

HHS Public Access

Author manuscript

Ann Surg Oncol. Author manuscript; available in PMC 2023 July 12.

Published in final edited form as:

Ann Surg Oncol. 2023 May; 30(5): 2629–2630. doi:10.1245/s10434-023-13204-0.

ASO Author Reflections: Neighborhood Deprivation Indices and Cancer Care

Chad Markey, BA¹, Oluwaferanmi Bello, BS¹, Meg Hanley, BA¹, Andrew P. Loehrer, MD, MPH^{1,2,3}

¹The Geisel School of Medicine at Dartmouth, Hanover, NH;

²Department of Surgery, Dartmouth-Hitchcock Medical Center, Lebanon, NH;

³The Dartmouth Institute for Health Policy and Clinical Practice, Lebanon, NH

PAST

Inequity in cancer care has been well established by patient socioeconomic status, insurance coverage, race, and geography.^{1,2} With growing scrutiny of these disparities in cancer care delivery, there has been increased examination of how neighborhood characteristics influence cancer care.^{3,4} Multiple composite measures or indices of small-area socioeconomic characteristics have been used, but there is little consensus or consistency regarding how to employ them across cancer-related studies.¹ Understanding the structure of these indices, their application in cancer research, and their relationship with outcomes can better illuminate potential paths for improved care delivery.

PRESENT

This study conducted a scoping review to summarize the use of these neighborhood socioeconomic indices, and their association with outcomes in recent cancer literature.⁵ There are currently multiple measures of local socioeconomic status that vary in geographic area, from the level of block group to county. We highlight the differences in the most commonly used measures, what cancer-related outcomes have been evaluated using these measures, the populations that have been studied using indices, and the degree to which neighborhood-level socioeconomic status is associated with cancer outcomes.

FUTURE

Despite variance in methodology, there is a strong indication that socioeconomically deprived areas are associated with adverse cancer-related outcomes. Further work investigating deprivation in the context of cancer can inform drivers of inequity, and identify potential targets for care delivery and policy interventions. The decision about what measure to be used in current literature seems to be largely guided by the data available. However,

A. P. Loehrer, MD, MPH, andrew.p.loehrer@hitchcock.org. DISCLOSURE

The authors report no financial or personal relationships with other people or organizations related to this work and its conclusions.

Markey et al. Page 2

researchers should balance the increased granularity of smaller-area measures with the potential instability of data that comes with smaller number of observations. The increased use of common deprivation indices with the appropriate causal frameworks may help create a more refined definition of neighborhood deprivation and direct solution-oriented work on cancer care inequities.

REFERENCES

- Krieger N, Williams DR, Moss NE. Measuring social class in US public health research: concepts, methodologies, and guidelines. Annu Rev Public Health. 1997;18:341–78. [PubMed: 9143723]
- 2. Krieger N, Chen JT, Waterman PD, Soobader MJ, Subramanian SV, Carson R. Geocoding and monitoring of US socioeconomic inequalities in mortality and cancer incidence: does the choice of area-based measure and geographic level matter?: the public health disparities geocoding project. Am J Epidemiol. 2002;156(5):471–82. [PubMed: 12196317]
- 3. Roux AVD, Kiefe CI, Jacobs DR Jr, Haan M, Jackson SA, Javier Nieto F, Paton CC, Schulz R. Area characteristics and individual-level socioeconomic position indicators in three population-based epidemiologic studies. Ann Epidemiol. 2001;11(6):395–405. [PubMed: 11454499]
- 4. Yost K, Perkins C, Cohen R, Morris C, Wright W. Socioeconomic status and breast cancer incidence in California for different race/ethnic groups. Cancer Causes Control. 2001;12(8):703–11. [PubMed: 11562110]
- Markey C, Bello O, Hanley M, Loehrer AP. The use of area-level socioeconomic indices in evaluating cancer care delivery: a scoping review. Ann Surg Oncol. 2023. 10.1245/ s10434-023-13099-x.