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Using Health System Population Health Data to Support Community Engaged Cancer Health Equity Initiatives: A Pilot Project

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1. Background
Dartmouth Cancer Center's catchment area of New Hampshire and Vermont has high rates of breast cancer – particularly in New Hampshire, which has the second highest crude breast cancer incidence in the U.S. To address this, we partnered with a local health system, Dartmouth Health (DH), which primarily serves patients in NH, to identify screening disparities by neighborhood socioeconomic status. Using the Area Deprivation Index (ADI), a tool for ranking neighborhoods by socioeconomic factors, we identified that only 68 percent of eligible DH medically homed patients living in the most deprived neighborhoods were up to date with breast cancer screening, compared with 79 percent in the neighborhoods with the lowest deprivation. Data revealed that patients overdue for screening had a greater burden of Health-Related Social Needs (HRSN) – indicating a need to address systemic barriers to care.

2. Goals
1) Eliminate ADI-related disparities in breast cancer screening among eligible patients aged 50-74
2) Reach an 80 percent breast cancer screening rate among eligible patients living in high ADI communities

3. Solutions and Methods
We convened a multidisciplinary work group with community partners, including NH's Breast & Cervical Cancer Program (BCCP). The work group sought patient input on strategies to implement through two Community Engagement Studios with patients from highly deprived neighborhoods who were overdue for screening. Studio participants recommended we enhance reminders and support for patients and promote BCCP's free screening services. We then piloted an outreach intervention with a Community Health Worker (CHW) in Lebanon, NH-based primary care clinics. The CHW was trained in motivational interviewing to navigate patients overdue for screening living in high ADI areas. Through this outreach, the CHW screened for and addressed HRSN, provided breast cancer screening information, elicited behavioral intent to screen, scheduled mammography, and—based on financial need—enrolled patients in BCCP.

4. Outcomes
As of March 2024, 241 patients aged 50-74 living in highly deprived neighborhoods were overdue for screening and did not have a mammogram scheduled, meeting program criteria for CHW outreach via patient portal messaging and phone calls.

With CHW support, 47 of the 241 patients (20%) scheduled mammograms, and 41 (17%) completed screening. Of the 47 who scheduled a mammogram with the CHW, five reported HRSN needs related to transportation and finances. Two requested and received CHW assistance with needs and the CHW facilitated BCCP enrollment for one patient.

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5. Lessons Learned and Future Directions

Community Engagement Studio participants identified strategies for improving screening utilization. Through a CHW outreach pilot program, we engaged patients in screening, though the intervention was time and labor intensive. As we scale ADI-related CHW outreach across the health system and catchment area, we are developing prediction models using electronic health record data to identify patients unlikely to return for screening. We are also identifying systemic solutions, including expanding mammography hours, refining cohorts to target, and streamlining outreach approaches**.**