

Increasing cervical cancer screening in Asian women under 40 in New York through Community-Based education and Expanded Access to Gynecological Care

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Evidence Tables

Evidence Table A: Significance of Health Issue

Why is CERVICAL CANCER a significant public health issue?

Author(s), Year	Research Method	Findings Relevant to Selecting Health Issue
Jallah, J. K., Anjankar, A., & Nankong, F. A. (2023)	Peer-reviewed article outlining public health control to manage cervical cancer - This is a systematic review and comparative analysis of numerous research studies about cervical cancer - Evaluated screening methods, immunization, and disparities in cervical cancer - Conducted a comprehensive literature search in February 2023 from databases such as Google Scholar, PubMed, International Journal of Gynecological Cancer	Incidence & Mortality In 2020, 604,127 new instances of cervical cancer and 341,831 deaths occurred globally. About 90% of these occurred in low- and middle-income countries, where access to screening and treatment is limited Cervical cancer is the highest causative agent of death-related cancer in women globally, regardless of the advancement in diagnostic and medical procedures Risks associated with cervical carcinoma Women with HIV are 6 times more likely to develop cervical cancer than those without HIV. Around 5% of all cervical cancer cases are HIV-related, making it a compounded public health challenge One of the key global factors influencing cervical carcinoma is HPV, the primary human source of risk for cervical cancer, which causes an infection spread through sexual contact. HPV is preventable through vaccinations Increasing burden - Cervical neoplasm remains a worldwide health problem, especially in underdeveloped nations where Pap test screening programs and vaccine campaigns are not generally available - Global HPV vaccine coverage is uneven; high prices and supply shortages limit implementation in many low-income countries Prevention & Screening Teenage HPV immunization is the most efficient and long-lasting approach for reducing the incidence of cervical cancer - Young teenage females and males between 9 and 15 years of age should take two vaccine doses to receive complete protection Pap smear test is a quick way to find anomalies in cervical cells and reduces the prevalence of mortality from cervical carcinoma - Countries with solid screening programs have seen a considerable decrease in cervical cancer rates due to the routine Pap smear test Importance to the Community/ Global action The World Health Organization (WHO) has initiated a national program to eliminate cervical carcinoma, including strategic initiatives to meet the 90-70-90 objectives

Why is CERVICAL CANCER a significant public health issue?

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		○ Immunization of a minimum of 90% of 15-year-old girls against human papillomaviruses (HPV) ○ Screening 70% of 35- and 45-year-old women utilizing a highly efficient test ○ Treating a minimum of 90% of pre-cancerous and aggressive cancers that are discovered
Biddell, C. B., Spees, L. P., Smith, J. S., Brewer, N. T., Des Marais, A. C., Sanusi, B. O., Hudgens, M. G., Barclay, L., Jackson, S., Kent, E. E., & Wheeler, S. B. (2021)	This is a cross-sectional survey within a randomized controlled trial from MyBodyMyTest Phase Three (MBMT-3) Study ● Participants were recruited through in-person enrollment, community events, flyers, online platforms, United Way 2-1-1 helpline between April 2016–December 2019. ● 702 participants of low-income, uninsured, or publicly insured women, ages 25–64, living in 22 counties in North Carolina were enrolled. All participants were overdue for cervical cancer screening (had not had a Pap in 4+ years or an HPV test in 6+ years). ● Data was collected by phone-based eligibility screening and baseline phone survey. ● The baseline survey asked about perceived financial barriers to cervical cancer screening, estimated costs, demographics, and awareness of free screening programs. ● Chi-square tests for assessing differences in sociodemographic characteristics for the two most commonly perceived financial barriers	● Disparities in cervical cancer rates and death continue to exist based on income, insurance coverage, race, and ethnicity, even though screening methods are both effective and affordable ● Over half of new cervical cancer cases are attributed to insufficient screening ● Cervical cancer is largely preventable through early detection, but findings show that underserved populations remain at risk due to preventable barriers, turning a treatable condition into a deadly one ● As of 2015, only 64% of uninsured women, 78% of publicly insured women, and 75% of low-income women had been screened for cervical cancer based on the national guidelines ● In 2018, 81% of U.S. women 21–65 years of age reported being up to date for cervical cancer screening (having had a Pap test within 3 years or HPV test within 3 years) Perceived financial burden ● Out of 702 participants in this study who are not up to date on cervical cancer screening, 72% perceived one or two financial barriers to screening and agreed with the statement: “If I needed to get cervical cancer screening, it would cost more than I could pay.” ● Individuals are concerned about out-of-pocket costs associated with screening appointments, future treatment, lost pay from missed work, and transportation costs, ranging from \$0 to \$1,300. ● Even among publicly insured participants, 84% believed they would still have to pay out of pocket, suggesting that misinformation or low health insurance literacy contributes to fear of cost and delays in care. Lack of awareness of cervical screening programs ● The Breast and Cervical Cancer Control Program is a government program that provides free breast and cervical cancer screening to low-income women with no insurance ● In this study, a vast majority of 94% of participants never heard of the free program before, which demonstrates a poor awareness and communication of cervical cancer and its screening.

Why is CERVICAL CANCER a significant public health issue?

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	• Multivariable logistic regression was used to predict reporting screening cost and future treatment cost as barriers to screening	
Burmeister, C. A., Khan, S. F., Schäfer, G., Mbatani, N., Adams, T., Moodley, J., & Prince, S. (2022).	Peer-reviewed article outlining cervical cancer • It is a literature review article based on findings from existing peer-reviewed articles, global health reports, and clinical trials. • Gives an overview of etiology, progression, stages, and treatment of cervical cancer • Emphasizes on the preventable nature of disease through screening and HPV vaccination	• Cervical cancer is the fourth most common female cancer worldwide and accounts for 600,000 new cases and 340,000 deaths annually. ○ The two major histological subtypes of cervical cancer: squamous carcinoma and adenocarcinoma ○ Squamous carcinoma accounts for approximately 75% of cervical carcinoma • Cervical cancer is a largely preventable disease, and early-stage detection is associated with significantly improved survival rates • This disease is a killer in women in low and middle-income countries because of limited resources for prevention (such as vaccination and screening programs) and treatment. • The most important etiology of cervical cancer is the infection by high-risk HPV ○ Persistent infection with high-risk HPV types is responsible for up to 99.7% of cervical cancer cases ○ HPV is estimated to infect around 291 million women worldwide, with especially high prevalence in women younger than 25 years ○ In addition, HIV infected individuals have a 6 times higher risk of developing cervical cancer when compared to the general population, and leads to risk of developing cervical cancer at an earlier age • Early-stage cervical cancer is often asymptomatic and may be diagnosed during a routine screening or pelvic examination ○ Common symptoms can include ■ Heavy or abnormal vaginal bleeding, in particular following intercourse ■ Vaginal discharge that may be watery, mucoid, or purulent and malodorous ■ In advanced disease, flank pain, pelvic or back pain, and bladder/bowel complaints may be experienced • Stage of cervical cancer is an important prognostic marker and is determined clinically, based on tumour size and degree of pelvic extension and imaging • Treatment ○ Treatment strategy may include one or a combination of surgery, radiation and chemotherapy ○ Surgery is a commonly used and successful technique in treating early-stage cancers as it involves the physical removal of cancerous tissue ■ Types of surgery performed to treat cervical cancer include total hysterectomy, radical hysterectomy, loop electrosurgical excision procedure

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		○ Radiotherapy uses high energy x-rays and is often used in conjunction with chemotherapy, especially for larger tumor size ○ Chemotherapy is a key part of the standard cervical cancer treatment regimen and is typically administered as an adjuvant therapy following surgery and used as a standalone treatment for locally advanced disease

Evidence Table B: Specific Priority Group

Which group(s) need to be addressed to reduce the rates of cervical cancer in New York?

Author(s), Year	Research Method	Findings Relevant to Selecting Priority Group
Ryan Suk, PhD, MS; Young-Rock Hong, PhD, MPH; Suja S. Rajan, PhD, MHA, MS; Zhigang Xie, MPA; Yenan Zhu, MA; Jennifer C. Spencer, PhD, MSPH (2022)	This study was a pooled, population-based cross-sectional study that utilized data from the 2005 and 2019 National Health Interview Survey (NHIS) which is a nationally representative, household-based survey administered by the National Center for Health Statistics. The NHIS collects health-related information from the civilian, non-institutionalized U.S. population via structured, in-person interviews. ● The study included 20,557 women aged 21 to 65 years (weighted $\approx$ 113.1 million) who had no prior hysterectomy. Data were analyzed to assess rates of up-to-date cervical cancer screening, reasons for being overdue, and disparities by race/ethnicity, age, insurance type, sexual orientation, and rurality of residence. ● Screening was defined using USPSTF guidelines: - In 2005: Pap test every 3 years for all women aged 21–65. - In 2019: Pap test every 3 years (ages 21–29); Pap alone every 3 years, HPV test alone every 5 years, or Pap + HPV co testing every 5 years (ages 30–65). ● Women who were overdue selected one primary reason from a fixed list: “didn’t know I needed it,” “doctor didn’t say I needed it,” “no symptoms,” “cost/access,” “unpleasant,” “postponed,” “HPV vaccine,” or “other.” This allowed categorization of barriers as either knowledge-based, provider-related, or structural. ● Sociodemographic data included race/ethnicity (Asian, Hispanic, Black, White, Other), age group (21–29, 30–65), insurance coverage (private, public, other,	● Nationally, Asian women had the highest rate of overdue cervical cancer screening in 2019 among all racial/ethnic groups. Specifically, 31.4% of Asian women were not up to date with screening, compared to 20.1% of non-Hispanic White women ($P = .01$). ● Young women aged 21 to 29 years had the highest overall rates of overdue screening, at 29.1% nationally in 2019. When adjusted for other sociodemographic factors, Asian women in this age group had the highest predicted probability of being overdue, 36.0%, compared to 21.8% in non-Hispanic White women. ● Between 2005 and 2019, the proportion of women aged 21–29 who were overdue for screening increased from 14.2% to 29.1%. However, Asian women consistently had no significant improvement in screening rates over time: 32.5% in 2005 vs 31.4% in 2019, making them the only racial/ethnic group without progress in 14 years. ● Lack of knowledge was the most frequently cited barrier to screening among Asian women. In 2019, 59.2% of Asian women without up-to-date screening reported they “did not know they needed it,” one of the highest rates of all racial/ethnic groups. ● Asian women were also more likely than other groups to report that no symptoms (“no problem”) and lack of provider recommendation were reasons for not getting screened, highlighting critical gaps in provider-patient communication and low perceived susceptibility to cervical cancer. ● Although HPV vaccination status was collected, it was not a significant reason for missing screening among Asian women under 30 (<1% cited it). Therefore, under-screening is not related to vaccine coverage but is likely due to informational and cultural barriers.

	none), residence (urban vs. rural), and sexual orientation (heterosexual vs. LGBTQ+). • Researchers used Wald chi-square tests to assess differences in screening rates and reasons across subgroups. Multivariable logistic regression was used to calculate adjusted predicted probabilities of overdue screening, controlling for other demographic factors.	• These patterns identify Asian women under 40, particularly those aged 21–29, as a priority concern for cervical cancer prevention efforts due to persistently high under-screening, modifiable behavioral barriers, and lack of progress despite national screening campaigns.
Van Manh, A.L., Blondeau-Lecomte, E., Makoni, N., Jandorf, L., Perumalswami, P. (2020)	This is a cross-sectional survey conducted between 2013 and 2015 within The Hepatitis Outreach Network (HONE), a community-based viral hepatitis screening program in New York City (NYC) that primarily serves the immigrant population. • A total of 1,298 participants completed a questionnaire that asked for native language, English proficiency, country of origin and cancer screening behaviors - specifically whether they had ever done a colonoscopy, mammogram, or Pap smear. • Of this group, 701 (54%) were African born, 311 (23.9%) were Asian born, and 286 (22%) were US born. • The exact number of female participants was not specified, though gender-specific questions (mammogram and Pap smear) were only asked to females.	• Only 58.2% of immigrant women reported ever having a Pap smear, which is significantly lower than the NYC average of 90.4%. • Language played a major role in this disparity. Those with limited English proficiency were 76% less likely to have had a Pap smear compared to those who were comfortable with English. • Meanwhile, 65.1% reported ever having a mammogram. Although this percentage is below the NYC average of 80.3%, the gap is not as pronounced as with Pap smears. • Language did not appear to be a barrier for mammograms, which indicates that immigrant women face fewer obstacles and have better access to mammograms compared to Pap smears.

Seo JY, Li J, Li K. (2010) Note: Although the majority of women in this study are older than our target group of under 40, it is important to recognize that their perceptions/views are often passed down and can easily influence the younger generation. By understanding how this older generation thinks and feels, we can tailor our interventions to better meet the needs of younger women.	This is a qualitative study that explores Chinese American women's perceptions of cervical cancer screening in Los Angeles, California. • The study included 12 women aged 34 to 64 (average age 52) who spoke English or Mandarin and had no personal history of gynecologic cancer or hysterectomy. • None of the participants received HPV vaccinations. • Five participants met current cervical cancer screening guidelines, four participants had Pap tests once within 3-5 years (without HPV tests), and three participants never had a Pap or HPV test. • Data was collected through 12 face-to-face, in-depth individual interviews lasting 40 to 60 minutes each, conducted either at the participant's home or the research team's office. • All the interviews were recorded with a digital recorder and transcribed/checked for accuracy by the research team members.	• Most participants believed that Pap test screening was unnecessary because they lived healthy lives and did not have any risks (smoking, drinking, unhealthy diet, and unsafe sexual practices) for cervical cancer. • Most avoided any gynecological check-ups because they felt ashamed of discussing gynecologic diseases with other people. They mentioned that Chinese people tend to keep health problems either within the family or to no one at all (especially if the problem was associated with sexuality or sexual organs). • Participants expressed their frustrations with long wait times to see providers or to have Pap tests. Making an appointment to see a provider is not a common practice in China. Most Chinese hospitals allow walk-in service without an appointment. • Most participants found it difficult to navigate an unfamiliar health care system for available resources and necessary health services. • Most participants stated that physicians did not explain the examination well enough to them (possible language barrier) and just assumed that they were already familiar with the procedure. • Physicians often overlooked the smaller stature of Chinese women and used large speculums designed for American women for the exam, which caused unnecessary pain and discomfort.
Flint M, Yi F, Saleh M, Liu X, Blank SV, Liu Y. (2025)	This is a retrospective cohort study conducted at a single tertiary care cancer center (Mount Sinai Hospital) from 2015 to 2022. • Participants were identified through a pathology database search for women under age 40 diagnosed with invasive cervical cancer. Inclusion required histological confirmation and availability of complete medical records for staging and treatment review. • A total of 57 women, aged 27–40 (median age 34), were included. Patients had various stages of disease and histologic subtypes (70% squamous cell carcinoma, 28% adenocarcinoma, 2% adenosquamous carcinoma). • Data were collected through retrospective chart review, including: Demographics (age, race/ethnicity, BMI, parity, smoking status), Insurance type (Medicaid vs. private), HPV vaccination status (completed doses, partial, or none), Clinical data: cancer histology, grade, FIGO stage, imaging results, Screening history: Pap	• Although cervical cancer has declined overall in the U.S., recent Surveillance, Epidemiology, and End Results (SEER) data show that 14% of cases occur in women aged 20–34 and 24% in women 35 - 44, highlighting a significant disease burden among women under 40. • Many younger women are part of recommended screening groups, yet this study showed that 25% of women had normal or minor cytology results shortly before cancer diagnosis. This points to limitations in cytology-based screening, especially for adenocarcinoma, where 62% were missed by Pap smear. • A striking 77% of women had no documented HPV vaccination status, and among those with documentation, less than half had completed the series. Missed vaccination opportunities directly contribute to preventable HPV-driven cancers in this age group. • Women with public insurance, non-White backgrounds, and HIV positivity were more likely to present with advanced-stage disease and were less likely to qualify for fertility-sparing surgery(FSS), which is typically reserved for early-stage cases .

	test/cytology and high-risk HPV co-testing within 24 months prior to diagnosis, Treatment received: categorized as fertility-sparing surgery (FSS) or non-FSS (e.g., hysterectomy, chemoradiation), Follow-up outcomes: recurrence and pregnancy outcomes among FSS recipients • Cancer staging was assigned using the 2018 FIGO classification system, integrating clinical, radiologic, and pathologic findings. • This study utilizes a community-based participatory research approach to assess the feasibility and impact of culturally tailored interventions in the promotion of HPV self sampling in Asian American women in Philadelphia and New York Ci	• This age group often has reproductive aspirations. Of the 16 patients who received FSS, four achieved pregnancy. But such options are limited for advanced disease, making early detection especially crucial.
Nghiem VT, Davies KR, Chan W, Mulla ZD, Cantor SB. (2015)	This is a retrospective cohort study using records from the National Cancer Institute's SEER registry from 1996-2012. The registry represents approximately 28% of the US population with a wide geographic coverage. • Records of Asian American women (Indian/Pakistani origin, Chinese, Filipino, Japanese, Kampuchean, Korean, Laotian, or Vietnamese origin) and non-Hispanic white women with a confirmed diagnosis of cervical cancer were extracted. • Collected information included demographic characteristics, tumor histology, stage of disease, initial treatment, vital status, and time-to-event (time in months from the date of diagnosis until death, censoring, or last follow-up). • Socioeconomic status was assessed using a composite index based on county-level data (poverty rate, education level, income, and unemployment) from the Area Health Resource File, and categorized into one of four quartiles, with Quartile 1 representing the greatest socioeconomic disadvantage. • Group differences were assessed using the chi-square test for categorical variables and the Wilcoxon rank-sum test for continuous variables.	• Asian American women were about 3.3 years older than white women at the time of diagnosis (mean age 53.4 vs. 50.1 years, $p < 0.001$) → attributed to lower cervical cancer screening rates due to cultural or personal barriers and NOT low socioeconomic status (overall survival outcomes did not differ between Quartile 1 and Quartile 4) • Asian American women under 35 years were twice as likely than white women to die from cervical cancer (HR =2.42, 95% CI = 1.47-4.00) • Treatment patterns were generally similar across groups, with most women receiving surgery (44%) or combined surgery and radiation (25%) • Overall survival analysis demonstrated that Asian American women had better survival outcomes than white women at both 36 months (0.77 vs 0.73; $p=0.004$) and 60 months (0.70 vs 0.67; $p=0.033$).

	• Kaplan-Meier survival analysis and the log-rank test were used to evaluate and compare survival curves by race.	
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Evidence Table C: Specific Health Behavior

Which behavior(s) needs to be addressed to reduce CERVICAL CANCER IN WOMEN UNDER 40? (plus measures of outcomes)		
Author(s), Year	Research Method	Findings Relevant to Selecting Health Behavior
Morse, R. M., Brown J., Gage J.C., et al (2023)	This was a qualitative study conducted in Iquitos, Peru, prior to the implementations of HPV/ cervical cancer screening and treatment programs. • 35 semi-structured interviews (19 health professionals, 16 women with cervical precancer or cancer) • 8 focused groups (70 community women) • 1 workshop (14 health professionals) • 210 counseling observations during VIA/Pap screening visits (20 nurse-midwives) • Document review of health guidelines and policies Thematic analysis based on socio ecological model	Widespread HPV-related stigma was present in women, health professionals, nurse-midwives, and community. Implied <u>blaming of women</u> for HPV infections was reinforced by: • Community women who associated HPV with having multiple sex partners or being sexually active at a young age • Health professionals linked HPV to “bad behaviors” or “poor choices” during patient-provider interviews • National guidelines emphasized sexual behaviors as a risk factor of HPV undermining the lack of screening Implied <u>blaming of men</u> for HPV infections was reinforced by: • Individual and relationship level- women emphasized caution but believed their partners infidelity and poor use of protection still exposed them to HPV. They viewed HPV diagnosis as positive evidence of their partner’s cheating. • Community level- healthcare professionals and nurses-midwives specifically stated to patients that partners are responsible for infection and “faithfulness” as a preventative measure. • Societal level- national health guidelines highlighted male sex behaviors as a risk factor for cervical cancer progression <u>Consequences of stigma-</u> embarrassment, secrecy and lack of screening was reinforced by: • Individual and relationship level- women felt that HPV was “disgusting” and felt embarrassed to seek care or discuss symptoms. They were afraid their families would assume they were promiscuous • Community level- nurse-midwives and other healthcare professionals hid their own HPV results due to shame encouraging secrecy rather than open discussion • Societal level- husbands and male partners discouraged HPV screening due to controlling attributes and strict gender roles. Women did not get tested out of fear of being abandoned and rejected. • Stigma-driven avoidance of VIA/Pap leaves pre-cancer undetected, contributing directly to progression to invasive cervical cancer.

Bonful, H. A., Addo-Lartey, A. A., Sefenu, R. S., Nwameme, A., et al (2022).	This study utilized a formative, mixed-methods design conducted in Accra, Ghana. - Participants were between the ages of 18-39 and have never undergone a pap smear, VIA/VILI or HPV test. - Residents of one of four urban districts of Greater Accra (Tema, Ashaiman, Accra Sub-Metro, La-Nkwantanang Madina). - Owned a mobile phone and could read SMS. Four sequential activities were carried out: - Conducted five focus group discussions - Administered a baseline survey involving 62 female bankers and 68 community women - Convened a stakeholder meeting with cervical cancer research and clinical experts - Pilot-tested 32 draft SMS messages Developed and pilot-tested an SMS library for a quasi- experimental trail of a culturally tailored cervical cancer screening intervention in Accra, Ghana.	Created a library of 32 behavior-change SMS messages divided into specific communication objectives: 13 messages addressed <u>cervical cancer knowledge</u> 6 messages on the <u>importance of early detection</u> 5 messages specifically targeted <u>fear-related barriers</u> (pain, test results, stigma) to encourage screening 5 messages encouraged women to <u>take time for their health</u> 3 messages on <u>available facilities and the costs involved</u> Baseline results showed: - Although overall awareness of cervical cancer was high but knowledge of screening was low (less than 50%) - Chief barriers to screening were: - Low-income level (21.2%) - Lack of time (12.1%) - Fear of screening procedure (9.1%) - Fear of cancer (9.1%) - Low education on cervical awareness (6.1%) - Fear of screening outcome (6.1%) SMS acceptability and feasibility findings: - Respondents thought that the 32 text messages were relevant and could increase uptake of cervical cancer screening. They rated the texts “clear” and “motivating” confirming the content hit the identified barriers. (knowledge, fear, time, cost/access) 99% owned a mobile phone and 98% usually read SMS 87.5% of participants said they have read the text messages within one hour of receiving the messages. 87.5% said they would like to receive cervical cancer screening reminders on their phones. Behavior-change intention (after SMS): 94.6% reported they would get a PAP/VIA after receiving the messages, providing preliminary evidence that the intervention can move behavior toward actual screening
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Fuzzell, L. N., Perkins, R. B., Christy, S. M., Lake, P. W., & Vadaparampil, S. T. (2021).	This narrative review explores potential reasons for the persistent disparities in cervical cancer screening across different populations in the U.S. - Identify underscreened populations such as: - Racial and ethnic minorities - Rural residents - Sexual and gender minorities - Limited english proficiency communities - Identify barriers at the individual, provider and system level - Identify possible solutions at the individual, provider and system level	Systemic racism affects screening behavior of racial and ethnic minorities - Perceived discrimination and lower trust in healthcare providers links to reduced screening in Black, Asian, and Hispanic women - Implicit bias in clinical settings can lead to fewer discussions of preventative care and recommendation for screening. - Black women often cite distrust in the healthcare system; leading to reduced screening behaviors. - Strong patient-provider relationships and effective communication strategies, such as the teach-back method, can further increase screening rates - patient navigation with phone support and education have shown promise in improving outcomes across prevention, screening, diagnosis, and treatment Rural residents - Individuals living in rural areas are less likely to complete a cervical cancer screening 33% of women living in rural Appalachian Kentucky and rural Washington state reported not completing a screening in the last 5 years - Rural areas have long wait times, have low provider density, lack healthcare facilities and high-quality medical care. - HPV self-sampling is a promising alternative for rural NY residents who face long travel distances for in-person screening. Sexual and gender minorities - Women who identify as lesbian or gay are less likely to participate in screening as those who identify as heterosexual - National survey found screening rates to be ~ 30% lower in women not identifying as “completely heterosexual” and 90% lower in those identifying as lesbians. - Women who identify as lesbian often perceive themselves to be at lower risk for cervical cancer than a heterosexual women - Stigmatization of sexual minority women is an important barrier to receiving cervical cancer screening - Since most gynecologic care setting are geared towards cisgender females, adopting and tailoring culturally appropriate care for sexual minorities can increase screening for cervical cancer Limited english proficiency - Language barriers hinder effective provider-patient communication, reducing engagement during clinical visits and limiting access to vital information about screening. - Vietnamese-American, Korean-American, and Hispanic women with limited English proficiency have lower awareness and knowledge of cancer screening tests, which further contributes to decreased screening participation - Providing low-literacy educational materials in multiple languages can promote participation in cervical cancer screening and overcome language barriers
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Ma, G. X., Zhu, L., Zhai, S., Lin, T. R., Tan, Y., Johnson, C., Fang, C. Y., Belinson, J. L., & Wang, M. Q. (2022).	This study utilizes a community-based participatory research approach to assess the feasibility and impact of culturally tailored interventions in the promotion of HPV self sampling in Asian American women in Philadelphia and New York City • Total of 156 female participants consisting of ◦ 56 Chinese ◦ 50 Koreans ◦ 50 Vietnamese • Participants were recruited through community and faith based organization; self-identified as Chinese, Korean, or Vietnamese, aged 30-55, no history of cervical cancer diagnosis or screening in past 3 years • All participants completed baseline and post-intervention surveys that collected: ◦ Sociodemographic and health-related data ◦ Level of HPV - related knowledge ◦ Level of awareness and attitude towards HPV-self sampling ◦ Level of social support ◦ Level of self-efficacy in HPV -self sampling use • Intervention consisted of 4 components ◦ Community-based education ◦ HPV self-sampling test kit tutorial ◦ Group discussion sessions ◦ Patient navigation and follow-up care • Interventions were modified to be culturally tailored to the Asian American population by: ◦ Use of bilingual health educators and community health workers ◦ Incorporation of Chinese, Korean and Vietnamese cultural beliefs and practices ◦ low - literacy materials ◦ Content delivered in Asian language • Measurement of outcomes were scored as the following: ◦ Change in HPV-knowledge (score 0-6) ◦ Change in level of social support (11-item scale, averaged score 1-5) ◦ Self-efficacy in HPV sampling (scale 1-5) ◦ Comfort with HPV self-sampling (scale 1-5) • Researchers used binary logistic regression to examine the baseline and post-intervention factors associated with self-sampling uptake. • Used paired sample t-test to examine changes in psychosocial factors - knowledge, social support, self-efficacy, comfort in conducting self-sampling. • A P-value lower than .05 indicates statistical significance	Culturally sensitive and tailored interventions were effective in empowering low income Asian American women to conduct HPV self sample testing. Overall, improve screening rates over time in the sample. • 100% of the 156 participants completed the self-sampling test • 92.95% of participants provided satisfactory samples. 3.57% of the Chinese participants and 18% (9/50) of the Vietnamese participants did not have satisfactory samples. Despite this, it shows that self-sampling can be an effective alternative to physical office visits for screening of cervical cancer. • HPV related knowledge increased significant post intervention in the paired sample T-test data ◦ “2.06-point improvement, from 2.83 to 4.89” • Level of social support post intervention also increased ◦ 3.91 to 4.09 • Self-efficacy to conduct a HPV sample test improved moderately from 3.05 to 3.59 • 75% of participants said they were confident in their ability to administer the test • 61.3% of participants report that they were comfortable performing the self sample test When it comes to discussing HPV testing with support system, the stigma surrounding it were non-evident in this sample study • Group discussions sessions consisting of participants exchanging opinions and concerns in a culturally familiar space allow for more open discussions that help participants feel more confident to seek support from friends and family.
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Tung, W. C., Lu, M., Granner, M., McDonough, J., & Ervin, S. (2019).	This is a cross-sectional quantitative survey to explore barriers to pap smear among Chinese American women (CAW). • Participants were between ages 21-65 who self-identified as Chinese Americans with no prior history of cervical cancer or total hysterectomy in California and Nevada. • Recruited through personal contacts of the authors, referrals, face-to-face at grocery stores, churches, and supermarkets • Self report questionnaire consisting of 3 sections for collecting data including: ◦ Demographics (age, marital status, education, employment status, income, health insurance coverage, disease history) ◦ Prior screening behaviors ◦ Risk factors ◦ Perceived barriers to screening • Data analysis included counts, proportions, odd ratio and logistic regression model. To detect a moderate-sized effect, a chi-square test up to 3 degrees of freedom was used with at least 90 participants to achieve a 80% chance of detecting a true effect.	Specific behaviors that need to be addressed to reduce cervical cancer and increase screening among Chinese American women • Delaying or avoiding screening due to partner resistance. CAW are nearly 17 time more likely to say “My partner would not want me to have a Pap test” ◦ Odd ratio = 16.99, P = 0.009 • Skipping screening due to embarrassment ◦ Uninsured women are 4.15 times more likely to say “it is too embarrassing to have a Pap test” • Cultural expectations and prioritization of family needs over individual health Increase emphasis of culturally appropriate education and interventions to promote awareness and participation in cervical cancer screening • Trained lay health advisor who share similar cultural values, social and linguistic backgrounds • Use community based programs • Bilingual and bicultural nurses
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Table A:

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Table B:

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Table C:

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