**Improving Rural Cancer Screening Rates Through Community-Engaged Multi-Level Patient Navigation: A Study in a Southeastern Academic Health System**

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### 1. Background
South Carolina ranks 13th highest in the nation for cancer mortality. Improving cancer screening rates could help reduce these mortality rates. Unfortunately, Black people and rural people in South Carolina have higher cancer incidence and mortality rates and lower cancer screening rates than other population groups.

### 2. Goals
To address South Carolina's cancer disparities, investigators evaluated the effects of a centralized, protocol-driven patient navigation intervention in reducing social determinants of health-related cancer screening barriers among predominantly rural patients in a large, statewide academic health system. Rural patients were identified using published Rural Urban Continuum Codes. The primary program outcome was successful completion of screening for breast, prostate, lung, colorectal, and cervical cancer. Secondary outcomes included categorizing barriers to screening as well as the specific strategies navigators used to address the barriers. Data were analyzed based on race/ethnicity, age, sex, rurality, and insurance status.

### 3. Solutions and Methods
Participants were randomly selected from a statewide Southeastern United States academic health system based on their overdue status for guideline-supported cancer screening, oversampling for rural residence. The patient navigation intervention that was employed with the participants is an evidence-based approach, based on adult learning theory, social cognitive theory, social support theory, and competency evaluation. Navigators focused on identification of potential participants, identifying barriers to care/needs of patients, and implementing a plan to actively address these barriers to care/needs, employing the National Cancer Institute's Barrier Plan Form.

### 4. Outcomes
Since the inception of this one-arm study on 10/20/2023 to 9/5/2025, 3,634 patients were identified as being out of window for cancer screening based on specific evidence-based screening guidelines for each cancer type. Of this number, 1,782 (49.0 percent) needed breast cancer screening; 302 (8.3 percent) needed cervical cancer screening; 318 (8.8 percent) needed colorectal cancer screening; 995 (27.4 percent) needed lung cancer screening; and 237 (6.5 percent) needed prostate cancer screening. Black patients (n=1,522; 41.9 percent) and white patients (n=1,965; 54.1 percent) comprise most program participants. In terms of outcomes, among the 1,010 patients who were navigated to date, 55.4 percent have received cancer screening (n=233, 23.1 percent), have scheduled a screening appointment, and are waiting to be screened (n=326, 32.3 percent). Navigators addressed health-related screening needs of participants by communicating the importance of screening and helping to reduce fear of screening, collaborating with participants' primary care providers to obtain screening orders in the health system's electronic medical record system, scheduling screening appointments, and providing transportation resources.

**5. Lessons Learned and Future Directions**
Fifty-five percent of the predominantly rural navigated patients to date have successfully completed cancer screening. These are patients who would likely not have received screening in the absence of patient navigation intervention. This intervention thus serves as a national model for promoting access to cancer screening among rural patients by addressing social determinants of health such as access to care, communication with health care providers, and transportation issues.