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Bolivian Health Providers' Attitudes Toward Alternative Technologies for Cervical Cancer Prevention: A Focus on Visual Inspection with Acetic Acid and Cryotherapy

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Abstract

Background—Little is known about health providers' attitudes toward visual inspection with acetic acid (VIA) and cryotherapy in the prevention of cervical cancer, as most research in Latin America and the Caribbean (LAC) has examined attitudes of the general population. This study describes attitudes of Bolivian health professionals toward new technologies for cervical cancer prevention, focusing on VIA and cryotherapy.

Methods—Between February 2011 and March 2012, we surveyed 7 nurses and 35 physicians who participated in 5-day workshops on VIA and cryotherapy conducted in Bolivia. Multiple choice and open-ended questions were used to assess participants' acceptability of these procedures and the feasibility of their implementation in the context of perceived barriers for the early detection of cervical cancer in this country.

Results—Most believed that cultural factors represent the main barrier for the early detection of cervical cancer (70%), although all stated that VIA and cryotherapy would be accepted by women, citing the advantages of VIA over cytology for this belief. Most also believed their colleagues would accept VIA and cryotherapy (71%) and that VIA should replace Pap testing (61%), reiterating the advantages of VIA for these beliefs. Those who believed the contrary expressed a general resistance to change associated with an already existing cytology program and national norms prioritizing Pap testing.

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Disclosure Statement

The authors have no conflicts of interest to report.

Conclusions—Most participants had favorable attitudes toward VIA and cryotherapy; however, a sizable minority cited challenges to their adoption by colleagues and believed VIA should not replace cytology. This report can inform the development of strategies to expand the use of alternative cervical cancer screening methods in LAC and Bolivia.

Introduction

Of an estimated 275,000 deaths worldwide from cervical cancer, approximately 88% occur in developing countries.¹ In Latin America and the Caribbean (LAC), cervical cancer is the second leading cause of cancer-related death among women, with Jamaica, Guyana, Nicaragua, Honduras, El Salvador, and Bolivia having the highest incidence of and mortality rates from this disease.² Infection with the human papillomavirus (HPV) high-risk types has been identified as a prerequisite for the development of cervical cancer. Although most infections with HPV resolve spontaneously, persistent infections may lead to precancerous lesions of the cervix and, ultimately, to cervical cancer if left untreated.³

In the United States and other developed countries, the implementation of cytology-based screening programs for cervical cancer has resulted in a significant decrease in deaths from this disease, whereas in most LAC countries, cervical cancer rates have increased or remain unchanged.⁴ Effective cytology-based programs require multiple clinic visits related to screening, diagnosis, and treatment, as well as a substantial infrastructure to process and interpret cytology slides, perform colposcopy, process and interpret biopsy specimens, and provide treatment services. These services are poorly coordinated, limited, or simply nonexistent in LAC, which has resulted in ineffective cytology programs in most countries.⁵

Since 1999, the Pan American Health Organization (PAHO) in partnership with the Alliance for Cervical Cancer Prevention (ACCP) has been conducting research in low resource settings to assess the safety and effectiveness of screening based on visual inspection with acetic acid (VIA), HPV DNA testing, and treatment with cryotherapy.⁵ Demonstration projects and randomized controlled screening trials have found that the effectiveness and efficiency of a single visit screen-and-treat strategy using VIA testing followed by treatment with cryotherapy are high.^{6–8} VIA has sensitivity equal to or greater than the Pap test in detecting high-grade dysplasia, requires simple equipment, and provides immediate results. Cryotherapy is also more appropriate for low resource settings, as it does not rely on electricity and is inexpensive.⁹ Lastly, both procedures can be performed by trained nurses or other non-physicians who are more available in rural areas.¹⁰ Although HPV DNA testing as a primary screening method has been found to be more effective than VIA in reducing cancer and cervical cancer mortality,¹¹ the currently available HPV test is expensive and requires substantial laboratory infrastructure. Thus, the CareHPV test, which is a simpler and more affordable type of HPV test, is currently being developed and represents a promising tool for the secondary prevention of cervical cancer in low resource settings, as it allows for self-sampling and results are available within 2 hours.^{12,13}

Based on the potential of these new, alternative approaches, PAHO has developed a Regional Strategy for Comprehensive Cervical Cancer Prevention and Control for 2008 through 2015.¹⁴ This strategy aims to strengthen health services along the continuum of care, from

primary and secondary prevention to treatment and palliative care. A key priority has been the introduction of alternative, more practical methods for delivery of screening services and treatment of precancerous lesions. As a result, interventions for capacity building in VIA and cryotherapy are taking place in several LAC countries.

As part of the collaboration in cancer between the U.S. Centers for Disease Control and Prevention (CDC) and PAHO,¹⁵ staff from these organizations have partnered with the Bolivian Ministry of Health (MOH) and the Peruvian National Cancer Institute (INEN) to increase capacity building for VIA and cryotherapy among Bolivian providers. To date, two courses have been taught in La Paz and one in Perú to provide Bolivian physicians and nurses with the basic clinical skills to perform these procedures. These are the first of a series of workshops to be conducted in Bolivia as part of the CDC-PAHO collaboration.

Bolivia: Background

Of 10.4 million Bolivian inhabitants, an estimated 62% are of indigenous descent.¹⁶ Approximately 19.3% of Bolivian females speak only an indigenous dialect compared to 6.9% of males.¹⁷ The country is divided into nine regions (*departamentos*), and approximately 66.3% of the population live in urban areas and 60.1% are below the poverty line.¹⁸ Figure 1 shows the geographic distribution of Bolivia's nine regions.

Cervical cancer prevention and control in Bolivia

Bolivia has age-standardized incidence and mortality rates for cervical cancer of 36.4/100,000 and 16.7/100,000, respectively.² Although this country does not have an organized program dedicated to cervical cancer screening, a national cervical cancer prevention and control plan has been in place since 1988. A unit for the detection and control of women's cancer (*Componente de Detección y Control del Cáncer de la Mujer*) was established in 1989 and currently operates under the MOH unit for sexual and reproductive health. Bolivia has a decentralized model of healthcare provision in which local health departments, or *Servicios Departamentales de Salud* (SEDES), are in charge of the allocation of funds and resources provided by the MOH.¹⁹ Since 2006, the Pap test is offered free of charge to all women through the Maternal and Child National Health Insurance Program, or *Seguro Universal Materno Infantil* (SUMI); however, the screening coverage of the target population is only 14%.²⁰ Screening, diagnostic services, and treatment of precancerous lesions and simple hysterectomies as treatment for carcinoma *in situ* are offered at no cost through the SUMI. Services for treatment of cervical cancer are available for a fee through the public healthcare system.

In 2009, the Bolivian MOH unit for the detection and control of women's cancer developed a comprehensive plan for cervical cancer prevention and control for 2009–2015.²¹ This plan prioritizes cytology as a primary screening method, recommends screening every 3 years after two consecutive negative Pap tests, and incorporates the use of VIA and cryotherapy on a smaller scale.²² At this time, the HPV vaccine is being administered by a nongovernmental organization to a large group of the target population in a demonstration project that has achieved high coverage and acceptability, with minimal adverse effects.²³

Most research on VIA and cryotherapy in LAC has focused on their feasibility, effectiveness, safety, and acceptability by the general population. Thus, little is known about providers' attitudes toward these alternative technologies. Because acceptability of these procedures by health providers is key to their successful implementation in Bolivia, this initial study reports the key findings on (1) provider knowledge and attitudes on VIA and cryotherapy, (2) physicians' attitudes toward the role of nurses as providers of VIA and cryotherapy services, and (3) perceived barriers to cervical cancer prevention efforts. The results of the present study will be used to improve the subsequent training programs that are planned in Bolivia.

Materials and Methods

Participants and materials

Between February 2011 and March 2012, we surveyed a group of 42 Bolivian health professionals who participated in one of two basic 5-day workshops on VIA and cryotherapy conducted at the Women's Hospital in La Paz. The group of participants attending the first offering included 7 nurses and 14 physicians from five regions: La Paz, Potosí, Sucre, Oruro, and Pando. At least 1 nurse, 1 general practitioner, and 1 obstetrician/gynecologist were selected from each of these regions. Most participants of the first offering worked for local health departments. A separate group of 21 physicians who worked for local health departments attended the second offering of the workshop.

Two questionnaires were developed to assess attitudes toward alternative methods for cervical cancer screening and treatment of precancerous lesions. Some questions were selected, adapted, and translated from existing survey tools,²⁴ but most were drafted based on issues specific to Bolivia and the LAC region as a whole. All survey items were drafted and translated by a native Spanish speaker and revised for content, clarity, and relevance by both native English and Spanish speakers.

Procedure

As we were interested in assessing attitudes toward VIA and cryotherapy after participants had learned about these technologies through course materials, two questionnaires were administered at two different times. A questionnaire consisting of multiple choice questions was administered at the beginning of the first workshop day to assess current cervical cancer screening practices, perceived barriers to the early detection of cervical cancer, and attitudes of physicians toward the role of nurses in the provision of VIA and cryotherapy services. A second questionnaire consisting of multiple choice and open-ended questions was administered on the last workshop day to assess acceptability of VIA and cryotherapy, perceived barriers for the implementation of these procedures using a single-visit screen-and-treat approach, and acceptability and familiarity with HPV testing and HPV vaccination. Participants were given 30 minutes to complete each questionnaire. Both questionnaires were part of a larger survey administered by local PAHO staff for program evaluation purposes, and CDC received de-identified data for analysis. All participants completed both questionnaires. Codes to organize and categorize responses to open-ended questions were

developed through an inductive approach. The data were analyzed using SPSS 14 statistical software.

Results

Participants included a total of 35 physicians and 7 nurses (Table 1). Most physicians were obstetrician/gynecologists (71%), were male (51%), and had practiced medicine for an average of 14 years. As shown in Table 2, 58% of participants believed that VIA is very effective, and almost half stated this belief for HPV testing. Knowledge on the self-collected HPV test seemed very limited, with only 7 participants stating they were familiar with the advantages of this test.

Attitudes toward VIA and cryotherapy

Except for 1 participant who did not provide an answer, all reported that VIA would be accepted by their patients (Table 2). When asked to provide reasons for this belief, the vast majority cited the advantages of VIA over cytology and issues related to the ineffectiveness of the current system to implement cytology-based screening:

“[VIA] is fast and simple.”

“Because our patients would not have to come back 2 weeks later or a month later to get the results, as it is usually the case [with the Pap test].”

“VIA is cheap and more accessible because it can be performed by nonphysicians.”

“Women no longer trust the Pap test because it takes a long time to get the results back. VIA is [also] much cheaper.”

Seventy-one percent reported that their colleagues would accept VIA as a screening method (Table 2), with most reporting the advantages of this procedure (e.g., low cost and immediate results) over cytology for this belief. The nearly 30% who stated the contrary cited general distrust and resistance toward the use of VIA for this belief. The perceived resistance from colleagues to accepting VIA as a screening method is reflected in the following answers:

“Because [physicians] are not up-to-date and have this idea that VIA does not provide good results.”

“[Due to] lack of credibility in the sensitivity [of VIA] and lack of training.” “It’s been many years [since physicians started] working with the Pap test. They also have little information about VIA and its benefits.”

“There is a lot of controversy and distrust regarding [VIA].”

Approximately 61% believed that VIA should replace Pap testing, citing the advantages of VIA over cytology (Table 2). Most participants who believed that VIA should not replace the Pap test stated that in their specific health facility Pap testing works well:

“The cytology-based system is more optimal, and adequate follow-up is provided.”

“In my health facility, Pap results are received within 24 hours.”

“Because [in my health facility] we have a pathologist and we [provide] follow-up.”

Many were also confused about the role of VIA and believed that the Pap test and VIA serve different purposes and could be performed together instead of one replacing the other:

“I can perform both procedures. The Pap can diagnose other pathologies. [VIA and Pap testing] can synergize with each other.”

“[VIA and Pap testing] complement each other, they are complementary techniques.”

A total of 42% reported seeing challenges to the implementation of a single-visit screen-and-treat approach using VIA and cryotherapy in their specific health facility (Table 2), citing lack of equipment (88%) and capacity (50%) as main barriers to implementation of this approach. When asked about the main barriers women would face at their specific health facility to receive follow-up after cryotherapy treatment, most cited long distances from women’s homes to the health facility:

“Many patients come from rural areas, and due to lack of medical staff many appointments are usually postponed.”

“[Women] have to wake up early [to go to the hospital] and make an appointment. These are women coming from areas that are very far.”

Many others explained that the main barriers to conduct appropriate follow-up are long waits on the day of the scheduled appointment and lack of capacity and materials:

“At 7 am [women] arrive at their appointment [at the health facility] and around 10–11 am they receive care.”

“A large number of patients and lack of medical personnel.”

Lastly, some participants emphasized characteristics of the population as barriers to conduct follow-up:

“If we were to perform cryotherapy [the main barriers] would be [...] constant changes in patients’ addresses.”

“Having a migrant, dispersed population without telephone numbers.”

Nearly 75% of participants believed that these alternative methods would have an impact on local healthcare systems (Table 2), with most of those who reported a positive impact reiterating the advantages of VIA over cytology. Many also stated that the adoption of new methods, such as VIA, could have a positive impact on other health services. As one participant stated:

“Making [women] aware of a new test [for cervical cancer screening] will attract more women, increasing demand and coverage for other services.”

Others stated that promoting VIA might decrease the number of other procedures commonly performed, which, in turn, could negatively affect pathologists and those working in cytology laboratories:

“It would reduce the number of Pap tests, which is not beneficial for pathologists.”

“There will be less work in cytology labs.”

“It would decrease [the number of] hysterectomies performed and the number of Pap tests [performed].”

Perceived barriers to cervical cancer prevention

Fifty-two percent reported that the level of awareness about cervical cancer among the general population is low (Table 2). Over 75% reported that cultural factors represent the main general barrier to early detection of cervical cancer. When asked for specific barriers to cancer prevention efforts, most cited taboos related to Pap testing (71%) and lack of infrastructure and educational campaigns targeting women (52%).

Nurses' role in provision of VIA and cryotherapy services

Both physicians and nurses in this study were asked about their attitudes toward the more active role that nonphysicians might play in the provision of VIA and cryotherapy services. Whereas the vast majority of physicians reported feeling comfortable with nurses performing VIA (74%), a little over half (56%) reported feeling comfortable with nurses performing cryotherapy (Table 3).

Discussion

VIA and cryotherapy can help overcome the major challenges that have kept screening access and coverage low in countries like Bolivia. However, knowledge about VIA and cryotherapy is still very limited in LAC, and continuing efforts to promote their introduction are crucial for the eventual institutionalization of these technologies in the region.²⁵ Overall, our findings suggest that most participants selected for training in VIA and cryotherapy have favorable attitudes toward the introduction of these technologies in Bolivia. Most also believed that VIA and cryotherapy would be accepted by health professionals and women, citing the advantages of these procedures as a reason for this belief.

Most participants believed that a single-visit screen-and-treat approach using VIA and cryotherapy is feasible in Bolivia; however, VIA represents a more viable option than cytology even if cryotherapy is not immediately performed, as VIA provides immediate results, reducing the number of visits needed to receive treatment.²⁶ In fact, a recent PAHO demonstration project conducted in Peru revealed that women screened with VIA were more likely to receive treatment for precancerous lesions than those screened using cytology.²⁷

Adequate follow-up of women with positive Pap test results has been the main challenge to the successful implementation of cytology-based programs in LAC, including Bolivia, where < 20% of eligible women receive treatment for precancerous lesions.²⁸ As most cytology-based services are available in urban areas, women need to make costly trips to health facilities to get screened and receive diagnostic and treatment services if needed. At facilities offering these services, women experience long delays to receive care or Pap test results.²⁹ Although VIA can be made easily available in rural areas, participants in our training workshops believed that excessive delays to receive care and long distances between

women's homes and health facilities represent impediments to provide follow-up to women who have received cryotherapy treatment. These findings suggest that limitations inherent to issues that are country specific and not to cytology-based programs *per se* are perceived as barriers to implementing widespread screening programs in Bolivia. It will be important as alternative technologies are incorporated into the healthcare system that efforts are made by the MOH to decentralize care and organize services more efficiently.

One of the major advantage of VIA is that it can be performed by nonphysicians, which may aid in efforts to decentralize care and reach high-risk populations living in remote areas. The Bolivian MOH selected 7 nurses to participate in CDC-supported workshops and plans on further increasing capacity among nurses. Although all nurses who participated in our workshops reported feeling comfortable in their new role as VIA and cryotherapy providers, only a little over half of physicians reported feeling comfortable with nurses performing cryotherapy. These findings are not surprising, as physicians have historically been in charge of making therapeutic decisions about eligibility of women for treatment of precancerous lesions. The experiences of the ACCP in training both nurses and physicians on VIA and cryotherapy have shown that nurses experience difficulty in making therapeutic decisions, which makes concerns from some of the physicians in our workshops consistent with the experiences of ACCP trainers.²⁹ Attitudes toward nurses performing cryotherapy, however, should be further explored through a qualitative approach to understand underlying issues that may be causing concerns among some physicians.

In the present study, cultural factors were perceived by most health professionals as the main general barrier to cervical cancer prevention efforts, perhaps underestimating the limitations of the healthcare system in preventing women from receiving proper care. Our findings, however, are consistent with those of a previous population-based survey in the *departamento* of Sucre, which found that 90% of surveyed males disapproved of their female partners having a Pap test. The same study also found that the main factors preventing women from getting a Pap test were shame and fear.³⁰ A recent qualitative assessment found that in many parts of the country, men are the ones deciding whether or not women should get screened or receive treatment and that many women do not seek care because of the stigma attached to the Pap test.²⁸ This is consistent with our findings showing that most physicians believe that taboos about Pap testing represent the major specific barrier for early detection of cervical cancer in Bolivia.

Lack of public health education campaigns was another specific barrier reported by participants in our study, which parallels the findings of a recent qualitative assessment showing that educational materials on cervical cancer were limited or inexistent in most health facilities, that providers tend to prioritize education on reproductive health and other health issues before cervical cancer, and that most women did not know the purpose of the Pap test.²⁸ Education efforts may prove an effective strategy to increase cervical cancer screening coverage, as 44% of women in Sucre who reported having been screened at least once in their lifetime cited receiving information on cervical cancer as the main reason for seeking care.³⁰ Because men participate in the health decisions of women, it is important that health education and promotion strategies for the Bolivian public are tailored toward both men and women.

Successful cervical cancer control and prevention are possible when screening, diagnostic, and treatment services are widely available.³¹ This can be achieved in Bolivia and other LAC countries by implementing such cost-effective methods as VIA and cryotherapy, which are also more appropriate to the region's health infrastructure and resources. For VIA to be effective in increasing the screening coverage and demand for cryotherapy services, raising awareness about this disease by addressing sociocultural barriers among the population through health promotion efforts will be crucial. VIA represents a long-term strategy for Bolivia, as this procedure may also allow, in the long term, for adoption of HPV testing as a primary screening method, which will require a triage test to avoid a large number of referrals to colposcopy.¹² This country recently participated in PAHO's ProVac initiative to learn about cost-effectiveness strategies for introduction of HPV vaccination,³² but potential plans for adoption of HPV vaccines are simply one component of a comprehensive cervical cancer prevention plan for the country that will continue to include screening as a key strategy.

The present study is an initial assessment of health professionals' attitudes toward alternative strategies for cervical cancer prevention in Bolivia, and the findings are not intended to represent the attitudes of health professionals in the country as a whole or in specific regions. In addition, our final sample was small, and we used two separate groups of participants to gather all data for this study. Because we used a self-report survey, social desirability bias may have also influenced our results. Despite these limitations, this assessment is the first to provide an overview of Bolivian health professionals' attitudes toward VIA and cryotherapy and may be helpful as a starting point to inform the implementation of these technologies in Bolivia and the LAC region. Further, this information will be valuable for future initiatives conducted in LAC as part of CDC's global strategy for cervical cancer prevention and control.³³

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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

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FIG. 1.
The nine regions of Bolivia. (Courtesy of Tom Richards.)

Table 1

Distribution of Selected Demographic, Practice, and Professional Characteristics of Participants, Bolivia, 2011–2012 ($n= 42$)

Item	<i>n</i> (%)
Type of health professional	
Physician	35 (83.3)
Nurse	7 (16.7)
Mean age (SD)	40.4 (8.0)
Physician gender ^a	
Female	17 (48.6)
Male	18 (51.4)
Physician specialty ^a	
FP/GP	9 (25.7)
OB/GYN	25 (71.4)
Oncology	1 (2.9)
Physician mean years in practice ^a (SD)	14.0 (6.2)
Performed Pap test	37 (90.2)
Performed VIA prior to workshop	18 (46.2)
Performed cryotherapy prior to workshop	4 (14.3)
Perceived impact of national guidelines on clinical practices ^b	
High	16 (40.0)
Very little or none	24 (60.0)

^a
 $n = 35$.

^b Percentages may not add to 100 due to missing values.

FP, family practice; GP, general practice; OB/GYN, obstetrics/gynecology; SD, standard deviation; VIA, visual inspection with acetic acid.

Table 2

Knowledge, Attitudes, and Perceived Barriers Toward Alternative Technologies for Cervical Cancer Prevention, Bolivia, 2011–2012 ($n = 42$)

Item	<i>n</i> (%)
Knowledge	
HPV infection and HPV vaccine ^a	
HPV increases risk for vaginal cancer	13 (31.0)
Most women with HPV infection are asymptomatic	39 (95.1)
HPV infection cause most cases of cervical cancer	37 (92.5)
HPV vaccine protects against 2 types of HPV	39 (92.9)
HPV vaccine may protect against vulvar cancer	18 (42.9)
HPV vaccine may help prevent penile cancer	10 (24.4)
Perceived effectiveness of screening tests ^b	
HPV	14 (46.7)
VIA	23 (57.5)
Cytology	12 (30.8)
Familiar with the advantages of the self-collected HPV test	7 (17.1)
Attitudes on VIA and cryotherapy	
Acceptability	
Think patients would accept VIA and cryotherapy ^c	41 (100.0)
Think their colleagues would accept VIA and cryotherapy	29 (70.7)
Think VIA should replace the Pap test	25 (61.0)
Think VIA and cryotherapy would have an impact on other health services	30 (75.0)
Think performing VIA and cryotherapy in a single visit is not feasible in their specific health facility	17 (41.5)
3 main challenges to implement a single visit screen-and-treat approach ^d	
Lack of equipment	14 (87.5)
Lack of capacity	8 (50.0)
Few health professionals in hospital/health center	4 (25.0)
Attitudes on HPV testing and HPV vaccine	
Would recommend the HPV vaccine to female patients	38 (92.7)
Think incorporation of HPV testing is feasible within 5 years	8 (42.1)
Perceived barriers for early detection of cervical cancer ^e	
General barriers	
Cultural	31 (75.6)
Political	2 (5.0)
Economic	3 (7.5)
Organizational	4 (10.0)
Specific barriers ^f	
The taboo about Pap testing among women	30 (71.4)
Lack of educational campaigns and infrastructure	22 (52.4)
Lack of dissemination of screening guidelines	17 (40.5)

Item	<i>n</i> (%)
Lack of knowledge about cervical cancer	16 (38.1)
Lack of priority given to women's health	13 (31.0)
Lack of infrastructure and organization of the Bolivian healthcare system	12 (28.6)
The belief that cancer cannot be prevented	9 (21.4)
The stigma related to cervical cancer for being a sexually transmitted illness	6 (14.3)
Level of awareness among patients about getting screened for cervical cancer	
High	2 (4.8)
Moderate	15 (35.7)
Low	22 (52.4)
None	3 (7.1)

All items were asked at pretest except for those related to attitudes on specific procedures.

^aNo. of correct responses.

^bNo. of participants who reported that the test is very effective.

^c $n = 41$.

^dParticipants were instructed to check all that apply. Only the most cited categories are presented.

^eParticipants were given 4 barriers and asked to list them according to their level of importance in preventing early detection of cervical cancer.

^fParticipants were asked to select 3 of the 8 barriers listed.

HPV, human papillomavirus; VIA, visual inspection with acetic acid.

Table 3

Participants' Responsibilities and Level of Comfort Providing Visual Inspection with Acetic Acid and Cryotherapy Services, by Type of Health Professional, Bolivia, 2011–2012 ($n = 42$)

Item	Nurses $n = 7$ n (%)	Physicians $n = 35$ n (%)
Responsibilities of participants		
No. in charge of discussing Pap test results with patients	1 (16.7)	30 (85.7)
No. in charge of follow-up of abnormal results	0 (0.0)	29 (82.9)
No. in charge of recommending further testing for abnormal results	1 (14.3)	30 (85.7)
No. in charge of reminding patients about an appointment	3 (42.9)	24 (70.6)
The new role of nurses regarding VIA		
Level of comfort performing VIA		
Comfortable	7 (100.0)	26 (74.3)
Uncomfortable	0 (0.0)	9 (25.8)
Level of comfort performing cryotherapy		
Comfortable	7 (100.0)	19 (55.9)
Uncomfortable	0 (0.0)	15 (44.2)
Level of comfort being in charge of follow-up of those treated with cryotherapy		
Comfortable	7 (100.0)	26 (76.4)
Uncomfortable	0 (0.0)	8 (23.5)
Discussing VIA results with patients		
Comfortable	7 (100.0)	27 (77.1)
Uncomfortable	0 (0.0)	8 (22.9)

Participants were asked how comfortable they would feel with nurses performing procedures or being in charge of the activities listed. Nurses were instructed to indicate how comfortable they would feel undertaking the activities listed. A Likert-type scale was used to assess level of comfort for specified activities.

Percentages may not add to 100 due to missing values.

VIA, visual inspection with acetic acid.