



The Role of CHWs in Combatting Colorectal Cancer

Health Disparities in Colorectal Cancer

Colorectal Cancer (CRC) is highly preventable through routine screening but is the third most common cancer in the United States with more than 102,000 new diagnoses per year.¹ CRC is the second leading cause of cancer-related deaths in the US. Although men are diagnosed with and die from CRC more often than women, strong racial and socioeconomic disparities exist among both men and women.

United States	Michigan
Black men are more likely to die from CRC than White males (29.1 vs. 19.5 deaths per 100,000 cases, respectively) ²	Black men are more likely to die from CRC than White males (29.4 vs. 18.4 deaths per 100,000 cases, respectively) ²
Black women are more likely to die from CRC than White women (19.7 vs. 13.7 deaths per 100,000 cases, respectively) ²	Black women are more likely to die from CRC than White women (18.5 vs. 13.7 deaths per 100,000 cases, respectively) ²
Lower income (47.6%) and less educated (45.4%) adults aged 50-75 are less likely to screen for CRC ³	Although higher than national levels, lower income (62%) and less educated (66.9%) adults aged 50-75 are less likely to screen for CRC ⁴

Community Health Worker (CHW) Interventions

Education

Educational CHW interventions have been shown to increase client knowledge and awareness about CRC,⁵ as well as CRC screening.⁶ A study of a medically underserved region in Appalachian Kentucky examined the effectiveness of face-to-face CHWs delivering cancer education to male participants. The study found that men had a higher understanding of CRC six months following the CHW-provided education, and a higher percentage of participants reported asking their doctor about colorectal cancer.⁷

Screening

Education, outreach, and patient navigation are all methods by which CHWs promote CRC screening. A group of Chinese American lay health workers (LHWs) provided education about CRC screening to 81 Chinese American community members. Following the education sessions, fecal occult blood testing (FOBT) for CRC among the participants increased from 0% to 55.7%. In addition to screening rates, participant awareness of screening options, FOBT, sigmoidoscopy, and colonoscopy increased significantly, and the number of participants who believed that screening can prevent CRC increased from 39% to 82.9%.⁸

Health System Navigation

Patient navigation has been recommended and documented to increase CRC screening and appropriate follow-up care.⁹ A study comparing individuals from East Harlem, New York City both with and without patient navigators found that patient navigation can significantly improve screening rates among patients referred for CRC screening. Three months after the referral, 18.4% of patients with navigators had appointments for an endoscopy, compared to 0% of the control group. The navigation group was also more likely to complete an endoscopy 6 months following the referral (23.7% vs. 5.0%).¹⁰

A randomized trial of individuals with abnormal colorectal screenings found that patients with a patient navigator had their diagnoses resolved at a significantly quicker rate when compared to patients without a navigator.¹¹



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Article Title	Year	Target Population	Intervention Type
Using a Lay Cancer Screening Navigator to Increase Colorectal Cancer Screening Rates	2015	N/A	Patient navigation and screening promotion
Dissemination of colorectal cancer screening by Filipino American community health advisors: a feasibility study. Health Promotion Practice	2013	Filipino Americans	Patient education and screening promotion by community health advisors
Effectiveness of community health workers in providing outreach and education for colorectal cancer screening in Appalachian Kentucky	2012	An underserved geographic region	CHW led patient education
A pilot study of lay health worker outreach and colorectal cancer screening among Chinese Americans. Journal of Cancer Education	2010	Chinese American women	Lay health worker group education sessions
Use of a patient navigator to increase colorectal cancer screening in an urban neighborhood health clinic	2005	Urban residents	Patient navigation and screening promotion
A multilevel intervention to promote colorectal cancer screening among community health center patients: results of a pilot study. BMC Family Practice	2009	Urban minorities	Patient navigation and screening promotion
Effectiveness of lay health worker outreach in reducing colorectal cancer screening disparities in Vietnamese Americans	2014	Vietnamese Americans	Lay health worker group education sessions
The longitudinal impact of patient navigation on equity in colorectal cancer screening in a large primary care network	2014	Vulnerable populations	Patient navigation and screening promotion
Patient navigation improves cancer diagnostic resolution: an individually randomized clinical trial in an underserved population	2012	Low income minorities	Patient navigation to resolve diagnoses

Article abstracts available by clicking the hyperlinked article titles above; full citations are below

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For more on CHWs and cancer, visit <http://www.michwa.org/resources/research-evidence/> | MiCHWA 2015



The Role of CHWs in Combatting Breast Cancer

Health Disparities in Breast Cancer

Breast cancer is the most common cancer among American women, with the exception of skin cancer.¹ One in eight women in the US will develop invasive breast cancer during their lifetime.¹ In Michigan, breast cancer is the second leading cause of cancer deaths and the most frequently diagnosed cancer.² In the US and Michigan, racial and socioeconomic disparities exist in breast cancer mortality and screening.³

United States	Michigan
The age-adjusted mortality rate for breast cancer is higher for black women than white women (31.4 vs. 22.2 deaths per 100,000 population). ³	The age-adjusted mortality rate for breast cancer is higher for black women than white women (35.9 vs. 22.9 cases per 100,000 population). ³
The cause-specific survival rate among Black women is the lowest among all racial groups (78.9%). ⁴	Black women with breast cancer face lower five-year survival rates (77%) at all stages of diagnosis than white women (90.4%) and all races (89%). ³
Asian American (62%) and Hispanic (64%) and less educated women (52%) age 40+ are less likely to have had a mammogram in the past two years than White women (67%) and more educated women (75%). ⁴	American Indian (53.5%) and Hispanic (49.9%) women aged 40+ are less likely to have had a mammogram in the past two years compared to the general population (75%). ³

Community Health Worker (CHW) Interventions

Health Literacy

Health literacy interventions commonly address breast cancer screening among racial and socioeconomic minority groups and have been found to be both effective and cost-effective.⁵ Interventions are typically tailored to target communities. The Kin Keeper Cancer Prevention Intervention trained female CHWs to deliver home-based education to clients and their selected female family members in English, Spanish, or Arabic.⁶ Surveys of program enrollees were used to inform curriculum development.⁷ Pre-post breast cancer literacy scores increased for all participants recruited.⁸

Screening and Mammography

A meta-analysis of 18 studies indicated that CHW interventions are associated with a significant increase in mammography rates. Effects were strongest in medical or urban settings and when CHWs and participants were ethnically or racially similar.⁹ In a study comparing the effect of lay health workers (LHWs) and media education to media education alone on screening rates among Vietnamese women, the LHW intervention significantly increased mammography and clinical breast examinations.¹⁰

Health System Navigation

Patient navigation interventions commonly address screening and diagnostic follow up testing for women with abnormal screening results. The Patient Navigation Research Program at Denver Health found that the use of lay patient navigators significantly shortened time to resolution of abnormal screening tests.¹¹ A Chicago-based patient navigation program found shorter time from abnormal screening to definitive diagnosis among socioeconomically disadvantaged women.¹²



The Role of CHWs in Combatting Breast Cancer

Article Title	Year	Target Population	Intervention Type
Economic Evaluation of a Community Health Worker-Led Health Literacy Intervention to Promote Cancer Screening Among Korean American Women	2015	Korean American women	Cervical cancer education; screening promotion and navigation
Do community health worker interventions improve rates of screening mammography in the United States? A systematic review.	2011	Women age 40 and older	Systematic review of screening interventions
Educating Hispanic women about breast cancer prevention: evaluation of a home-based promotora-led intervention	2010	Hispanic women	Breast cancer education; screening promotion
Breast cancer screening among Vietnamese Americans: a randomized controlled trial of lay health worker outreach	2009	Vietnamese American women	Breast cancer education; screening promotion
Kin KeeperSM: design and baseline characteristics of a community-based randomized controlled trial promoting cancer screening in Black, Latina, and Arab women	2013	Black, Latina, and Arab American women	Breast and cervical cancer education; screening promotion
Breast cancer and cervical cancer control program enrollees inform the kin keeper curriculum. Journal of Cancer Education : The Official Journal of the American Association for Cancer Education	2009	Black, Latina, and Arab American women	Breast and cervical cancer education; screening promotion
Moving from theory to practice: implementing the Kin Keeper Cancer Prevention Model	2009	Black, Latina, and Arab American Women	Breast and cervical cancer education; screening promotion
Follow-up and timeliness after an abnormal cancer screening among underserved, urban women in a patient navigation program	2012	Socioeconomically disadvantaged women	Health system navigation
Patient navigation improves cancer diagnostic resolution: an individually randomized clinical trial in an underserved population	2012	Medically underserved women	Health system navigation

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The Role of CHWs in Combatting Lung Cancer

Health Disparities in Lung Cancer

More men and women die of lung cancer in the United States than any other form of cancer.¹ It is estimated that 158,040 lung cancer deaths will occur in 2015, accounting for about 27% of all cancer deaths.¹ Tobacco use is the primary cause of lung cancer in the United States.² While incidence has decreased for most subpopulations since 1999,³ there still exist important lung cancer disparities.

United States	Michigan
In 2011, black men had the highest incidence of lung cancer, followed by white, American Indian/Alaska Native, Asian/Pacific Islander, and Hispanic men ³	Lung cancer incidence is higher for black men (106.6 deaths per 100,000) and women (68) than White men (83.8) and women (62.5) ⁴
Among men in 2011, black men were more likely to die of lung cancer than any other racial group (about 79 deaths per 100,000) ³	Lung cancer mortality is higher for black men (88.8 deaths per 100,000) than White men (66.3) ⁴
Rural young adults are 27 percent more likely to smoke than urban young adults, and they have higher rates of smokeless tobacco use ⁵	Lung cancer incidence and death rates are higher in rural areas of Michigan. ⁶ Smoking rates are higher in rural areas (26.2%) than metropolitan areas (22.5%). ⁷
Socioeconomically deprived and rural groups face excess risk of lung cancer and lung cancer mortality for white and black men ⁸	Adult Medicaid enrollees have a higher incidence of lung cancer. Enrollees younger than 65 are more likely to be diagnosed at advanced stages. ⁹

Community Health Worker (CHW) Interventions

Education and Smoking Cessation

CHWs are commonly employed in smoking cessation interventions targeting vulnerable communities such as minority groups and pregnant women.¹⁰ A systematic review found that bilingual lay health advisors can lead to more effective interventions.¹⁰ At the University of Arizona, Spanish-speaking CHWs were trained as tobacco cessation counselors to identify tobacco users and offer counseling. CHWs indicated high confidence in delivering brief cessation interventions.¹¹ In another intervention, CHWs led group sessions to provide smoking self-efficacy and social support to African American women living in public housing, leading to higher likelihood of smoking cessation.¹² Other research has shown that web-based and in-person interventions led by “lay health influencers” also increase self-efficacy and knowledge.¹³

In New York City, a tobacco cessation curriculum was delivered in English and Mandarin by lay health advocates and other partners to Chinese American 7th grade students. Incorporating the cultural views held by Chinese immigrant students on the individual and society was important to successful curriculum implementation.¹⁴

Health System Navigation

CHW navigators are employed in both lung cancer treatment and prevention efforts. Lung cancer patients and their families benefit from community health workers as navigators.¹⁵ A volunteer lay navigation program for patients with newly diagnosed lung cancer found that patients benefit from emotional support, information, and referrals to other services provided by lay navigators.¹⁵ A study of physicians found that a majority of primary care providers are interested in integrating patient navigation models (using lay navigators) into their practice.¹⁶



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Article Title	Year	Target Population	Intervention Type
Tobacco cessation services through community health workers for Spanish-speaking populations	2006	Hispanic populations	Smoking cessation
Activating Lay Health Influencers to Promote Tobacco Cessation	2014	Smoking populations	Smoking cessation
Evidence-based tobacco cessation strategies with pregnant Latina women	2012	Pregnant women, Latina women	Smoking cessation
The effect of a multi-component smoking cessation intervention in African American women residing in public housing	2007	African American women	Smoking cessation
Design and evaluation of a tobacco-prevention program targeting Chinese American youth in New York City	2007	Chinese American youth	Smoking prevention
The experience of people with lung cancer with a volunteer-based lay navigation intervention at an outpatient cancer center	2014	Newly diagnosed lung cancer patients	Patient navigation
Exploring primary care providers' interest in using patient navigators to assist in the delivery of tobacco cessation treatment to low income, ethnic/racial minority patients.	2010	Low income minority populations	Patient navigation
Recruitment, training outcomes, retention, and performance of community health advisors in two tobacco control interventions for Latinos	2010	Diagnosed lung cancer patients	Smoking cessation

Article abstracts available by clicking the hyperlinked article titles above; full citations are below

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The Role of CHWs in Combatting Cervical Cancer

Health Disparities in Cervical Cancer

Since the introduction of the Papanicolaou (Pap) test, incidence and mortality rates for cervical cancer have declined. However, disparities across racial and ethnic groups persist in the United States and in Michigan. The following table highlights major cervical cancer disparities.

United States	Michigan
African-American and Hispanic women are more likely than White women to be diagnosed with cervical cancer (2 and 1.5 times, respectively) ¹	Older black women (age 50+) have higher cervical cancer incidence rates than White women ²
Black women are twice as likely to die of cervical cancer than White women (4.4 deaths per 100,000 vs. 2.2 deaths per 100,000, respectively) ²	Black women are more likely to die of cervical cancer than White women (3.4 deaths per 100,000 vs. 1.8 deaths per 100,000, respectively) ²
Vietnamese women have the highest cervical cancer incidence rate (14 cases per 100,000) ¹	Cervical cancer screening rates are lower among Asian Americans than among white women ³
Asian American, Hispanic, or uninsured women and women with no more than a high school diploma or GED are less likely to have had a Pap test in the last three years ⁴	Asian American, Arab American, Hispanic, lower income and less educated women report significantly lower rates of cervical cancer screening. ⁵

Community Health Worker (CHW) Interventions

Health Literacy

Promotora-led workshops with Hispanic community members have been shown to significantly increase cervical cancer understanding and Pap smear screening. Following one such intervention, screening rates increased 29% (from 36% to 65%), cervical cancer knowledge increased from 3.5 to 5.4 (out of 6) and self-efficacy increased from 4.0 to 4.7 (out of 5).⁶

Screening and Vaccination

An economic evaluation found that although CHW-led education programs targeting Korean-American women are more expensive than traditional methods (\$444 vs. \$269 per enrollee), the cost per screening in the CHW-led program was significantly cheaper (\$1,002 vs. \$1,766), and the incremental cost-effectiveness ratio (ICER) was calculated to be \$236.⁷ For Hispanic communities, interventions that demonstrate the most significant increases in screening consist of one-on-one or small group educational sessions led by lay health advisors (LHAs). In effective interventions, LHAs carry out multiple sessions or implement ongoing activities in the community.⁸ In South Texas, a *promotora*-led program called *Entre Madre e Hija* (EMH) provides mothers and their daughters with culturally relevant cancer prevention education and support. This group was compared to another group given just an HPV vaccine education brochure. Eighty-four percent of participants in both groups started the HPV vaccine series, but the EMH group was over 30% more likely to complete the vaccine series (72.2% vs. 42.5%).⁹

Health System Navigation

Individuals from disadvantaged neighborhoods with lower socioeconomic statuses are less likely to receive timely cancer care.¹⁰ Patient navigators can decrease the time it takes to resolve abnormal cervical cancer screening tests. One study found that women with a patient navigator were more than twice as likely to have reached diagnostic resolution in 60 days (52.4% vs. 24.9%) and at 365 days were nearly 20% more likely to have their diagnosis resolved (88.5% vs. 70.3%).¹¹



The Role of CHWs in Combatting Cervical Cancer

Article Title	Year	Target Population	Intervention Type
Economic Evaluation of a Community Health Worker-Led Health Literacy Intervention to Promote Cancer Screening Among Korean American Women	2015	Korean American women	Cervical cancer education, screening promotion and navigation
Breast Cancer and Cervical Cancer Control Program Enrollees Inform the Kin Keeper Curriculum	2009	Underserved women	Cervical cancer education
Increasing Cervical Cancer Screening Among US Hispanics/Latinas: A Qualitative Systematic Review	2015	Latina women	Using lay health advisors to increase screening rates
Promotora Outreach, Education and Navigation Support for HPV Vaccination to Hispanic Women with Unvaccinated Daughters	2015	Latina women	<i>Promotoras</i> provide health education, referral and navigation support for the HPV vaccine
A Cancer Screening Intervention for Underserved Latina Women by Lay Educators	2012	Latina women	Group based education led by a lay health educator
Evaluating a Bilingual Patient Navigation Program for Uninsured Women With Abnormal Screening Tests for Breast and Cervical Cancer: Implications for Future Navigator Research	2014	Bilingual and non-English speakers	Patient navigation to decrease follow-up time
Follow-Up and Timeliness After an Abnormal Cancer Screening Among Underserved, Urban Women in a Patient Navigation Program	2012	Underserved women	Patient navigation to decrease diagnostic resolution time
Community Health Worker Intervention to Decrease Cervical Cancer Disparities in Hispanic Women	2010	Latina Women	Cervical cancer education and screening promotion
A RCT of a Community Health Worker Intervention Using HPV Self-Sampling to Increase Cervical Cancer Screening Among Minority Populations	2014	Latina, Haitian and African American women	Tailored health outreach and individualized CHW navigation
Effective Lay Health Worker Outreach and Media-Based Education for Promoting Cervical Cancer Screening Among Vietnamese American Women	2007	Vietnamese American women	Cervical cancer education and screening promotion

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