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Commentary: The structure of structural racism revealed by lung cancer screening

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CENTRAL MESSAGE

Untangling the structure of social inequities begins with their recognition.

In their article, Poulson and colleagues¹ present a sobering rendering of the structure of structural racism in the United States. The authors investigated the enduring impact of the government-sponsored Home Owners' Loan Corporation (HOLC) Act of 1933 on racial disparities in lung cancer screening. The readership will receive a startling lesson in American history on the practice known as redlining.

The insidious impact of redlining has had a severe and persistent impact on our nation yet will be unfamiliar to many readers; another description of redlining here will not be overly redundant. The origin of redlining is often credited to the HOLC, who generated residential "security" maps for major American cities to inform loan officers, appraisers, and real estate professionals of geography with risky mortgage lending. The basis for the red lines drawn around neighborhoods of high financial risk, however, is commonly cited to be the ethnicity of their inhabitants. Redlined neighborhoods are enriched for residents with minority backgrounds, and these red lines have precluded them from obtaining loans, devaluated their homes, and perpetuated residential segregation. To this day, many of these neighborhoods appear "trapped in the past" and locked into concentrated poverty. Importantly, the effects of redlining are more than just economical. In a study published earlier this year, it was shown that redlining negatively impacts the health and longevity of the residents of these communities, which have life

expectancies nearly 4 years lower than those in non-redlined communities.²

Poulson and colleagues¹ investigated racial inequities in lung cancer screening through an innovative approach of cross-referencing enrollment in a lung cancer-screening program with residence in local neighborhoods defined as hazardous in the original HOLC maps. The authors demonstrated that Black patients within historically redlined areas had lower rates of screening than their White counterparts and that Black women were most significantly impacted. This study is important because Black communities are more severely affected by lung cancer, where it presents at earlier ages and at greater stages and results in decreased survival.² Further, the findings of the study by Poulson and colleagues¹ are a profound example of how structurally racist historical policies are persistently damaging despite greater awareness of relevant health risks and how these policies enable a vicious cycle of poverty and morbidity.

In addition to increasing awareness of the negative impact of redlining on human health, Poulson and colleagues¹ contextualize a relevant framework for intervention. In 2011, the United States Preventative Services Task Force recommended computed tomography screening for individuals 55 to 80 years of age who have a 30 pack-year smoking history and, in 2021, these guidelines were liberalized to those 50 to 80 years of age with a 20 pack-year smoking history. Poulson and colleagues¹ remind us, however, that there are risk considerations relevant to redlined communities that are not accounted for in these guidelines, including their geography closer to industrial sites and associated carcinogen burdens, lower rates of green cover to reduce the density of inhaled environmental toxins, and impaired access to medical services.

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Beyond simply understanding such structural barriers, the Poulson manuscript explores targeted interventions and reparative actions to disassemble the structure of structural racism on lung health. This manuscript should be read and its content should be considered in your practice.

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