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## Increasing Cervical Cancer Screening in a Hispanic Migrant Farmworker Community Through Faith-Based Clinical Outreach

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### Abstract

**Objective**—Partnerships between academic medical centers and faith-based community organizations have been associated with increased screening rates in low-income minority women. We describe clinical outcomes of an outreach partnership between a cancer center and a faith-based outreach clinic offering gynecologic screening services in central Florida to increase cervical cancer screening adherence in a priority population of primarily Hispanic farmworker women.

**Methods**—Data sources included a retrospective chart review. This descriptive study examined patterns of cervical cancer screening behavior among the patient population of the faith-based outreach clinic.

**Results**—Findings suggest that among this group of patients, the demographic factors that predict adherence with cervical cancer screening recommendations are number of years having lived in the United States and marital status. Women residing in the United States for more than 5 years were significantly more adherent with cervical cancer screening recommendations compared with women who have resided in the United States for 5 years or less ( $p = .05$ ), and married women were more likely to be adherent than unmarried women ( $p = .02$ ).

**Conclusions**—The partnership was successful in increasing cervical cancer screening adherence in this medically underserved population. When enabling barriers to screening adherence are removed through faith-based clinical outreach and engaged continuously for a number of years, uninsured, low-income Hispanic women are more likely to receive recommended preventive services.

### Keywords

medically underserved; cancer screening; community outreach; farmworkers; Hispanics

Hispanics experience lower overall incidence and mortality rates from cancer overall compared with non-Hispanic whites; however, there is health disparity for cervical cancer. Higher cervical cancer incidence and mortality rates among Hispanics have been tied to lower screening rates and low adherence to follow-up recommendations after an abnormal Pap test result, lower rates of acculturation, limited access to health care, lack of health insurance, lack of physician referrals, lack of regular health care providers, limited English proficiency, income inequality, low educational attainment, transportation barriers, and cultural barriers such as cancer fatalism [1–7]. Differences in cervical cancer incidence rates among Hispanic immigrants have been found to be dependent on which geographic region the woman originated from, number of years in the United States, and immigration status [8–10].

In this article, we analyzed data that were collected in patient charts during well-women visits to a faith-based outreach clinic. The objective of this article was to describe the study findings from the chart review of cervical cancer screening visits and then indicate how this initial study led to subsequent collaborative projects designed to meet the needs of a low-income, primarily Hispanic migrant farmworker population.

## MATERIALS AND METHODS

This descriptive study used a chart review for data collection. The community partner for this study, Catholic Mobile Medical Services (CMMS), is located in a rural area of central Florida with a population fewer than 3000 people. The CMMS clinic provides medical screenings and follow-up medical care by volunteer medical professionals and qualified staff to Hispanic farmworkers and other low-income residents. A prerequisite for using the CMMS clinic is to meet the requirements set by a state-mandated low-income and lack of insurance qualification form. The study population included all women who received cervical cancer screening in well-women care at CMMS from January 2003 to October 2006. The study was approved by the University of South Florida Institutional Review Board. Researchers from the cancer center reviewed and analyzed the medical charts of all women to identify their clinical and demographic characteristics in 2006.

Medical records of women 18 years and older who had received a Pap test at the clinic were manually entered into a computer database by cancer center staff in the CMMS clinic under the supervision of the clinic director. The sample of all women seen by the clinic included 222 medical records. Clinical history was assessed based on patient self-report and documented care received at the clinic. The demographic data that were abstracted from the patient records included country of origin, age, length of residence in the United States, education, language use, employment status, marital status, number of children, and ethnicity. The clinical data that were abstracted included age at menarche, menstrual cycle, sexual history, cervical cancer–related risk factors (such as family history and sexually transmitted infections), last Pap test, and Pap test results. Variables included in the analysis had minimal missing data (<5%), and consequently, we report numbers and percentages based on the valid data. Descriptive statistics were used for all demographic and clinical characteristics.  $\chi^2$  tests were performed to identify potential associations between demographic and clinical variables. All analyses used SPSS, version 17 (Chicago, IL).

## RESULTS

### Demographic and Clinical Characteristics

Patients had a mean age of 40 years (SD = 11.3), first experienced menarche around 13 years (SD = 1.7), and had their first sexual experience at 19 years (SD = 4.2; Table 1).

Approximately 67% of the patients were married, had a mean total of 2 sexual partners in their entire lives ( $SD = 1.8$ ), and had, on average, 3 children ( $SD = 2.4$ ). Patients had spent a mean of 8 years living in the United States ( $SD = 6.9$ ), but 53% had lived in the United States for 5 years or less. Mean educational attainment for the patients was 8 years of schooling ( $SD = 4.5$ ). Most women were Hispanic (92%), born in Mexico (68%), and unemployed (58%). Only one-third of the women were able to read English (38%), with most preferring Spanish. The most common occupations reported were farm work, fruit/vegetable packing, and general labor, followed by housekeeping, seafood processing, and retail.

Results from the clinical variables included 13% ( $n = 27$ ) of patients reporting a family history of cancer of the uterus or ovaries and 37% ( $n = 80$ ) reporting past surgery of the uterus or ovaries (Table 2). Regarding cervical cancer screening history, 9% ( $n = 20$ ) of patients never had a Pap test before the current test, with a mean age of 35.3 years ( $SD = 19.7$ ). For the other women, 79% ( $n = 169$ ) of patients had received a Pap test in the last 3 years, and 12% ( $n = 25$ ) had received one in the last 4 to 7 years. Because of pending Pap test results, laboratory results were only available for 201 patients. The following outcomes were abstracted from the most recent Pap test results: 89% ( $n = 179$ ) of patients had normal results; 3% ( $n = 6$ ) had results that were suspicious for cancer, with a colposcopy recommended; 7% ( $n = 14$ ) had abnormal results, but not suspicious for cancer; and 1% ( $n = 2$ ) had unsatisfactory specimens. Positive Pap test results included atypical squamous cells, low-grade squamous intraepithelial lesions with mild dysplasia (cervical intraepithelial neoplasia 1), and partially ulcerated cervical polyps. The sample of 6 patient cases diagnosed with cervical dysplasia consisted of 4 women from Mexico, 1 from Puerto Rico, and 1 from Venezuela. Of this group, 3 women reported receiving a Pap test in the last 3 years, and the other 3 had never had a Pap test. The abnormal laboratory test results were confirmed with the CMMS clinic coordinator.

### Predictors of Screening Adherence

Two demographic variables were significantly associated with adherence with cervical cancer screening: time residing in the United States and marital status. Women who lived in the United States for 6 years or more were more likely to be within guidelines for regular screening (85.9%) as compared with women who lived in the United States for 5 years or less (74.5%) ( $\chi^2_1 = 3.97, p = .046$ ). Moreover, women who were married were more likely to be within guidelines (84.0%) compared with unmarried women (68.8%) ( $\chi^2_1 = 5.90, p = .015$ ). None of the other demographic variables (education, number of children, employment, etc.) was significantly associated with adherence with cervical cancer screening recommendations. Other clinical variables (having a regular period, having uterine or ovarian surgery, family history of uterine, and ovarian cancer) were not significantly associated with being adherent with cervical cancer screening recommendations.

### CONCLUSIONS

Previous studies affirm the importance of community-academic partnerships for the success of cervical cancer screening outreach programs among rural, low-income Hispanic groups [11, 12]. In addition, numerous examples point to the critical role of community partnerships for education and research with marginalized populations in the United States on cervical cancer control and prevention [13–15]. Our finding is consistent with the association found in other studies between longer US residence and likelihood of receiving a Pap test for this low-income Hispanic population in central Florida [16–18]. Among other challenges, recent immigrants have limited social support networks and access to information or resources.

The results of the chart review study found a high proportion of women who had previously received a Pap test (91%), which is similar to other study results from interventions with low-income Hispanic patients [19, 20]. Of all abstracted charts, 79% of the women had received a Pap test within the last 3 years. According to 2008 prevalence data for Florida from the Centers for Disease Control and Prevention, 83% of women 18 years and older had received their Pap test in the last 3 years (83% nationwide), so these data suggest that CMMS deserves credit for its success rate with women from this medically underserved priority population [21]. Further studies are needed to examine whether faith-based outreach clinics have greater success rates for increasing cervical cancer screening with priority populations than other outreach programs, for example, migrant clinics run by federally qualified health centers. Our study results reinforce the importance of community partnership activities for providing cancer screening services to priority populations, as well as capacity building for other types of health screening tests to medically underserved uninsured populations.

There are several limitations to this study. The main limitation relates to the study design. Case series studies are affected by selection bias because the investigator self-selects the cases, and these studies do not use appropriate controls [22]. Another study limitation relates to the residency characteristics of the patient population, who are largely Hispanic migrant farmworkers. Therefore, patients might be seeking follow-up care for abnormal Pap tests in other clinics that would not be recorded in their CMMS patient charts. Although the results of this research may not be generalizable beyond the patient population, other research projects resulting from this collaboration may have broader implications. Future planned and ongoing collaborations between the cancer center and CMMS for education and outreach will positively affect the health of this priority population.

The problem of loss-to-follow-up was a critical need identified from the chart review because referrals were not captured in our chart abstraction [23]. This need is now being addressed through a federally funded pilot grant for a trained cervical cancer patient navigator, using the model of patient navigation, an evidence-based intervention strategy [24]. In addition, another federally funded pilot grant explored cervical cancer knowledge and beliefs among women attending area health clinics serving low-income patients and found greater awareness and knowledge about cervical cancer risk factors among Anglo-American and Puerto Rican patients in comparison to Mexican and Honduran patients [25]. The descriptive chart review findings provided justification and pilot data for the aforementioned, funded research projects and added further evidence to support the sustainability of the initial community-based research partnership.

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**Table 1**

## Descriptive Statistics of Demographic Variables

Variable	<i>n</i>	%
Country of origin		
Mexico	151	68
Colombia	14	6
Honduras	10	5
United States	8	4
Other—South America	17	8
Other—Central America	8	4
Other—Caribbean	9	4
Other—Unknown	2	1
Age, y		
18–30	49	22
31–40	64	29
41–50	71	32
>50	38	17
Total years of residence in the United States		
5	112	53
6–10	38	18
>10	60	29
Education		
<Primary	14	6
1–6 y	77	36
7–12 y	96	45
>High school	26	13
Language use		
Reads English	69	38
Reads no English	112	62
Employment		
Full-time or part-time employment	86	42
Unemployed	117	58
Marital status		
Married	142	67
Single	59	28
Other	12	5
Using contraception		
Yes	75	40
No	113	60

**Table 2**

## Clinical History of Patients and Screening Results

Variable	<i>n</i>	%
Cancer of uterus or ovaries in family		
Yes	27	13
No	185	87
Surgery of uterus or ovaries		
Yes	80	37
No	138	63
Time since last Pap test, y		
3	169	79
>3	25	12
Never	20	9
Pap test outcome		
Normal, routine follow-up	179	89
Abnormal, not suspicious for cancer	14	7
Unsatisfactory smear, Pap test repeated	2	1
Suspicious for cancer, colposcopy recommended	6	3