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Strategies to reach marginalized women for cervical cancer screening: A qualitative study of stakeholder perspectives

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ABSTRACT

Background Self-sampling for human papillomavirus (HPV) has the potential to reach marginalized populations that are underserved for cervical cancer screening. However, before implementing an alternative screening strategy such as self-sampling for under- and never-screened women, the key processes, facilitators, and barriers to reform need to be understood.

Methods A descriptive qualitative study was conducted that involved semi-structured interviews with Canadian and international cancer screening health care providers and policy-makers. Respondents were purposively selected from a list of thirty stakeholders generated through an environmental scan. The interviews were transcribed verbatim and analyzed using directed content analysis.

Results Nineteen stakeholders participated in the interviews. Most respondents thought that self-sampling was an appropriate cervical screening alternative for hard-to-reach populations, as it addressed barriers to cervical screening related to various social determinants of health. All respondents emphasized that transitioning to HPV primary screening would catalyze a policy shift towards self-sampling. Clinician respondents were less enthusiastic about self-sampling strategies since that discouraged women's appointments with primary care providers, because cervical screening offered an opportunity to discuss other preventive health topics. There also was little consensus between respondents on whether the state of evidence was satisfactory to integrate a self-sampling option into policy, or whether more Canadian research was needed.

Conclusion Canadian cervical cancer screening stakeholders should collaborate to identify the knowledge gaps that researchers should address and leverage the existing literature to implement tailored, patient-centred alternative cervical screening strategies. The transition to HPV primary screening would be a key first step in the broad implementation of HPV self-sampling in Canada.

Key Words Cervical cancer, HPV self-sampling, barriers, cervical cancer screening, social determinants of health, vulnerable population

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INTRODUCTION

Cervical cancer screening programs using cervical cytology (the Pap test) have substantially reduced the incidence of cervical cancer and consequent mortality over the past several decades[1]. Despite investment in health promotion initiatives, incidence and mortality have remained unchanged in North American and European countries in the past twenty years[2-5]. Demographic shifts (e.g., increased immigration from countries without screening programs), changing social behaviours, limitations of cervical cytology, and suboptimal program delivery could play a role in the plateau of cervical cancer mortality in countries with early detection programs[4,3].

Recent cervical cancer prevention and control innovations target persistent infection of oncogenic human papillomavirus (HPV)—a necessary cause of cervical cancer[6,7]. These include HPV vaccination programs that target school-age girls before exposure to HPV and HPV DNA primary screening test, a test with greater sensitivity and higher positive predictive value than Pap testing[6,8-13]. Currently, many jurisdictions, including most Canadian

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provinces, are considering replacing the Pap test with HPV testing, which may overcome some of the performance limitations of cytology, particularly the low positive predictive value in the era of HPV vaccination. While the diagnostic performance of an HPV test is considered superior to traditional cytology[14], a new screening test will not overcome the suboptimal performance of early detection programs. Opportunistic programs and barriers to accessing cervical cancer screening[2,15-18] will still largely affect the impact of early detection programs on cervical cancer mortality. Most concerning is that these methods fail to reach populations that are already marginalized, including newcomers to Canada, Indigenous peoples, and women in rural/remote regions[16,19,20].

Human papillomavirus testing can be performed on a vaginal sample that women can collect themselves—"self-sampling"—which might be an attractive option to overcome some of the barriers to provider-administered screening[21-25]. Though there is high-quality evidence internationally to support self-collected sampling in population-based programs, only the Netherlands and Australia have implemented a self-sampling strategy as part of their population-based program. A recent review[18] found that the evidence indicates HPV testing on self-samples is clinically comparable with provider-collected samples and that it could improve screening rates in some populations.

With such a low implementation rate of self-sampling in cervical cancer early detection programs, there is a gap between the evidence to support a self-sampling option and current policy and practice[26]. From an equity perspective, self-sampling might increase access to cervical cancer screening for hard-to-reach populations, which is important for tailored screening strategies. Understanding the facilitators and barriers to offering self-sampling is an important step for developing equitable, evidence-informed cervical cancer screening programs.

This qualitative study aimed to explore barriers and facilitators to implementation of HPV self-sampling in Canadian cervical cancer screening programs, from provider and policy-maker perspectives. This study was part of a larger project that included a symposium on HPV self-sampling in October 2016 (www.equitycancerscreening.ca) that brought together national and international researchers, front-line workers, and policy-makers.

METHODS

Design

A descriptive qualitative study was conducted that involved semi-structured interviews with Canadian and international cancer screening health care providers and policy-makers. This study was part of a larger project that brought together national and international researchers, front-line workers, and policy-makers.

Data collection

A list of potential stakeholders was compiled during a preliminary environmental scan, with an aim to purposively sample relevant stakeholders from across Canada in addition to ensuring diverse professional representation. Family physicians, gynecologists, colposcopists, cyto-pathologists, researchers, guideline developers, cancer screening program managers and directors, and women's health advocacy organizations were targeted.

One-on-one interviews were conducted by phone or in-person, depending on participants' preferences, by the study research assistant (BW). The interviews lasted between 30 and 60 minutes and were audio-recorded. Demographic characteristics were collected through a brief survey completed by respondents at the beginning of the interview. A semi-structured interview guide contained four main questions: *1) What are the reasons for the observed cervical cancer disparities among vulnerable populations and how could they be addressed?, 2) What are your views in general on the use of alternative cervical cancer screening formats, and HPV self-sampling in particular?, 3) What are the knowledge gaps in adopting HPV self-sampling into the cervical cancer screening program in your province or area?, and 4) What resources/changes are required for adopting HPV self-sampling as part of screening programs?* The data were considered "saturated" when no new themes or understanding emerged[27,28]. Interviews were conducted over 4 months, from May to August 2016. The study was approved by the Ryerson University Research Ethics Board.

Analysis

The audio-taped interviews were transcribed verbatim, producing 140 pages of data. Data were then analyzed using an inductive interpretive approach[29], which allows relevant themes and categories of analysis to emerge from the transcribed interviews. NVivo11 (NVivo qualitative data analysis Software; QSR International Pty Ltd. Version 11, 2016) was used to organize and manage the data for the analysis. The transcripts were reviewed independently by the research team to identify coding patterns and collectively engage in data interpretation to ensure rigour, auditability, and trustworthiness.

RESULTS

Data saturation was reached after nineteen interviews were conducted with cervical screening stakeholders from Canada, Denmark, and the Netherlands. The study respondents included 14 females and 5 males. Socio-demographic surveys were completed by 16 of the 19 (85%) respondents. Three respondents who participated in the interview failed to return the survey after three follow-up emails. Table I depicts the participants' socio-demographic characteristics.

Below, we describe the main themes that emerged, categorized by the four interview questions.

1) What are the reasons for observed cervical cancer screening disparities among vulnerable populations?

Social determinants of health

All respondents understood "vulnerability" through the social determinants of health framework, specifically tailoring the definition of need to their professional role. Individuals who did not attend cervical screening or faced barriers in accessing screening were considered vulnerable or at increased risk of developing cervical cancer because

TABLE I Study participants' socio-demographic characteristics

Characteristic	Number of respondents *N*=16 (%)
Age	
Mean age±SD	48.58
Range	38–64 years
Location of respondent	
Eastern Canada (Newfoundland, Nova Scotia, Prince Edward Island, New Brunswick)	1 (5.3%)
Central Canada (Quebec, Ontario, Manitoba)	12 (63.1%)
Western Canada (Saskatchewan, Alberta, British Columbia)	3 (15.8%)
Northern Canada (Yukon, North West Territories, Nunavut)	1 (5.3%)
International (Europe)	2 (10.5%)
Ethno-racial identity	
White/Caucasian	12 (75%)
Other	4 (25%)
Professional training	
Health administration/Policy analyst (e.g., screening program administrator)	10 (62.5%)
Medicine (e.g., family physician, gynaecologist)	6 (37.5%)
Place of work	
Hospital/community centre	5 (31.3%)
Cancer screening program	2 (12.5%)
Government (ministry of health, public health agency)	4 (25%)
Other (e.g., research institute)	5 (31.3%)

of socio-demographic issues, including rural/remote/Northern geography, ethnicity, education level, gender and sexuality, and income. Different social determinants were associated with different challenges to accessing screening, suggesting that multi-pronged approaches at the individual, provider, and system level are important for reaching under- or never-screened women. Health care resources (e.g., primary care providers) are scarce in rural and remote areas, making it difficult for women to access screening if they desired it. More importantly, certain barriers to screening may compound when they intersect with one another. As one researcher noted, Northern Indigenous communities not only experience challenges with available providers but also mistrust the health care system because of their history of colonization. This means that a provider-administered test may not always be feasible. Women in these communities may not be able to prioritize preventive health because they may be struggling to fulfill basic needs, such as feeding their families. This is captured in the following quote:

> "From the perspective of the communities [First Nations] that we are working with, there seem to be a number of structural factors that impact health and access or lack of access to care, and then a number of factors that are also influenced by culture and social determinants and historical legacy of colonization…Food security is a significant issue in some of the communities. Some of the other communities have challenges with substance use…that makes … difficult for women to prioritize their own care." (Subject 1604)

A primary care provider emphasized that providers often struggle to engage individuals who are marginalized because of their gender or sexuality, because the providers are afraid or unsure of how to deliver cervical cancer screening, due to the gendered nature of the test.

> "Providers need to focus more on the LGBT population. I think that in general they [LGBT] face barriers much like the other ones to getting care and a lot of it has to do with either homophobia or transphobic providers." (Subject 1615)

More than a third of the respondents felt that the invasive nature of a Pap test (through a pelvic exam) may also deter participation for women who have experienced trauma or sexual abuse. The following quote shows how a female primary care provider felt that reframing the communication about cervical cancer screening as an empowerment strategy may allow abused women to take control over their own health.

> "I've had lots of conversations over the years [with sexually abused] women who did not want pelvic exam. We discuss how the abuser took away their agency, caused them PTSD… and they should not allow their abuser to also give them cervical cancer… by having a pelvic exam they are not

letting their abuser to continue having negative harm on their life." (Subject 1637)

2) Views of alternative cervical screening programs, self-sampling in particular

Perspectives of self-sampling – At the patient level

The majority of the respondents felt that self-sampling would be a great option, not only for women who face barriers in accessing primary care providers, but also for the general population. Respondents noted that while some marginalized groups may not have a primary care provider, or may not feel comfortable during a gynecological exam, the option of self-sampling may be appealing to all women since it provides flexibility.

> "If there's another option like HPV self-sampling for HPV, why wouldn't we be doing that?" (Subject 1615)

However, some felt strongly that self-sampling should only be offered to women who are otherwise not attending the organized screening program, because the decreased diagnostic performance of self-sampling could negatively impact population health.

> "If we want screening that works well and detects lesions in that capacity, you need to have a cervical sample. A self-sample is not a cervical sample it is a vaginal sample." (Subject 1645)

Perspectives of self-sampling – At the clinician level

Many front-line respondents discussed how cervical cancer screening often provided opportunities for clinicians to engage in discussion about other health concerns, like prenatal care, sexually transmitted infection testing, and other cancer screening. Most expressed concern that a self-sampling option in cervical screening would minimize those opportunities.

> "I do think when you actually do a pelvic examination there's a bunch of other things, [you] can see lesions…you can talk about contraception, you can look for genital warts… vulvar-cancer, vaginal cancer,… so not a big fan of just chucking out the clinician pelvic exam." (Subject 1637)

These clinicians felt that there needed to be safeguards in place before offering self-sampling, because taking one preventive practice out of the doctor's office could affect access to a range of preventive health care.

Perspectives of self-sampling – At the system level

At the system level, although most felt that HPV self-sampling could improve system-level efficiencies, many felt that those efficiencies would only be present after "economies of scale" were achieved at the laboratory level. However, a few respondents highlighted that for self-sampling to effectively reach the under-screened population, there would still need to be excessive use of health human resources, which could increase cost. The need for follow-up algorithms for women who test positive was emphasized. These concerns are reflected in the excerpt below.

> "We think that at the end, self-sampling will also turn out to be cheaper than having a smear at the office because you circumvent the GP [general practitioner] route, which also involves some costs. But what implementation strategies are needed to maximize benefits while minimizing harms?" (Subject 1625)

3) What are the knowledge gaps in adopting HPV self-testing into the cervical cancer screening program in your province or area?

Respondents interpreted "knowledge gaps" to mean gaps for health professionals who deliver cervical screening, for policy-makers who use research to create guidelines, and for researchers who are trying to understand how to optimize cervical screening programs.

Knowledge gaps among providers

Practices like self-sampling take health practices out of the clinic, which instilled some anxiety in health care providers who could feel unprepared to appropriately advise or counsel patients, given the several proposed changes to existing cervical screening practice.

> "From my perspective, some of the takeaways with that were that there needs to be a lot more education of care providers. We shouldn't assume that everybody out practicing is fully up to date even if they're working in the field because there hasn't been a tremendous amount of literature on self-sampling in Canada published. To my knowledge, there are no policy statements yet from sogc [Society of Obstetricians and Gynecologists of Canada] or any of the other bodies that might be important.... So I think there does have to be quite a lot of education and that's not just physicians, family physicians who might be doing it or ob-gyns, but increasingly in the communities that we're in, nurse practitioners and others who provide that level of care..." (Subject 1604)

Scientific knowledge gaps

There was little consensus among respondents of what were the most important scientific knowledge gaps that prevented a shift in cervical screening practice. Examples provided by respondents included specific unknowns, such as the most appropriate device, as well as more complex gaps, for example scaling up pilot projects that test specific strategies in a small, controlled setting. Several respondents acknowledged that while much international research supported the use of self-sampling at a population level, there was little Canada-specific evidence available. Because of Canada's unique geographies, populations, and multiple health systems, identifying the appropriate self-sampling delivery strategy is vital.

> "I think we can look at data from other jurisdictions... But I think that it still makes sense for us to

> do a made-in-Canada trial, so look at test properties, uptake, because some of the studies, the mail-in experience has not been very positive..." (Subject 1639)

> "…maybe more rigorous data needs to be available for the province and cancer agencies to act on it… like timely follow-up for abnormal results positive results, triage and management guidelines…" (Subject 1615)

4) What resources/changes are required for adopting HPV self-testing as part of screening programs?

When considering how self-sampling could be integrated into current practice, respondents' perspectives were grouped into the following themes:

Introduction of the HPV paradigm in cervical screening

Respondents unanimously agreed that the shift to using HPV testing as a primary screening test was the most important change needed to be made to cervical cancer screening programs in Canada. There was, however, disagreement among respondents as to whether provinces should implement HPV primary screening in cancer screening programs prior to offering self-sampling to vulnerable populations. Respondents were divided as to whether an alternative screening program such as self-sampling could be implemented before all pieces, including laboratories that can handle HPV tests and recall information system and registry, were in place.

> "We need the lab system for HPV testing, we need the appropriate engagement mechanisms, both directly for the physician [and] for the patient. So we need a way to say, you know, you're due for your test, you're not due for your test. We need really good information system around that, like that's going to be key." (Subject 1637)

> "We will not be able to implement this [self-sampling] on a larger scale without a paradigm shift to primary HPV testing. So first and foremost that needs to happen." (Subject 1664)

> "And once the testing paradigm is changed, then self-sampling is a shoe-in. It's a natural thing." (Subject 1645)

A few respondents were open to the idea of integrating self-sampling into a cytology-based program, but program administrators would need to identify an effective outreach strategy to reach the vulnerable populations.

> "I think you could put [self-sampling] wherever it fits, I think the issue is how do you get women engaged with it." (Subject 1639)

Several participants highlighted challenges with implementing HPV primary screening in cancer screening programs. Understanding how to scale up existing knowledge of HPV primary screening strategies was part of the problem, though political and financial concerns were perceived as the biggest barriers to change. A few suggested that politicians may not be as concerned about the health improvements introduced by the HPV test, but would be prone to changing policy if they were convinced that dollars were being saved.

> "Their [politicians] concern is mainly the affordability of HPV primary screening, so we need to show them economic (cost/benefit) analysis that shows money can be saved" (Subject 1696)

Several respondents commented on the impact of the transition from cytology to HPV-based screening for cytotechnologists and their labs, stating that the profession stands to lose a substantial number of positions because HPV testing is a primarily automated process. Some other logistic issues with the transition to HPV testing include laboratory capacity to handle HPV tests in the volumes that are expected—most respondents believed that current infrastructure is not conducive to this switch.

Change to existing cervical screening program structure

Most respondents discussed how important it is that alternate screening programs adhere to the principles of a successful screening program, including a desirable cost-benefit and acceptability of the test. Many respondents agreed that program organization, follow-up coordination, and test quality are essential to implement new strategies. Beyond fundamental elements of a successful population screening program, respondents discussed ways to adapt existing cervical screening programs to meet the needs of Canadian women and to accommodate the advancing science.

> "If you have an invitation system and you're able to identify women that have actually turned down invitations to screening, you might actually start a self-sampling program for non-responders ... So it is really by far the best way, both from an organization point of view and from an HPV laboratory quality control point of view, to start at the same time with self-sampling for non-responders and HPV office-based testing for responders." (Subject 1625)

Four respondents mentioned that program managers should model self-sampling after the FOBT [faecal occult blood test]. Many Canadian FOBT programs offer an at-home sample collection option, which could guide how a HPV self-sampling option could be integrated into cervical screening programs. However, respondents noted that differences between the epidemiology of cervical cancer and colorectal cancer may limit comparisons.

New perceptions of cervical cancer screening

Shifting to an HPV vaccination and testing paradigm requires a shift in mentality toward cervical cancer prevention. Many respondents discussed the need to change social norms around cervical cancer and HPV. Most respondents mentioned how a shift in cervical cancer strategy could

go hand-in-hand with reducing the stigma of sexually transmitted infections. Including men in prevention conversations and framing cervical cancer as an infectious disease instead of as a cancer were suggestions for ways to help change social norms.

> "As much as we've had this in the cancer screening program…we probably need to be thinking about it more as an infectious disease and how would we be approaching this as an infectious disease." (Subject 1639)

Health system characteristics

Respondents noted that changing the social norms around cervical screening and HPV is important for reducing disparities in cervical cancer screening, but this change needs to be mirrored in the health system and gain political support. Barriers to offering alternative cervical screening formats were linked with how health systems are organized and how decisions are made, as well as the availability and accessibility of primary care and the political will of screening funders to change.

Some respondents were critical of their own health systems, many citing the lack of organized recall (e.g., outside of Ontario and British Columbia) and with competing priorities of the health system as being responsible for the lack of progress.

Respondents suggested that the disconnect between federal and provincial policies and practices caused some of the greatest barriers to creating change in their local cervical screening programs.

> "Really what happened in our province is the pressure usually comes nationally once everyone else has started to do something, and we're about one of the last ones.… That's when things start changing for us." (Subject 1688)

Responses did not vary by age or gender of respondent, though different perspectives were observed between different professions. Researcher respondents tended to feel more positive about self-sampling and felt confident that the current body of evidence would justify a self-sampling option for hard-to-reach women as part of a cervical screening program. Clinicians, on the other hand, were more likely to show apprehension about a self-sampling option, suggesting that self-sampling could be used if other options were exhausted. These respondents emphasized the importance of a relationship between a screening participant and their health care provider, and that cervical cancer screening is one component of the overall care plan. Policy-maker respondents tended to agree that self-sampling could benefit hard-to-reach women, particularly populations in rural/remote areas or certain cultural backgrounds, but that operationalizing the strategies requires more political support than is currently available.

DISCUSSION

This study is the first Canadian qualitative study that focused on policy-maker and health professional perspectives of how HPV self-sampling could fit into existing Canadian cervical screening programs to promote hard-to-reach populations' screening uptake. Seventeen respondents from across Canada and two international stakeholders discussed barriers to and facilitators of alternative screening formats, particularly HPV self-sampling, to engage hard-to-reach women with cervical cancer screening in the Canadian context. Respondents agreed that cervical cancer screening programs need to have tailored strategies to reach marginalized women with early detection opportunities. However, there was disagreement on whether the self-sampling evidence was sufficient to justify implementation in cervical cancer screening programs. More broadly, respondents noted that cervical cancer screening programs must incorporate HPV testing as primary screening before developing tailored strategies, like self-sampling, for hard-to-reach populations.

Clinicians felt that self-sampling might not address all the important barriers that vulnerable populations face when accessing cervical cancer screening, particularly poor access to primary health care, which is important for following up screening results. Researcher respondents were more enthusiastic about self-sampling from population coverage and cost-effectiveness perspectives, as were policy-makers, though respondents perceived undecided implementation logistics as a barrier to changes in a cervical cancer screening program. Respondents agreed that the idea of a self-sampling component of a cervical cancer screening program was attractive from a patient empowerment perspective, but knowledge translation strategy was important to engage with women, health care providers, and other cervical cancer screening stakeholders about a change in cervical cancer screening options. The findings from this research suggest that political priorities and system barriers may be important challenges to implementing tailored screening, like self-sampling, to reach marginalized women. Knowledge-user and researcher respondents in this study agreed on important action points, such as a need for provincial programs to shift to HPV primary screening, though they disagreed on whether self-sampling evidence was sufficient for implementation.

Though respondents understood that a shift to HPV primary screening represents a major initial investment from governments, most felt that "the science is enough" to warrant the transition from cytology-based cervical cancer screening to a program based on HPV testing. Canadian randomized controlled trials[11,30], and international knowledge syntheses[10,14,25,31-33] also support this shift, which has been stressed in recent editorials[6,34,35], yet some policy-makers feel that the cytology-based programs are "good enough," echoing the World Health Organization suggestion[36]. Researcher respondents were particularly adamant that Canadian cervical cancer screening programs should shift towards primary HPV testing because the increase in sensitivity has the greatest impact on population health and health system spending, in the era of HPV vaccination[6,37]. Though not mentioned by interview respondents, some research questions whether this improvement might be exaggerated in the literature because of industry sponsorship of research[38], which suggests that the shift may not be as "urgent" as some authors convey. In Canada, the Ontario government recently allocated funding for HPV

testing in primary cervical cancer screening in their 2017 budget. However, the implementation strategy has yet to be disclosed.

A similar disconnect was observed in respondents' perceptions of the self-sampling evidence base. Some respondents thought that we needed more rigorous Canadian evidence around target populations and mode of delivery of self-sampling. Most respondents acknowledged that HPV testing on provider-collected cervical samples offered superior sensitivity and specificity to self-collected vaginal samples, aligning with the findings of a high-quality 2014 meta-analysis[25]. Respondents offered varying perspectives on how population-based screening programs should adapt to the different risks and benefits introduced by this alternative modality.

Some respondents felt that self-sampling by itself would not effectively reach marginalized communities, and that education/behavioural approaches would address the true barriers that women face with early detection. The literature is similarly divided, such that some authors believe that self-sampling should be an option available to all eligible women (not just non-responders)[39,40], while others suggest that self-sampling is appropriate only as a strategy to reach "non-compliant" women[24,41], and yet others argue that self-sampling is not the best way to reach under- or never-screened groups[22,42]. Recent evidence syntheses suggest that most women find self-sampling preferable to clinician-collected sampling[23,43]. Other systematic reviews found that self-sampling could increase cervical screening coverage in under- or never-screened women[24], though some authors observed similar uptake rates in opt-in scenarios[44].

Clinician respondents stressed the importance of maintaining face-to-face meetings between women and primary care providers, as they suggested a drawback to self-sampling was the loss of an engagement session between a clinician and a patient, which could include discussions on sexually transmitted infections and contraception. A recent study of physician billing claims in Ontario found that increasing the age of initiation for Pap testing significantly reduced the number of chlamydia cases detected in Ontario[45]. Because some of the suggested self-sampling strategies affect marginalized women who are at high risk for sexually transmitted infections, cervical screening strategies that are outside of a clinic may exacerbate other health inequities by taking away opportunistic screening.

There are some limitations associated with this research study. Though there was diversity in stakeholder perspectives including provincial policy-makers, no representatives from provincial government funding sources agreed to be interviewed. Thus, we could not examine some of the decision-making factors from the government side that were raised by other respondents. Also, patient perspectives were not included in this study because of the specific research focus on policy change. However, moving forward, patient advocacy groups will represent an important voice in developing equitable, patient-centered practice. Finally, participants were recruited from across Canada (and Europe), implying different jurisdictions, organization of programs, and funding schemes. Most of the programs within Canada are similar enough to warrant comparison of barriers and facilitators of program reform, though some of the barriers that women face to accessing screening may be unique to each jurisdiction.

CONCLUSION

According to cervical cancer screening health care providers, policy-makers, and researchers, screening programs must understand the marginalized population that faces barriers to accessing screening. After identifying the hard-to-reach populations, alternative screening strategies, including HPV self-sampling, may be appropriate if the implementation satisfies the criteria of successful population screening programs, including acceptability by the population, cost-effectiveness, sufficient sensitivity and specificity, and an organized call/recall program. Additionally, interview respondents recommended that self-sampling implementation include knowledge translation opportunities for researchers, health professionals, and the public to ensure a tailored approach for the specific population and context. To improve health equity, respondents emphasized that collaboration among cervical cancer screening experts will allow stakeholders to leverage existing scientific evidence and identify research that will inform local gaps in cervical cancer screening knowledge. Researchers and policy-makers should continue to engage with health care providers to address their needs, and in the future, incorporate the patient perspective into strategies that are acceptable to diverse populations.

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CONFLICTS OF INTEREST DISCLOSURE

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