

Knowledge, Attitudes, and Patterns of Cancer Screening: A Self-report among Foreign Born Hispanic Women Utilizing Rural Migrant Health Clinics.

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Rural Migrant Health Clinics

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ABSTRACT: Hispanics are the fastest growing minority in the United States and are currently Washington state's largest minority, with the highest growth rates found in the rural agricultural areas of eastern Washington state. Because breast and cervical cancer mortality rates are higher in Hispanics than other U.S. women, subgroups of Hispanic women with the lowest cancer screening utilization rates need to be identified and targeted for cancer control intervention to most effectively reduce late-stage cancer diagnoses and mortality. A study was conducted at six migrant health clinics located throughout eastern Washington state to discern age-specific proportions for utilization of mammography, breast self-examination, and Pap smears among Hispanic migrants to the United States. Knowledge and attitudes regarding these procedures also were assessed and face-to-face interviews were completed with 512 women.

Among women 20 years or older, 15 percent had never heard of a Pap smear, only 78 percent had ever received a Pap smear, and only 44 percent had received a Pap smear within the prior year. In all, 73 percent of the women had been taught breast self-examination, 62 percent performed breast self-examination, and 41 percent had performed a breast self-examination in the prior month. Among women 40 years or older, only 38 percent had never heard of a mammogram, 38 percent had ever received a mammogram, and only 30 percent had received a mammogram in the prior two years. Cost was reported as a major barrier for screening in this population. Additionally, a substantial proportion of the women perceived Pap smears and mammography as unnecessary or diagnostic procedures, rather than preventive health measures.

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The above breast and cervical cancer screening rates fall well below those documented in national studies of U.S. women and Hispanic women, as well as below the recommended guidelines of the American Cancer Society and the National Cancer Institute. Culturally sensitive interventions to increase cancer screening knowledge and rates are urgently needed for high-risk groups of Hispanic women, especially those 50 years or older.

Hispanics are the fastest growing minority in the United States. The Hispanic population is increasing at a rate five times that of the rest of the United States and will become this country's largest minority group by the year 2000 (Council of Scientific Affairs, 1991; Furino & Munoz, 1991). Hispanics are currently Washington state's largest minority (Cook, 1991). While the Hispanic population in the United States increased 53 percent between 1980 and 1990, Washington state experienced a 78 percent increase for the same time period (Bureau of the Census, 1983a, 1983b, 1992a, 1992b). The highest growth rates are found in the rural, agricultural areas of eastern Washington state.

Despite the general acceptance that appropriate screening can prevent advanced disease, and thereby reduce mortality from breast and cervical cancer, Hispanic women continue to die excessively and needlessly from these diseases (DeLaRosa, 1989; Department of Health and Human Services [DHHS], 1986; Longman, Saint-Germain, & Modiano, 1992; Morris, Lusero, Joyce, Hannigan, & Tucker, 1989; Novello, Wise, & Kleinman, 1991; Whitman, et al., 1991). Past studies have shown that Hispanics are less likely than blacks or whites to report prior cervical or breast cancer screening (Calle, Flanders, Thun, & Martin, 1993), including mammography, clinical breast examination, and breast self-examination (Vernon, Vogel, Halabi, Jackson, Lundy, & Peters, 1992). Other studies have demonstrated that Hispanic women are at greater risk of late-stage breast cancer diagnosis (McCoy, Nielsen, Chitwood, Zaverchnik, & Khoury, 1991; Richardson, Marks, Solis, Collins, Birba, & Hisserich, 1987).

One of the goals of the Public Health Service's *Healthy People 2000* program is to increase the utilization of mammography among all women, but especially among Hispanic women (Public Health Service [PHS], 1990). Subgroups of Hispanic women with the lowest cancer screening utilization rates need to be identified and targeted for cancer control intervention to most effectively meet this objective. However, much of the data currently available regarding Hispanic health comes from general population samples of Hispanics, which over-represent women

with more years of education, higher family income, and telephone access (Bastani, Marcus, & Hollatz-Brown, 1991; Espino, Burge, & Moreno, 1991; Rust, 1990; Texidor, 1987). Subpopulation differences among Hispanics generally have been ignored (Delgado & Estrada, 1993).

This article describes the age-specific proportions of utilization for mammography, breast self-examination, and cervical cancer screening via Papanicolaou (Pap) smears among Hispanic migrants to the United States who reside in mostly rural eastern Washington state. The women's knowledge of and attitudes toward these screening procedures are presented, as well as self-perceived barriers for screening.

Methods

Within Washington state, a network of 23 migrant health clinics provide medical care to low-income and migrant populations. This study was conducted in six of these clinics located throughout eastern Washington state (Grandview, Moses Lake, Othello, Toppenish, Wenatchee, and Yakima, WA). These nonprofit clinics provide the principal source of health care delivery available to these rural populations. Clinics were selected as data collection sites to obtain a sufficient sample across age categories of interest, and to overcome logistical difficulties previously encountered in survey research involving migrant and low-income populations (Aday, Chiu, & Andersen, 1980; Hazuda, Comeaux, Stern, Haffner, Eifler, & Rosenthal, 1986; Howard, 1983). Traditional survey methods, such as random digit dialing and mailings, remain inappropriate due to low literacy rates and because many of these individuals do not maintain telephone access.

All foreign born Hispanic women, aged 20 years or older, with no history of breast or cervical cancer, attending any one of the six migrant health clinics, were eligible to participate in the study. Based on a questionnaire used by the National Cancer Institute Breast Cancer Screening Consortium, a survey instrument was developed to obtain self-reported data on Pap smear, breast self-examination, and mammography knowledge; attitudes regarding these

procedures; utilization; and time since the last screening (National Cancer Institute Breast Cancer Screening Consortium, 1990; Zapka, Stoddard, Maul, & Costanza, 1991). The survey instrument was translated into Spanish, pretested, and refined to match colloquial usage within the study population. Finally, the migrant health clinics' directors and medical staffs reviewed the findings stemming from the validation of the questionnaire and authorized its use.

Women were asked the reason for having had their last Pap smear and/or mammogram. Among those who had never had a mammogram, or had not received a Pap smear in the past three years or longer, the principal reason the procedure was not conducted was asked in an open-ended format. Women who had not performed a breast self-examination in the past three months or longer were likewise asked the most compelling reason for not performing this technique. Those who had never heard of a Pap smear or mammogram were not asked further questions regarding these preventive services. Questions concerning mammography were asked only to women aged 40 years and older.

Bilingual, female medical assistants and nurses were hired from within each clinic and trained as interviewers. Specific interviewing days were established within each clinic. Women with a scheduled or walk-in appointment who fit the study criteria, were approached by the interviewer who explained the purpose of the study and obtained informed consent. The study was designed to interview an equal number of women from within each of the six clinics and within four age categories: 20-29 years old, 30-39 years old, 40-49 years old, and 50 or more years old. Women were interviewed consecutively until all age strata were completed. Some of the clinics exceeded the minimum requirement.

All interviews were conducted face to face prior to each scheduled appointment. Subjects chose to respond to the survey in Spanish or English. The interviews were conducted in private office space within each clinic, or in a secluded section of the waiting room if privacy could be ensured. All interviews were conducted between February and May in 1994. A total of 515 women were approached for an interview and 512 (99.4%) provided consent and completed the interview. Data were entered on a mainframe computer with dual entry verification. Statistical analyses were conducted using SAS (Version 6.08). Data were analyzed to discern the proportion of women who had ever heard of a Pap smear or mammogram, who had been taught breast self-examination, who had ever

received a Pap smear or mammogram, who perform breast self-examination, and the time since the last procedure by age-specific categories. The Kruskal-Wallis test (*chi square approximation*) was used to examine differences across age-specific categories for each of these variables. The a priori level of significance was set at $P \leq 0.05$. Reasons for having had or not having had each procedure were summarized and the proportion responding to each category was determined.

Results

Sociodemographic Characteristics. Nearly all (96.7%) of the women in this study were born in Mexico, with 68 percent having resided in the United States for four years or more. Spanish was chosen as the language of preference for completing the survey by 85.4 percent of the women (Table 1). The demographic profile of the study population is in stark contrast with national data, whether it be among whites or specific to Hispanics. Nationally, 25 percent of Hispanic families live in poverty, with a median family income of \$23,431 (Bureau of the Census, 1991). Approximately 85 percent of the study population had a total family income of \$15,000 or less per year, with 35.5 percent earning less than \$5,000 per year. Nationally, 52 percent of Hispanics have completed 12 years of formal education (Bureau of the Census, 1990). Comparatively, fewer than 13 percent of the study participants had completed high school, or any college; two thirds had attained less than a seventh grade education; and 11.2 percent had no formal education at all. Nearly 31 percent of the population did not have telephone access in the home—a major reason migrant and low-income Hispanics have been, and continue to be, overlooked in state and national surveys that generalize Hispanic health status (Ackermann, Brackbill, Bewerse, & Sanderson, 1992; National Cancer Institute Breast Cancer Screening Consortium, 1990).

Knowledge and Attitudes. Table 2 presents women's self-reported knowledge regarding recommended guidelines for screening and their attitudes toward breast cancer and screening procedures. Among those who had heard of a Pap smear, three fourths correctly reported the need for an annual Pap smear. The proportion overestimating the need (more than once per year) and underestimating the need (less than once per year) were similar; 13.2 percent

Table 1 Characteristics of Foreign Born Hispanic Women Using Migrant Health Clinics (N=512).

Characteristics	N	Percent
Age in Years		
20-29	151	29.5
30-39	142	27.7
40-49	111	21.7
50 or older	108	21.1
Country of Birth		
Mexico	494	96.7
Other	17	3.3
Number of Years Lived in United States		
Fewer than 1	50	10.0
1-3	110	22.0
4-10	171	34.3
More than 10	168	33.7
Language Preference		
English	75	14.6
Spanish	437	85.4
Years of Education		
None	55	11.2
1-6	271	55.0
7-11	105	21.3
12 or more	62	12.5
Total Family Income		
Less than \$5,000	177	35.5
\$5,000-\$15,000	245	49.2
More than \$15,000	76	15.3
Marital Status		
Married	361	70.5
Living as married	57	11.1
Divorced	24	4.7
Separated	29	5.7
Widowed	23	4.5
Never married	18	3.5
Telephone in Home		
Yes	354	69.3
No	157	30.7

and 11.2 percent, respectively. Among the study population, 46.4 percent indicated a breast self-examination should be performed once per month. However, 32 percent of women reported that a breast self-examination should be performed more frequently, and 21.6 percent reported it should be performed less frequently than once per month. Of

those who had heard of a mammogram, 73.7 percent reported that screening is needed every one to two years.

Of the women interviewed, 63.4 percent reported that their chance of getting breast cancer some day was "not very likely" or "not at all likely." However, nearly 80 percent of those women said they would probably get a screening mammogram in the next year if their doctor recommended it. Cost was reported as a high concern (those responding "extremely concerned," or "quite concerned") for having a mammogram by 56.2 percent of the women, as was the fear of finding cancer by one half of the women. Nearly 40 percent of the women expressed feeling a high degree of embarrassment with regard to obtaining a mammogram, while 40.8 percent were concerned about radiation exposure.

Self-Reported Utilization

Pap Smear Utilization. Table 3 presents Pap smear utilization patterns for women 20 years or older by age-specific categories. Overall, 14.7 percent of the study population had never heard of a Pap smear, while 78.1 percent reported ever having received at least one Pap smear. Data from the 1992 National Health Interview Survey (PHS, 1994) reported much higher Pap smear utilization rates; 91 percent of women in the general population, and 83 percent of Hispanic women, reported ever receiving a Pap smear.

Statistically significant differences ($P < 0.05$) were discerned across age-specific categories for having ever heard of a Pap smear, having ever received a Pap smear, and having received a Pap smear in the past year. Study participants aged 50 years or older were the least knowledgeable of Pap smears (26.2% had never heard of one) and they exhibited the lowest utilization rate with only 60.7 percent ever having received one. Moreover, only 24.3 percent of women 50 years or older had received a Pap smear within the past year, compared to 44.5 percent overall.

Breast Self-Examination Practices. The National Health Interview Survey found that more than three fourths of U.S. women practiced breast self-examination on at least an irregular basis (Dawson & Thompson, 1990). Only 72.6 percent of women in this study had been taught breast self-examination, only 62.2 percent had ever performed it, and only 40.9 percent

Table 2. Knowledge and Attitudes Regarding Breast* and Cervical Cancer Screening Among Foreign Born Hispanic Women.**

Knowledge and Attitudes	Percent Responding in Each Category
A woman my age should get a Pap smear: (n=402)	
Never	1.0
Less than once per year	10.2
Once per year	75.6
More than once per year	13.2
Frequency I should self-examine my breasts: (n=478)	
Never	1.5
Once per year	12.8
Twice per year	2.9
3-6 times per year	4.4
Once per month	46.4
2-3 times per month	11.1
Once per week	13.4
More than once per week	7.5
A woman my age should have a mammogram: (n=114)	
Never	1.8
Less than every two years	14.0
Every two years	8.8
Once per year	64.9
More than once per year	10.5
My chance of getting breast cancer some day is: (n=506)	
Very likely	6.9
Somewhat likely	29.6
Not very likely	32.0
Not at all likely	31.4
If I found a lump in my breast, I would: (n=511)	
Wait for awhile and see if it would go away	9.2
Go to a medical doctor	88.3
Go to someone other than a medical doctor, such as a curanderos, spiritualist, or herbalist	2.5
The likelihood I will get a screening mammogram in the next year if my doctor recommended it is: (n=133)	
Very likely	54.9
Somewhat likely	24.8
Not very likely	17.3
Not at all likely	3.0
Concern for the cost of a mammogram: (n=128)	
Extremely concerned	32.8
Quite concerned	23.4
Somewhat concerned	20.3
Not at all concerned	23.4

Feeling embarrassed about a mammogram: (n=126)	
Extremely concerned	27.0
Quite concerned	12.7
Somewhat concerned	23.0
Not at all concerned	37.3
Fear of pain from mammogram: (n=126)	
Extremely concerned	22.2
Quite concerned	14.3
Somewhat concerned	19.8
Not at all concerned	43.7
Fear of finding cancer from a mammogram: (n=130)	
Extremely concerned	33.8
Quite concerned	16.2
Somewhat concerned	22.3
Not at all concerned	27.7
Worry about the X-ray/radiation from a mammogram: (n=125)	
Extremely concerned	14.4
Quite concerned	26.4
Somewhat concerned	19.2
Not at all concerned	40.0

Mammography questions restricted to women who had heard of the procedure and to those older than 40 years.
Pap smear questions restricted to women who had heard of the procedure.

performed it within the past month (Table 3). Statistically significant differences ($P < 0.05$) were discerned across age-specific categories for all three variables, with women 50 years or older reporting the lowest levels of breast self-examination knowledge and performance.

A recent study of Mexican-American women aged 50 years or older (Saint-Germain & Longman, 1993) found that 72.1 percent had ever performed a breast self-examination. In contrast, Table 3 documents that study participants aged 50 years or older (those at the highest risk for breast cancer) were found to be the least likely to have been taught breast self-examination (59.3% compared to 72.6% overall), the least likely to perform it (42.6%), and by far the least likely to have performed a breast self-examination within the past month (25% compared to 40.9% overall).

Mammography Utilization. The American Cancer Society and the National Cancer Institute recommend that women ages 40-49 years obtain mammograms every one to two years, and annually after age 50 (Levin & Murphy, 1992; Vanchieri, 1989). Table 3 shows that only 62.4 percent of women in this study

Table 3. Patterns of Use for Pap Smear, Breast Self-examination, and Mammography Among Foreign Born Hispanic Women by Age-specific Categories.

Screening Procedure Use	20-29 Years		30-39 Years		40-49 Years		50 Years or Older		Total	
	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent
Pap Smear (n=510)										
Ever heard of	123	82.0	131	92.3	102	91.9	79	73.8	435	85.3
Ever received*†	110	73.3	127	89.4	95	87.2	65	60.7	397	78.1
Received in past year†	79	53.0	70	49.3	50	46.3	26	24.3	225	44.5
Breast Self-examination (n=511)										
Ever been taught†	107	70.9	113	79.6	87	79.1	64	59.3	371	72.6
Ever performed†	95	62.9	101	71.1	76	69.1	46	42.6	318	62.2
Performed in past month†	59	39.6	63	45.3	58	52.7	27	25.0	207	40.9
Mammography** (n=213)										
Ever heard of procedure					68	63.6	65	61.3	133	62.4
Ever received*		—			40	37.4	41	38.7	81	38.0
Received in past year		—	—	—	22	20.6	23	21.9	45	21.2
Received in past two years			—	—	30	28.0	34	32.4	64	30.2

† Significant difference via Kruskal-Wallis Test (*chi* square approximation), $P \leq 0.05$.

* Assumes women who have never heard of the procedure have never received the procedure.

** Restricted to women aged 40 years or older.

(aged 40 years or older) had ever heard of a mammogram; only 38 percent had ever received a mammogram; 21.2 percent had received one in the previous year; and only 30.2 percent in the previous two years. Of those receiving a mammogram in the previous two years, little difference was seen by age group, with 28 percent of women aged 40-49 years old and 32.4 percent of women aged 50 years or older receiving a mammogram, respectively. Analyses revealed no statistically significant differences across age-specific categories for any of these variables.

These findings differ markedly from results of the 1990 National Health Interview Survey of Health Promotion and Disease Prevention (Rakowski, Rimer, & Bryant, 1993), which found that 57.7 percent of women aged 40 years or older ever had a mammogram for routine screening; 50.3 percent in the previous two years. By ethnicity, 59.9 percent of non-Hispanic whites, 51.4 percent of blacks, and 46.7 percent of Hispanics ever had a mammogram for routine screening.

Results from the 1992 Behavioral Risk Factor Surveillance System (BRFSS) (Centers for Disease

Control, 1993) study of U.S. women aged 50 years or older reported that 45.1 percent of U.S. women and 44.7 percent of Hispanic women had received a mammogram during the year preceding the interview. Although all groups fall well below the annual recommended guideline for mammography, this study's population was only one half as likely as the general Hispanic population (21.9% versus 44.7%) to receive a mammogram in the prior year.

The study of Mexican-American women by Saint-Germain & Longman (1993) found that 77.5 percent of women aged 50 years or older had heard of a mammogram, and only 51.3 percent had ever received a mammogram. Again, this study population of women 50 years or older compares less favorably in both categories (61.3% having ever heard of a mammogram and 38.7% having ever received one).

Reasons for Having Last Pap Smear or Mammogram. Of the women interviewed, 20.5 percent said they received their last Pap smear because of a health problem rather than for routine screening. Likewise, 26.2 percent reported having had their last mammogram due to a health problem. General U.S. popula-

tion studies have reported 10 percent of women as ever having had a mammogram for a breast problem (Ackermann, et al., 1992). This magnitude of difference may reflect the fact that many women in the target population are not pursuing or postponing these procedures until they are referred for screening due to the detection of a potential problem.

Pap Smear and Mammography Barriers. Of those who had not had a Pap smear in the prior three years or longer, and provided a reason as to why (N=59), 22 percent reported that they felt it was "not necessary." Other common reasons included "cost" (16.9%), "too embarrassing" (15.2%), "no problem or no pain" (10.2%), and "doctor never recommended" (10.2%).

Cost was the most common reason given by women for never having had a mammogram (23.5%; N=51). Nearly as many women (21.6%) reported "no problem, or no pain, or no lump/s" as the sole reason, which may indicate that many of these women perceive mammography as a diagnostic procedure rather than a preventive health measure. Other common responses included "no good reason," reported by 17.6 percent of the women, "doctor never recommended" (13.7%), and "fear" (5.9%).

Breast Self-examination Barriers. Of the women not performing a breast self-examination in the past three months or longer, 38 percent (N=200) reported the principal reason as being that they "don't know how to" perform the procedure. As with Pap smears and mammography, "no pain or no problem" was commonly reported as the reason for not performing a breast self-examination (14%), 13.5 percent reported that they just "forget to," and 6.5 percent responded with "didn't know I needed to."

Conclusions

Women participating in this study were all seeking and obtaining medical care as demonstrated by their interaction with the migrant health clinics. Because of this, the sample may not be representative of Hispanic women with the lowest utilization of preventive health services. If this were the case, then results from this study represent a conservative estimate as to the true magnitude of the problems examined, and thereby overestimate actual utilization rates. Additionally, the validity of self-report for cancer screening procedures in this population is unknown. However, a study to measure the validity of self-reported mammography and Pap smear usage in a group of predominately low-income, older, and

Spanish speaking Mexican-American women in Texas reported that for both procedures, twice as many tests in the past five years were reported as were documented (Suarez, Goldman, & Weiss, 1995). Thus, it appears that this study's findings may present a best case scenario.

Results of this study indicate that among women aged 20 years or older, 15 percent had never heard of a Pap smear, 78 percent had ever received a Pap smear, and only 44 percent had received a Pap smear within the prior year. Overall, 73 percent of the women had been taught breast self-examination, 62 percent performed breast self-examinations, with 41 percent performing it in the prior month. Among women aged 40 years or older, 38 percent had never heard of a mammogram, 38 percent had ever received a mammogram, and only 30 percent had received a mammogram in the prior two years. Culturally sensitive interventions to increase breast and cervical cancer screening rates are urgently needed for this high-risk population of Hispanic women, particularly those aged 50 years or older. Among the Public Health Service *Healthy People 2000* objectives are: (1) increasing to at least 80 percent the proportion of Hispanic women aged 40 years or older who have ever received a clinical breast exam and mammogram, (2) increasing to at least 60 percent the proportion of Hispanic women aged 50 years or older who have received a mammogram within the preceding two years, (3) increasing to at least 95 percent the proportion of Hispanic women aged 18 years or older who have ever received a Pap smear, and (4) increasing to at least 80 percent the proportion of Hispanic women 18 years or older who have received a Pap smear within the preceding three years (PHS, 1994). These goals will not be met without targeting high-risk Hispanic subpopulations such as the women identified in this report.

Implementing interventions for these women will be challenging. Data-based interventions such as geographic mapping (Suarez, Martin, & Weiss, 1991), and community interventions such as peer role models and media campaigns which have shown some success in other Mexican-American populations (Suarez, Nichols, & Brady, 1993) may not be appropriate for the population in this study, due in large measure to their geographic migration in pursuit of agricultural employment. Insufficient knowledge, misconceptions as to the need for screening, and expense were identified as major barriers to screening among these women. The most common reason women reported for not performing breast self-

examination was that they had not been shown how to perform the procedure. A substantial proportion perceived Pap smear and mammography screening as unnecessary or diagnostic procedures rather than preventive health measures. Interestingly, 80 percent of the women responded they would be likely to obtain a screening mammogram in the next year if a physician recommended it. These findings underscore the powerful role health care providers can play in increasing the rate of screening utilization by teaching and advising women of the benefits of performing breast self-examination and obtaining regular Pap smears and mammograms.

Although cost has been extensively reported as a barrier to screening mammography (Elnicki, Morris, & Shockcor, 1995; Kiefe, McKay, Halevy, & Brody, 1994; Stein, Fox, & Murata, 1991), evidence of the magnitude of its effect on utilization is limited (Urban, Anderson, & Peacock, 1994). Self-reported concern for cost as a barrier to mammography presents a difficult obstacle to overcome when planning interventions in low-income populations. It is unknown if, in fact, this subgroup of women would seek routine screening mammograms if cost were not a factor. Future research needs to assess the impact of complete or partial subsidization for screening mammography on women's utilization.

The results herein document significant differences in the rate of utilization for Pap smear, breast self-examination, and mammography among Hispanic women using rural migrant health clinics relative to findings stemming from national health surveys that include Hispanics. The migratory nature of the study population is directly related to pursuit of agricultural employment in rural areas throughout the western United States and thereby poses distinct challenges to the implementation and assessment of cancer control intervention. Without culturally sensitive and affordable cancer control interventions, breast and cervical cancer mortality rates will remain high in the Hispanic population examined, and given the projected growth of this population in both Washington state and the United States, actual numbers of deaths per year from these cancers will probably increase.

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