Title: American Indian cancer epidemiology: an Oklahoma experience

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Abstract:

Background: Despite a lower cancer incidence rate than 33 states, Oklahoma has a high mortality rate, indicating a need to examine cancer rates among high-risk populations, particularly the American



Indian and/or Alaska Native (AI/AN) population. To improve the accuracy of AI/AN cancer statistics, cancer records are linked with Indian Health Services (IHS) administrative records. The study presents data on overall and cause-specific cancer incidence and mortality among the AI/AN population in Oklahoma and cancer screening rates. It discusses the implications of these findings on clinical practice and public health policy.

Methods: This study uses publicly available, de-identified data from various sources, including the CDC's NPCR, Oklahoma's Central Cancer Registry, and Vital Statistics, to examine cancer incidence and mortality in Oklahoma's AI/AN population. To ensure accuracy, data is adjusted for age and suppressed for stability. The study focuses on PRCDA counties, which include all of Oklahoma's counties, and compares the AI/AN population with the US NHW and Oklahoma NHW populations. The AI/AN race category includes those of Hispanic origin.

Results: Between 2014 and 2018, there were 51,165 cancer cases and 16,880 cancer deaths among the AI/AN population in the US, with 9,852 cases and 2,995 deaths in Oklahoma. The AI/AN population in Oklahoma had higher age-adjusted cancer incidence and mortality rates than the NHW population. The top 10 cancers for incidence and mortality were identified, with the AI/AN population having higher rates for most types than the NHW population. Mortality rates were highest in the northeastern quadrant of Oklahoma. Screening rates for breast and cervical cancer were higher among AI/AN women in Oklahoma compared to NHW women, but colorectal cancer screening rates were lower. These findings highlight the need for targeted interventions to address the high cancer mortality rate in this population.

Conclusions: The AI/AN population in Oklahoma has higher cancer rates than the NHW population. Improving surveillance, healthcare financing, screening, and research could reduce these rates. Accurate and timely data is crucial for effective cancer surveillance. Financial barriers to screening and high-quality cancer care need to be reduced. Programs to increase demand for evidence-based cancer screening are needed. Clinical trials should include diverse participants, and research should aim to understand why certain cancers are particularly lethal among AI/AN patients. National and state-level efforts are important, but more actions are needed to eliminate cancer disparities.

Biography:

Janis E. Cambell has been a Professor in Biostatistics and Epidemiology at the Department, Hudson College of Public Health, The University of Oklahoma Health Sciences, Oklahoma, USA, for over 15 years. Dr. Campbell previously served as Chronic Disease surveillance coordinator for ten years and program analyst for Maternal and Child Health Services for over five years at the Oklahoma State Department of Health. She has over 30 years of experience working in public health. Dr. Campbell has published over 100 articles in peerreviewed journals, many focusing on Indigenous health disparities in the US. She has presented over 175 times locally, nationally, and internationally. Her research interests focus on cancer Among the indigenous population.