

Exploring Disparities in Lung Cancer Screening in Massachusetts: Barriers Beyond Health Insurance

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1. Background

Massachusetts is one of the few states in the United States with a legal mandate for health insurance, reducing disparities in health outcomes. Despite this, lung cancer remains the leading cause of cancer-related deaths in the state. Screening can decrease lung cancer mortality by up to 20 percent by enabling early detection, yet only 35 percent of cases in Massachusetts are diagnosed at an early stage. Disparities in the implementation of and access to lung cancer screening persist and may exacerbate inequities among racial and ethnic minorities, individuals with lower income and education levels, and residents across the state's 14 counties.

2. Goals

Our goal was to examine disparities in lung cancer screening, early-stage diagnosis, and late-stage diagnosis across racial/ethnic, socioeconomic, and geographic groups in Massachusetts.

3. Solutions and Methods

Data were obtained from three sources: the Behavioral Risk Factor Surveillance System (2022), the North American Association of Central Cancer Registries (2017-2021), and State Cancer Profiles (2017-2021). Analyses compared lung cancer screening rates and stage at diagnosis across racial and ethnic groups, socioeconomic strata, and geographic regions.

4. Outcomes

People of color in Massachusetts have worse lung cancer outcomes, including lower rates of early-stage diagnosis and higher rates of late-stage diagnosis, compared to white individuals. Asian/Pacific Islander individuals have the poorest outcomes statewide. Screening rates do not increase with income or education levels. Geographic disparities were also evident, with western Massachusetts counties showing limited access to accredited lung cancer screening centers and higher lung cancer burden.

5. Lessons Learned and Future Directions

Despite broad health insurance coverage in Massachusetts, substantial lung cancer screening disparities persist among underserved groups, particularly racial/ethnic minorities and rural populations. Identifying barriers beyond insurance coverage is essential for designing targeted policies, interventions, and communication strategies to increase screening uptake and reduce lung cancer inequities.