Cancer Prevention and Early Detection Continues to be Suboptimal in the United States

Historical gains in smoking cessation undercut by social and geographic disparities

Cancer prevention and early detection measures show mixed progress, and substantial racial/ethnic, socioeconomic, and geographic disparities continue to exist according to the recent American Cancer Society (ACS) article on cancer prevention and early detection efforts in the United States in 2018 and 2019. All data was compiled prior to the COVID-19 pandemic.

This study, which appears in *Cancer Epidemiology, Biomarkers & Prevention*, a journal of the American Association for Cancer Research, and accompanies the ACS's biennial report, *Cancer Prevention & Early Detection Facts & Figures*, is one of the only sources that looks at major modifiable cancer risk factors, including tobacco use, obesity, diet and physical activity, HPV vaccination, ultraviolet radiation exposure, environmental exposure, and screening test use.

In 2021, an estimated 608,570 cancer deaths are expected to occur in the U.S. with about 45% attributable to modifiable risk factors, such as cigarette smoking, excess body weight, alcohol intake, physical inactivity, and unhealthy diet. Cigarette smoking alone accounts for nearly 30% of cancer deaths.

The article, led by Priti Bandi, PhD, reported a mixed picture with historic lows in smoking prevalence but suboptimal obesity, cancer screening, and HPV vaccination levels. Additionally, racial/ethnic, and socioeconomic status disparities persisted across most major modifiable cancer risk factors and preventive outcomes.

Tobacco

Cigarette smoking in 2019 reached a historic low (14.2%) mainly because 61.7% (54.9 million) of all persons who ever smoked quit (a measure also known as the *quit ratio*). While the quit ratio has improved across most subpopulations since 1965, it continues to be lower among persons who are Black, American Indian/Alaska Native, poor, lower educated, lesbian, gay, or bisexual, and residents of Southern states.

Persons who smoke in many of these same subgroups also have lower levels of recent successful cessation, despite having similar or higher quit attempt levels. This disparity was most striking among lower-income and Medicaid insured or uninsured persons in whom the successful cessation rate is about 40% lower than higher income and privately insured persons respectively, even though their quit attempt prevalence were similar.

Despite being recommended as effective clinical cessation interventions since the late-1990s, only 71.7% reported receipt of medical doctor advice to quit and just about one-in-three used evidence-based cessation treatments for tobacco dependence in 2018-2019, with significantly lower levels among those who were Hispanic, younger, and Southern residents.

"While historical gains in smoking cessation have led to steep declines in lung cancer mortality in the past decade, substantial progress can still be made by improving cessation outcomes among socially vulnerable groups. Much can be achieved by expanding tobacco cessation coverage in state Medicaid programs and equitably implementing effective tobacco control policies within and across U.S. states," said Dr. Bandi.

Cancer Screening

Early detection of cancer through screening reduces mortality from cancers of the breast, cervix, colon, rectum, and lung. Colorectal and cervical cancers screening can also prevent these cancers by identifying precancerous lesions that can be removed. Cancer screening prevalence was suboptimal in 2018 (colorectal cancer ≥50 years:

65.6%; breast ≥45 years: 63.2%; cervical 21-65 years: 83.7%), especially among uninsured adults (colorectal: 29.8%; breast: 31.1%).

Approximately 18% of cancer cases in the U.S. can be attributed to a combination of excess body weight, insufficient physical activity, unhealthy diet, and consumption of alcoholic beverages.

Excess Body Weight

Obesity levels remain high in 2017-2018. Among adults ≥20 years, the prevalence of obesity was 42.4% (an estimated 99.14 million adults), and the prevalence of overweight was 30.7%. Overall, obesity prevalence was disproportionately higher among Black (56.9%) and Hispanic (43.7%) women and lowest among Asian men (17.5%) and women (17.2%).

Physical Activity

In 2018, over a quarter (25.6%) of adults reported no leisure time physical activity. The disparity by education was vast, ranging from nearly half (48.2%) of people with <high school education compared to 14.5% of college graduates.

Diet

Overall, most adults do not meet the guidelines for healthy eating. In 2019, about 12.3% of adults reported consuming three or more servings of vegetables per day and about 26.2% of adults reported eating two or more servings of fruit daily. Vegetable consumption was higher among Asian and White women than Hispanic or Black women.

Alcohol

In 2018, an estimated 5.1% of adults were classified as heavier drinkers (12+ drinks in lifetime, and >14 drinks per week for men; >7 drinks per week for women). Heavier alcohol consumption increased with higher levels of education among women (2.4% with less than a high school diploma vs. 6.4% of college graduates); whereas among men prevalence was highest (7.1%) in men with less than a high school diploma and lowest (4.2%) among college educated.

HPV Vaccination

In 2019, data show the HPV vaccination in adolescents (aged 13-17 years) remains underutilized and over 40% were not up to date. In adults (ages 19-26 years), 52% of women and 31.7% of men reported ever having received one or more dose of the HPV vaccine.

“More work is needed in order to further reduce cancer risk factors and improve cancer screening,” said the authors. “Immediate actions are needed to increase smoking cessation in health disparate populations, stem the tide of obesity epidemic, and improve screening and HPV vaccination coverage.”

Article: Bandi P, Minihan A, Siegel RL, Islami F, Nargis N, Jemal A, Fedewa SA. Updated Review of Major Cancer Risk Factors and Screening Test Use in the United States in 2018 and 2019, with a Focus on Smoking Cessation. *Cancer Epidemiology Biomarkers & Prevention* 2021. doi: 10.1158/1055-9965.EPI-20-1754.

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