics, 1989-2000.

## **Teen Mortality (ages 15-19 years)**

Mortality by manner of death for teens ages 15-19 years is expressed as the number of deaths due to a specific cause to teens per 100,000 in this age group. Due to the small number of events experienced in Alaska, teen mortality rates are presented in three-year moving averages.

*Numerator:* Number of deaths due to a specific cause among teens ages 15-19 years.

*Denominator:* Total number of teens ages 15-19 years.

*Data Source:* Alaska Bureau of Vital Statistics, 1989-2000.

### **Teen Births (ages 15-17 and 18-19 years)**

Teenage birth rate is expressed as the number of live births to females ages 15-17 or 18-19 years in the calendar year per 1,000 females in that age group in the calendar year.

*Numerator:* Number of live births to females ages 15-17 or 18-19 years.

*Denominator:* Total number of females ages 15-17 or 18-19 years.

*Data Source:* Alaska Bureau of Vital Statistics, 1991-2000.

### **Pregnancy-Associated Mortality**

Pregnancy-associated mortality rate, also known as pregnancy-associated mortality ratio, is expressed as the number of deaths that occur during pregnancy or within one year of pregnancy, due to any cause per 100,000 live births. Due to the small number of events experienced in Alaska, pregnancy-associated mortality rates are presented in five-year moving averages.

*Numerator:* Number of pregnancy-associated deaths.

*Denominator:* Total number live births.

*Data Source:* Alaska Maternal-Infant Mortality Review, 1990-1999.

### **Pre-pregnancy Overweight or Obesity**

Percent of women whose body mass index (as calculated from self-reported weight just before pregnancy and height) was at least 25 kg/m<sup>2</sup>.

*Numerator:* Number of women whose pre-pregnancy body mass index was 25 kg/m<sup>2</sup> or greater.

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1991-2000.

### **Physical Abuse by Anyone 12 Months Before Pregnancy**

Percent of women who indicated someone (i.e. husband/partner, a family or household member other than the husband/partner, a friend, or someone else)

# Indicator Definitions

physically abused them 12 months before pregnancy. Physical abuse was defined as pushing, hitting, slapping, kicking, or any other way of physically hurting someone.

*Numerator:* Number of women who experienced physical abuse by anyone 12 months before pregnancy.

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-1999.

## **Female Mortality (ages 15-44 years)**

Mortality by manner of death for females of childbearing age (15-44) is expressed as the number of deaths due to a specific cause to females per 100,000 in this age group. Due to the small number of events experienced in Alaska, female mortality rates are presented in three-year moving averages.

*Numerator:* Number of deaths due to a specific cause among females ages 15-44 years.

*Denominator:* Total number of females ages 15-44 years.

*Data Source:* Alaska Bureau of Vital Statistics, 1989-2000.

## **Physical Abuse in Last Two Years**

Percent of mothers of newborns who indicated that their husband or partner physically hurt them during the 12 months before delivery, including the months before they became pregnant or if they indicated they had been physically hurt by someone they were close to in the last two years.

*Numerator:* Number of women who experienced physical abuse by their husbands or partners 12 months before delivery of their newborn, including the time before the pregnancy or in the last two years had been physically hurt by someone they were close to. (NOTE: This indicator has been replaced with the percentage of women experiencing physical abuse by husbands/partners surrounding the prenatal period [12 months before or during pregnancy].)

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1991-1996.

(Phase 2 data only.)

## **Physical Abuse by Husband/Partner Surrounding the Prenatal Period**

Percent of women who indicated that their husband or partner physically abused them 12 months before or during pregnancy.

*Numerator:* Number of women who experienced physical abuse by their husband/partner 12 months before pregnancy or during pregnancy.

*Denominator:* Total number of Alaska-resident women who delivered a live-born infant.

*Data Source:* Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 1996-2000.



# Addendum October-03

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# Methodology

All statistical analyses were performed at a significance level of  $\alpha=.05$ . Any mention of a significant trend or significant difference between two groups implies that it is **statistically significant** at  $\alpha=.05$ .

## Trend Analyses

Trend analyses were performed using ordinary least squares regression of the natural log of the rate for years within a given time period. By convention, some trends (e.g., mortality rates) are graphed as three or five-year moving averages. However, all trend analyses are performed on the single year data, not the averaged data presented in the graph. Although the graphs of trends may show what appears to be a declining trend, it should be noted that these are moving averages and the decline may not be statistically significant since the regression is performed on single year data, not the averaged data.

## Percent Change

Percent change between two time periods is calculated as follows:

$$PC = \frac{(P_n - P_o)}{P_o} \times 100$$

where  $P_n$  = later time period  
 $P_o$  = earlier time period

## Rate Ratios

Rate ratios, the ratio of two rates, are used to compare rates for two populations – calculated as follows:

$$RR = \frac{(E_1 / P_1) \times 10^n}{(E_2 / P_2) \times 10^n} = \frac{Rate_1}{Rate_2}$$

where  $E_1$  = number of events occurring in population 1  
 $E_2$  = number of events occurring in population 2  
 $P_1$  = number of people in population 1 at risk of an event  
 $P_2$  = number of people in population 2 at risk of an event  
 $n$  = base for multiplier  
 $Rate_1$  = rate for population 1  
 $Rate_2$  = rate for population 2

so  $n = 3 \Rightarrow 10^3$  would give a rate per 1,000

Note: The multiplier,  $10^n$ , must be the same for both rates. A rate ratio of 1.0 indicates that there is no difference in the race-specific or age-specific rates for the two populations being compared. It is customary for the group of interest to be labeled as population 1 and the reference group as population 2, so, the group of interest is always in the numerator.

## Moving Averages

Moving averages are overlapping sequences of time periods that are used to smooth out the year-to-year variability that is often observed when dealing with small numbers. A general formula for calculating the first and second time periods using the moving average method is as follows:

$$MA = \frac{\sum_{P_i-(w-1)}^{P_i} events}{\sum_{P_i-(w-1)}^{P_i} pop} \times 10^n, \quad \frac{\sum_{P_{i+1}-(w-1)}^{P_{i+1}} events}{\sum_{P_{i+1}-(w-1)}^{P_{i+1}} pop} \times 10^n$$

where  $P_i$  = time period of interest  
 $w$  = width of interval  
 $n$  = base for multiplier  
 $pop$  = population

so  $w = 3$  would be a three-year moving average  
 $n = 3 \Rightarrow 10^3$  would give a rate per 1,000

**Ex.** The three-year moving average for the year 1991 is comprised of data from 1989-1991, 1992 is comprised of data from 1990-1992, and so forth. Using the formula, the rate per 1,000 for this example is:

$$\frac{(events_{1989} + events_{1990} + events_{1991})}{(pop_{1989} + pop_{1990} + pop_{1991})} \times 10^3, \quad \frac{(events_{1990} + events_{1991} + events_{1992})}{(pop_{1990} + pop_{1991} + pop_{1992})} \times 10^3$$

Examples using the methods found in this section can be found in:

Analytic Methods in Maternal and Child Health, Handler, A., Rosenberg D., Monahan, C., and Kennelly, J. (eds.), Maternal and Child Health Bureau, HRSA, DHHS, 1998.

To view this document on-line, please visit:

<http://www.uic.edu/sph/dataskills/publications/wrkbkpdfs/index.html>

## Chapter 1: Population Characteristics

### Crude Birth Rate (rate per 1,000)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Alaska	20.5	20.0	18.6	17.8	17.0	16.6	16.3	16.1	16.0	15.9
U.S.	16.3	15.9	15.5	15.2	14.8	14.7	14.5	14.6	14.5	14.4

## Chapter 2: Reproductive Health

### Fertility Rate (rate per 1,000 females ages 15-44 years)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Alaska	83.1	82.3	77.3	74.9	72.7	71.7	71.6	71.6	72.5	70.9
U.S.	69.3	68.6	67.3	66.3	65.2	64.9	64.5	65.4	65.9	67.7

### Unintended Pregnancies Among Women Delivering Live Births (percent)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Overall	42.5	45.5	43.5	42.6	40.8	41.6	40.5	42.8	42.5	43.2
Alaska Native	50.1	55.1	52.4	54.0	49.4	45.1	46.8	53.4	53.4	54.3

## Chapter 3: Prenatal Health

### Protective Behaviors

#### Prenatal Care (percent)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
First Trimester	82.6	83.1	83.4	84.7	83.7	81.2	81.1	82.0	79.9	80.5
Adequate/Adequate Plus	69.8	71.2	73.4	74.1	73.4	69.2	67.9	66.8	67.1	67.4

#### Prenatal Screening for Domestic Violence (percent)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Overall						28.2	30.1	37.9	42.3	
White						21.1	26.5	31.8	35.8	
Alaska Native						47.9	41.3	55.1	60.7	

## Chapter 3: Prenatal Health cont.

### Medicaid Coverage for Prenatal Care (percent)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Overall	28.2	29.7	31.3	33.3	32.6	32.4	36.0	35.2	39.0	41.1
White	25.7	25.2	26.0	28.2	27.9	25.3	30.5	28.0	31.4	34.6
Alaska Native	35.8	42.9	46.1	48.4	47.9	50.2	51.8	53.5	57.5	56.6

### Prenatal WIC Participation (percent)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Overall	29.7	30.7	32.6	33.2	42.3	44.4	41.4	47.9	47.0	48.5
White	22.5	24.1	25.2	26.1	35.0	37.0	35.4	40.3	39.7	39.8
Alaska Native	49.8	49.0	50.5	53.0	63.4	60.8	55.3	66.8	61.0	66.3

### Knowledge of Folic Acid Benefits (percent)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
White						72.5	78.8	81.4	85.8	89.2
Black						61.7	80.1	71.3	77.2	88.5
Alaska Native						39.5	48.6	48.4	60.9	62.3
Asian/Pacific Islander						40.2	53.0	41.4	52.0	61.1

### Risk Behaviors

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Prenatal Physical Abuse (percent)						5.6	4.0	3.8	4.1	5.2

### Any Prenatal Alcohol Use (last 3 months) (percent)

	10.3	10.9	7.7	7.4	6.6	6.4	6.6	4.3	4.4	5.3
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### Prenatal Tobacco Use (last 3 months) (percent)

	23.2	21.3	20.9	20.8	18.2	21.5	17.6	18.3	16.6	16.8
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### Prenatal Marijuana Use (percent)

	5.8	5.5	5.0	3.7	5.1	5.5	5.4	4.2	5.4	4.5
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\*Three-year moving average. See page 163 for definition of moving average.

## Chapter 4: Birth Outcomes

<b>Infant Mortality (rate per 1,000 live births)*</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
Infant	9.6	9.4	8.6	8.1	8.0	7.7	7.7	7.0	6.5	6.1
Neonatal	4.3	4.2	4.0	3.9	4.3	3.9	4.1	3.5	3.1	3.1
Post-Neonatal	5.3	5.2	4.6	4.2	3.7	3.7	3.6	3.6	3.4	3.0
<b>Fetal Mortality (rate per 1,000 live births plus fetal deaths)*</b>	5.2	5.4	5.2	4.6	4.3	4.5	4.4	4.4	4.5	4.7
<b>Low and Very Low Birth Weight (percent)</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
LBW	3.8	4.0	4.1	4.3	4.3	4.4	4.7	4.6	4.4	4.4
VLBW	0.6	0.8	0.8	0.7	0.8	0.8	1.0	0.8	0.7	0.7
<b>Preterm Births (&lt; 37 weeks) (percent)</b>	8.7	9.4	9.3	8.9	8.9	9.9	10.2	10.1	10.7	10.1
<b>FAS Prevalence (rate per 1,000 live births)*</b>										
Overall							1.7	1.6	1.2	
Alaska Native							5.9	5.3	4.1	

## Chapter 5: Infant Health

<b>Breastfeeding (percent)</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
Initiation After Delivery	79.1	77.6	83.8	83.7	84.2	85.5	86.4	87.9	89.0	88.8
4 Weeks Postpartum	67.8	66.4	70.4	69.1	72.5	74.3	75.3	75.5	77.3	79.0

### **Placing Infants to Sleep on Their Backs (percent)**

	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
Overall						40.9	48.5	59.3	60.4	66.6
White						43.7	50.0	61.6	62.0	68.0
Alaska Native						38.6	45.7	52.1	58.8	65.5

### **Mother-Infant Co-Sleeping (percent)**

	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
Always/Almost always	15.9	18.9	21.3	20.8	24.5	32.9	35.2	35.8	38.4	39.9
Sometimes	41.8	42.0	41.3	47.0	43.5	41.5	41.5	38.1	39.1	41.1
Never	42.2	39.2	37.4	32.3	32.1	25.6	23.3	26.1	22.5	19.1

### **Infant Exposure to Second-Hand**

<b>Smoke (percent)</b>						8.6	6.8	4.5	4.4	5.3
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\*Three-year moving average. See page 163 for definition of moving average.

## Chapter 6: Child Health

### Child Mortality by Cause of Death and Age (rate per 100,000)\*

#### All Causes

Ages 1-4 Years

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<b>All Causes</b>										
Ages 1-4 Years	56.4	50.9	51.9	54.5	55.3	52.0	56.0	48.3	45.7	43.7
Ages 5-9 Years	29.3	24.4	24.4	20.9	23.6	21.7	25.2	23.4	23.6	19.3
<b>Due to Unintentional Injury</b>										
Ages 1-4 Years	25.1	25.1	30.3	33.0	38.6	33.1	33.4	23.8	19.2	15.7
Ages 5-9 Years	18.2	15.7	16.5	14.4	17.1	13.5	15.8	12.9	13.6	10.2

56.4

29.3

25.1

18.2

50.9

24.4

25.1

15.7

51.9

24.4

30.3

16.5

33.0

14.4

38.6

17.1

33.1

13.5

33.4

15.8

23.8

12.9

19.2

13.6

15.7

10.2

Ages 5-9 Years

#### Due to Unintentional Injury

Ages 1-4 Years

Ages 5-9 Years

### Completed Combination

#### Immunization Series for Children 19-35

Months (percent)

Alaska

U.S.

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<b>Completed Combination</b>										
Immunization Series for Children 19-35										
Months (percent)										
Alaska					54.3	67.2	68.8	74.1	74.5	70.6
U.S.					55.1	67.7	68.5	72.7	73.2	72.8

54.3

55.1

67.2

67.7

68.8

68.5

74.1

72.7

74.5

73.2

70.6

72.8

## Chapter 7: Adolescent and Teen Health

### Adolescent Mortality by Cause of Death and Sex, Ages 10-14 Years (rate per 100,000)\*

#### All Causes

Overall

Male

Female

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<b>All Causes</b>										
Overall	35.1	34.1	38.4	36.8	37.8	28.4	33.6	32.0	27.8	26.9
Male	49.6	53.0	55.4	50.7	45.8	30.6	41.2	40.8	35.4	36.0
Female	19.5	13.6	20.0	21.9	29.2	26.0	25.6	22.7	19.9	17.2
<b>Due to Unintentional Injury</b>										
Overall	18.7	16.7	20.5	21.0	21.8	16.4	16.2	16.6	12.1	14.9
Male	24.1	26.5	33.0	30.4	28.5	19.6	20.6	20.4	13.0	20.9
Female	13.0	6.0	7.1	10.9	14.6	13.0	11.5	12.6	11.2	8.6

35.1

49.6

19.5

18.7

24.1

13.0

34.1

26.5

6.0

38.4

7.1

36.8

10.9

21.0

21.8

16.4

16.2

16.6

12.1

14.9

30.6

19.6

13.0

20.6

20.4

13.0

20.9

26.0

11.5

25.6

11.2

17.2

28.4

16.4

33.6

25.6

32.0

22.7

19.9

27.8

26.9

41.2

20.6

40.8

35.4

36.0

## Chapter 7: Adolescent and Teen Health cont.

\*Three-year moving average. See page 163 for definition of moving average.

### Teen Mortality by Cause of Death and

Sex, Ages 15-19 Years (rate per 100,000)\*

#### All Causes

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Overall	141.5	129.3	129.7	127.9	118.8	120.3	117.4	112.4	106.9	114.7
Male	200.7	185.6	178.9	189.2	173.3	191.6	183.0	175.0	156.5	160.7
Female	75.7	67.1	76.3	61.4	59.5	42.5	45.7	44.0	52.9	64.3

#### Due to Unintentional Injury

Overall	70.8	63.8	61.8	58.1	45.6	49.2	50.4	52.2	44.3	50.5
Male	107.2	96.2	86.9	85.7	67.1	82.3	77.8	80.5	62.1	65.3
Female	30.3	28.0	34.5	28.1	22.1	13.1	20.5	21.2	25.0	34.3

#### Due to Intentional Injury

All Intentional	56.4	51.4	57.4	60.6	59.4	53.9	47.4	45.0	42.9	45.8
Suicide	43.9	38.1	44.4	46.3	43.9	39.1	33.1	34.8	33.0	40.4
Homicide	12.5	13.3	13.1	14.3	15.5	14.8	14.3	10.2	9.8	5.5

Teen Birth Rate by Age and Race (rate per 1,000)

#### Overall

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
15-17 Years	37.8	35.2	34.2	33.7	30.6	26.9	26.2	26.4	26.5	24.3
18-19 Years	126.0	123.3	112.5	111.9	101.2	96.4	94.2	88.3	85.0	97.3
15-19 Years	70.9	68.0	62.4	61.6	55.6	51.6	50.3	48.4	47.8	49.0

#### Ages 15-19 Years

White	57.1	55.8	48.5	50.0	41.3	39.8	38.4	36.9	33.8	
Alaska Native	120.3	114.6	104.3	99.5	98.3	89.3	83.7	86.0	85.5	

\*Three-year moving average.  
 \*\*Five-year moving average.  
 See page 163 for definition of moving average.

## Chapter 8: Maternal Health

**Pregnancy-Associated Mortality (rate per 100,000)\*\***

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
				43.8	45.1	48.4	71.1	70.8	73.8	

**Pre-pregnancy Overweight or Obesity (percent)**

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Overall	26.8	27.7	29.6	30.8	32.0	37.3	32.3	37.6	39.4	41.2
White	25.0	26.9	28.8	29.0	32.1	36.1	30.2	36.3	36.9	38.1
Alaska Native	33.4	33.5	38.2	37.8	37.6	44.8	42.0	44.7	49.3	53.1

**Postpartum Tobacco Use (percent)**

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Overall	29.1	27.2	26.5	26.3	25.2	27.6	24.2	25.6	24.6	24.4
White	26.1	22.8	23.9	2	21.6	24.8	20.8	21.1	19.9	21.1
Alaska Native	43.2	46.8	41.8	39.2	40.4	42.6	38.6	42.6	41.7	37.1

**Physical Abuse (by Anyone) 12**

**Months Before Pregnancy (percent)**

	6.6	8.1	8.7	5.5
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## Chapter 9: Women's and Family Health

**Female Mortality, Ages 15-44 Years (rate per 100,000)\***

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
All Causes	100.5	97.2	99.4	95.5	97.2	97.0	104.3	104.0	107.0	104.0
Due to Unintentional Injury	31.9	32.0	30.2	28.6	24.7	26.1	24.7	22.8	23.8	27.0



**Live Births by Category and Census Area, Alaska, 1996 - 2000**  
**Alaska Pregnancy Risk Assessment Monitoring System (PRAMS)**

Census Area <sup>†</sup>	Births Resulting from an Unintended Pregnancy 1996-2000		Avg Births 1996-2000 Unmarried 13-19y.o.	
	n (average annual)	%	n	%
Anchorage	1482	40.1	304	76.5
Fairbanks NSB	526	38.6	100	63.0
Matanuska Susitna	332	47.9	62	72.7
Kenai Peninsula	282	47.5	41	62.0
Bethel	192	50.4	49	90.6
Juneau	130	36.7	21	96.9
Wade Hampton	114	56.6	42	95.1
Nome	92	53.8	35	97.9
Kodiak Island	82	31.0	16	50.7
Northwest Arctic B.	79	48.4	34	94.0
Valdez-Cordova	65	50.1	14	63.1
North Slope	62	56.8	23	92.3
Ketchikan Gateway	55	35.0	18	68.8
Dillingham	55	51.0	15	90.4
Sitka	44	34.2	5	59.0
Yukon-Koyukuk	43	45.5	23	87.8
Prince of Wales	33	44.4	6	100.0
SE Fairbanks	33	32.9	4	100.0
Wrangell-Petersburg	29	35.5	13	80.3
Aleutians West	20	74.3	1	100.0
Denali Borough	13	55.0	1	100.0
Aleutians East	13	38.9	4	100.0
Lake and Peninsula	10	39.7	6	100.0
Haines	9	51.3	0	0.0
Skagway/Hoonah/An	8	30.7	7	100.0
Bristol Bay	3	20.3	1	100.0
Yakutat	2	50.2	0	0.0
<b>Total (Alaska)</b>	<b>3809</b>	<b>42.1</b>	<b>842</b>	<b>76.6</b>

Note: Unintended means the pregnancy was wanted later or not wanted at all.

\* Alaska Bureau of Vital Statistics, 1999 Annual Report, pp.19-45, crude birth rate, all races. (Most recent data available.)

† Alaska Population Overview: 1999 Estimates; Alaska Dept. of Labor and Workforce Development, p. 106. (Alaska Boroughs and Census Areas Map.)

Avg Births 1996-2000 Married 13-19y.o.		Avg Births 1996-2000 Unmarried 20+y.o.		Avg Births 1996-2000	1997-99 Crude Birth Rate*
n	%	n	%	n	per 1,000 pop
93	23.5	909	20.5	3702	16.4
59	37.1	266	16.3	1364	17.2
23	27.3	215	26.1	693	12.9
25	38.0	158	21.7	593	13.6
5	9.4	181	36.8	380	26.5
1	3.1	111	25.3	355	13.3
2	4.9	120	48.4	202	31.3
1	2.2	100	52.4	171	22.4
15	49.3	64	19.8	264	18.8
2	6.1	110	58.6	163	26.3
8	36.9	30	21.5	130	12.7
2	7.7	68	56.2	109	19.9
8	31.2	46	24.4	158	13.6
2	9.6	48	36.1	108	21.7
3	41.0	30	19.1	130	12.9
3	12.2	55	50.7	96	18.1
0	0.0	25	24.8	75	13.3
0	0.0	29	22.2	102	15.9
3	19.8	20	22.7	80	12.5
0	0.0	17	46.4	27	7.8
0	0.0	12	41.0	24	10.6
0	0.0	19	48.7	33	10.0
0	0.0	8	27.7	25	17.3
2	100.0	7	31.8	18	9.8
0	0.0	8	31.5	26	9.3
0	0.0	4	16.6	16	15.8
0	0.0	7	69.7	5	7.3
<b>257</b>	<b>23.4</b>	<b>2668</b>	<b>24.5</b>	<b>9046</b>	<b>16.1</b>

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