



Providing Women's Cancer Screening and Education in an Underserved Border Population

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Abstract

Health disparities related to breast and cervical cancer screening and mortality exist for Hispanic women living near the United States (US)-Mexico border. The Medical Student Run Clinic (MSRC) at Texas Tech University Health Sciences Center El Paso Paul L. Foster School of Medicine provides free health care to a primarily Hispanic, Spanish-speaking border community and has focused on expanding its women's cancer screening services. The MSRC held mammogram drives, clinical breast exam (CBE) nights, and cervical cancer screenings with the help of student and physician volunteers alongside community health workers. Also, a Women's Health Day Clinic was held, providing CBEs, Pap smears, and women's health education. Clinic volunteers provided 163 women with CBEs, out of which 154 women then received screening mammograms, nine women were referred directly for diagnostic testing, and one patient was diagnosed with breast cancer. For cervical cancer screening, 55 Pap smears were performed. Through its mammogram drives, cervical cancer screenings, and Women's Health Day Clinic initiatives, the MSRC demonstrated a method to increase access to women's preventative health care services in a medically underserved community. The MSRC's women's health initiatives serve as examples for other student-run free clinics on how to implement preventative health screenings and education for their patient populations.

Introduction

According to a 2012 study, breast cancer mortality rates among Latina women are higher along the United States (US)-Mexico border as compared to rates overall in Mexico and the US.¹ For US Hispanic women living in border counties, breast cancer mortality rates range from 15.9 to 19.0 breast cancer deaths per 100,000 women as compared to 15.3 to 16.2 breast cancer deaths per 100,000 US Hispanic women living in non-border counties.² US-Mexico border Latinas face lack of access to the necessary screenings for breast cancer prevention, and Hispanic women have the highest incidence of cervical cancer of any US ethnic group.³ And, in comparison to immigrants with US citizenship, noncitizens are less apt to obtain cervical or breast cancer screening.⁴ Notably, the

use of community health worker (CHW) interventions have a statistically significant increase in screening mammography rates as compared to interventions without CHW involvement, especially when the participants and the CHWs were of similar ethnic background.³

Among student-run clinics, a study focusing on preventative services at a student-run clinic in New York found that preventative services, including mammograms and Pap smears, are underutilized in relation to Healthy People 2020 goals and national averages.⁵ When compared to individuals with health insurance, patients without health insurance at another New York state student-run free clinic had lower screening rates for breast and cervical cancers.⁴ In a separate study, uninsured patients were more likely to be diagnosed with advanced stages of cancer.⁶ Barriers to breast and cervical cancer screening included the belief that

screening for breast and cervical cancer is unnecessary, the need for a physician to encourage screening, the fear of breast cancer, language barriers, low socioeconomic status, low levels of education, and acculturation.⁴

Founded in 2013, the Medical Student Run Clinic (MSRC) at Texas Tech University Health Sciences Center (TTUHSC) El Paso Paul L. Foster School of Medicine serves a low income, uninsured, primarily Hispanic, Spanish-speaking population in Sparks, Texas, which is located five miles from the US-Mexico border near El Paso, Texas. Ninety-one percent of patients are Hispanic, 66.8% speak Spanish only, 13.3% speak English only, and 4.8% speak English and Spanish. Citizenship status is not asked and does not factor into access to patient care at the MSRC. All services provided by the MSRC are provided at no cost to the patients. To address health disparities in breast and cervical cancer screenings among border Latinas, the MSRC enhanced and expanded its women's health services through grant-funded initiatives to provide mammograms, Pap smears, and education.

Interventions

The MSRC's mammogram drives, clinical breast exam (CBE) nights, and cervical cancer screenings are three avenues utilized to bring preventative care to women in the Sparks community. The MSRC utilizes CHWs or "promotoras" and flyers distributed throughout the community as the main patient recruitment techniques. Additionally, a Women's Health Day Clinic was created to provide CBEs, Pap smears, and women's health education. Teams of student volunteers working under the direct supervision of physician faculty volunteers provided education, triage, CBEs, and Pap smears.

This protocol was exempt by the TTUHSC El Paso Institutional Review Board.

Mammography Drives

With funding provided by a National Breast Cancer Foundation grant for the 2015-2016 cycle, the MSRC had a goal of providing 150 mammogram screens. To reach the target goal of 150 patients seen, the clinic held one mammogram drive per month for a total of six drives (three per each

semester), aiming to see 25 patients per drive. Each mammogram drive included CBEs and screening mammography over a period of two nonconsecutive days to maximize efficiency. To better serve our patients, a bilingual questionnaire (Women's Health Questionnaire) was developed to document patients' past gynecologic and obstetric history (Online Appendix).

The first day was solely dedicated for CBEs provided by volunteer physicians. Patients who met the American Cancer Association recommendation criteria were eligible to receive screening mammography. Patients were seen for CBEs on a first-come, first-served basis until the target number of patients was reached, while all other patients were scheduled for the following drive. The drive's second day was mainly to provide the mammogram screening and patient education to patients who previously received CBEs. An imaging company provided an onsite mobile mammography coach. Patients were scheduled over a four-hour interval with 8 patients per hour. Patients were reminded a day prior to their appointment to minimize no-shows.

Once mammogram results were obtained, patients were made aware via a phone call and registered mail if the results were negative and via a phone call and certified mail if the results required additional follow-up. To facilitate follow-up, patient registration and charting included telephone number, address, and emergency contact information.

Scheduling of additional imaging was done by the MSRC Student Leadership Team in conjunction with the imaging center. The Student Leadership Team contacted the imaging center with the additional patient orders via fax and notified the patient via telephone and mail. If breast cancer was suspected and a biopsy recommended, then attempts were made to schedule the patient for the next clinic for a consultation with a physician to discuss the importance of the results and decide upon a management plan.

Most patients seen were previous clinic patients; others were recruited by CHWs promoting the drive at health fairs across the city of El Paso throughout 2015 to 2016.

Cervical Cancer Screening

With funding provided by the Stern Foundation, the MSRC provided cervical cancer screenings free of charge. Patient eligibility for cytology and Human Papilloma Virus testing was determined using the United States Preventative Services Task Force guidelines.⁷ The screenings were provided during regular clinic operating hours 5:00PM-9:00PM throughout the year 2015-2016, twice per month. Up to four patients per clinic were scheduled for cervical cancer screening on a first-come, first-served basis. Patients with abnormal Pap exam results were referred to Texas Tech gynecology faculty.

Women’s Health Day Clinic

In efforts to increase awareness regarding women’s health, the MSRC Student Leadership Team integrated CBEs, cervical cancer screenings, and patient education at the MSRC’s first Women’s Health Day Clinic in the Fall of 2016. The Women’s Health Questionnaire was used to help expedite patient registration. The clinic operated using one triage room, four patient rooms, and one discharge room. Personnel for the event in-

cluded the five members of the MSRC Student Leadership Team who managed patient registration and triage. In addition, six 3rd and 4th year medical student volunteers with two per patient room, and four faculty physicians with one per room provided the screenings. Patients were seen on a first-come, first-served basis. Before discharge, education was provided by 2nd year medical student volunteers using bilingual resources from the Centers for Disease Control and Prevention, which discussed the purpose of the screening, causes of cervical cancer, requirements for screening, and components of the screening procedure.^{8,9}

Results

One hundred sixty-three CBEs were performed during normal clinic nights, dedicated CBE nights, and the Women’s Health Day Clinic (Table 1). From these exams, 154 patients continued on to receive screening mammograms. Forty-two patients were referred for other imaging studies (diagnostic ultrasounds, diagnostic mammograms, biopsies), with a total of 52 additional studies completed. In

Table 1. Overview of Data from the Medical Student Run Clinic Women’s Health Initiatives

Patient Demographics		Staff Time		Screening Statistics	
Average age, mammogram	49.38±6.6	Physician hours	56	Mammogram Statistics	
Average age, Pap test	42.35±9.5	Number of physicians (total)	4	Clinical breast exams	163
		Student hours	280	Total mammogram screenings	154 (94%)
		Number of students (per clinic)	5-7	Initial referral to diagnostic imaging	9 (5.5%)
		Number of clinics	7	Biopsies	4 (2.5%)
				MRI	1 (0.6%)
				IDC	1 (0.6%)
				Pap Test Statistics	
				Total Pap test screenings	55
		Total Volunteer Hours	336	Total Screenings	372

MRI: Magnetic resonance imaging; IDC: Invasive ductal carcinoma; mammogram statistic percentages calculated from total number of clinical breast exams

addition, one patient was diagnosed with breast cancer and was referred to treatment. For cervical cancer screening, 55 Pap smears were performed. To coordinate and deliver the exams, over 330 volunteer hours were dedicated to the community by our volunteer physicians and medical students.

Discussion

Breast and cervical cancer screening and treatment have undergone promising advances; however, these two conditions remain major health problems in Hispanic populations.⁴ Several barriers have been identified in Hispanic communities that limit access or willingness to seek screening services or treatment. Through mammogram drives, cervical cancer screenings, and Women's Health Day Clinic initiatives, the MSRC aimed to tackle some of these obstacles for its primarily Hispanic medically underserved community.

An individual's decision to take part in screening activities is influenced by the perceived benefits and barriers, along with the education, guidance, and reinforcement that they may receive from a health professional or other external "cues to action," which include how-to information, promoting awareness, and reminders.¹ Along with the Women's Health Day Clinic, an emphasis was placed on patient education as a component of the patient screening visits. The education encompassed information about screening procedures, breast and cervical cancer awareness, and recommended screening intervals. The clinic also provided information on the other services available including laboratory services, social work assistance for any recommended interventions at the county hospital, free medical care provided at our bimonthly clinic nights, and the MSRC referral system. Since language barriers in a border community are extremely common, the Student Leadership Team has members who are fluent in English and Spanish, which helps minimize this barrier, provide better communication, and achieve closer relationships between the clinic and its patients. Another strength is the utilization of CHWs to promote screening events. The MSRC addresses educational barriers that prevent individuals from understanding the disease while connecting our patients with volunteer physicians that can follow up with them through regular MSRC clinic nights.

One challenge encountered was getting patients to undergo further diagnostic imaging or follow through with referrals. This can be addressed by making further efforts to provide education for patients requiring further evaluation. One strategy may be to emphasize the importance of these diagnostic tests, their potential to detect malignancies or abnormalities early, and the ability to prevent increased costs or undesired outcomes in the future.

The MSRC plans to continue the Women's Health Day Clinic while expanding cancer screenings, family planning services, and maternal and infant health care. Further funding sources would be required to provide these additional services. These services will aim to help reduce health disparities for Latinas along the US-Mexico border.

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Disclosures

The authors have no conflicts of interest to disclose.

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