



Women's, Children's, & Family Health



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Prenatal Tobacco Use in Alaska

Seriousness

Healthy People 2010 Targets and National Data

Indicator	Alaska 2002 [†]	Nation 2002 [^]	Healthy People 2010 Goal [*]
Proportion of pregnant women who smoke	17.7%	14.0%	1%
Proportion of pregnant women who use smokeless tobacco	5.0%	0.4%	None

- The prevalence of prenatal smoking in Alaska is significantly higher than the HP2010 goal of 1%.
- Approximately 1 in 6 Alaskan women reported that they smoked cigarettes during the last three months of their pregnancy – slightly higher than the U.S. as a whole.
- Approximately 1 in 20 Alaskan women reported prenatal smokeless tobacco use. Compared to data from a national survey, Alaskan women were much more likely to report prenatal smokeless tobacco use than women in the U.S. as a whole.

Severity

Accounting for 20-30% of all low birth weight births in the United States, prenatal cigarette smoking is the greatest known risk factor for low birth weight.^{1,2} Smoking during pregnancy is associated with infant mortality, miscarriages, preterm delivery, Sudden Infant Death Syndrome (SIDS), and respiratory problems in newborns.²

The effects of smokeless tobacco during pregnancy have been largely unstudied. A recent study indicates that prenatal smokeless tobacco use may be associated with increased risk of preterm delivery and pre-eclampsia.³ According to the Surgeon General, smokeless tobacco use is associated with oral cancer and oral leukoplakia. Studies have shown that it also increases the risk of tooth loss and periodontal disease.

Urgency

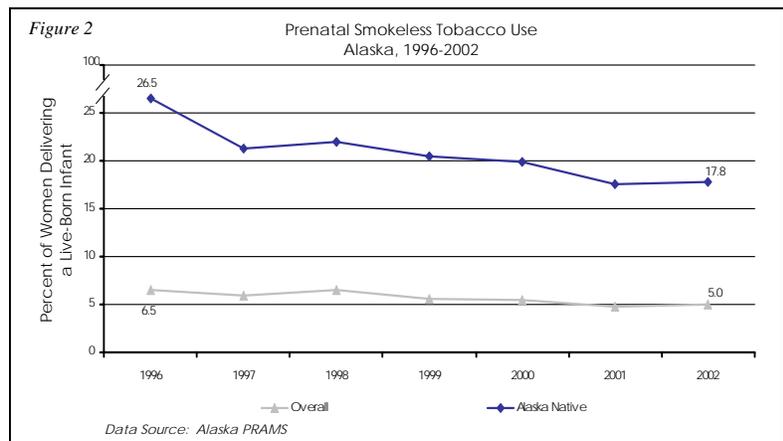
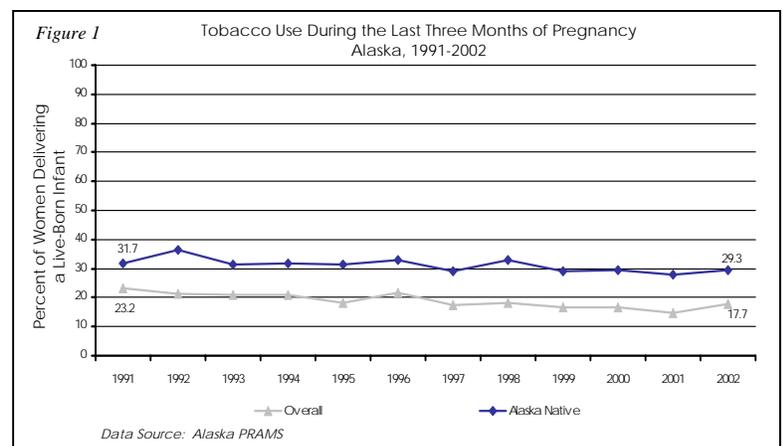
Tobacco Use (Cigarette Smoking)

- From 1991 to 2002, the prevalence of prenatal tobacco use has significantly decreased in Alaska – nearly 24% overall and 8% for Alaska Natives. (Figure 1)

- Among women who reported prenatal tobacco use in 2000, approximately 62% smoked less than half a pack a day – 50% smoked 1-9 cigarettes a day – during the last three months of their pregnancy, while 14% smoked a pack or more a day.⁴

Smokeless Tobacco Use

- From 1996-2002, there has been a significant decline in prenatal smokeless tobacco use in Alaska – nearly 30% overall and 34% for Alaska Natives. (Figure 2)



Disparities

Tobacco Use (Cigarette Smoking)

Analysis of Alaska Pregnancy Risk Assessment Monitoring System (PRAMS) data showed that race, maternal age, education, region, and Medicaid status were significantly associated with prenatal smoking during the last three months of pregnancy.

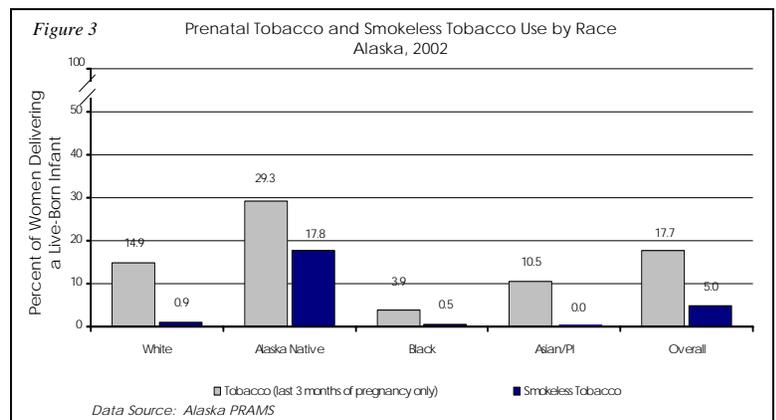
- Although the trend for maternal smoking among Alaska Natives has significantly declined, the prevalence has consistently remained nearly 2 times that of the overall prevalence. Alaska Native mothers had the highest prevalence of prenatal tobacco use of any race group – nearly 2 to 3 times that of white and Asian/Pacific Islander mothers.[†] (Figure 3)
- Young mothers, less than 25 years of age, were at greater risk of prenatal tobacco use than mothers 25 and older and teen mothers were twice as likely to report prenatal tobacco use as older mothers.[‡]
- Women with less than a high school education were 2 times as likely as women that completed high school and nearly 6 times as likely as women with at least some college to smoke tobacco prenatally.[‡]
- During 1999-2001, Alaskan women living in the Northern region were significantly more likely to smoke prenatally (41.1%) than any other region – they were 2 times as likely as women from the Southwest (20.4%) and approximately 4 times as likely than women from the Interior (11.2%) region.[‡]
- Alaskan women that had at least some prenatal care services paid by Medicaid were significantly more likely to smoke prenatally than women that did not use Medicaid to pay for prenatal care.[‡]

Smokeless tobacco use

Analysis of Alaska PRAMS data showed that race, education, region, and Medicaid status were significantly associated with prenatal smokeless tobacco use.

- Although the trend among Alaska Natives has significantly declined from 1996-2002, it is still nearly 4 times that of the state average. (Figure 2)
- In 2002, Alaska Native mothers were significantly more likely to report using smokeless tobacco while they were pregnant than white mothers – the prevalence was nearly 20 times higher. (Figure 3)
- Women that had not completed high school (11.9%) were nearly 2 times as likely to use smokeless tobacco as those that had completed high school (6.7%) and 40 times more likely than those with at least some college (0.3%).[‡]
- Women from the Southwest region were significantly more likely to use smokeless tobacco while they were pregnant (43.9%) – nearly 8 times that of women from the Northern region (6.1%) and more than 30 times that of women from the Interior, Anchorage/Mat-Su, Southeast, and Gulf Coast regions (from 1.2% to 1.5%).[‡]

- In 2001, smokeless tobacco use among Alaskan women that had prenatal care paid by Medicaid (9.2%) was 6.5 times higher than women that did not use Medicaid to pay for prenatal services (1.4%).[‡]



Economic Loss

In 1996, the CDC estimated that Alaska's health care costs for excess neonatal direct health care costs due to maternal smoking was \$540 per maternal smoker – this does not include costs incurred after the infants' initial hospital stay or costs associated with secondhand smoke.⁵

Interventions & Recommendations

Women who quit smoking before or during pregnancy reduce the risk of preterm delivery and low birth weight. Women who stop smoking by the first trimester have infants with weight and body measurements comparable with those of non-smokers. Studies also suggest that smoking in the third trimester is particularly detrimental.²

According to Alaska PRAMS 2000 data, 80% of postpartum women who smoked had a desire to quit smoking. The majority of these women (85.4%) cited the craving for a cigarette as the number one barrier to quitting smoking. If cost were not an issue, 74.2% would use a nicotine patch, gum, nasal spray, or inhaler to aid them in quitting smoking.⁴

A more in-depth analysis of PRAMS 2000 data showed that a significantly higher percentage of white women perceived cost and weight gain to be barriers to quitting smoking compared with Alaska Native women. In contrast, a significantly higher percentage of Alaska Native women perceived lack of support from others to quit smoking was a barrier compared with white women.⁶ Since addiction (craving) was the most cited barrier to quitting and a nicotine product was the most cited aid, dollars spent on actually providing a nicotine product to assist postpartum Alaskan women to quit may prove to be more successful than other intervention efforts.

Intervention Effectiveness

According to the 2004 Surgeon General's Report, eliminating maternal smoking may lead to a 10% reduction

in all sudden infant deaths and a 12% reduction in deaths from perinatal conditions.²

There are a growing number of proven and effective tobacco cessation interventions for women, and research shows that each dollar invested in smoking cessation programs for pregnant women saves \$2-\$3 in health care costs.⁷

Studies have shown that the occurrence of low birth weight could be reduced by an estimated 20% if all pregnant women were non-smokers.^{8,9} Women are more likely to stop smoking during pregnancy, both spontaneously and with assistance, than at other times in their lives. Since women are highly motivated to stop smoking during pregnancy, programs that encourage women to stop smoking before, during, and after pregnancy deserve high priority.²

Capacity

Propriety

Reducing risk factors associated with poor birth outcomes for Alaskan infants falls within the overall mission of the Women's, Children's, and Family Health (WCFH) Section. Prenatal tobacco use is an important issue among the maternal and child health population – national initiatives have been set forth to address prenatal substance use (HP2010) and the Maternal and Child Health Bureau requires that several indicators of poor birth outcomes that can be associated with prenatal alcohol, smoking, and other substance use (NPM#15, #17; NOM#1-5; and HSCI#1A-2B) are monitored and assessed on a yearly basis.

Economic Feasibility

Economic Feasibility was not evaluated.

Acceptability

Alaska PRAMS data showing decreasing trends in prenatal tobacco use and further data indicating that 80% of postpartum women want to quit smoking suggest that the target population is accepting of reducing prenatal tobacco use.

Resources

Data: Alaska PRAMS data can be used to better understand significant risk factors associated with prenatal tobacco use in Alaska and target prevention measures toward high-risk groups.

Legality

Not an issue.

References

- 1 U.S. Department of Health and Human Services. Healthy People 2010. 2nd ed. With understanding and improving health and objectives for improving health. 2 vols. Washington, DC: U.S. Government Printing Office. 2000.
- 2 U.S. Department of Health and Human Services. The Health Consequences of Smoking: A Report of the Surgeon General. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. 2004.

- 3 Safe Motherhood: Promoting Health for Women Before, During, and After Pregnancy. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. 2004.
- 4 Schoellhorn J, Wiens HN, Perham-Hester K. Alaska Maternal and Child Health Data Book 2003. Anchorage, AK: Maternal and Child Health Epidemiology Unit, Section of Maternal Child and Family Health, Division of Public Health, Department of Health and Social Services. pp 52-53, 132 June 2003.
- 5 Melvin CL, Adams EK, and Ayadi MF. State Estimates of Neonatal Health-Care Costs Associated with Maternal Smoking – 1996. CDC Surveillance Summaries, Oct 8, 2004. MMWR 53(39):915-917. 2004.
- 6 Perham-Hester KA. Postpartum Smoking Cessation Barriers And Aids For Alaskan Women. (poster presentation) Ninth Annual Maternal and Child Health Epidemiology Conference; Tempe, AZ: December 10, 2003.
- 7 Centers for Disease Control and Prevention. Health & Economic Impact: Smoking Cessation for Pregnant Women. July 2002.
- 8 Alameda County Low Birth Weight Study Group. Cigarette smoking and the risk of low birth weight: a comparison in black and white women. Epidemiology 1990;1(3):201-5.
- 9 Chnattingius S, Forman MR, Berendes HW, Graubard BI, Isotalo L. Effect of age, parity, and smoking on pregnancy outcome: a population-based study. American Journal of Obstetrics and Gynecology 1993; 168(1 Pt 1):16-21.

Data Sources

[†] Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 2002 Data: State of Alaska, DHSS, DPH.

[^] National Survey on Drug Use and Health, 2002. SAMHSA, Office of Applied Studies. (2003). Results from the 2002 National Survey on Drug Use and Health: National findings (DHHS Publication No. SMA 03-3836, NHSDA Series H-22). Rockville, MD: Substance Abuse and Mental Health Services Administration.

^{*} Healthy People 2010. U.S. Department of Health and Human Services. Healthy People 2010. 2nd ed. With understanding and improving health and objectives for improving health. 2 Vols. Washington, DC: U.S. Government Printing Office. 2000.

[‡] Alaska Pregnancy Risk Assessment Monitoring System (PRAMS), 2001 Data: State of Alaska, DHSS, DPH. Alaska Maternal and Child Health Data Book 2004: PRAMS Edition (in prep).

Notes

For Alaska PRAMS data note that prenatal tobacco use is cigarette smoking during the last three months of pregnancy for women that delivered a live-born infant. Prenatal smokeless tobacco is any use of smokeless tobacco during pregnancy for women that delivered a live-born infant.

National prenatal tobacco use is cigarette smoking during the last trimester among women ages 15-44 who were pregnant in their last trimester at the time they were surveyed. Prenatal smokeless tobacco is any use of smokeless tobacco during pregnancy among women ages 15-44 who were pregnant at the time they were surveyed.

Regional groupings are based on the Alaska Department of Labor Regions as shown in the map below.

