

Trends in Cervical and Breast Cancer Screening Practices Among Women in Rural and Urban Areas of the United States

Background

Periodic screening for breast cancer with mammography and for cervical cancer with Papanicolaou (Pap) smear testing can reduce the risk of premature death. However, women residing in rural areas may have lower rates of receipt of these tests than non-rural women because of barriers to healthcare, such as greater distances to medical facilities, and lower educational, income, and health insurance levels. This study explores whether rural-urban gaps in cancer screening have narrowed over time.

Study Aim

To examine the prevalence of and trends in mammography and Pap smear screening in adult women living in urban and rural locations, including more remote rural areas.

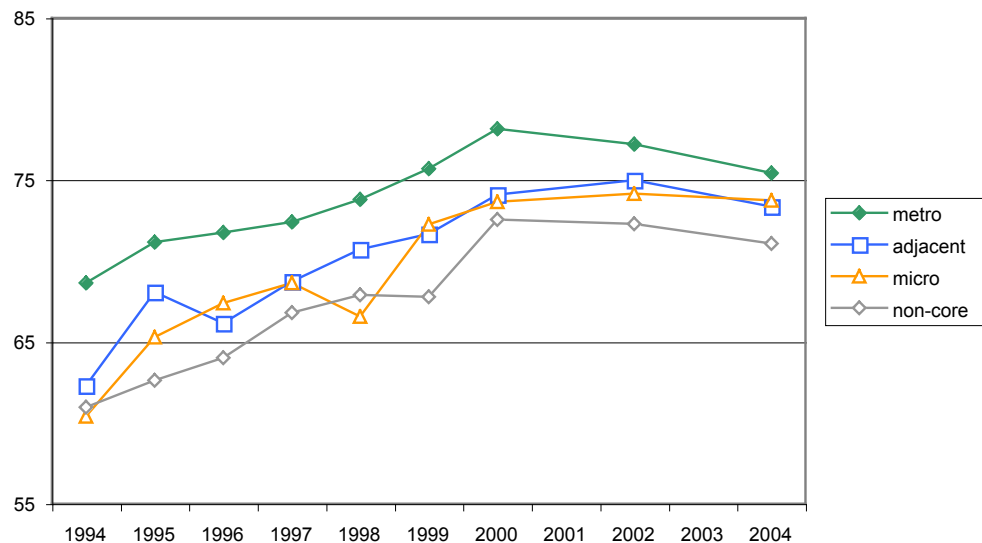
Study Design

This study used data from 1994 through 2004 from the Behavioral Risk Factor Surveillance System (BRFSS), an annual state-based, random-digit telephone survey of non-institutionalized U.S. adults aged 18 and over concerning various health behaviors. Rural residence was ascertained by classifying county Federal Information Processing Standards codes as metropolitan or non-metropolitan using the Office of Management and Budget taxonomy, and then using the 2003 Urban Influence Code groupings to classify levels of rurality.

Major Findings

- Timely mammography was received by 70.8% of rural and 75.7% of urban respondents in 2004; this overall rural-urban difference remained significant after adjusting for sociodemographic factors, including age, education, income, and race/ethnicity.
- Despite a 10% increase over time in the overall participation in mammography, a rural-urban gap persisted, with women residing in the most remote rural areas least likely to receive a timely mammogram (see Figure 1).
- While 83.1% of rural and 86.1% of urban respondents received a timely Pap test in 2004, the adjusted difference was not significant across the rural-urban continuum. Also, Pap testing did not improve over the 11-year interval (see Figure 2).
- Factors associated with lack of breast and cervical cancer screening among women in both urban and rural settings included advanced age, low socioeconomic status (SES), and Asian/Pacific Islander race/ethnicity.

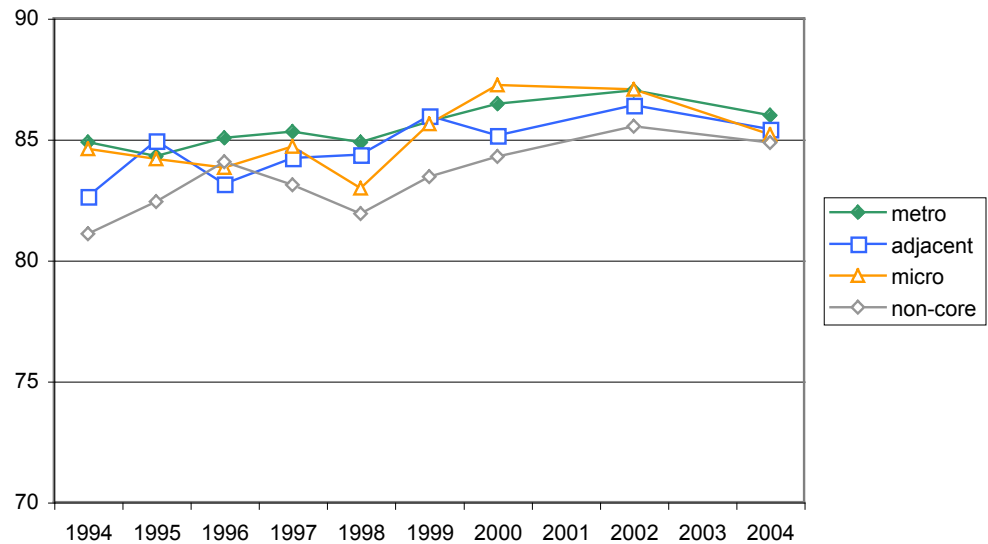
Figure 1: Adjusted Percentage of Women Aged 40+ with Current Mammogram



Conclusions

Although mammography screening improved nationally between 1994 and 2004, women living in rural areas remained less likely than their urban counterparts to receive testing. In contrast, the prevalence of timely Pap smear testing during that period remained at about 85% across both time and the rural-urban continuum.

Figure 2: Adjusted Percentage of Women Aged 18+ with Current Pap Smear



Policy Implications

This study documents the receipt of timely breast and cervical cancer screening using a refined rural-urban classification system and nationally representative data. Increased access to these screening services is needed among women living in rural areas, particularly those who are elderly, women of low SES, and those who are Asian or Pacific Islander ethnicity. In rural areas, low rates of health insurance and limited availability of medical care and radiographic services can decrease access to cancer screening services. Coordinated efforts by insurers and funding agencies, healthcare providers, public health departments, and local media could improve receipt of cancer screening services among women residing in rural America.

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