



AMERICAN INDIAN/ALASKA NATIVES & TOBACCO USE

Despite reductions in smoking prevalence achieved since the first Surgeon General's report on the consequences of smoking in 1964, smoking remains the leading cause of preventable death in the United States.¹ Smoking accounts for 480,000 deaths in the United States each year, and is a major risk factor for the four leading causes of death: heart disease, cancer, chronic obstructive pulmonary disease, and stroke.² American Indians and Alaska Natives (AI/AN), as a whole, have an especially high risk of suffering from tobacco-related death and disease because they have the highest prevalence of smoking compared to any other population group in the United States.

Smoking Among American Indian/Alaska Native Adults

American Indians and Alaska Natives (AI/AN) have a higher smoking rate than any other racial/ethnic subgroup. According to the 2017 National Health Interview Survey (NHIS) of adults ages 18 and over, 24.0 percent of AI/AN currently smoke.³ In comparison, 15.2 percent of Whites, 14.9 percent of African Americans, and 9.9 percent of Hispanics currently smoke. 14.0 percent of U.S. adults are current smokers.⁴

Within the AI/AN population, smoking rates can vary considerably from one tribe to another. According to a 2005 study, 14 percent of Southwest tribal members were smokers compared to a 50 percent smoking rate among Northern Plains tribal members.⁵ A 2010 study found that, despite a lack of tobacco-related tribal traditions, cigarette use was four times higher among Alaska Natives than American Indians in the Southwest United States (32 percent vs. 8 percent).⁶

According to the Centers for Disease Control and Prevention, AI/AN women have the highest rate of smoking during pregnancy of any racial or ethnic group. 16.7 percent of AI/AN women smoke during their pregnancy, compared to 10.5% of whites, 6.0% of African Americans, 1.8% of Hispanics, and 0.6% of Asian Americans.⁷ Tobacco use during pregnancy is one of the key preventable causes of adverse pregnancy outcomes.

Smoking Among American Indian/Alaska Native Youth

AI/AN high school students have traditionally had the highest smoking prevalence of all racial/ethnic groups. In 2017, 18.7 percent of AI/AN high school students were current smokers, compared to 11.1 percent of White, 4.4 percent of African American, 7.0 percent of Hispanic, and 2.2 percent of Asian American high school students are current smokers.^{8,9}

American Indian/Alaska Natives and Other Tobacco Use

In addition to having the highest smoking rate among all racial/ethnic groups, AI/ANs also have the highest prevalence of use of any tobacco product. According to the 2017 NHIS, 29.8% of AI/AN adults are current users of any tobacco product.¹⁰ While good current data is not available for smokeless tobacco, data from the 1991 NHIS indicated that prevalence of smokeless tobacco use has been highest among AI/AN men and women, compared to other racial/ethnic subgroups. In 1991, 5.4 percent of AI/AN adults (8.1 percent of men and 2.5 percent of women) were current smokeless tobacco users, compared to 2.9 percent for the overall U.S. population (5.6 percent of men and 0.6 percent of women).¹¹ More recently, a 2010 study noted disparities within the AI/AN population, following similar patterns to smoking rates. This study that from 2004-2007, 17.7 percent of Alaska Natives were current users of smokeless tobacco compared to 8.0 percent of American Indians in the Southwest United States.

According to aggregated data from the 1987 and 1991 NHIS, the prevalence of current pipe and cigar use has also been higher among AI/AN than among other racial/ethnic subgroups. However, the NHIS did not distinguish between ceremonial and addictive daily pipe smoking which may contribute to the higher prevalence rates among this group.¹²

Use of other tobacco products is higher among AI/AN high schools students compared to their peers. Prevalence of cigar smoking among AI/AN high school students (22.1%) is double that of every other racial/ethnic group. AI/AN high schools students also have the highest rate of e-cigarette use (30.2%). Nationally, 9.3 percent of AI/AN high school students are current smokeless tobacco users, compared to 9.3 percent of Whites, 4.5 percent of Hispanics, 3.7 percent of African Americans, and 3.2 percent of Asian Americans.¹³

Tobacco Use Health Consequences Among American Indian/Alaska Natives

Cancer is the second leading cause of death among AI/ANs.¹⁴ Each year, over 3,800 AI/ANs are diagnosed with a tobacco-related cancer and over 1,800 die from a tobacco-related cancer.¹⁵ Lung cancer is the second leading cause of cancer incidence and the leading cause of cancer death.^{16,17} From 2001-2009, the vast majority of lung cancer deaths (88 percent for men, 84 percent for women) were attributable to smoking among AI/AN over age 35 living in 637 Indian Health Service Contract Health Service Delivery Area (IHS CHSDA) counties.¹⁸ However, lung cancer rates among AI/ANs vary greatly by tribal region. Alaska and Northern Plains tribal members, who have the highest smoking prevalence among American Indians, also have the highest rates of lung cancer and heart disease.^{19,20} From 1994–1998, rates of lung cancer death among AI/ANs in the North Plains and Alaska regions were higher than the U.S. rate for all racial/ethnic populations combined.²¹ While lung cancer mortality has been declining among AI/AN men since 1997, rates continue to increase for AI/AN women.²²

The 2007 annual report on the status of cancer in the U.S. found that there is wide variation in AI/AN cancer surveillance, and that regional and tribe-specific data is needed to fully understand the disease burden among Indian tribes. Regional and tribal variations in cancer rates likely reflect geographic and tribal variations in risk factors and access to screening. For example, among AI/AN, regional lung cancer rates mirrored regional smoking prevalence rates.²³

Heart disease is the leading cause of death among AI/ANs, for which tobacco use is an important risk factor.²⁴ Heart disease death rates for AI/ANs show geographic disparities, with the highest rates occurring primarily in Northern Plains states, including North and South Dakota, as well as Wisconsin and Michigan.²⁵ The CDC estimates that racial/ethnic disparities for smoking-attributable mortality are most pronounced for cardiovascular disease. From 2001-2009, smoking-attributable mortality for ischemic heart disease, other heart disease and stroke for AI/AN women over age 35 was double that of White women, among those living in 637 HIS CHSDA counties.²⁶

Tobacco Industry Targeting of American Indian/Alaska Natives

As with other minority populations, the tobacco industry strategically targets AI/ANs. The industry has provided funding to cultural events like powwows and rodeos to build credibility. Additionally, the industry promotes brands like Natural American Spirit that use the cultural image of traditional American-Indian warriors.²⁷

Helping American Indian/Alaska Natives Quit Smoking

Since federally recognized tribes are considered sovereign nations, they are exempt from state taxation of tobacco products, making cigarettes cheaper on tribal lands. Recommendations for lowering the high rate of smoking-caused cancer and heart disease include reducing tobacco use among this community by better tailoring tobacco cessation and treatment programs to the AI/AN community, increasing tobacco product prices and increasing funding for tribal tobacco control programs.²⁸

Additional Sources of Information

- National Indian Health Board, <http://www.nihb.org>, and its Area Health Boards
- Native CIRCLE, American Indian/Alaska Native Cancer Information Resource Center and Learning Exchange, at Mayo Clinic, <http://www.mayo.edu/research/centers-programs/cancer-research/other-initiatives/native-populations>.
- Indian Health Service, http://www.ihs.gov/epi/index.cfm?module=epi_tobacco_main
- Bureau of Indian Affairs, <http://www.bia.gov/>
- Association of American Indian Physicians, <http://www.aaip.org/>

¹ *Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service*, PHS publication 1103, 1964, http://www.cdc.gov/tobacco/sgr/sgr_1964/sgr64.htm. McGinnis, JM, et al., "Actual causes of death in the United States," *Journal of the American Medical Association (JAMA)* 270:2207-2212, 1993.

² HHS, *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*, 2014, <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/>. CDC, "Deaths: Leading Causes for 2010," Table D, *National Vital Statistics Reports*, 62(6), December 20, 2013, http://www.cdc.gov/nchs/data/nvsr/nvsr62/nvsr62_06.pdf.

³ Centers for Disease Control and Prevention (CDC), "Tobacco Product Use Among Adults—United States, 2017," *MMWR* 67(44): 1225-1232, November 9, 2018, <https://www.cdc.gov/mmwr/volumes/67/wr/pdfs/mm6744a2-H.pdf>. Current smoking is defined as persons who reported having smoked ≥ 100 cigarettes during their lifetimes and, at the time of the survey, reported smoking every day or some days.

⁴ CDC, "Tobacco Product Use Among Adults—United States, 2017," *MMWR* 67(44): 1225-1232, November 9, 2018, <https://www.cdc.gov/mmwr/volumes/67/wr/pdfs/mm6744a2-H.pdf>.

⁵ Henderson, et al., "Correlates of Cigarette Smoking Among Selected Southwest and Northern Plains Tribal Groups: The AI-SUPERPPF Study," *American Journal of Public Health (AJPH)* 95:867-872, 2005.

⁶ Redwood, D, et al. "Differences in cigarette and smokeless tobacco use among American Indian and Alaska Native people living in Alaska and the Southwest United States," *Nicotine and Tobacco Research*, 12(7): 791-796, July 2010.

⁷ CDC, "Cigarette Smoking During Pregnancy: United States, 2016." NCHS Data Brief, 305, February 2018, <https://www.cdc.gov/nchs/data/databriefs/db305.pdf>.

⁸ CDC. *2015 High School Youth Risk Behavior Survey Data*. Available at <http://nccd.cdc.gov/youthonline/>. Accessed on June 20, 2016.

⁹ CDC, "Youth Risk Behavior Surveillance—United States, 2017," *MMWR*, 67(8), June 15, 2018.

<https://www.cdc.gov/healthyyouth/data/yrbs/pdf/2017/ss6708.pdf>. See also CDC, *2017 High School Youth Risk Behavior Survey Data*. Available at <http://nccd.cdc.gov/youthonline/>. Accessed on June 20, 2018. 8.8 percent of US high school students are current smokers. Another survey, the 2017 National Youth Tobacco Survey, using different methodology than the YRBS, found that 7.6% of US high school students smoke.

¹⁰ CDC, "Tobacco Product Use Among Adults—United States, 2017," *MMWR* 67(44): 1225-1232, November 9, 2018, <https://www.cdc.gov/mmwr/volumes/67/wr/pdfs/mm6744a2-H.pdf>.

¹¹ CDC, "Use of Smokeless Tobacco Among Adults—United States, 1991," *MMWR* 42(14):263-266, <http://www.cdc.gov/mmwr/PDF/wk/mm4214.pdf>.

¹² HHS, *Tobacco Use Among U.S. Racial and Ethnic Minority Groups, Report of the Surgeon General*, 1998, http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_1998/index.htm.

¹³ CDC, "Youth Risk Behavior Surveillance—United States, 2015," *MMWR*, 65(6), June 10, 2016.

http://www.cdc.gov/healthyyouth/data/yrbs/pdf/2015/ss6506_updated.pdf. See also CDC. *2015 High School Youth Risk Behavior Survey Data*. Available at <http://nccd.cdc.gov/youthonline/>. Accessed on June 20, 2016.

¹⁴ Deaths: Final Data for 2012. NVSR Volume 63, Number 9. 85 pp. (PHS) 2014 -1120. http://www.cdc.gov/nchs/data/nvsr/nvsr63/nvsr63_09.pdf

¹⁵ CDC, "Vital Signs: Disparities in Tobacco-Related Cancer Incidence and Mortality—United States, 2004-2013," *Morbidity & Mortality Weekly Report*, 65(44): 1212-1218, <http://www.cdc.gov/mmwr/volumes/65/wr/mm6544a3.htm>.

¹⁶ Kohler, BA, et al. "Annual Report to the Nation on the Status of Cancer, 1975-2011, Featuring Incidence of Breast Cancer Subtypes by Race/Ethnicity, Poverty, and State," *J Natl Cancer Inst*, 107(6).

¹⁷ American Cancer Society. *Cancer Facts and Figures 2014*. Atlanta: American Cancer Society, 2014.

¹⁸ Mowery, P.D., et al., "Disparities in Smoking-Related Mortality Among American Indian/Alaska Natives," *Am J Preve Med*, published online July 6, 2015.

¹⁹ HHS, *Tobacco Use Among U.S. Racial and Ethnic Minority Groups, Report of the Surgeon General*, 1998,

http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_1998/index.htm. Espey, D, et al. "Annual Report to the Nation on the Status of Cancer, 1975-2004, Featuring Cancer in American Indians and Alaska Natives," *Cancer*, 110(10):2119-52, November 2007. Henderson, et al., "Patterns of Cigarette Smoking Initiation in Two Culturally Distinct American Indian Tribes," *JAMA* 99:2020-2025, 2009. Casper, M., et al. "Atlas of Heart Disease and Stroke Among American Indians and Alaska Natives," 2005, http://www.cdc.gov/dhds/atlas/aijan_atlas/. CDC, "Cancer Mortality Among American Indians and Alaska Natives—United States, 1994-1998," 52(30):704-707, August 1, 2003, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5230a4.htm>.

²⁰ Plescia, M, et al. "Lung Cancer Death Rates Among American Indians and Alaska Natives, 1990-2009," *Am J Pub Health*, 104(53):S388-S395, 2014.

- ²¹ CDC, "Cancer Mortality Among American Indians and Alaska Natives—United States, 1994–1998," 52(30):704–707, August 1, 2003, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5230a4.htm>.
- ²² Plescia, M, et al. "Lung Cancer Death Rates Among American Indians and Alaska Natives, 1990-2009," *Am J Pub Health*, 104(53):S388-S395, 2014.
- ²³ Espey, D, et al. "Annual Report to the Nation on the Status of Cancer, 1975–2004, Featuring Cancer in American Indians and Alaska Natives," *Cancer*, 110(10):2119-52, November 2007.
- ²⁴ Deaths: Final Data for 2012. NVSR Volume 63, Number 9. 85 pp. (PHS) 2014 -1120. http://www.cdc.gov/nchs/data/nvsr/nvsr63/nvsr63_09.pdf. See also, HHS, *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*, <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/>; HHS, "Tobacco Use Among U.S. Racial and Ethnic Minority Groups, Report of the Surgeon General," 1998, http://www.cdc.gov/tobacco/data_statistics/sqr/sqr_1998/index.htm.
- ²⁵ Casper, M., et al. "Atlas of Heart Disease and Stroke Among American Indians and Alaska Natives," 2005, http://www.cdc.gov/dhdsp/atlas/aian_atlas/.
- ²⁶ Mowery, P.D., et al., "Disparities in Smoking-Related Mortality Among American Indian/Alaska Natives," *Am J Preve Med*, published online July 6, 2015.
- ²⁷ HHS, *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*, <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/>; HHS, "Tobacco Use Among U.S. Racial and Ethnic Minority Groups, Report of the Surgeon General," 1998, http://www.cdc.gov/tobacco/data_statistics/sqr/sqr_1998/index.htm.
- ²⁸ See, e.g., Espey, DK, et al., "Annual Report to the Nation on the Status of Cancer, 1975-2004, Featuring Cancer in American Indians and Alaska Natives," *Cancer* (DOI: 10.1002/cncr. 23044) Published online, October 15, 2007; Print issue date, November 15, 2007, <http://www3.interscience.wiley.com/cgi-bin/fulltext/116330621/HTMLSTARTW?CRETRY=1&SRETRY=0>.