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Connecticut Implements a Team-Based Approach to Cardiovascular Disease Prevention Using Community Health Workers and Mobile Medical Devices

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ABSTRACT
The Connecticut Department of Public Health's Early Detection and Prevention Program uses an integrated approach to deliver breast and cervical cancer screening services, cardiovascular disease risk assessment, health coaching, and the identification of social determinants of health to women from economically disadvantaged and minority communities. Statewide contracted providers who represent twenty hospitals and their fee-for-service providers employ community health workers (CHWs) to conduct outreach, screening assessments using mobile medical devices, and risk reduction counseling in community settings to reduce service access barriers, while also engaging eligible women who may not typically frequent clinical services. Mobile medical screening devices enhance healthcare accessibility by enabling screenings to be conducted in a participants preferred setting, whether it is a clinic or within the community, with the added benefit of delivering rapid screening results. Utilizing these results, CHWs provide risk reduction counseling to develop individualized health action plans at the outreach session.

KEY WORDS: community health workers, mobile medical devices, team-based approach

Community health workers (CHWs) play a critical role in enhancing access to health-care services for underserved populations.[1] CHWs reflect the diversity of their communities including race, ethnicity, language, and their roots in the local community. CHWs receive training in delivering a compassionate, patient-centered, non-judgmental approach when conducting outreach and education. They are also trained to administer health assessments, use mobile medical equipment to screen for health problems, and perform motivational interviewing techniques to determine individual readiness to make healthy lifestyle changes.[2]

The Connecticut Department of Public Health's Early Detection and Prevention Program (CEDPP) uses an integrated approach to deliver breast and cervical cancer screening, diagnostic services, cardiovascular disease risk assessment, health coaching, and the identification of social determinants of health (SDoH) to women from economically disadvantaged and minority communities. CHWs are at the heart of the delivery of these services.

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Reducing Service Access Barriers with Mobile Equipment and Integrated Care

Contracted providers from six health systems who represent 20 hospitals and their fee-for-service providers across the state are required to use a Navigation Team model[3] which includes a credentialed clinical navigator to assist patients with abnormal results, Health Systems Navigator to coordinate care and clinical appointments, and a CHW to conduct outreach, screening, and assessments. This team-based approach allows trained CHWs to conduct outreach, screening assessments using mobile medical devices (such as PTS Diagnostics CardioChek and A1CNow), and risk reduction counseling in community settings to reduce service access barriers, while also engaging eligible women who may not typically frequent clinical services.

Mobile medical screening devices enhance healthcare accessibility by enabling screenings to be conducted in a participant's preferred setting, whether it is a clinic or within the community, with the added benefit of delivering rapid screening results.[4,5] These screenings, facilitated by medical mobile equipment, offer women instant results about their body mass index, blood pressure (BP), cholesterol levels, and fasting glucose or hemoglobin A1C if the participant has diabetes. Utilizing these results, CHWs provide risk reduction counseling to develop individualized health action plans at the outreach session. CHWs use a work-appointed iPhone and Google Chromebook for appointment coordination and input of participant program enrollment information during the initial visit. The integration of mobile medical equipment with a mobile workstation provides a seamless transition from screening to program enrollment. Additionally, CHWs facilitate referrals to necessary services identified in the SDoH assessment, ensuring participants have access to essential services required to enhance their wellbeing and safety. This comprehensive approach increases their opportunity to actively participate in the program.

This integrated program ensures that eligible women undergoing screening for breast and cervical cancer are also screened for cardiovascular disease. Supplemental digital material, Figure 2 (available at http://links.lww.com/JPHMP/B346) depicts the process flow for the integrated model. The SDoH assessment and risk reduction counseling conducted by CHWs connects women to essential services, educates women about their health conditions, and provides a medical home for critical health promotion services. CHWs also offer health coaching and facilitate the enrollment and support of motivated participants looking to make lifestyle changes through approved Healthy Behavior Support Service (HBSS) programs.

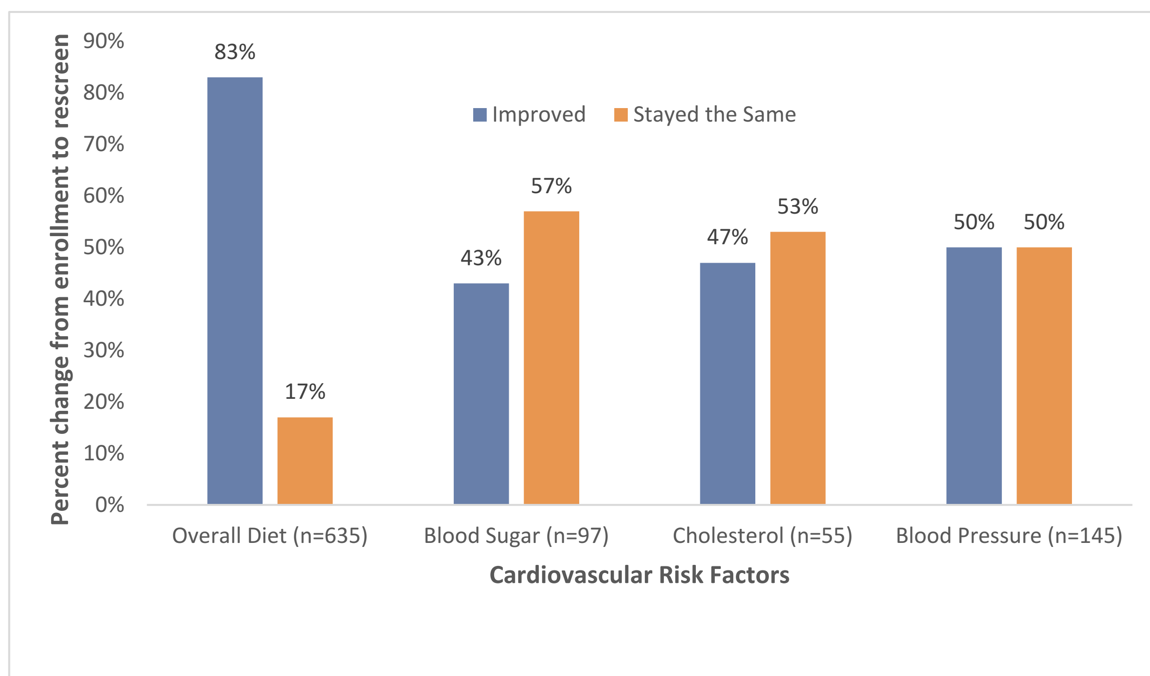

FIGURE 1 Percent change in cardiovascular disease (CVD) risk factors from baseline screening to follow-up rescreen (11 to 18 months from program enrollment) for CT WISEWOMAN participants between September 2018 and March 2023

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Monitoring our progress

Program monitoring data are collected to monitor CHW activity, utilization of mobile medical equipment during screenings, participant health status, SDoH needs, HBSS participation, and service system referrals. In the 2022/23 program fiscal year, CHWs conducted 70% of WISEWOMAN screenings, and mobile medical equipment was utilized in 68% of those screenings. Furthermore, analysis of HBSS participation from 2018 to 2023 revealed short and long-term health coaching, which are provided by CHWs, were the most requested services by participants (68% and 51%, respectively).

Lastly, an analysis of participant anthropometric data from program enrollment to follow-up rescreening (typically occurring between 11 and 18 months from program enrollment) reveals improvements in participants' overall diet (83%), blood sugar (43%), cholesterol (47%), and BP (50%).

Figure 1 illustrates anthropometric changes in CVD risk factors from program enrollment to rescreening (typically occurring between 11 and 18 months from program enrollment) for WISEWOMAN participants between 2018 and 2023 (n = 1033).

Discussion

One limitation of this practice brief is the inability to assess variations in participant program retention and completion attributed to the referral source. To address this limitation, the next phase of the evaluation involves modifying the current data collection and reporting system to monitor participant program engagement and outcomes based on referral source. It is hypothesized that the active involvement of CHWs in evaluating SDoH, offering real-time screening results, and facilitating immediate enrollment enhances the probability of program engagement and participation in a healthy lifestyle program, surpassing other types of program referral sources.

Supplemental digital material, Figure 2 (available at http://links.lww.com/JPHMP/B346) illustrates the workflow of the Connecticut Department of Public Health's Early Detection and Prevention Program (CEDPP) which is an integration of two national chronic disease prevention programs funded by the Centers for Disease Control and Prevention (CDC): the Connecticut Breast and Cervical Cancer Early Detection Program (CBCCEDP) and the Well-Integrated Screening and Evaluation for Women Across the Nation (WISEWOMAN) Program.

Implications for Policy & Practice

- Identify opportunities to implement team-based care. Navigation teams are composed of healthcare professionals, each fulfilling a distinct role in participant care. Well-defined team roles and expertise within their specialty enable navigation teams to provide comprehensive support to participants. CHWs act as intermediaries between team members, ensuring participants are connected to essential services and empowered with the knowledge to make informed health decisions.
- Assess for SDoH early. Unmet SDoH needs, such as safe housing, access to nutritious foods, job opportunities, income, language, and literacy skills, can significantly impact a participant's ability to prioritize health screenings and adopt healthy lifestyle changes. Assessing for SDoH during program enrollment and navigating participants to needed services empowers them to focus on their healthcare needs.
- Incorporate mobile medical equipment during program outreach or health visit. Mobile medical screening devices help reduce service access barriers by allowing screenings to take place in the participant's preferred setting, whether it is a clinic or the community, and deliver rapid screening results and individualized risk reduction counseling and health education.
- Ensure timely follow up on abnormal and alert results by connecting participants to medical providers and establishing a medical home for chronic disease management.

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