
IMMIGRANT WOMEN AND CERVICAL CANCER PREVENTION IN THE UNITED STATES

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Introduction

The United States has always been a magnet for immigration. Foreign-born residents often face different health problems and unique challenges in accessing healthcare than US-born citizens. Immigrants often experience disease rates more akin to their country of origin than those of their US counterparts. For cervical cancer, this discrepancy is certainly true. While cervical cancer rates are low and screening rates are high in the general US population, immigrant women frequently come from countries where the opposite is true. For these women, immigration to the US can provide opportunities for access to care. Many women, however, are not adequately informed about cervical cancer and are unable to navigate the healthcare system.

Improving the cultural sensitivity of information and healthcare access for foreign-born women is crucial for reducing cervical cancer incidence and mortality in these communities. Without both patient and provider based interventions, such as basic, up-to-date brochures and access to translators, the effects

of cervical cancer prevention efforts and screening for immigrant women will not match the successes of interventions achieved with US born women.

This policy brief is intended to help program managers and clinicians better understand the barriers to care that foreign-born women face regarding cervical cancer screening and treatment, and the current best practice interventions to help alleviate these barriers. The brief begins with a general overview of the current demographic changes within the US population and current cervical cancer screening rates, incidence and mortality for the specific foreign-born populations at risk. The next section catalogues barriers to care faced by immigrant women, further investigating issues of acculturation, socioeconomic and insurance status, lack of continuous source of health care, cervical cancer knowledge, concepts of preventive medicine, and specific cultural beliefs. Finally, several single focused and dual patient/provider interventions are highlighted to show promising results in helping improve screening and treatment rates within foreign-born communities.

Executive Summary

Immigrant women face a multitude of barriers to Pap screening and cervical cancer treatment. Immigrants residing in the US fewer than 10 years are less likely to be screened for cervical cancer than those living here more than a decade. While a number of barriers pertain to all immigrant women, variation among groups by country or region of origin demands close examination in order to determine and address unique concerns. This policy brief provides an analysis of the barriers faced by foreign-born women residing in the United States regarding cervical cancer screening and treatment and highlights intervention strategies.

Foreign-born women without US citizenship face serious barriers. They often are disadvantaged by language barriers, lack of health insurance, and lack of continuous sources of health care, further decreasing their use of regular Pap smears and limiting their knowledge of current screening recommendations. Additional culture-specific barriers also play a role in compromised cancer screening and treatment. Many women report absence of symptoms, coupled with the general embarrassment of the Pap smear, as major factors for not having regular tests (e.g. Latinas and Koreans). For others, beliefs that proper genital cleanliness and hygiene means that a Pap smear is not necessary (e.g. Latinas and Vietnamese). Finally, cancer prevention strategies can be compromised by fatalistic views regarding cervical cancer (e.g. Latinas), or karma (e.g. Southeast Asians).

Despite numerous studies on cervical cancer interventions, there is limited research regarding immigrant women and the disease. A systemic review of published studies between 1990 and 2006 reveals that multi-component interventions involving the patient and the provider offer the greatest potential to increase cervical cancer screening and treatment within foreign-born populations. Notable interventions include: telephone screening reminders in the patient's native language coupled with educational messages about cervical cancer, providing transportation, using female physicians and interpreters in an informal clinic setting, and establishing coalitions among trusted community organizations, and screening providers.

In order to increase cervical cancer screening and education for a particular foreign-born population, program managers and clinicians must understand the population's unique belief system in order to tailor interventions aimed at such risk factors as basic knowledge, embarrassment, improper hygiene beliefs, and karma/fate.

Methods

While there are many cervical cancer studies and interventions, few involve foreign-born women. A Pub Med search, limited to studies about cervical cancer screening, incidence, mortality, and corresponding interventions within the United States, identified articles post 1985. Articles using data before 1985 were excluded in order to ensure that current cervical cancer screening methods were in use at the time data were collected. Search terms included: cervical cancer, HPV, foreign born, immigrant, migrant, cervical screening, cervical incidence, cervical mortality, Papanicolaou smear, Vietnamese, Filipino, Cambodian, Korean, Latina, Hispanic, Latin American, Hmong, Asian, Pacific Islander, Muslim, Caribbean, and intervention. The majority of the studies focused on immigrants from Mexico and Latin America. Other well documented groups included: Vietnamese, Korean, Filipino, and Hmong foreign-born women. Few studies using post 1985 data involved Muslim or Caribbean women. Thirty-seven articles were identified and used in the review. Eleven articles were used to create a Pap smear rates grid, tracking rates for foreign-born women by citizen status, years in the US, or country of origin.

The search was not intended to be exhaustive. Rather, the goal was to identify screening, incidence and mortality rates in these groups and to locate examples used to illustrate the varieties of interventions that have been successful in immigrant communities.

Background

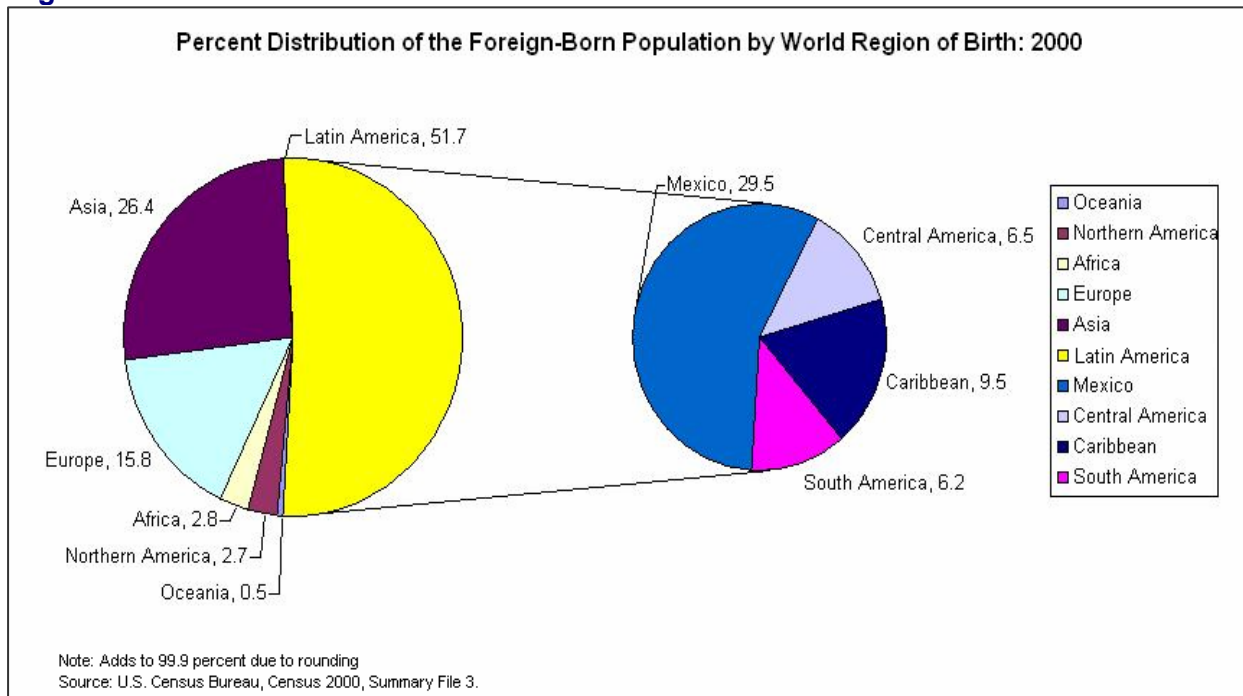
POPULATION CHANGES

The United States is experiencing rapid growth in foreign born populations. In the decade between 1990 and 2000, the foreign-born population increased by 50 percent. In 2000, 11.1 percent (31 million) of the United States population was foreign-born, up from 7.9 percent (19 million) in 1990.¹ Every region of the world contributed to these immigration increases. Over 51 percent of the immigrant population emigrated from Latin America [see Figure 1]. For this region, 36 percent of the foreign-born population originated from Mexico and Central America, 10 percent from the Caribbean,

and 6.2 percent from South America. Asia and Europe contributed 26 percent and 16 percent of the foreign-born population, respectively. Africa, North America, and Oceania together comprised less than 6 percent of the foreign-born population.¹

Mexico is the largest contributing country, constituting 29.5 percent of the foreign born population (9 million).¹ The next largest contributors – the Philippines, India, China, and Vietnam – individually provide only between three and five percent of the population born outside of the US.

Figure 1



While every state attracts immigrants, the majority of the immigrant population lives in six states. Sixty-seven percent of the US foreign-born population is concentrated in California (29 percent), New York (11), Texas (9), Florida (9), New Jersey (5), and Illinois (4).² The remainder is disbursed across the United States. Increasingly, the foreign-born population is seeking to locate in areas that previously did not attract immigrants. Only one state, Maine, had no significant change in its foreign-born population from 1990 to 2000.¹ Nineteen states, none of which were among the aforementioned six, experienced increases of over 100 percent [see Table 1].¹ North Carolina, Nevada, and Georgia saw a 200 percent or more increase in their foreign-born populations during this timeframe.¹ Due to these large increases, areas new to the migration boom are pressed to quickly adapt to the new population demographics.

Table 1 – Percent Change in Foreign-Born Population for States with >100 percent change, 1990 and 2000¹

North Carolina	273.7
Georgia	233.4
Nevada	202.6
Arkansas	196.3
Utah	170.8
Tennessee	169.0
Nebraska	164.7
Colorado	159.7
Arizona	135.9
Kentucky	135.3
South Carolina	132.1
Minnesota	130.4
Idaho	121.7
Kansas	114.4
Iowa	110.3
Oregon	108.0
Alabama	101.6
Delaware	101.6
Oklahoma	101.2

Similarly, regions with increases in their immigrant population will need to adapt to the area’s new languages. The level of English proficiency of immigrant groups varies by the state and region. In 2000, 35 percent of foreign-born residents had “limited English proficiency” – defined as the percentage of the population that speaks English “not well” (23 percent) or “not at all” (12).³ Southern states are more likely to have non-English

speakers, reflecting a 100 percent or more increase in the foreign-born population in six of the 16 southern states between 1990 and 2000.³ English speaking foreign-born residents are more likely to be found in the North East.³

Education is more often associated with country of origin than with state of residence. In 2000, 17 percent of immigrants (4.2 million) had less than a high school diploma, and 15 percent (3.8 million) had some high school education.⁴ Immigrants from Mexico were more likely to have less than a high school education (36 percent) or some high school (23 percent) than any other group.⁴ While 66.4 percent of women born outside of the US have a high school degree or higher, they are half as likely to have a college education as men from the same country.⁵

Foreign-born women are less likely to have paid work outside the home than US-born women,⁵ possibly contributing to observed differences in income and access to health insurance. Similarly, foreign-born, full-time working women make an average of \$4,000 less per year than working, US-born women.⁵ This discrepancy contributes to higher poverty rates among groups of women from other countries, affecting their ability to pay for health insurance or preventive care.

OCURRENCE OF CERVICAL CANCER AND PREVENTION AMONG IMMIGRANT WOMEN

Cervical cancer is rare among US-born women. The American Cancer Society estimates in 2006 there were 10,370 new cases of cervical cancer, and 3,710 deaths.⁶ The incidence of and mortality associated with cervical cancer are on the decline for women born in this country, indicating success in both prevention and screening efforts. However, the opposite is true for women born outside of the US.

Cervical cancer is caused by the sexually transmitted human papilloma virus (HPV). Cervical cancer incidence can be prevented in two ways: through direct prevention of HPV transmission and through Pap smear screening to identify an infection before it becomes cancerous. HPV is most often passed through genital contact, commonly in the context of vaginal and anal sex. Over 50 percent of the US population contract HPV in their lifetime.⁷ Abstaining from sexual activity is the best way to prevent an HPV infection, although it is not always a realistic prevention goal. Having one monogamous partner and using condoms during sexual activity are the next best prevention methods. However, the

partner may have had previous partners, and therefore may already be exposed. Condoms shield against 70 percent of HPV infections,⁸ but do not offer complete protection.

Because of this limitation, screening is needed to detect changes in cervical cells before they become cancerous. Currently, the US Preventive Services Task Force guidelines recommend Pap smears once every three years, beginning at age 21 or three years after the age at first sex.⁹ Pap smears detect precancerous lesions, when they are treatable.

SCREENING RATES

While cervical cancer is easily prevented in most cases through regular screening, screening among immigrant populations is less common than among US-born women [see Table 2]. Among foreign-born women residing in the US less than 10 years, only 61 percent received a Pap smear in the last three years, compared to 83 percent of US-born women.¹⁰ Foreign-born women who have been in the US more than 10 years fared significantly better, but still less well than US-born women [see table 1].¹⁰

Differences in screening rates also were observed between naturalized foreign-born and non-citizen women. In California, naturalized citizens received five percent more pap smears in the last two years than non-citizen women.¹¹ Nationwide, 84 percent of naturalized Latinas received Pap smears in the last two years, while only 70 percent of Latina non-citizens did so.¹²

Differences in screening rates also exist by country of origin [see table 2]. A study of Los Angeles immigrants found that Laotians, Cambodians, Vietnamese, Asian Indian, and Chinese immigrants had low screening rates within the last two years (52 to 56 percent) compared to Korean, Filipino, and Japanese women (65 to 75 percent).¹³ A similar study in the same area found that for foreign-born women over 50, Filipino immigrants were more likely to have been screened (48 percent) in the last three years than Korean immigrants (40 percent).¹⁴ These results are comparable to other areas of the country; for example, Maryland Korean-born women over the age of 40 showed low levels of testing with Pap smears.¹⁵

Lack of regular screening has led to heightened incidence of cervical cancer in these groups. Cervical cancer is one of the top five most commonly diagnosed cancers among Vietnamese immigrants, contributing to 15 percent of all cancers.¹⁶ In 2000, cervical cancer was the second

most diagnosed cancer in Korea (18 percent of all cancers).¹⁷ In the US, Korean immigrants had half the number of diagnosed cancers (9 percent), but it was still more than among US whites (6 percent).¹⁷ Foreign-born Hmong have cervical cancer incidence rates three times that of other Asian and Pacific Islanders (AAPI) and 4.5 times that of non-Hispanic whites.¹⁸

CANCER MORTALITY

Cervical cancer mortality rates for immigrant women remain high due to low screening rates. Overall, US-born women's cervical cancer mortality declined 17 percent between 1985 and 1996, while foreign-born mortality increased by 22 percent.¹⁹ Latinas, primarily from Mexico, Vietnamese, Hmong, Korean and Caribbean women show increased cervical cancer mortality rates over US-born women and lower levels of being previously screened.^{11, 13-15, 20-25} Latinas in Texas and AAPI in Los Angeles, CA, are 77 percent²² and 31 percent¹³ less likely than non-Hispanic White citizens to have ever had a Pap smear, respectively. Up to 62 percent of Korean immigrants have never been screened for cervical cancer.¹⁵ Under 27 percent of foreign-born Vietnamese in two counties in Texas and California never had a Pap smear,²⁴ and over 76 percent of Vietnamese aged 17-35 in Houston, TX, had never been screened.²⁵ Increases in cervical cancer mortality in foreign-born populations are partially due to these women failing to receive Pap smears until they develop advanced, and hard to treat, cervical cancer.

Barriers to Care Faced by Immigrant Women

Immigrant women's lack of access to preventive care is multifaceted. Migrating from another country, they often face language and cultural barriers and have difficulty navigating unfamiliar healthcare systems. Immigrant communities are vulnerable to being uninsured or underinsured, lacking a continuous source of healthcare, and experiencing economic hardships. For cervical cancer, these barriers to care can delay access to preventive screening, such as Pap smears and HPV testing, until care is urgent.

ACCULTURATION

The length of time immigrants spend in the United States affects the likelihood that they will be screened for cervical cancer. Swan et al. and Carrasquillo and Pati found that women who have

been in the US less than 10 years were 10 to 18 percent less likely to be screened for cervical cancer than women who resided in the US longer than 10 years.^{10,26} The longer Korean and Filipina women reside in the US, the more likely they are to receive regular screening.¹⁴ Latinas who are less acculturated are also less likely to have had a Pap smear ever, within the last three years, and within the last year.²⁷ Naturalized citizens are more likely to obtain cervical cancer screening than non-citizens.¹¹ Women who have been in the US longer and legally may be more proficient in English and have more experience navigating the health care system.

English proficiency and health literacy are directly related to access to preventive care. Latinas with inadequate health literacy, “the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions,” are 16.7 times less likely to have ever had a Pap smear compared to those with adequate health literacy.²⁸ Similarly, patient education materials may be written at English or Spanish proficiency levels that are too high. Latinas who are unable to read any Spanish words are more likely to have been in the US less than 15 years and to have fewer years in school.²⁸

SOCIOECONOMIC AND INSURANCE STATUS

Health insurance and higher incomes directly impact access to the healthcare system. Lack of health insurance is associated with the diagnosis of late stage cervical cancer.²⁹ Vietnamese and Latinas reported lack of health insurance and out-of-pocket costs as one of the principal reasons for not being screened (72 percent and 69 percent, respectively).³⁰ Korean women with health insurance were two times more likely to be screened than those without insurance.¹⁵

Citizenship status directly affects access to health insurance. In 1991, 38 percent of Latino citizens indicated lack of health insurance, while 60 percent of non-citizen Latinos did so.³¹ In a group of Chinese Californians, 92.7 percent of US-born respondents had some form of health insurance, followed by 82.2 percent of naturalized citizens, and 59.9 percent of non-citizens.³² Of these respondents, insured women received two to three times more early detection exams, including Pap smears, than the uninsured.³²

While co-payments, no matter how low, are designed to deter overuse of the healthcare system and recover some costs, they still become barriers for women who must choose between preventive health care and other necessities.²² Even when care is free, other costs related to seeing a physician can prohibit screening. Cambodian women cited lack of transportation and its cost (38 percent) as major reasons for not being screened.³⁰

CONTINUOUS SOURCE OF HEALTH CARE

Having a continuous source of care, regardless of the type of doctor, increases access to the healthcare system. Women with a regular source are 55 percent more likely to be screened for cervical cancer than women without.²² Women who were only seeing a doctor for their current pregnancy were 249 percent more likely to have had a Pap smear in the last year, and 776 percent more likely to have had a Pap smear within the last three years, than other women in the same study.²² Korean and Filipino women who had been to any preventive health exam were three and five times, respectively, more likely to have been screened, than women who had not had a checkup.¹⁴

CERVICAL CANCER KNOWLEDGE

Culture plays a role in knowledge of reproductive health. The discovery that HPV causes cervical cancer is relatively new. Foreign-born women may have limited knowledge about reproductive health generally and cervical cancer specifically. Many women may not know what HPV is, let alone its link to cancer. Indeed, many foreign-born women may not know what a cervix is. In a focus group of Latina women, one commented, “My sister had cancer and they removed her womb.... I don’t know where it [the cancer] was from.”³³ Many English and Spanish cervical cancer pamphlets do not define where the cervix is or differentiate it from the uterus.³⁴

Knowledge of cervical cancer screening guidelines is one of the strongest motivators for having a Pap smear among all foreign-born groups. Korean immigrants who knew the recommended Pap smear guidelines were three times more likely to have regular exams, were more motivated to have health insurance, and have friends who also had Pap smears.¹⁵ Migrant farm workers who were assigned to intervention groups informing them about cervical cancer screening guidelines were four times more likely to obtain screening.³⁵

SYMPTOMS AND THE CONCEPT OF PREVENTIVE MEDICINE

Unfamiliarity with prevention and early detection efforts deters foreign-born women from being screened. Moreover, without tangible symptoms, many foreign-born women believe that they do not need a Pap smear. The most common reason why foreign-born women are not being tested, in fact, is absence of signs or symptoms of a problem.¹⁵ Without the basic understanding that cervical cancer is caused by an HPV infection, women do not know why they need to see a doctor when they otherwise seem to be healthy. Additionally, many immigrants rely on their doctors to explain why they need treatment when they feel nothing is wrong. When a physician does not recommend routine screening exams at each visit, cervical cancer screening is considered unnecessary.³⁶ Latinas expressed that, in Mexico, women only go to the gynecologist when

"I have not had checkups like that... [Women] get checkups only when they are pregnant or when something else hurts, most of the time they don't."
-Survey Respondent³⁵

they were in pain or pregnant.³⁵ Korean women felt similarly; 40 percent described having no symptoms as their main reason for not having regular Pap smears.¹⁵ In many cultures women are reluctant

to obtain a pelvic exam if they are asymptomatic. Mexican-born women reported that it was not appropriate for doctors to "check private areas of the body unless there were symptoms."³³ Latinas also were more likely to fear telling their spouses about needing a Pap smear in the absence of vaginal bleeding.³⁵ Thirteen percent of Korean women over the age of 40 reported pelvic exams as too embarrassing to obtain without symptoms.¹⁵

CULTURE SPECIFIC BELIEFS

Culture specific beliefs play a role in cervical cancer screening. Two major themes regarding foreign-born women and cervical cancer screening are: 1) cervical cancer is caused by improper hygiene, and 2) cervical cancer is caused by karma or fate. People from many cultures believe that sexual activity and lack of genital cleanliness cause cervical cancer through an infection. Moreover, many cultures believe that karma dictates which women become infected, principally as punishment for culturally unacceptable actions and not because of HPV infection. Women with strong faith in God often believe that life is predetermined and events, such as cervical cancer, cannot be changed.

Latinas. Foreign-born Latinas are more likely than US-born Latinas to attribute contracting cervical cancer to unwise sexual behaviors and lifestyles.³⁷ Latinas also hold more fatalistic views than other

"While the woman remains a virgin there is no corruption... but it's another thing with a man. I have heard that as a married woman to prevent infection... as soon as you have relations you need to go to the restroom fast"
-Survey Respondent³⁵

groups, making them less likely to seek preventive care. Many believe little can be done to prevent cervical cancer. Cervical cancer is viewed as uncontrollable and preordained,^{35, 38} causing screening to be seen as

unnecessary. Because of this belief structure, many foreign-born Latinas would prefer not knowing if they have cervical cancer.³⁷

While some Latinas linked cervical cancer with an infection from heterosexual sex, it was mostly associated with an infection from improper hygiene immediately after sex.³⁵ This belief also extended to sexual relations during menstruation (the cleansing time for a woman), early sexual intercourse, vaginal trauma (rape), and poor hygiene.³⁷

Southeast Asians. Women who believe in karma and fatalism are less likely to be screened for cervical cancer. Many foreign-born women feel that following cultural norms keeps the body healthy, rather than medicine. Among Asian and Pacific Islander immigrants, younger women associated cervical cancer screening with promiscuity and shame.¹³ Women originally from Southeast Asia tend to indicate that illnesses are linked to karma.^{23, 29} Cambodian-born women who believed in karma and fate were significantly less likely to have been screened in the past.²³ Women making culturally acceptable decisions, such as practicing a monogamous, married relationship, believe they should have nothing to fear and do not need to be tested. Similarly, many Vietnamese physicians assume that unmarried women are not sexually active and do not require Pap smears.²⁴

Many Southeast Asian women believe that cervical cancer is caused by genital impurity and lack of hygiene. Twenty percent of Vietnamese born women felt that cervical cancer came from uncleanness.²⁴

Discussion of Interventions

Foreign-born women are confronted with complex barriers to cervical cancer screening. A single intervention is not adequate. Unless both female patients and their providers become involved, the gap in cervical cancer screening, incidence, and mortality rates for foreign-born and US-born women will remain large.

SINGLE FOCUSED INTERVENTIONS

Two studies using trained female lay health advisors (LHA) or “promotadoras” among Mexican migrant farmworkers in California were shown to be effective in increasing cervical cancer screening rates. In one, LHAs visited six migrant labor camps, presenting public educational sessions on cervical cancer. One year later, women in the camps self-reported a 28 percent increase in cervical cancer screening rates.³⁹ Another study in Central Valley used LHAs to lead discussions on anatomy, cervical cancer, and breast cancer, as well as to distribute information on and vouchers for free screening.⁴⁰ A pre- and post-test comparison showed a statistically significant increase in cancer knowledge; 18 percent of the participants redeemed vouchers for cancer screening.⁴⁰

A study conducted by Jackson et al., used a randomized trial to evaluate the effectiveness of culturally competent cervical cancer screening educational materials based on the reproductive health practices and beliefs of North-American Chinese women. Information to aid in the production of the video, pamphlet, and content of outreach worker home visits were gathered through 87 qualitative interviews and nine focus groups, grouped by language preference, in Seattle, WA, and Vancouver, British Columbia.⁴¹ From these interviews the researchers developed an educational/entertainment video (educational “soap opera”) in Cantonese, Cantonese with English subtitles, Mandarin, and Mandarin with English subtitles, and written pamphlets and fact sheets in Cantonese, Mandarin, and English. The randomized trial of the materials involved Chinese women ages 29-72 who had not had a Pap smear. The “high intensity” intervention group was visited by a Chinese female outreach worker and given follow-up calls. The women were given the video, pamphlets, and verbal counseling with visual aids. The “low intensity” intervention group was mailed the video and pamphlets. The control received services that are currently available to the community at large. Two years later, the

participants self reported their Pap testing behavior. In the “high intensity” group, 61% of the women received Pap testing, compared to 47% in the “low intensity” group, and 34% in the control.⁴¹ A bi-lingual, bi-cultural outreach worker explaining and answering questions about culturally sensitive materials appears to be an optimal option, but is also the most costly. The findings also showed that culturally competent videos and pamphlets alone are effective in influencing Chinese women to obtain a Pap smear, compared to the controls.

Assessing the status of clients in relation to immigration may aid their entry into the healthcare system. Researchers Loue and Foerstel created an assessment to help researchers not only determine if a patient would qualify for Medicaid or Medicare, but also their potential for legal citizenship.⁴² This evaluation, when used in settings where undocumented immigrants will not be penalized, has the potential to remove financial barriers to screening.

DUAL PATIENT/PROVIDER INTERVENTIONS

Multifaceted interventions that affect both the patient and the provider, while also utilizing community organizations and core institutions, offer the greatest potential impact. A trial from 11 community health centers in New York City found that telephone screening reminders in the patient’s language of choice, delivered with education about cervical cancer and early detection, increased Pap screening rates by 10 percent.⁴³ Reinforcing the importance of the screening at the reminder call is crucial for helping women keep their appointments. Enforcing this bond is important for opening the patient-physician dialogue, to help the patient understand why they must be screened, and help the doctor understand the patient’s history.⁴⁴

In a study to implement a community screening program for Cambodian women in the US, focus groups of Southeast Asian women were used to identify 13 reasons for low cancer screening rates and possible solutions for each.⁴⁵ The intervention utilized community programs and materials in Cambodian, transportation for participants, female physicians and interpreters, and an informal clinic setting. Cancer screening rates were then compared to those before the intervention. At the end of the study, 23 of the 31 Cambodian women who began the intervention received cancer screening, increasing the screening rates from 13-16% to 74%.⁴⁵

Another successful comprehensive, community-action intervention developed through www.healthisgold.org involved coalition building between established community organizations in the Vietnamese areas of Santa Clara County, CA (SCC).²⁴ The community action plan focused on six components: two community-based, two provider-based, and two interaction-based. They consisted of a media campaign, lay health worker (LHW) outreach into the community, physician training, the reestablishment of the Breast and Cervical Cancer Control Program (BCCCP), Vietnamese doctors with a Vietnamese-speaking staff to help patients navigate the system, and the introduction of a reminder program for the next Pap smear. Harris County (HC), Texas served as the comparison community as it has the largest Vietnamese-American community outside California as well as other similar contextual similarities.

The results of the intervention were promising. Knowledge about Pap testing rose 18 percentage points among Vietnamese women in SCC, but declined 5 percent among women in the control city (HC, TX). Similarly, knowledge about screening recommendations rose 22 percentage points, with little to no change in Harris County. Cervical cancer screening among Vietnamese women in SCC rose 7 percentage points, more women reported their physicians recommending Pap smears, and among women who had never had a Pap smear, more planned to obtain one in the future (41.3% to

53.6%).²⁴ There was negative or no significant change among women in the control city. More women in SCC reported their physicians treated them with more respect after the intervention.²⁴

LIMITATIONS OF INTERVENTIONS

Outreach materials can be effective in educating the general public about screening and prevention. However, cervical cancer educational pamphlets often contain content, reading levels, pictures, and language that are not appropriate for the targeted communities.³⁴ Reading levels must be more in the range of 5th or 6th grade reading level as opposed to the 9th grade level, as is usually done.³⁴

While many studies discussed the importance of cultural practices for immigrant populations, few tested interventions that merged herbal/traditional medicine with cervical cancer prevention. One study of Chinese Americans in San Francisco (81 percent foreign-born) found that the majority reported taking herbal medicine twice a week or more.³² Insurance plans that allow for traditional medicine, as well as physicians that succeed in merging herbal medicine into their practices, may break down a cultural barrier for many female immigrants. Similarly, many South East Asian immigrants follow the tenets of Buddhism, believing firmly in ideas of karma. By becoming more familiar with world religions, clinicians may be able to work within their clients' beliefs to form a more fitting preventive strategy.²³

Summary

While rates of cervical cancer screening, incidence, and mortality in foreign-born women are closer to the US than that of their home country, a gap between US-born women and foreign-born women remains. Targeting intervention efforts before an HPV infection progresses to cervical cancer is vital. Unfortunately, many foreign-born women face barriers to access cervical cancer prevention services, including cultural norms, lack of insurance, limited screening knowledge, or lack of acculturation. Physician-patient interventions are crucial to increasing access to care by breaking down cultural and educational barriers. Economic barriers, such as socioeconomic and insurance status, can be lessened through general education about funding sources, free or sliding scale clinics, and information related to state programs available to naturalized citizens, non-citizens, and undocumented foreign-born women.

Table 2 – Pap Smear Rates Among Foreign-Born (FB) Women Living in the United States By Length of Time in the US, Citizenship Status, and Country of Origin

FB Group (FB in General if not named)	Region	Data Source	Age Range (years)	% FB with Pap Smear within last two years	% FB never having Pap Smear	Reference Group	Year(s) Data Collected
< 10 Years in US ¹⁰	United States	In-person Interview	≥ 25	61.0% (CI, 55.2-66.8)*	-	US Born: 83.4% (CI, 82.6-84.1)*	2000
> 10 Years in US ¹⁰	United States	In-person Interview	≥ 25	79.0% (CI, 77.0-81.8)*	-	US Born: 83.4% (CI, 82.6-84.1)*	2000
< 10 Years in US ²⁶	United States	Telephone Survey	18-70	73%	-	-	April – Nov 2001
> 10 Years in US ²⁶	United States	Telephone Survey	18-70	83%	-	-	April – Nov 2001
General Naturalized ¹¹	California	Telephone Survey	≥ 18	85.5%*	8.7%	-	2001
General Non-citizen ¹¹	California	Telephone Survey	≥ 18	80.6%*	14.3%	-	2001
Latina Naturalized ¹²	United States	In-person Interview	18-65	84%*	-	US-Born Latinas: 82%*	2000
Latina Non-Citizen ¹²	United States	In-person Interview	18-65	70%*	-	US-Born Latinas: 82% with Pap smear within last three years	2000
Latina ²²	Texas	Telephone Survey	18-60	20.2%* less likely than non-Hispanic White citizens	77.3% more likely than non-Hispanic White citizens	Non-Hispanic Whites	Fall 2000
Asian and Pacific Islander ¹³	Los Angeles, CA	Telephone Survey	≥ 18	65%	31% more likely than non-Hispanic Whites	Non-Hispanic Whites: 81% with Pap smear within last two years	2001-2002
Filipino ¹⁴	Los Angeles, CA	In-person Interview	≥ 50	48%	26%	-	-
Korean ¹⁴	Los Angeles, CA	In-person Interview	≥ 50	41%	23%	-	-
Korean ¹⁵	Maryland	In-person Interview	≥ 40	48.4%	62.3%	-	June – Oct 2000
Korean ¹⁵	Maryland	In-person Interview	40-49	55.3%	56.6%	-	June – Oct 2000
Korean ¹⁵	Maryland	In-person Interview	50-64	52.7%	55.7%	-	June – Oct 2000
Korean ¹⁵	Maryland	In-person Interview	≥ 65	8.0%	87.7%	-	June – Oct 2000
Cambodian ²³	Seattle, WA	In-person Interview	≥ 18	53%	24 %	-	1997 – 1998
Vietnamese ²⁵	Houston, TX	Mail and Telephone Surveys	17-35	-	76.2%	-	July – Oct 1996
Vietnamese ²⁴	Santa Clara County, CA	Telephone Survey	≥ 18	64.9%**	22.5%	-	2000
Vietnamese ²⁴	Harris County, TX	Telephone Survey	≥ 18	59.2%**	26.1%	-	2000

* Percent FB with Pap smear within last 3 years; ** Percent FB with Pap smear within the last year

RESOURCE LIST

CancerCare

<http://www.cancercare.org>

212-712-8080

1-800-813-4673 (1-800-813-HOPE)

212-712-8400 (Administración)

CancerCare is a national nonprofit organization that provides free, professional support services to anyone affected by cancer: people with cancer, caregivers, children, loved ones, and the bereaved. CancerCare programs – including counseling, education, financial assistance and practical help – are provided by trained oncology social workers and are completely free of charge. CancerCare maintains a Spanish language website.

Cancer Information Service

<http://cis.nci.nih.gov>

cancernet@icicb.nci.nih.gov

1-(800)-4-CANCER

Cancer Information Service provides information about cancer and cancer-related resources to patients, the public, and health professionals. Spanish-speaking staff members are available. Distributes free publications from the National Cancer Institute.

Office of Minority Health

<http://www.omhrc.gov/>

The mission of the Office of Minority Health (OMH) is to improve and protect the health of racial and ethnic minority populations through the development of health policies and programs that will eliminate health disparities.

National Alliance for Hispanic Health

<http://www.hispanichealth.org/>

Su Familia Hotline: 1-866 Su-Familia (1-866-783-2645) M-F 9:00 am to 6:00 pm EST

The National Alliance for Hispanic Health (the Alliance) is the Nation's oldest and largest network of Hispanic health and human services providers. Alliance members deliver quality services to over 12 million persons annually.

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Immigrant Women and Cervical Cancer Prevention in the United States

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