Colorectal Cancer Screening Disparities in the U.S. (BRFSS 2022)

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Introduction

Colorectal cancer (CRC) is the third leading cause of cancer-related deaths in the United States. Despite the availability of effective screening methods, a significant portion of the population remains unscreened, particularly among underserved demographic groups. This project analyzes data from the 2022 Behavioral Risk Factor Surveillance System (BRFSS) to identify disparities in CRC screening rates across various sociodemographic and geographic groups in the U.S.

Methods

Data were obtained from the 2022 BRFSS, focusing on adults aged 45–75, the target population for CRC screening as per USPSTF guidelines. The dataset includes responses from all 50 states and Washington, D.C. The analysis was conducted using R with survey weights to account for the complex sampling design. Key variables included race/ethnicity, sex, income, education, insurance status, and access to healthcare. Survey-weighted prevalence estimates were calculated at the national and state levels. Visualizations were created using ggplot2.

Results

The national CRC screening prevalence was approximately 67%, slightly below the Healthy People 2030 goal of 68.3%. Screening rates were lowest among adults aged 45–54, males, individuals without insurance (26%), those with an income <$25,000, and those without a personal doctor. Racial and ethnic disparities were observed, with lower rates among Hispanic, Asian, American Indian/Alaska Native, and Native Hawaiian/Other Pacific Islander populations. A total of 32 states, including Texas, California, Florida, Georgia, and Illinois, reported CRC screening rates below the HP2030 benchmark.

Conclusion

This analysis underscores persistent disparities in colorectal cancer screening across the United States. Findings highlight the need for targeted public health interventions and outreach programs focusing on younger adults, racial/ethnic minorities, the uninsured, and individuals in lower-income brackets. These insights can guide policymakers, healthcare providers, and public health practitioners in designing data-driven strategies to increase screening rates and promote health equity.