

Strategies for cervical cancer prevention using visual inspection with acetic acid screening and cryotherapy treatment

REPORT OF THE PAHO WORKSHOP FOR
LATIN AMERICA AND THE CARIBBEAN



Guatemala City

1-2 June 2011

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Finally, this meeting was made possible by the collaboration and enthusiasm of the representatives from the 11 participating countries in Latin America and the Caribbean. Their effort and motivation to improve programs for the prevention and control of cervical cancer through the introduction of new technologies support the contents of this report and offer an opportunity for change and to have a positive impact on the health of women in the region.



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ABBREVIATIONS

ACCP	Alliance for Cervical Cancer Prevention
CD4	Cluster of Differentiation 4
CDC	Centers for Disease Control and Prevention
CLAP	Latin American Center of Perinatology, Women and Reproductive Health
GCCPTP	Guyana Cervical Cancer Prevention and Treatment Program
HIV	Human Immunodeficiency Virus
HPV	Human Papillomavirus
IARC	International Agency for Research on Cancer
INEN	National Institute of Neoplastic Disease
IPPF	International Planned Parenthood Federation
LAC	Latin America and the Caribbean
LEEP	Loop Electrosurgical Excision Procedure
NCD	Non-Communicable Diseases
NGO	Nongovernmental Organization
NOC	National Oversight Committee
PAHO	Pan American Health Organization
PINCC	Prevention International: No Cervical Cancer
SBM-R	Standards-based Management and Recognition
SILAIS	Integrated Local Health Care System
SUMI	Mother and Child Universal Insurance
UICC	Union for International Cancer Control
UNFPA	United Nations Population Fund
VIA	Visual Inspection with Acetic Acid
WHO	World Health Organization

EXECUTIVE SUMMARY

Although many countries of Latin America and the Caribbean (LAC) have been using cytology as a screening technique for over 30 years, cervical cancer is still the second most common malignant neoplasm in women of all ages in terms of incidence and mortality, with an estimated 67,801 new cases and 31,467 deaths every year. In this context, the availability of alternative approaches such as visual inspection with acetic acid (VIA) and cryotherapy treatment for precancerous lesions offers new opportunities to improve the impact of prevention efforts.

VIA consists of inspecting the cervix with the naked eye using a bright light source, after applying a 3%-5% solution of acetic acid. This causes abnormal cervical tissue to temporarily turn white in color so that the provider can tell whether the result is positive. This simple, effective test can be performed by mid-level health personnel after a relatively short training period. The enormous advantage of VIA is that the results are available immediately and therefore the “screen and treat” approach can be used, whereby cryotherapy is administered to positive women with eligible lesions during the same visit.

Despite its advantages, VIA also has limitations, including variations in performance due to its nature as a subjective test dependent on provider interpretations. Just as with other screening tests, therefore, provider training and supervision, quality control, and monitoring and evaluation are extremely important.

In view of the need to improve the impact of cervical cancer programs, VIA screening and cryotherapy treatment have been introduced in several LAC countries in recent years, and several international organizations are providing technical assistance in this area. Growing experience with these techniques has generated a wealth of lessons learned about the training requirements, quality control, and monitoring and evaluation.

In this context, the Pan American Health Organization (PAHO), in collaboration with the Ministry of Health of Guatemala, convened a workshop titled “*PAHO Workshop on Cervical Cancer Prevention Strategies using VIA Screening and Cryotherapy Treatment*,” which was held in Guatemala City on 1-2 June 2011. The meeting provided an opportunity to share experiences and determine the best way to ensure quality and standards in VIA screening and cryotherapy treatment. It was attended by 45 representatives from 11 countries of LAC and 8 nongovernmental organizations (NGOs) and partner organizations.

The workshop was a two-day event that featured roundtable discussions on the following core themes: the experiences of the countries of the region in the use of VIA and the “screen and treat” approach; provider training and supervision; and monitoring and evaluation of both approaches in the context of public health programs for cervical cancer prevention and control. Each roundtable included presentations followed by a question and answer period and a plenary discussion of the most relevant issues and lessons learned with respect to the specific theme. In addition to the roundtables, the workshop included a session on health promotion and strategies to attract women in the high risk age category and a presentation on the preliminary results of the preparatory surveys. The participants also had the opportunity to discuss the WHO proposal for standardizing supervision and quality assurance in the use of VIA and they offered enriching observations to the draft. The workshop concluded with a plenary session to discuss ways in which to harmonize approaches based on the experiences shared and existing resources and to determine the next steps for strengthening VIA screening and cryotherapy treatment in the region.

In conclusion, throughout the workshop it was shown that there is clear, well-established scientific evidence to support VIA and the “screen and treat” approach and that their implementation in public health programs is feasible, as shown by the successful experiences in some countries in the region. In addition, the participants with less exposure to the use of these techniques showed great interest, motivation, and enthusiasm about introducing

them in their cervical cancer prevention programs. It was also clear that a vast array of validated materials and tools are available that can serve as a starting point for regional standardization and for the establishment of the desirable minimum requirements for training, supervision, quality control, and monitoring and evaluation. All of this suggests to us that the conditions are ripe in the region for expanding the use of VIA and the “screen and treat” approach to improve the effectiveness and impact of prevention efforts in public health programs.

INTRODUCTION

Background

Cervical cancer is the second most common malignant neoplasm in terms of incidence and mortality in women of all ages in Latin America and the Caribbean (LAC). Each year, an estimated 67,801 women are diagnosed with cervical cancer in LAC, with 31,467 deaths from this disease. The highest age-adjusted incidence rates are recorded in Jamaica, Guyana, Nicaragua, Honduras, and El Salvador, whereas Chile, Trinidad and Tobago, Uruguay, and Costa Rica have the lowest rates¹ (*Annex 1*).

This high burden of disease represents a major public health problem that could be prevented by effective primary and secondary prevention strategies in conjunction with appropriate diagnostic and therapeutic case management. Although cytology has been used as a screening technique for over 30 years in many Latin American countries, a reduction in incidence and mortality comparable to that recorded in developed countries has not been achieved. The failure of prevention programs is due not only to the limitations of cytology, but also to the organization of health services, as well as social and cultural factors. In this context, the availability of alternative approaches such as visual inspection with acetic acid (VIA) and cryotherapy treatment for precancerous lesions offer new opportunities to improve the impact of cervical cancer prevention efforts, especially in low resource settings.

VIA consists of inspecting the cervix with the naked eye using a bright light source, after applying a 3%-5% solution of acetic acid. Abnormal cervical tissue that comes into contact with the acetic acid dilution temporarily turns white in color (“acetowhite”), allowing the provider to make an immediate assessment of a positive (abnormal) or negative (normal). This test is effective, supported by an extensive body of scientific evidence, simple, feasible, and accessible and can be performed by mid-level health personnel after a relatively short training period. It requires minimal infrastructure and the consumables are within reach in any setting. The enormous advantage of VIA is that

its results are available immediately and therefore the “screen and treat” approach can be applied, whereby cryotherapy treatment is administered to positive women with eligible lesions during the same visit².

Despite its advantages, VIA also has limitations, including variations in performance due to its nature as a subjective test dependent on provider interpretations. Just as with other screening tests, therefore, provider training and supervision, quality control, and monitoring and evaluation are extremely important in cervical cancer programs that use these methods.

In view of the need to improve the impact of cervical cancer programs, VIA screening and cryotherapy treatment have been introduced in several LAC countries in recent years, and several international organizations are providing technical assistance in this area. Growing experience with these techniques has generated numerous lessons learned about the training requirements, quality control, and monitoring and evaluation. These experiences can be useful for other countries of the region interested in introducing VIA and the “screen and treat” approach into their public health programs.

In this context, the Pan American Health Organization (PAHO), in collaboration with the Ministry of Health of Guatemala, convened a workshop titled “*PAHO Workshop on Cervical Cancer Prevention Strategies using VIA Screening and Cryotherapy Treatment*”, which was held in Guatemala City on 1-2 June 2011 (*Annex 2*). This workshop took place in the context of activities for the implementation of the Regional Strategy and Plan of Action for Cervical Cancer Prevention and Control³ and follows up on the Latin American meeting on new technologies for cervical cancer prevention held in Panama in June 2010⁴. The workshop provided an opportunity to share experiences and determine the best way to ensure quality and standards for VIA and cryotherapy treatment. This report describes the structure, contents and results of the workshop, as well as the main conclusions and the commitments made by the participants.

Purpose

The purpose of this workshop was to discuss experiences and lessons learned by LAC countries and partner organizations regarding the use of VIA screening and cryotherapy treatment, and to share materials and harmonize approaches for training, quality assurance, monitoring, and supervision in the context of cervical cancer programs.

Objectives

- To review the available scientific evidence on cervical cancer prevention using VIA screening and cryotherapy treatment and the “screen and treat” approach at the primary care level.
- To showcase experiences carried out in LAC countries on the practical application of VIA and cryotherapy in public health programs.
- To discuss approaches and standards for training providers in VIA screening and cryotherapy treatment in order to homogenize strategies.
- To discuss quality control indicators and strategies

for VIA screening, including ongoing supervision.

- To discuss monitoring and evaluation of VIA and cryotherapy in the context of cervical cancer prevention programs.

Participants

A total of 45 representatives from 11 LAC countries and 8 nongovernmental organizations (NGOs) and partner organizations attended the workshop (*Table 1*). The main audience of the meeting consisted of:

- Cervical cancer program managers of the Ministries of Health in countries that are using VIA and cryotherapy in their public health programs or are seriously considering introducing them in the near future.
- Health/clinical professionals who, together with program managers are taking the lead in the use of VIA and cryotherapy.
- International organizations that are providing technical assistance to support this process.



Workshop participants during a working session.

The complete list of participants is provided in *Annex 3*.

Preparatory work

Table 1. Participants of the PAHO workshop on Cervical Cancer Prevention Strategies using VIA Screening and Cryotherapy Treatment.

COUNTRY	
Bolivia	Nicaragua
Colombia	Paraguay
El Salvador	Peru
Guatemala	Dominican Republic
Guyana	Suriname
Honduras	
ORGANIZATIONS	
Basic Health International	
Grounds for Health	
International Planned Parenthood Federation (IPPF)	
JHPIEGO	
PATH	
United Nations Population Fund (UNFPA)	
World Health Organization (WHO)	
Pan American Health Organization (PAHO)	

Prior to the meeting, a SharePoint site was created on the PAHO Intranet to circulate the agenda for the meeting, relevant documents on VIA and the “screen and treat” approach, and relevant links. The speakers’ presentations, and the materials and tools developed by partner organizations for training, quality control, monitoring and evaluation were also available on the SharePoint site. Finally, in preparation for the workshop, the participants were asked to complete a survey on their experience with these approaches to cervical cancer prevention (*Annex 4*). The survey explored the challenges and opportunities associated with these techniques and each country’s expectations for the workshop and elicited information on VIA and the “screen and treat” approach in the following categories: a) norms and regulations; b) health care activities; c) human resources and training; d) material resources; e) quality control, monitoring and evaluation; and f) technical assistance and cooperation. The survey results were presented at the workshop and will be published in a report.

CONTENTS

Agenda and planning

The meeting was a two-day event organized into roundtables on the following core themes: the experiences of the countries of the region in the use of VIA and the “screen and treat” approach; provider training and supervision; and monitoring and evaluation of both approaches in the context of public health programs for cervical cancer prevention and control. The presentations for each roundtable were followed by a question and answer period and a plenary discussion of the most relevant issues and lessons learned.

In addition to the roundtables, the workshop included a session on health promotion and strategies to attract women in the high risk age group and a presentation of the preliminary results of the preparatory surveys. The participants also had the opportunity to discuss the WHO proposal for standardizing supervision and quality assurance in the use of VIA and they offered enriching observations to the draft.

The workshop concluded with a plenary session to discuss ways in which to harmonize approaches based on the experiences shared and existing resources and to determine the next steps for strengthening VIA screening and cryotherapy treatment in the region.

The complete agenda of the meeting is provided in *Annex 2*.

Inauguration of the meeting

The inauguration of the subregional meeting was chaired by Dr. Silvia Palma, Vice Minister of Hospitals of the Ministry of Public Health and Social Welfare of Guatemala who, together with Dr. Pier Paolo Balladelli, the PAHO/WHO representative in the country, welcomed the participants to Guatemala City.

After the opening session, the agenda and meeting structure were presented, followed by a round of introductions of the workshop participants.



Inauguration of the meeting, left to right: Dr. Daniel Frade (PAHO/WHO Guatemala); Dr. Macarena Pérez (PAHO/WDC); Dr. Pier Paolo Baradelli (PAHO/WHO Guatemala Representative); Dr. Miriam Bethancourt (Sexual and Reproductive Health Program Manager, Ministry of Health Guatemala); Dr. Nathalie Broutet (WHO/ Geneva)

Introduction to the meeting



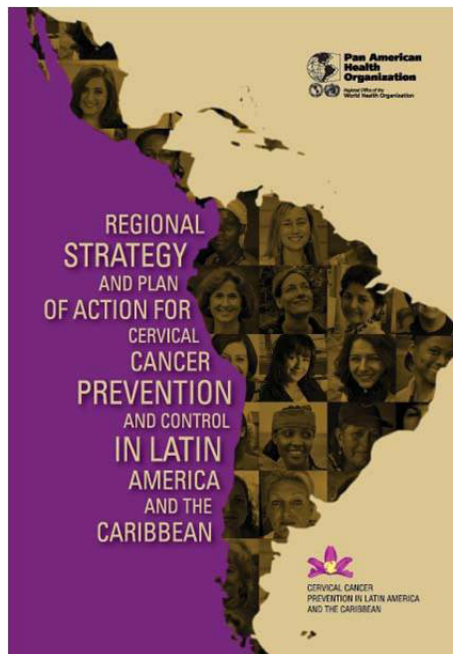
Cervical cancer screening using VIA and cryotherapy. Objectives and expected outcomes of the workshop. Dr. Macarena Pérez Castells, PAHO, Washington D.C.

Dr. Macarena Pérez Castells, PAHO Regional Adviser on Cervical Cancer Prevention and Control (Washington D.C.), began her introductory presentation on VIA screening and cryotherapy treatment by reviewing the cervical cancer burden at the international and regional levels.

An estimated 80,292 new cases and 35,880 deaths associated with this disease are recorded each year. Cervical cancer is a disease of great inequities that mainly affects the most vulnerable groups of women. According to data from Globocan, women living in developing countries accounted for 80% of all deaths from this cause recorded in 2002. That percentage rose to 88% in 2008 and is expected to reach 98% by 2030. Our region is no exception to this: mortality rates are 7 times higher in LAC compared to North America and the gap is projected to widen even further by 2025. Cervical cancer prevention programs in LAC have not, in fact, had an effect on incidence and mortality rates comparable to that achieved in developed countries. The lack of impact of these programs is attributable not only to the limitations of the screening test used—cytology—but also to issues relating to the organization of programs, the accessibility and organization of health services, and social and cultural factors. New technologies for primary prevention (vaccine against human papillomavirus (HPV)) and secondary prevention (VIA and the HPV DNA test), however, offer unprecedented new opportunities for intervention. The scientific evidence and the experience amassed in the region on the use of these new technologies were reviewed at a subregional meeting held in Panama City in June 2010. As a follow-up, this

workshop focused on VIA and the “screen and treat” approach.

The *Regional Strategy and Plan of Action for Cervical Cancer Prevention and Control*, which was developed by PAHO and endorsed by the Ministers of Health of the Americas in 2008, provides a framework for this endeavor by promoting a comprehensive approach with an emphasis on strengthening programs for the early detection and treatment of precancerous lesions. Specifically, the Regional Strategy recommends that the incorporation of the “screen and treat” approach (*Table 2*) be considered in settings that lack the resources for high-quality cytology screening and adequate follow up of positive cases.



PAHO’s recommendation is based on the many advantages of VIA, including its immediate results, the wide range of health personnel who can perform it, its simplicity and affordability, minimum infrastructure requirements, acceptance by women, and the potential for single-visit treatment of eligible

lesions. The test does have limitations, however: it should not be used in postmenopausal women due to the regression of the transformation zone into the endocervical canal, and its subjective nature requires a high level of provider training and supervision (*Table 3*).

Table 2. PAHO Regional Strategy and Plan of Action for Cervical Cancer Prevention and Control

STRATEGIC PLAN OF ACTION

The following 7-point plan of action is proposed for the Regional Strategy:

1. Assess the situation, compiling strategic information to be used as the basis for decisions on whether standards and procedures in connection with cervical cancer should be changed and in what way. This analysis can serve as a point of comparison to observe the effects of the program.
2. Increase information, education, and orientation, promoting knowledge about HPV and cervical cancer as well as sex education, with special emphasis on the most disadvantaged and vulnerable groups of women.
3. Strengthen the programs for the detection and treatment of precancerous lesions, adapting the strategy to the resources
4. In environments with sufficient resources to maintain quality cytology screening with appropriate and timely follow-up of women: 1) improve quality and consider the possibility of introducing the HPV DNA test; 2) increase screening coverage in women at risk (over 30 years of age; and 3) increase the percentage of women with abnormal results who receive timely and appropriate follow-up.
5. In environments with insufficient resources to maintain quality screening and where there is a high percentage of women with insufficient follow-up, consider introducing the single-visit approach to screening and treatment by performing screening (VIA) followed by immediate treatment of precancerous lesions with cryotherapy.
6. Establish or strengthen cancer registries and information systems.
7. Improve access to and quality of cancer treatment and palliative care. Surgery and radiation therapy are the treatments of choice for invasive cervical cancer, with cure rates from 85-90% in the initial stages. Palliative care is an integral component of the programs. It includes pain control, palliative radiation therapy, and family and psychological support.
8. Generate information to facilitate decisions about the introduction of HPV vaccines.
9. Promote equitable access as well as affordable, comprehensive prevention of cervical cancer.

Table 3. Advantages and limitations of visual inspection with acetic acid (VIA) as a screening test.

Advantages	Limitations
<ul style="list-style-type: none"> • Immediate results. • It can be performed by a wide range of personnel trained in the technique. • Simple and inexpensive. • Minimum infrastructure requirements. • Sensitivity equal or better than cytology. • Potential to “screen and treat” in a single visit in primary care settings. • Single-visit reduces the possibility of losing women with positive results to follow-up care. 	<ul style="list-style-type: none"> • This is not the most appropriate test for postmenopausal women, due to regression of the transformation zone into the endocervical canal. • Subjective nature dependent on provider interpretation, which means that proper provider training and supervision and appropriate quality control are required.

In this context, and given the variations in the level of for cooperation and exchange during the two working development of VIA and the “screen and treat” approach days. and the presence of international and national agencies Finally, Dr. Pérez presented the expectations for the and organizations among the participating countries, the workshop as expressed by the participating countries in workshop provided a forum for identifying opportunities the survey distributed prior to the meeting (Table 4).

Table 4. Expectations for the Workshop on the part of the participating countries, based on the results of the preparatory surveys

EXPERIENCES	TECHNOLOGY	PROGRAM
<ul style="list-style-type: none"> • Learn about the experiences of other countries. • Take advantage of the lessons learned from other countries. • Describe their country’s experience. 	<ul style="list-style-type: none"> • Increase knowledge of VIA and cryotherapy. • Increase knowledge of the “screen and treat” approach. • Increase knowledge of training, monitoring, and evaluation methods. 	<ul style="list-style-type: none"> • Learn strategies to implement a VIA-based program. • Learn strategies to strengthen a VIA-based program. • Obtain technical support. • Offer technical support.



Comprehensive approach to cervical cancer prevention. Perspective of the World Health Organization (WHO). Dr. Nathalie Broutet, WHO, Geneva.

Dr. Nathalie Broutet began her presentation by underlining the wide gap that often exists between the development of innovative approaches in health (vaccines, medicines, and care strategies) and their availability at the community level. This imbalance is especially pronounced in low resource settings.

Indeed, women from middle- and high- income countries live longer and enjoy better health, while the rate of premature deaths (those recorded for people under 60) from all causes is disproportionately higher in low-income countries. Moreover, the epidemiological transition observed in many countries in recent decades has entailed a reduction in mortality from communicable, maternal and child, and nutrition-related diseases, accompanied by an increase in deaths from noncommunicable diseases (NCD).

In this context of a higher burden of disease associated with NCDs, cancer poses a growing threat to public health, especially in middle- and low-income countries. In response to this epidemiological situation, WHO proposes a comprehensive approach to cancer control with interventions ranging from prevention and early detection to proper diagnosis and treatment, including access to palliative care. This comprehensive approach is cost-effective, leads to improved program efficiency, and yields social benefits.

Cervical cancer is one of the more preventable types of cancer. This is due in part to its long natural history, which provides many opportunities for intervention during the woman's life cycle, and to the availability of effective prevention tools. The introduction of HPV vaccines and screening and treatment of precancerous lesions are cost-effective interventions that are already being used successfully in high resource countries, but are also appropriate for large-scale use in middle- or low- income settings. That notwithstanding, mortality from cervical cancer in women ages 25 to 64 is as much as 6 times higher in developing countries than in developed countries, while these differences are not nearly as pronounced for other types such as breast or lung cancer (Figure 1).

In an effort to close this gap, the Alliance for Cancer Control and Prevention (ACCP) has been promoting research on alternative cervical cancer prevention approaches in developing countries since 2000. Among other objectives, it has been working to reduce the number of visits in order to improve compliance with treatment and minimize losses to follow-up care. "Screen and treat" approaches, therefore, have emerged as a new paradigm for screening and treating precancerous lesions in a single visit, or in two visits if the strategy of choice is to screen, and subsequently "see (colposcopy) and treat" without waiting for histological confirmation.

Dr. Broutet went on to present support manuals and tools that WHO has developed for cervical cancer prevention and control, including the 6 modules "*Cancer Control Series*," the manual for managers "*Planning and Implementing Cervical Cancer Prevention and Control Programs*" developed in collaboration with the ACCP, and "*Comprehensive Cervical Cancer Control: A Guide to Essential Practice*." This guide has been translated into the WHO's 6 official languages and adapted by numerous countries. It contains the following key messages:

- Health education should be an integral part of a comprehensive approach.
- Cytology is recommended for large-scale screening programs, if sufficient resources exist. Cytology screening should be performed every 3 years in women ages 25-45, and every 5 years in women over 50; women under the age of 25 should not be screened; screening should cease after the age of 65, provided the last two tests were negative; and finally, if a woman can be screened only once in her lifetime, do it between the ages of 35 -45 years.

- Visual screening methods, followed by cryotherapy treatment, are recommended for use only in pilot projects or other closely monitored settings.
- The HPV DNA test can be used in conjunction with cytology or other screening tests, where sufficient resources exist.
- Women should be offered the same screening and treatment options irrespective of their HIV status.

Since these recommendations were published in 2006, however, new scientific evidence has emerged on cervical cancer prevention strategies, including visual inspection techniques, that necessitate a review of the guide and its recommendations. A review process was initiated in 2010 for the purpose of incorporating the following key points:

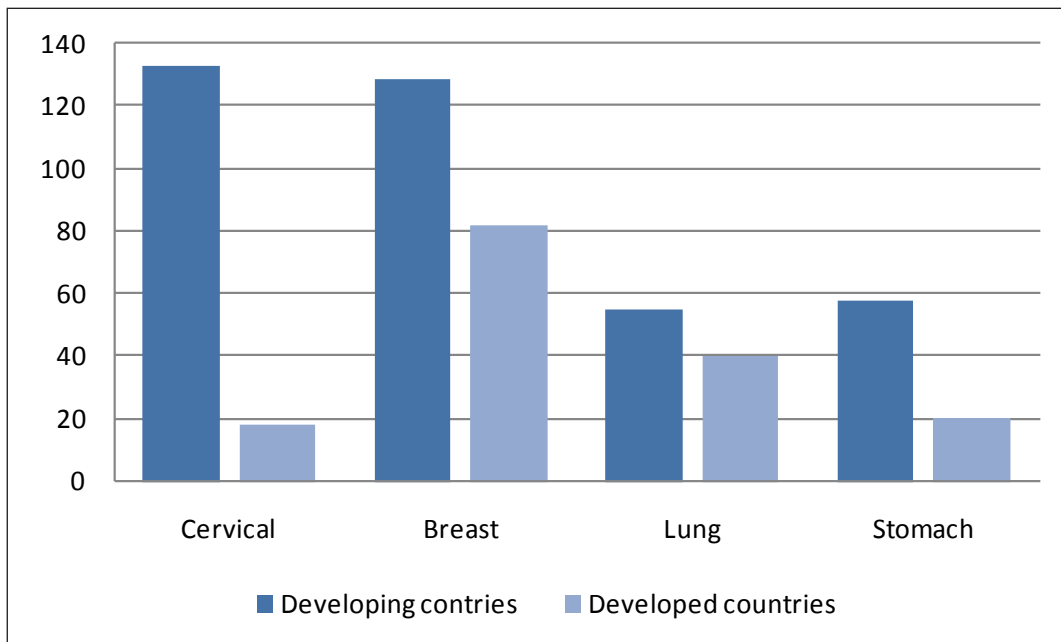
- WHO's position on the introduction of HPV vaccines published in 2009.
- New evidence on alternative screening tests such as VIA and the HPV DNA test, which help surmount

some of the structural barriers while maintaining adequate sensitivity and specificity.

- Proposed new algorithms for cervical cancer screening based on HPV as primary screening, followed by triage with cytology or triage using visual inspection methods, and treatment of precancerous lesions.
- Recommendations for future screening of the cohorts of vaccinated girls.
- Recommendations for cervical cancer screening in HIV-positive women.

Finally, once the guide has been fully updated, the great challenge will be to translate the evidence into recommendations and actions that will enable the Ministries of Health to strengthen their programs with evidence-based interventions, selecting the most appropriate screening tests and algorithms for each context and even combining various approaches within the same country.

Figure 1. Comparison with other types of cancer: number of deaths in women ages 25 to 64.



Questions and answers

The following points were raised during the question and answer period after the presentations by Dr. Macarena Pérez Castells and Dr. Nathalie Broutet:

- » There are difficulties associated with the quality, availability and maintenance of equipment for cryotherapy treatment. Significant variations in prices between countries could become a barrier to access. In addition, it is not easy to obtain adequate technical servicing, and the equipment sometimes has to be sent abroad for maintenance. WHO has developed a guide on this subject, which includes a set of minimum technical specifications for cryotherapy equipment. It is scheduled for publication in late 2011.
- » As far as “screen and treat,” much value was placed on the single-visit approach as a way of minimizing losses to follow-up care. Nonetheless, many countries are experiencing programmatic difficulties in ensuring the availability of cryotherapy equipment in all settings where VIA is being performed. In this regard, the WHO pilot carried out in six African countries demonstrated the efficiency of concentrating resources for cryotherapy treatment in strategically located referral centers at the secondary care level.
- » The CareHPV test being developed for HPV screening tailored to low resource settings was discussed. Its infrastructure and personnel training requirements are minimal, it is affordable, and the results are ready in a couple of hours, which means it can be used in conjunction with the “screen and treat” approach. This test has yet to be placed on the market and is only being used in the context of pilot projects.
- » WHO has developed a guide to cryotherapy treatment that will be published in the near future. It recommends that the technique be performed by health personnel of any level, including nursing staff and midwives, as long as they have sufficient training.

Experiences from the countries of the region

Successful experiences and lessons learned relating to the introduction of VIA and the “screen and treat” approach in three countries of the region were presented next. The case studies demonstrated the feasibility of incorporating these prevention approaches into cervical cancer programs in the region, and facilitated the identification of opportunities for inter-country collaboration.



Experiences with the use of VIA and cryotherapy in Guatemala. Dr. Erick Álvarez, Manager, Cervical Cancer Component, Ministry of Public Health and Social Welfare, Guatemala.

Dr. Erick Álvarez began his presentation with a brief description of Guatemala's sociodemographic characteristics. The country has a population of 14 million, of which 51% are women and 54% live in rural areas. A total of 5 million women ages 25 or older are at risk of developing cervical cancer.

Guatemala faces the challenge of having 23 different cultural groups and languages. Poverty and inequity are governmental priorities and its goals in this regard are clearly set out in the national development plan and the national health program. With respect to the epidemiological situation of cervical cancer, according to Globocan estimates, 717 deaths of women aged 25 or over were recorded in 2008. According to death records, the mortality rate for cervical cancer was 11 per 100,000 women at the national level in 2007, with significant differences between departments ranging from under 5 per 100,000 women in Guatemala City to over 20 per 100,000 women in Escuintla and Retalhuleu. It is important, however, to take into account a significant degree of under-reporting.

Guatemala has had a cytology-based National Plan for cervical cancer in place since 1998. VIA was introduced beginning in 2002 in the form of pilots, the two most significant of which were conducted in the departments of Escuintla and Zacapa (2004-2005). A situation analysis on institutional capacity to respond to cervical cancer was conducted from 2004 to 2008, and a program to strengthen pathology laboratories was launched, along with a national provider training program. Data on health services activity point to poor screening coverage (8-10%) from 2005 to 2007. This percentage increased slightly in 2008 concurrently with an increase in the use of VIA. On 10 March 2009, a national appeal

for screening went out, with the participation of all of the stakeholders involved in cervical cancer prevention and control, and resulted in 45% coverage using VIA and cytology. The public health services network provided 18% of that coverage.

The main problems identified throughout this process included poor coverage in disadvantaged rural and urban areas; a high number of false negative results with cytology testing; poor quality of colposcopic evaluation; inaccuracies in histopathological diagnosis; and lack of follow-up on patients with abnormal results. In addition, improper maintenance of the country's installed capacity was detected at the levels of diagnosis (ongoing supervision and training of service providers, maintenance of equipment and cytology and pathology laboratories) and treatment of precancerous lesions (colposcopy, cryotherapy, LEEP). The following actions were proposed to address these limitations:

- Provider training with support from academia and other organizations;
- Introduction of cryotherapy in Area Administrations, colposcopy at the secondary care level, and early detection clinics at the secondary and tertiary care levels;
- Preparation of supporting documentation;
- Standards-setting for monitoring, evaluation, and

supervision;

- Strengthening of the information system and statistics on cancer in women.

All of this work culminated in the development of a National Plan of Action for 2009-2012, which incorporated the proposal to use cytology and VIA screening as well as the challenge of improving coverage, especially in rural and impoverished areas. In order to ensure that the desired impact would be achieved, the plan was based on the premise that screening should be tied to treatment. With this objective in mind, the plan promotes a “screen and treat” approach by certified personnel. The following progress has been achieved since the plan was put into practice:

- Standardized guidelines, guides, and protocols for early detection of cervical cancer and public education materials in the form of flipcharts were distributed beginning in May 2010. All health service areas currently have these materials.
- Every department in the country has had at least one set of colposcopy equipment and one set of surgical equipment since late 2010.
- The cytology laboratories of San Marcos, Petén, and Baja Verapaz have been strengthened.
- Screening coverage by public health services hovered around 15% in 2009, and VIA accounted for 65% of this activity, with an 8% positivity rate. The introduction of the “screen and treat” approach in 2008 led to a progressive increase in cryotherapy treatments from 45 in 2008 to 601 in 2010, and 365 so far this year.
- Certified training has been carried out in the 29 health areas, with a primary focus on reproductive health teams and the physicians and nursing staff of hospitals, health centers, and health posts. In all, 950 professionals have been trained in VIA and the “screen and treat” approach.
- The training courses include contents on performing cytology screening and general concepts on other options for the primary and secondary prevention

of cervical cancer. Academic support for these courses has been provided by the University of San Carlos in Guatemala City, Mariano Gálvez University, the College of Physicians and Surgeons, and the Obstetrics and Gynecology Association of Guatemala.

- Basic and intermediate colposcopy training has been offered in 16 health areas. A total of 44 colposcopists are available. A total of 2,280 colposcopies were recorded in the official information system in 2010. It is important to point out that there is a high degree of under-reporting.
- Supervision, monitoring, and evaluation are ongoing based on 29 standards that were adopted by consensus in 2009.

In closing, Dr. Álvarez pointed to some of the challenges facing the program in the short and medium terms. The most imminent is to strengthen the information and statistics system to improve follow-up of positive women. It is also necessary to continue supervision, monitoring, and evaluation in the 29 health areas and at the three levels of care. Finally, the lack of availability of cryotherapy in the health areas continues to hamper the ability to offer the “screen and treat” approach.



Cervical cancer in Bolivia. Dr. Lizeth Soraide, Manager, Sexual and Reproductive Health Program, Ministry of Health and Sports, Bolivia.

Dr. Lizeth Soraide began her presentation by offering some background data on the country. Bolivia has a population of 10 million with a growth rate 2.3%, 62% of the population lives in urban areas, and life expectancy is 62 years. The country's dispersed rural population and complex geography are two of its major challenges.

The current government has made health a priority and developed a national intercultural family and community health policy that promotes social participation and a comprehensive and intersectoral approach.

Cervical cancer is a major public health problem in Bolivia. According to estimates, approximately 4.5 women die from this disease every day and some 2 million women are at risk (25-64 years). Although the number of cytology screenings performed has risen over the past 10 years, from 176,612 in 2001 to over 324,000 in 2009, coverage is still insufficient. In addition, there are serious problems in providing the proper monitoring, diagnosis, and treatment of women with abnormal results.

In response to this situation, a legal framework to support cervical cancer prevention and control activities was developed in recent years. In December 2005, a ministerial resolution was adopted to expand the universal health insurance coverage, SUMI, free of charge throughout the national territory, including cervical cancer screening and treatment of precancerous lesions. Subsequently, a July 2009 ministerial resolution adopted "*National Standards, Protocols, and Procedures for the Detection and Control of Cervical Cancer*", and the current "*National Plan for the Prevention, Control, and Monitoring of Cervical Cancer 2009-2015*", which includes VIA as a screening option.

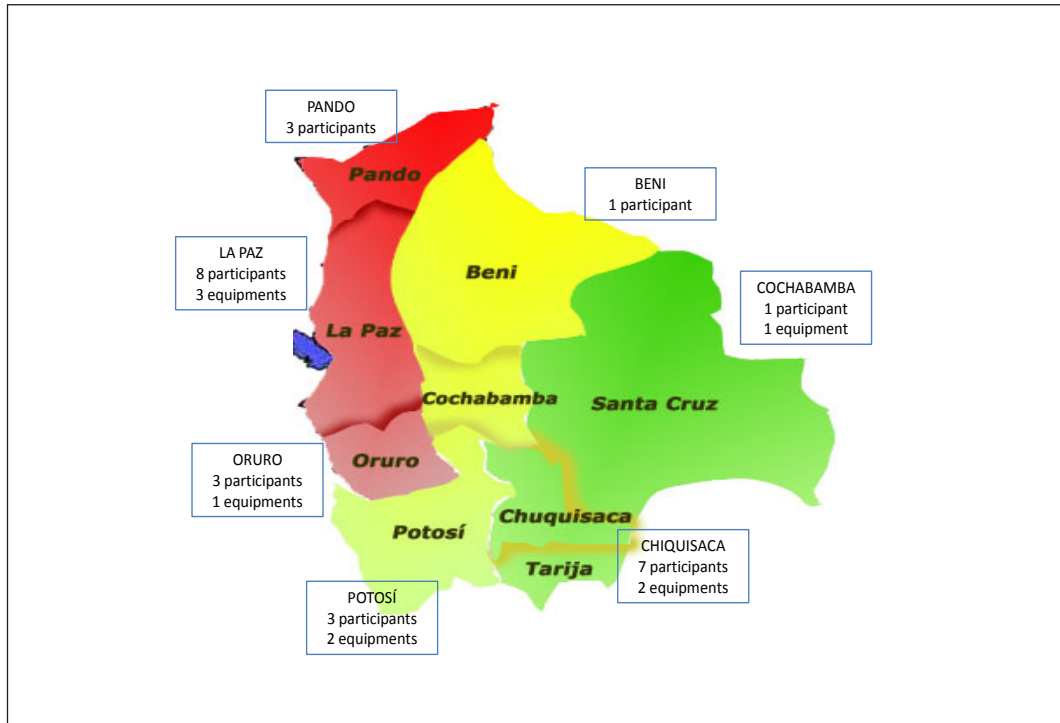
The following are some of Bolivia's main achievements in the prevention and treatment of cervical cancer:

- The creation of committees composed of a cytologist, a pathologist, a colposcopist, and a social worker to review cases.
- The development of action plans with the 9 departments to ensure patient control and follow-up.
- The introduction of VIA screening and the "screen and treat" approach as pilots in rural areas with limited access to cytology.

Dr. Soraide went on to describe how provider training in VIA and cryotherapy has been organized. Twelve gynecologists, one oncologist, 9 general practitioners, and 6 nurses from the departments of La Paz, Oruro, Chuquisaca, Potosí, and Pando have been trained since 2010. Professionals from the Institute of Neoplastic Diseases (INEN) of Peru gave the 5-day workshops, which included both theoretical and practical sessions. As follow-up, the Ministry of Health proposed that each trained provider sign a statement outlining the actions that he or she pledged to carry out in the short term and the needs identified in order to do so. Procurement of cryotherapy equipment was identified as a priority in order for the trained professionals to put the skills acquired during the course into practice. The map in *Figure 2* shows where the trained providers are located and the availability of cryotherapy equipment in each of their departments.

The next step will be to conduct train the trainers courses in order to develop the capacity required to institutionalize these techniques in Bolivia.

Figure 2. Site map of providers trained in VIA and the “screen and treat” approach and availability of cryotherapy equipment by department in Bolivia.



VIA and cryotherapy, the experience in Guyana. Dr. Narine Singh, Director of Regional Health Services, Ministry of Health, Guyana.

Dr. Narine Singh began his presentation by offering the audience some sociodemographic data on the country. Located along the northern coast of South America, Guyana spans 214,970 km² and has a population of 748,480; 85% of its inhabitants are concentrated in coastal areas, while the rest live inland and are extremely dispersed geographically.

Cervical cancer is a first-order public health problem and is the most common form of cancer in women of all ages and in the 15-44 age group. According to current estimates, 168 new cases and 71 deaths occur each year from this cause. Incidence and mortality rates are 60% higher in the country relative to Latin America and other Caribbean countries. In light of this epidemiological situation, the Ministry of Health has made cervical cancer a priority.

Although cytology screening has been available in Guyana for over 20 years, it has been concentrated

mainly in the capital, Georgetown, and has not had the anticipated impact due to the scheduling difficulties posed by a test that requires several visits. For this reason, in October 2008, the Ministry of Health approved the “Guyana National Policy on Cervical Cancer Prevention,” which proposes using VIA and the “screen and treat” approach as the primary method for screening and treatment of precancerous lesions in the country. This decision led to the establishment of the *Guyana Cervical Cancer Prevention and Treatment Program (GCCPTP)* funded by USAID through JHPIEGO.

The program focused initially on HIV-positive women and was later expanded to cover all women at risk. As part of this process, the *National Oversight Committee* (NOC) integrated by representatives of all of the stakeholder groups involved in the program was established in 2008 for the purpose of guiding and supporting its development and implementation.

Since the launch of prevention services in 2009, 14,500 women have been screened, with 2,058 positive results (14.2%), 85% of which were eligible for cryotherapy treatment. A cure rate of 91% was recorded for this treatment based on follow-up at one year. During this period, 16 points of care have been set up in 8 of the country's 10 administrative regions and are located in regional hospitals (8), district hospitals (5), private hospitals (1), and health centers (2). All of these centers offer VIA and cryotherapy services and two of them offer LEEP treatment. In addition, the *Georgetown Public Hospital Corporation* (GPHC) has been designated as a center of excellence for cervical cancer prevention and treatment.

One of the GCCPTP's main objectives is to train a sufficient number of providers. Since its inception, 53 professionals have been trained in VIA and cryotherapy, through 3 courses. The staff categories trained include gynecologists, general practitioners, nursing staff and "medex." An additional train the trainers course was given to 6 physicians and 2 "medex" in January 2010.

The whole process has been accompanied by the implementation of a quality control system known as "Standards-Based Management and Recognition" (SBM-R), which ensures the ongoing, consistent provision of "best practices" that adhere to established standards. The SBM-R is based on an oversight tool developed by JHPIEGO to identify performance deficits, determine their cause, and measure progress. A standardized form has been designed to collect the information used by the program at the national level.

Some of the main challenges identified in program implementation were then described, especially:

- Migration of trained professionals or priority accorded other responsibilities at the expense of

screening services.

- Problems with the gas supply for cryotherapy treatment and the lack of material resources such as speculums or cryotherapy tips.
- Lack of a proper maintenance system for cryotherapy equipment.
- In some centers, a lack of managerial support for trained professionals to provide these services.
- Losses to follow-up care of 51% of VIA positive women with cryotherapy eligible lesions who decide to postpone treatment and never return.

Dr. Singh concluded his presentation by emphasizing that increased coverage has more potential to have an impact on the burden of disease in Guyana than increased frequency of screening in a small subset of the at-risk population. As it evolves, and depending on the resources available, the program will focus on expanding the age range of the target population and increasing the recommended screening frequency.

Questions and answers

Following the roundtable presentations, there was an opportunity to share lessons learned and the experiences of other countries. The main discussion points are presented below:

- » Inclusion in the country's regulatory system is a critical factor in the successful introduction of VIA and the "screen and treat" approach. This was true in Guatemala, where the Ministry of Health spearheaded the drafting and dissemination of regulations on cervical cancer prevention and control in a participatory process involving civil society.
- » Involving academia in VIA and cryotherapy training offers considerable added value. In Guatemala, for example, university professors have been trained and there are proposals for training physicians as they begin their supervised professional gynecology practice and medical students carrying out their 6 month internship.
- » The relevance of using mobile units for cervical cancer screening and treatment was discussed. It was generally agreed that, if they are to be cost-effective and sustainable, these units would have to be linked to health systems and form part of integrated programs (for example, the use of mobile units in the framework of a broader sexual and reproductive health program). Guyana shared its experience with mobile units that provide comprehensive services in remote inland areas, including buccodental health care, pediatric care, VIA, and other services, which are provided by general practitioners. In this way, costs are shared and the impact is maximized.
- » The importance of systematizing all the successful experiences from the countries as a tool to facilitate South-South cooperation was stressed. This systematization process would also elicit the evidence necessary to preserve projects, for example, during changeovers in administrations or decision-making structures.

Training

VIA is shown to be an effective screening test with enormous advantages for low resource countries, due to its simplicity, low cost, and immediate results. Because it is a subjective, provider dependent test, however, it must be accompanied by an appropriate system for training and supervision. The roundtable summarized below discussed some of the general issues and challenges associated with training and shared the successful experiences of countries in the region and partner organizations.



Overview and challenges of VIA and cryotherapy training. Dr. José Jerónimo, Reproductive Health, PATH.

Dr. Jose Jerónimo gave an introductory presentation with an overview of VIA and cryotherapy training and the challenges. He began by underscoring that the number of deaths caused by cervical cancer far surpasses those caused by maternal mortality in every country of Central and South America, with the exception of Haiti (Figure 3).

It is important to learn from the successes achieved in the control of maternal mortality in recent decades and apply those lessons to the approach to cervical cancer. Two critical aspects in this regard were the inclusion of maternal mortality in the millennium goals and the large amount of funding allocated for its control.

Training in VIA and cryotherapy should be approached as a “package” that includes clinical skills as well as

contents on counseling and community education, monitoring, and follow-up. In conclusion, Dr. Jerónimo highlighted some of the most important challenges for training:

- *Trainee characteristics:* Any health care provider can be trained in VIA, although an issue to consider is whether the same training should be offered to all professionals regardless of their prior experience.

Figure 3. Disease burden and investment: cervical cancer and pregnancy-related complications (maternal mortality).

	PREGNANCY-RELATED COMPLICATIONS (MATERNAL MORTALITY)	CERVICAL CANCER
ANNUAL DEATHS	358.000 women DIE ANNUALLY	270.000 women DIE ANNUALLY
MORTALITY TRENDS	34% DECREASE IN MORTALITY 1990-2008	45% INCREASE IN MORTALITY 1990-2008
PRIORITAZION IN MILLENIUM DEVELOPMENT GOAL (MDG)?	YES (MDG-5: IMPROVING MATERNAL HEALTH FROM PREGNANCY-RELATED COMPLICATIONS)	NO
CURRENT ANNUAL INVESTMENTS IN DEVELOPING WORLD	USD 12 billion	??? EXACT FIGURE UNKNOWN

Source: Cervical Cancer Action. Progress in Cervical Cancer Prevention: The CCA Report Card. April 2011. Available at: <http://www.cervicalcanceraction.org/pubs/pubs.php>

The challenge is how much time they will be able to devote to VIA after the training is complete, in light of all of their other responsibilities. An important consideration as far as cryotherapy is concerned is that the professional characteristics of the trainee will depend on the regulations in each country. The regulations in some countries do not allow nursing staff and midwives to administer cryotherapy even though they are accustomed to performing much more complex procedures. In these cases, training will only be targeted toward physicians. Another important issue is the strategic distribution of cryotherapy equipment to make sure resources are used as efficiently as possible and that providers accumulate enough cases to maintain an adequate performance level.

- *Duration of training:* This varies among institutions, although it generally lasts from 1 to 2 weeks.

Experience has shown, however, that it is hard to take a provider away from his or her job for more than 4-5 days. It therefore makes sense to evaluate the possibility of offering on-line training in advance of the on-site course to establish a more feasible time frame.

- *Validation of training materials:* plenty of validated materials are available in the region and it is therefore important to consolidate these resources and promote synergies between institutions.
- *Certification of trainers and trainees:* ideally based on region-wide standardized certification and validation.
- *Follow-up and monitoring:* Individual supervision of trainees is complicated and costly in terms of time and resources. It is therefore advisable to assess the use of virtual tools for this.



***Training approaches and methodologies: experiences in Guatemala.
Dr. Erick Álvarez, Manager, Cervical Cancer Component, Ministry of Public Health and Social Welfare, Guatemala.***

Dr. Álvarez began his presentation by describing a study on cervical cancer expertise at the different care levels that found significant shortcomings attributable to the lack of continuing education.

The goal of clinical training in Guatemala is to help health service providers acquire the knowledge, abilities, and attitudes they need to provide high-quality clinical care. This training is premised on adult education principles, uses behavior modeling, is competency-based, and incorporates humanistic methods.

Clinical skills courses are designed with the following goals in mind:

- To train service providers for competency in cytology, VIA techniques, and cryotherapy treatment.
- To develop counseling skills for orienting women about screening and treatment.
- To manage side effects or other problems that might arise in relation to treatment.

Dr. Álvarez presented the training materials that have been developed, such as pocket manuals, images, practical guides to cytology and VIA, and the trainer's manual. A training curriculum for basic and advanced colposcopy has also been developed.

A total of 400 providers in 21 districts were trained in 2010, and 29 of these professionals have been certified to replicate the training. Finally, Dr. Álvarez presented the results of the pilot project underway in San Marcos, where screening coverage has tripled since 2007. This department has 400 trained health care providers, 4 of which are certified. In terms of facilities and equipment, there are 4 colposcopes, 3 cryocautery devices, one set of electrosurgical equipment, as well as a VIA training center located in San Pedro Sacatepéquez.



Training methodology. Putting classroom skills into practice. Dr. Carlos Santos Ortiz. INEN, Lima, Peru.

Dr. Santos began his presentation by displaying the pyramidal care system that should be part of any cervical cancer prevention program, regardless of the screening test used. At its base are health promotion activities aimed at the target population in the community, which are necessary to achieve adequate coverage.

Detection and treatment through VIA and cryotherapy occupy the next level and must have a high resolution capacity of at least 80% of cases. The management of cervical intraepithelial neoplasm cases follows and, lastly, invasive cancer management. This prevention pyramid informs the composition of the educational pyramid (*Figure 4*), which will have a broad base of health promoters, followed by a similarly broad level of VIA and cryotherapy providers, and a smaller number of gynecologists trained in advanced diagnostic and treatment methods. The educational pyramid must have trainers available and finally, each country should have a group of “master instructors” available as trainers and leaders in cervical cancer prevention.

Based on the pyramid described above, it would seem reasonable to focus training programs on those professionals working in primary health care and in daily contact with the target population, which can vary from country to country. Peru’s health posts, for example, are usually staffed by general practitioners, midwives, and nursing personnel. It is also useful to train gynecologists, however, and enlist them as allies and leaders in the use of these techniques.

Dr. Santos went on to describe the 3 components of the training:

- A basic course called “*Clinical skills in visual inspection and cryotherapy*” that lasts 5 or 6 days and is offered parallel to the 3-day promoters course;
- A training the trainers course;
- A training course for “master instructors”, to develop their capacity to produce new educational materials or validate existing ones.

As far as the training site, each country should have

one or more centers of excellence staffed by experts, although training can be conducted in the setting where the at risk population is found, or a combination of both, since participants in the clinical skills course must have the chance to see at least one or two cases of invasive cancer.

The courses should be based on adult education principles such as behavior modeling, and competency-based and humanistic methods. Knowledge acquisition, as well as performance, is evaluated using the learning guides and checklists.

The *Latin American School for Cervical Cancer* located at the INEN in Peru was established as a regional training center in 2005 pursuant to an agreement with the International Agency for Research on Cancer (IARC). In recent years it has received support from PATH and JHPIEGO for the development of educational materials. Since its founding, the School has organized courses in Venezuela, Bolivia, Honduras, and Nicaragua, in addition to Peru.

In the second part of his presentation, Dr. Santos discussed ways in which to put the classroom skills acquired into practice. Based on the School’s experience, between 60% and 90% of trained providers, depending on the location, actually apply the expertise acquired once the training is completed. Some of the main obstacles that providers confront when they return to their home base are:

- Lack of equipment and inputs;
- Competing activities;
- Staff turnover or migration;
- Not included in the goals the providers must meet;
- Little support from their superiors;

- In general, physicians exhibit less enthusiasm after the training relative to other categories of professionals.

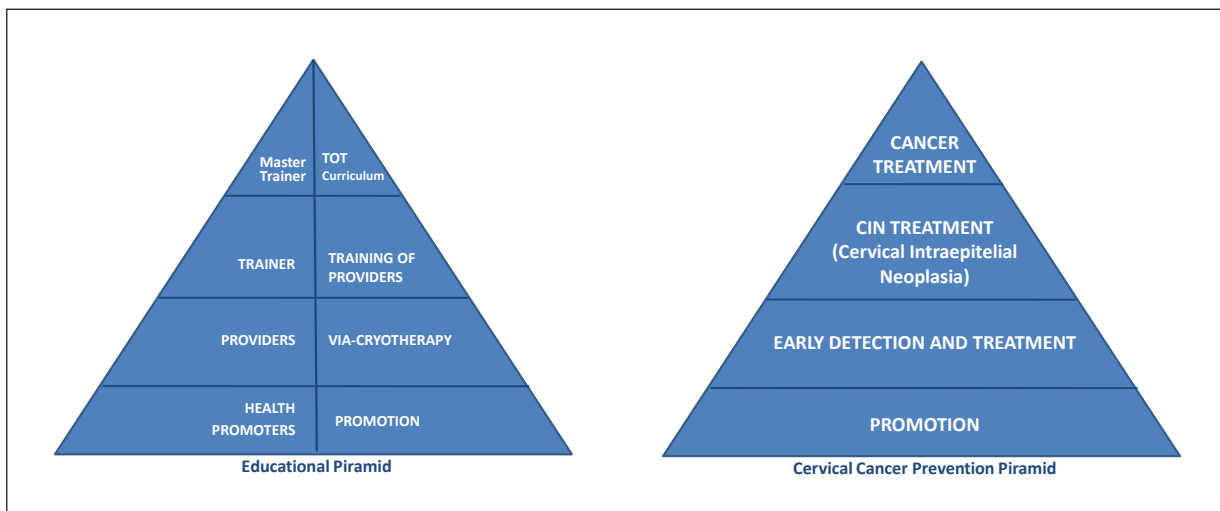
Dr. Santos proposed the following solutions to these obstacles:

- Include a group exercise at the end of the clinical skills course on how to implement VIA and cryotherapy services when they return to their health facilities. Trainees are given a template (*Annex 5*) with 3 main sections: infrastructure and inputs, community oriented educational and health promotion activities, and operational aspects of VIA and cryotherapy services. Participants are asked to

identify necessary resources and support, lead staff, and time frames for each section.

- Provide the participants with a list of the furniture, inputs, and equipment necessary to set up an examining room for VIA screening and cryotherapy (*Annex 6*).
- Train teams in each center to ensure continuity of services in case of staff changes.
- Carry out support and follow-up visits based on a pre-established schedule (*Annex 7*).
- Enter into agreements with decision-makers to ensure the sustainability of the services.

Figure 4. Cervical cancer prevention and service-provider education pyramids.





Competency-based approach to VIA and cryotherapy training. Dr. Veronica Reiss, Advisor, Sexual and Reproductive Health, Jhpiego.

Dr. Reiss began her presentation by reviewing the pyramid of human resources required for cervical cancer prevention and treatment from the community to the referral level. She underscored the need for professionals trained in program management and services supervision.

The critical training areas based on this pyramid are (Figure 5):

- Counseling;
- Screening (VIA, cytology, HPV DNA test);
- Treatment of precancerous lesions (cryotherapy, LEEP, conization);
- Invasive cancers management;
- Equipment maintenance;
- Management, supervision, monitoring and evaluation skills.

The goal of clinical training is to acquire the knowledge, attitudes and skills necessary for performing a specific activity or procedure, on the assumption that it will be applied immediately. It is also based on the premise that all training participants can learn and master the knowledge, attitudes and skills, if they are given enough time and the right methods are used. That said, the training facilitator should take into account that different paces of learning may be found within a single group. Competency-based training is based on the following 4 pillars:

- It consists of learning by doing: according to the evidence on post-training memorization, we recall 10% of what we hear, 30% of what we see, 80% of what we say, and up to 90% of what we do;
- It focuses on the participant's performance;
- The clinical trainer acts as a facilitator; and
- It involves an objective evaluation of overall performance: skills, as well as knowledge acquisition, are measured.

As observed in previous presentations, effective clinical training is competency-centered, based on adult education principles, uses behavior modeling,

and includes humanistic methods. Adult education has certain differential characteristics, since adults have prior experiences that must be taken into consideration. Learning is therefore more effective when the participant is aware of what he or she needs to learn, when it is based on his or her existing knowledge, when the training techniques and methods are varied, and when it is conducted in the most real-life context possible. Clinical training uses behavior modeling, since the fastest and most effective type of learning is to observe how someone else carries out the activity or implements a particular skill set. Finally, the use of humanistic training techniques has been mentioned several times. This means that anatomical models and role playing are used to recreate clinical situations, so that the participant can learn before providing care to real patients. This reduces training time while minimizing the risk to patients.

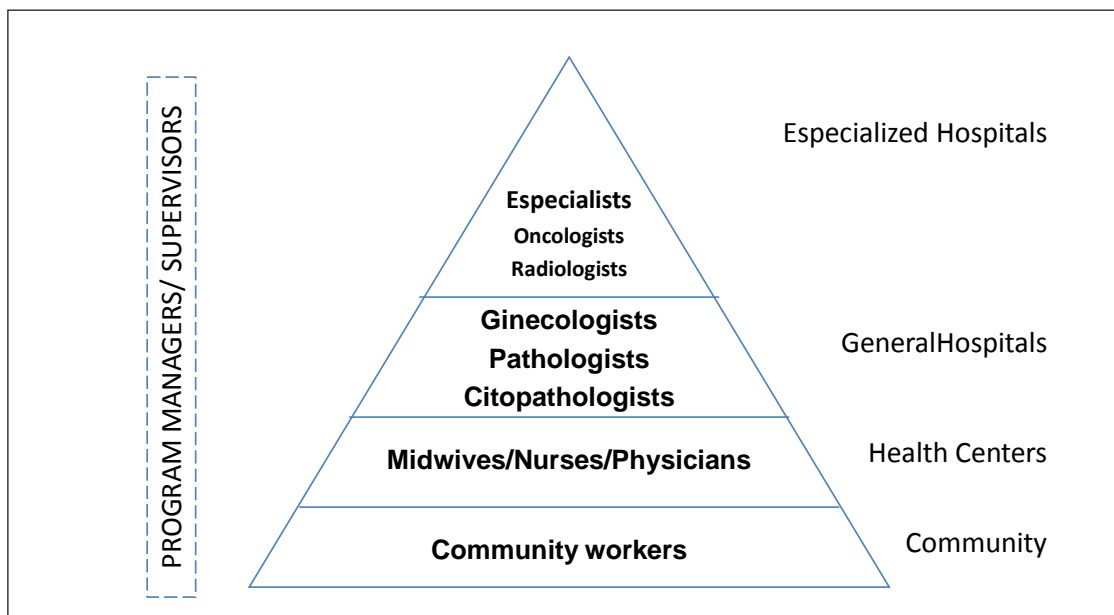
Dr. Reiss then presented a sample schedule for a VIA course (Annex 8) and noted the importance of having an anatomical model available to each trainer and a maximum of 4-5 participants.

She concluded with the following key messages:

1. The training should be preceded by a planning exercise and assessment of existing needs, available resources, and training partners.
2. It is important to strengthen in-country capacity by establishing a team of skilled trainers and a standardized training package. Jhpiego has developed a package with the following components:
 - » Reference manual with technical contents;
 - » Trainer and participants manuals;
 - » Performance evaluation tools;
 - » Atlas of images of the cervix;

- » Interactive CD-ROM with images;
 - » Work aids;
 - » Documentation and reporting tools.
3. The training process should begin with clinical providers, a subset of which will achieve a high performance level and can be trained as trainers.
4. A plan for scaling up the training should be designed taking into account demand generation, training resources, quality assurance, and logistical, equipment, and supply issues.

Figure 5. Essential human resources for cervical cancer prevention.



Discussion: Lessons learned and issues of interest related to training.

The following points were raised during the discussion that followed the roundtable presentations:

- » One of the main post-training challenges is how to go about supervising providers to ensure the quality of the services provided. In-person supervision is expensive and slows down provider training and services expansion. The training process has proceeded very quickly in Guatemala in recent years. One of the factors that contributed to this progress was that hospital-based gynecologists, the sexual and reproductive health facilitators for each health area, were the first to receive training in VIA and cryotherapy. These professionals have taken on quality control responsibilities in their respective health areas by supervising the work of newly trained providers.

- » The VIA and cryotherapy courses offered by the INEN include a daily student evaluation of the contents, as well as a survey at the end of the training. In those surveys, the trainees frequently say that they would have appreciated the opportunity for additional cryotherapy practice. For this reason, at least 60% of the women selected for screening during the course should be patients with a previous abnormal result, in order to increase the probability of identifying lesions requiring cryotherapy treatment.
- » One of the questions for the roundtable panelists had to do with validation methods for the trained provider. Dr. Reiss of Jhpiego explained that the competency-based approach tries to take into account different paces of learning. A questionnaire is filled out at the beginning and knowledge acquisition is measured again midway through the course. This assessment is not included at the end, in order to allow a catch up period for students who did not pass. A checklist is also used to assess skills and attitudes in practicums using models and patients. If the required knowledge, skills and attitudes have been acquired by the end of the course, the student receives the respective certification. If not, post-course follow-up and reinforcement must be offered until the required levels are achieved. Dr. Santos of the INEN identified 3 different stages: a) first, acquisition of skills to perform VIA and cryotherapy; b) next, the competency phase, in which the provider has the skills but still lacks experience; and finally c) expertise, which is achieved after months of practice. The training is aimed at taking the student to the level of competency. The student may then seek certification after acquiring a degree of expertise in the skills.
- » The enormous value of integrating VIA and cryotherapy training into undergraduate medical and nursing education was underscored. In this sense, it is important to train university professors and work with scientific associations. An interesting strategy might be to schedule training sessions immediately before scientific association conferences.
- » The approved protocol for the “screen and treat” approach in Suriname includes taking a biopsy prior to administering cryotherapy, which would suggest the relevance of including biopsy procedures in the curriculum of VIA and cryotherapy training courses. The roundtable panelists were of the view that it is not necessary to take a biopsy prior to treatment, since the “screen and treat” approach should be as resolute as possible. From the public health standpoint, one must assume a certain calculated risk inherent to any screening test, since none of them are infallible.
- » In light of the future widespread introduction of HPV DNA detection as the primary screening test, the current investment in VIA and cryotherapy will be extremely valuable inasmuch as it can be used as a triage procedure to identify precancerous lesions in HPV positive women. On this point, Dr. Jerónimo mentioned the progress and positive results that are being achieved with CareHPV, an HPV DNA test especially designed for low resource settings, with minimal infrastructure requirements and the potential to produce results in just a few hours.
- » The importance of conducting simple visual acuity testing on students in the training courses was mentioned, as adequate vision is required in order to correctly perform VIA.

Health promotion and strategies to attract women in the high-risk age group



Mobilizing the community through coffee cooperatives in coffee-growing communities: surmounting barriers in access to cervical cancer prevention programs.

Dr. August Burns, Executive Director of Grounds for Health.

Dr. Burns began her presentation by explaining that Grounds for Health has forged a partnership with the coffee cooperatives to work with local health systems on the development of an innovative and effective model for cervical cancer prevention in urban and rural, accessible or remote communities (*Figure 6*). Community mobilization is critical to the success of cervical cancer prevention programs. A high-quality screening test might be available, but it will not have the desired impact if the women do not seek services.

Grounds for Health supports the work of communities, which have genuine ownership of the program. Once women's health, and cervical cancer in particular, has been established as a priority, the problem of access to services is dealt with, potential gender conflicts are addressed head on, and the "social permission" of the community is obtained. In this way, women take charge of managing their own health with resources provided by the community, and this ensures the sustainability of the program.

The cooperative's role includes breaking down the barriers to women's access to preventive services through the following key actions:

- Educate the community on the importance of prevention and early detection and treatment of cervical cancer.
- Facilitate transportation of women to services
- Ensure follow-up of women requiring treatment.

The main barriers that keep women from accessing services include lack of time, lack of support to cover the rest of her responsibilities, lack of money or

transportation, or lack of permission from the husband. All of these obstacles are easily surmountable through a community effort.

Dr. Burns went on to mention the main lessons learned in the work that Grounds for Health has carried out over the past 15 years in Nicaragua, Mexico, and Tanzania:

- Without active community participation, only women with better access to services take advantage from prevention.
- Local civil society organizations such as the coffee cooperatives have the capacity and infrastructure necessary to surmount the barriers to access to these services.
- Sustainable implementation of VIA and cryotherapy is possible in remote, very resource poor communities.
- The community can help ensure the effectiveness of the inputs supply chain.
- A designated screening day is a highly effective service delivery model. Going together helps women overcome their fear of having the test done.
- The collaboration between the public system and private organizations helps to strengthen and enhance the sustainability of the program.
- Efforts must be targeted to high risk women (ages 30-50) and the community is best suited to identify these women and direct them to the services.
- Single-visit detection and treatment of precancerous lesions is necessary to ensure treatment of women living in remote areas.
- It is important to ensure that VIA providers have the necessary visual acuity.

- Not all vinegars on the market have the proper concentration to perform the test.
- Providers must be supervised and attend periodic refresher courses.

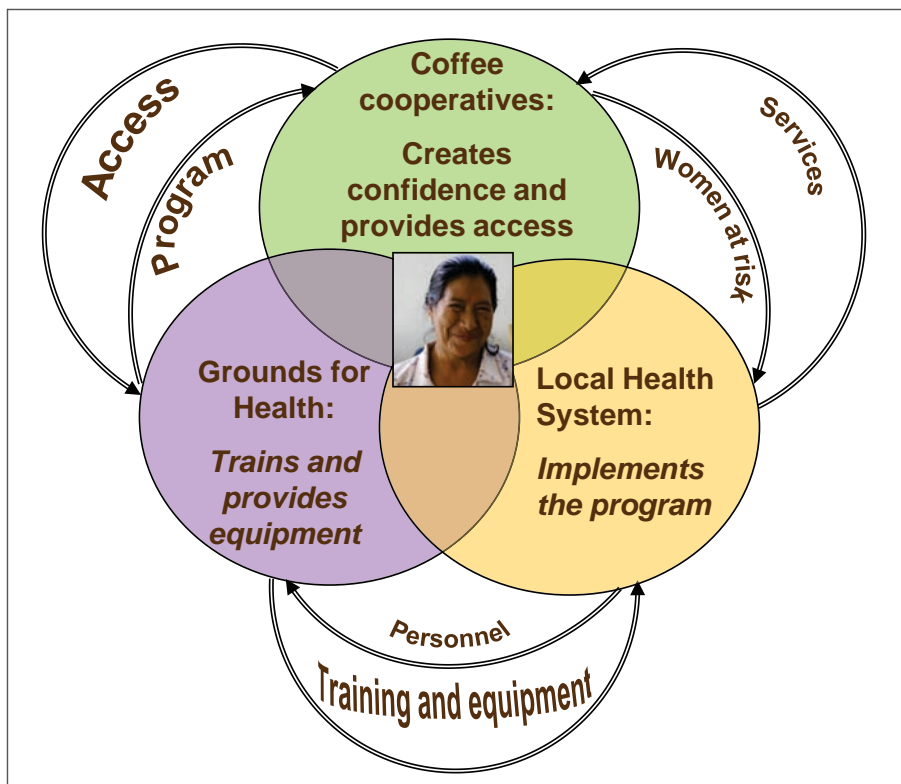
The following aspects have clearly contributed to the success of the model: establishment of accessible, nearby services; reliance on a single visit; low-cost services that are replicable since they are based on simple protocols; and sustainability, because an empowered community is contributing the necessary resources.

In closing, Dr. Burns presented the results obtained since 2001:

- Over 20,000 women have received cervical cancer screening services.

- Over 80% of these women were between 30 and 50 years of age.
- VIA has been offered in all of the communities since 2007.
- An average of 10% of the women screened with VIA had a positive result.
- Over 95% of VIA-positive women have received treatment.
- Over 200 physicians and nurses, 54 of them in Nicaragua, have been trained in the detection and treatment of precancerous lesions and referral of advanced cases.
- 28 treatment centers have been established, 14 of them in Nicaragua.
- A health promoter network has been formed in each community.

Figure 6. Grounds for Health collaborative model.





Health promotion: the role of health promoters in VIA-based programs. Ms. Haydee Padilla, PAHO/WHO Bolivia.

Ms. Padilla began her presentation by reviewing the concept of health promotion which, according to the Ottawa Charter, consists of enabling people to increase control over, and improve their health. It is therefore fueled by many disciplines and is a process rather than an easy answer.

Cervical cancer causes an estimated 4.5 deaths each day in Bolivia. In response to this high burden of disease, the Ministry of Health and Sports developed a *National Plan for the Prevention, Control, and Monitoring of Cervical Cancer*, one of the objectives of which is to provide information and raise public awareness about cervical cancer, prevention methods, early detection, control and follow-up.

Two 3-day courses were organized in order to strengthen information, education and communication strategies for the prevention of cervical cancer. One of these courses, titled *“We learn with love”* has been offered with CDC support, and the other, *“Take care of yourself in time and don’t stop smiling,”* was developed by the INEN in Peru. As a result, 15 promoters were trained in 2010, and 14 in 2011, in the 4 departments of the country with the highest burden of disease based on the health demographics survey.

The courses include contents on how to conduct educational sessions for families and the community, and guides for community visits. There are also materials on counseling, information and communication,

general anatomy of the reproductive system, causes and risk factors of cervical cancer, sexually transmitted diseases, and HPV. The goal is to strengthen good counseling skills and principles (confidentiality, privacy) and to reiterate the importance of follow-up.

The course methodology is designed to create a pleasant atmosphere based on respect and trust, encourage active student participation, and emphasize the important role that promoters play in the health promotion process. The idea is that participants will make a genuine commitment to their communities and also seek out other promoter candidates to ensure the sustainability of the work. Promoters have many different job descriptions, from community volunteers to nursing aids, social workers, and members of social organizations.

Finally, the sustainability and continuity of promoter programs was described as the main challenge facing countries like Bolivia, where this type of work is not paid. It is therefore necessary to create partnerships with other institutions and social organizations such as anti-cancer leagues.



Participants of the course for health promoters *“Take care of yourself in time and don’t stop smiling”*, La Paz, February 2011.

Survey results



Results of the Workshop preparatory surveys. Dr. Elisa Prieto Lara, PAHO, Washington D.C.

Dr. Elisa Prieto Lara presented the preliminary results of the preparatory survey on experiences with VIA and the “screen and treat” approach that was completed by all participating countries prior to the workshop (*Annex 4*).

Most of the countries use VIA in the context of their national cervical cancer prevention programs, either at the national level (Guyana, Suriname, and Guatemala), in selected areas with limited access to cytology (El Salvador, Colombia, and Nicaragua), or in the form of demonstration projects (Peru and Nicaragua); it is only being used by NGOs in Honduras. Implementation of the “screen and treat” approach follows that of VIA in every country except Suriname, where it is only being used inland and only after a biopsy has been taken.

All of the countries except for Colombia, Suriname, and Paraguay indicated that VIA and the “screen and treat” approach are included in their regulations on cervical cancer prevention. The target group ranges from 29 to 59 years of age, and the recommended screening frequency is every 3 years in every country except Suriname (every 2 years) and Guyana (every 5 years). Responsibility for training, quality, monitoring, and evaluation has been assigned in every country except Suriname, and services are usually funded through a combination of national and donor funds. As far as job categories, the professionals authorized to perform VIA and the “screen and treat” approach tend to be physicians and nursing personnel, although some countries have more restrictive regulations concerning the types of providers authorized to perform cryotherapy.

All of the countries have algorithms for screening and cryotherapy treatment, and in every case except Guyana and Suriname, the circuit that VIA positive women follow is cryotherapy treatment of eligible lesions during the same visit (“screen and treat” approach), and colposcopy referral of women with ineligible lesions. In Suriname, all VIA positive women are referred for colposcopy for biopsy taking and

histological confirmation prior to treatment, while in Guyana, women are treated with cryotherapy or LEEP depending on the characteristics of the lesion.

In terms of assistance activity, the positivity index fluctuated widely, from 22.8% to 3.9%. Only 3 countries reported data on the percentage of positive women lost to follow-up care, which ranged from approximately 2% in El Salvador, to 20% in Peru and 51% in Guyana.

The Ministry of Health is responsible for training in all of the countries, whether through its own courses or in conjunction with partner organizations. Only 3 countries reported having an accreditation system in place and 4 reported having refresher courses available for providers. In the last 3 years, a total of 1,393 professionals in 8 countries have been trained in promotion and education, 1,344 in VIA and as many as 424 in the “screen and treat” approach.” A not insignificant percentage of these professionals remain inactive after the training for reasons including their other responsibilities, lack of equipment, or staff turnover.

All of the countries have a variable amount of cryotherapy equipment and, in general, do not report difficulties in ensuring gas supply. A widespread challenge is having an adequate and efficient maintenance system in place.

Finally, half of the countries have not designated specific responsibility for quality, monitoring, and evaluation. Similarly, while most of the countries have developed specific indicators, the information systems are inadequate in more than half of them.

The detailed analysis of the surveys will be published and distributed in a report.

Questions and answers

The following key issues were raised during the questions and answers period:

- » VIA and the “screen and treat” approach must be institutionalized so that the Ministries of Health take both techniques into consideration in their operational programs and guarantee the procurement of the necessary inputs in order to ensure uninterrupted prevention service. Some countries, such as Guatemala, are very dependent on cooperation assistance for equipment procurement and have yet to create enough of a critical mass to ensure program sustainability and continuity.
- » It is necessary to promote more involvement in cervical cancer prevention on the part of civil society in general, and women’s organizations in particular.
- » It is very important to change the message that VIA is a screening test for low-income countries. This test has enormous potential and performs as well as, or better than, cytology in terms of sensitivity and specificity. It is important to rethink the protocols in light of the scientific evidence and existing resources and to avoid unwarranted or unnecessary actions such as taking a biopsy prior to administering cryotherapy in the “screen and treat” approach.
- » It would be very useful to map the stakeholders involved in cervical cancer prevention in each country as a tool to harmonize technical cooperation and resource mobilization. The preparatory survey provides preliminary information in this regard.

Monitoring and evaluation

Monitoring and evaluation are critical to improving the implementation and management of cervical cancer prevention and control programs. They support decision-making by identifying gaps and identifying solutions, and facilitate continuous quality improvement of services. The roundtable discussion summarized below focused on general considerations and challenges associated with monitoring and evaluation, as well as the experiences of the countries and partner organizations.



Overview and challenges of monitoring and evaluation in VIA and cryotherapy. Dr. Mauricio Maza, Medical Director, Basic Health International.

Dr. Maza began his presentation by emphasizing the importance of having an adequate monitoring and evaluation system in place to ensure that objectives and established targets are being met.

These activities are important to assess whether the desired impact is being achieved, and elicit key information to support decision-making. To this end it is necessary to design indicators at several levels:

- Indicators at the level of health policies and programs in order to evaluate overall program performance;
- Indicators at the level of health services to monitor service providers and clinical management of users;
- Incidence and mortality from cervical cancer.

Monitoring and evaluation should be dynamic and ongoing and include feedback and corrective actions

to improve performance. *Table 5* presents ACCP's proposed framework for monitoring and evaluation.

Monitoring and evaluation of VIA poses a series of challenges that should be highlighted:

- Challenges related to the subjective nature of the test.
- Most of the available information comes from research studies or demonstration projects.
- Existing information systems are very focused on the analysis of data from cytology-based programs.

Table 5. Monitoring and evaluation framework proposed by the Alliance for Cervical Cancer Prevention (ACCP).

MONITORING Process evaluation		EVALUATION Effectiveness evaluation	
Inputs	Outputs	Outcomes	Impact
<ul style="list-style-type: none"> • Staff • Money • Supervision • Facilities • Equipment • Supplies • Training • Program plan 	<ul style="list-style-type: none"> • Available screening and treatment services • Quality services • Competent staff • Knowledge of cervical cancer prevention 	<ul style="list-style-type: none"> • Screening coverage • Treatment rate for women with precancer lesions • Behavior change • Increase in social support 	<ul style="list-style-type: none"> • Incidence of cervical cancer • Mortality from cervical cancer • Economic impact • Social impact

Source: Adapted from UNAIDS and the World Bank 2002.

Dr. Maza went on to describe some of the salient experiences of international organizations and countries in the area of monitoring and evaluation:

- » Jhpiego has developed a series of standards to evaluate the performance of VIA and cryotherapy. In a study conducted in Thailand and Ghana, they found that 74% of providers were adhering to VIA performance standards.
- » Bangladesh has a VIA-based cervical cancer prevention program, with 55 “master trainer” gynecologists and 425 providers, including physicians and health workers, in 145 health centers that offer opportunistic screening services. More than 100,000 women were screened through this program in 44 districts of Bangladesh from January 2005 to June 2008, with a 4.8% positivity rate. The “screen and refer” approach is used, and 87.2% of positive women were evaluated with colposcopy during the same period.
- » The studies on Thailand and Ghana and on the Bangladeshi program identified weaknesses in the monitoring and evaluation of services due to the lack of a centralized information system equipped to collect and provide information at the national level.
- » The TATI project implemented in the Peruvian Amazon jungle is a reference work for LAC and required reading for any country that is thinking about introducing these techniques.

Basic Health International has been training physicians and nursing personnel in the central and paracentral regions in El Salvador since 2006. It has also organized trainings in the department of Olancho in Honduras, Guatemala, and the Dominican Republic, and plans to offer a course in Haiti at the end of the year.

VIA and the “screen and treat” approach were first introduced in El Salvador in 2002 in a demonstration project promoted by PAHO in the central region. The project ended in 2005, although it is being continued in Chalatenango Hospital. After the initial project ended, several NGOs organized trainings for staff of the Ministry of Health and other organizations and, in 2008 finally achieved a consensus that culminated in the development of the VIA Technical Guides. It was an arduous process since there was not as much scientific

evidence available at that time as there is now.

Monitoring and evaluation requires a good information system starting with the appropriate data collection forms. Dr. Maza displayed the data collection forms developed by Jhpiego, which Basic Health International translated into Spanish in 2007 (*Annex 9*), as well as the format developed by the Ministry of Health of El Salvador as part of the VIA technical guides (*Annex 10*). In the area of information systems, one of the first steps taken in the country was to include VIA together with cytology in the daily log (*Annex 11*). Efforts are currently focused on ensuring that the data collection form includes visual inspection results. The Ministry of Health has an Internet-based morbidity and mortality system that facilitates searches by region, area, municipality, facility, and date, among other parameters. This information is critical for evaluating whether the established targets are being met and provides guidance as to what corrective actions are necessary.

At the health services level, there is a database with a digitalized information recording form, which is also available on-line and can be used for a more detailed analysis of the information. For example, it is possible to measure the percentage of women screened who fall within the high risk age category, or the test positivity rate, the percentage of women treated with cryotherapy, and the percentage referred for colposcopy. The positivity rate can be studied by department in order to identify places where the percentage of positive cases is excessively high or low, investigate the cause, and apply corrective measures.

Lastly, Dr. Maza concluded by identifying the main challenges for monitoring and evaluation, around which consensus must be reached:

- What are the minimum requirements for VIA data collection methods?
- How can VIA data collection be incorporated into existing information systems based on conventional cytology?
- How should indicators be standardized?
- How should monitoring and evaluation time frames, along with their respective corrective measures, be standardized?



**Monitoring and evaluation of competencies and professional training.
Dr. Manuel Álvarez Larraondo, INEN, Peru.**

Dr. Álvarez began his presentation by explaining that Peru only offers VIA services in the form of demonstration projects. To date, some 100 providers have been trained, and nearly 70% of them currently provide services in different regions of the country.

These services are monitored through supervisory visits to assess aspects related to programming, infrastructure, and staffing, as well as information, education, and monitoring. A report on these visits is submitted to the INEN School.

Supervision of trained providers is conducted based on the number of patients seen, the outcomes of the exams administered (percentage of normal cases,

precancerous lesions and invasive cancers identified) and a checklist. Supervision is usually conducted 6 months after the training, although there is no consensus on the best time to do it. This is one of the areas that require consensus and standardization. The verification test rates each step of the procedure as “satisfactory,” “unsatisfactory,” or “not observed.” *Table 6* shows the steps included in the clinical skills and VIA and cryotherapy orientation checklists.

Table 6. Steps included in the clinical skills and VIA and cryotherapy orientation checklists.

VIA	Cryotherapy
<ul style="list-style-type: none"> • Pre VIA orientation. • Pre VIA preparation. • Performance of the visual inspection. • Post VIA procedures. • Post VIA orientation. 	<ul style="list-style-type: none"> • Pre cryotherapy orientation. • Pre cryotherapy preparation. • Cryotherapy treatment. • Post cryotherapy procedures.

The requirements a provider must meet to achieve competency also needs to be discussed and standardized. *Table 7* shows the criteria proposed by INEN. The result of this process is summarized in an evaluation sheet that includes the provider’s name, whether he or she passed the exam, the number of patients treated, the results of the verification test, and whether the provider attained competency in VIA or cryotherapy, depending on which technique was being evaluated. Supervision is not punitive in nature. It is a mechanism to support the provider by identifying achievements, challenges, and the actions that should be taken. Dr. Álvarez then displayed the forms for

recording VIA and cryotherapy outcomes, as well as the daily report logs and consolidated monthly reports of assistance activity (*Annex 12*). He also made the Latin American School’s bank of over 2,000 images available to the participants.

Peru currently has fewer than 100 providers, but it is important to think about how supervisory tasks will be carried out once a larger number of professionals are providing these services and it is no longer feasible to conduct follow-up visits in every center. The development of alternative supervisory mechanisms is one of the major challenges.

Table 7. INEN proposal on the requirements a provider must meet to achieve competency level in VIA and cryotherapy.

VIA	Cryotherapy
<ul style="list-style-type: none"> • Screen 100 women • Complete the steps of the verification test • Respond correctly to 85% of the visual evaluation and questions • Identify cervical cancer cases 	<ul style="list-style-type: none"> • Treat 7 patients • Complete the steps of the verification test • Administer cryotherapy • Post cryotherapy tasks • Correctly identify 85% of cases of precancerous lesions and normal cases



***Strengthening monitoring and evaluation in VIA and cryotherapy.
Sharon Kibwana, Program Officer, Cervical Cancer Prevention,
Jhpiego.***

Jhpiego has an extensive track record in supporting cervical cancer programs in countries throughout the world. It currently has active projects in 10 countries of Africa, Asia, and Latin America.

Sharon Kibwana's presentation focused on demonstrating the experience that Jhpiego has amassed in its monitoring and evaluation activities in different countries. The purpose of these activities is to improve program implementation and management and support decision-making by identifying gaps and finding solutions. In this way, critical information is obtained to support advocacy, ensure accountability, efficiently allocate resources, and measure progress towards established targets.

It is very important to plan for monitoring and evaluation from the outset, at the same time that training courses are being planned and material resources for initiating service-provision are being reviewed, rather than after screening and treatment has begun. The components of what could be construed as an example of a monitoring and evaluation plan were presented and explained, and the following 4 steps were identified:

- » **Step one:** Develop targets, goals, and indicators. It is important to develop information collection tools before launching provider training programs. This step entails asking the following questions: Who?, What?, When?, How often?, What will be done with the results?
- » **Step two:** Train providers and the Ministry of Health supervisory team in how to use information collection tools, obtain high quality data, and document exceptional cases.
- » **Step three:** Consolidate the information monthly, analyze the data, and identify centers that are not meeting the standards.
- » **Step four:** Carry out supervision and support visits to identify gaps, verify data quality by reviewing the information collected during a month chosen at random, and verify the results by comparing

them with the original documents from which the information was taken.

Even if resources are insufficient to collect information on each one of the indicators ideally deemed necessary, they should, at the very least, be planned and taken into account.

Most information collection tools include written documentation. In most projects, individual patient data are transferred to a record book and consolidated each month on a summary form that is matched to a database.

The data must be high-quality: otherwise the indicators will be useless no matter how well designed they are, and can lead to erroneous decisions at the program level. For this reason, it is very important to correct any possible errors at the data collection point in health facilities. A key strategy to improve the quality of the data is to ensure that providers grasp the value and utility of the information they are collecting. For this reason, it is important to provide them with appropriate feedback.

Some strategies were then presented to improve the quality of monitoring and evaluation activities:

- Organize one-day workshops on information collection and reporting. VIA and cryotherapy training programs usually do not spend a lot of time on monitoring and evaluation. Therefore, it is very useful to hold this type of workshop several months after the training in order to correct errors before they become ingrained habits.
- Conduct quality control of the information at the health facility and program levels. Monitoring visits are useful for this and also provide an opportunity to review and correct errors with providers.

Jhpiego has created a poster (*Annex 13*) that presents the data collected in a very visual way, along with trends or patterns, gaps, and progress toward the established goals and standards. Materials such as these have been used successfully in Guyana, and are a very useful tool to empower providers in the use and importance of the information they are recording.

In conclusion, the principal lessons learned about monitoring and evaluation were summarized as follows:

- It is necessary to plan how monitoring and evaluation will be done from the outset.
- It is critical to involve Ministry of Health staff in supervision, monitoring, and evaluation.
- After the training is over, it is necessary to follow up on how the providers trained are collecting information.
- It is essential to empower providers by explaining the ways in which the information they collect is used

for decision-making. Graphics depicting progress are very useful.

- Information must not only be collected, it must be analyzed and the results shared.

Some of the lessons learned with regard to cervical cancer prevention and control in areas with a high prevalence of HIV include:

- The difficulty of confirming serological status with regard to HIV.
- HIV-positive women have a higher probability of presenting a VIA positive result and being referred to specialized health care centers for extensive lesions not eligible for cryotherapy treatment.
- Information on the correlation between VIA results, antiretroviral treatment and CD4 levels will be important for future review of treatment and screening protocols for HIV-positive women.

Table 8. Goals, objectives, and key indicators for monitoring and evaluation.

Goal
“Increase access to high-quality cervical cancer prevention and treatment services”
Objectives
» The main actors are collaborating to maintain an atmosphere that facilitates the introduction and expansion of services.
» Health facilities are offering high-quality services.
» Target communities have accurate and timely information concerning access to services.
Key indicators for monitoring and evaluation of VIA and cryotherapy
» Number of women screened using VIA
» Percentage of women screened with a positive VIA positive result
» Percentage of VIA positive women with large lesions referred
» Percentage of VIA positive women referred for suspicion of cancer
» Percentage of VIA positive women with lesions eligible for cryotherapy who receive this treatment immediately (rate of single-visit approach)
» Percentage of postponed cryotherapy treatments administered during a second visit (follow-up rate or rate of losses to follow-up care)
» Percentage of VIA-positive women who receive LEEP treatment for extensive lesions
» Screening coverage
» Number of health centers that offer the service
» Number of trained providers



The experience of Nicaragua. Ms. Ana Cecilia Silva Ramírez. Coordinator, Cancer Component, General Bureau of Outreach and Quality of Care, Ministry of Health, Nicaragua.

Ms. Ana Cecilia Silva began by presenting some general data on Nicaragua. The country has a population of approximately 5.8 million including nearly 3 million women, more than 1.5 million of which are of childbearing age.

The government considers poverty and inequity a priority, with clearly defined goals in the national development plan. According to Globocan estimates, 414 deaths from cervical cancer were recorded in Nicaragua in 2008, making it one of the leading causes of death in the country.

In response to this epidemiological situation, the Ministry of Health developed a national strategic plan for cancer control in 2008. The “screen and treat” approach was initially introduced as a pilot project in a health unit of the SILAIS in Rivas. A report on the implementation of VIA and cryotherapy was prepared in 2009 with civil society participation. The protocol was not published until 2010, however, after a series of awareness raising workshops were held to surmount the resistance of certain professional groups, mainly gynecologists and pathologists. At present, VIA and the “screen and treat” approach are only used in the context of demonstration projects and services are provided in 22 health units of 10 SILAIS (Figure 7). Although just 34 units of cryotherapy equipment are available

countrywide, this service is being incorporated into mobile units through integrated brigades within the family and community health system.

While the length of theoretical and practical training in VIA and cryotherapy varies depending on the sponsoring organization, the Ministry has adopted a standard 5-day training course that is offered at a national reference hospital in Managua. Various methods are used for monitoring and evaluating these services, in light of the shortage of resources and the varying degrees of accessibility of the centers. Trained providers are monitored monthly for the first 3 months, every other month up until the sixth month, and then at the end of one year. It is carried out on-site and includes a monitoring checklist and refresher activities. It has not been possible to conduct supervisory visits to some locations until up to 6 months after the training course however, since facilitators equipped to carry out this task are in short supply. Specifically, there are 7 supervisors in the country, 4 of whom were recently trained at the INEN’s Latin American School in Peru.



Figure 7. Site map of the “screen and treat” approach in Nicaragua.

Technical support has also been provided by a number of organizations such as PATH, Doctors of the World, Grounds for Health, ISLA and PINCC (Prevention International No Cervical Cancer).

Indicators have been developed for monitoring and evaluation and are being used in the SILAIS involved in implementing the strategy. A checklist is used to monitor the VIA technique and cryotherapy treatment and offer provider feedback. The filled out VIA forms also serve as a monitoring tool. *Table 9* lists some of the indicators used by the SILAIS involved in VIA and cryotherapy activities. Evaluations of the results are presented at health forums and reported to the relevant health bureaus. This information is also included in the biannual evaluations of the cancer component.

Ms. Silva concluded her presentation with the main challenges facing Nicaragua:

- Include new screening technologies in the regulations for cervical cancer, which will be updated this year.

In addition to VIA, it is hoped that the “screen and treat” approach and HPV DNA test can also be included based on the results of the demonstration project on these screening techniques that is currently winding up in one SILAIS.

- Improve and standardize statistical records to facilitate a more objective and clear evaluation.
- Train more teachers in monitoring methods for the strategy, to ensure they have a presence in every region.
- The migration of trained physicians poses an enormous challenge, and necessitates training even more providers.
- With the support of PATH and the INEN, the hope is to increase the number of centers of excellence, so that one is available in every region.

It is anticipated that VIA will be institutionalized and in use at the national level by the second half of this year, although exclusively in areas that have been prioritized for having little or no access to cytology.

Table 9. Indicators for monitoring and evaluation of VIA and cryotherapy services in the SILAIS, Nicaragua.

- » Coverage of the target population
- » VIA test positivity rates
- » Percentage of VIA positive women who undergo colposcopy after obtaining a VIA positive result.
- » Percentage of women in whom precancerous lesions or cancer are detected and who complete an appropriate course of treatment.
- » Cure rate after cryotherapy treatment: percentage of VIA negative women one year after receiving cryotherapy treatment for the precancerous lesions detected.



The experience of Suriname. Dr. Antoon Grünberg, Ministry of Health of Suriname.

Dr. Antoon Grünberg began his presentation by offering some general data on Suriname, a former Dutch colony that achieved independence in 1975. Many different ethnic groups, languages, religions, and cultures coexist in this country of half a million people.

Most of the population is concentrated in the capital, Paramaribo. According to Globocan estimates, age-adjusted incidence and mortality rates are 27.2 and 11.1 per 100,000 women, respectively. The majority of deaths from cervical cancer are recorded among women of Criollo, Javanese, and Maroon origin.

The earliest organized cervical cancer prevention efforts in Suriname were associated with the National Cytology Project carried out from 1998 to 2001 with the aim of screening 75% of an estimated target population of 80,000 women ages 20 to 54. The project was developed in collaboration with the Regional Health Services (primary health care service providers in coastal areas), the Medical Mission (primary health care service providers in the interior), gynecologists, pathologists, the Family Planning Association of Suriname, and the University of Leiden in the Netherlands. The program's main outcomes are summarized below:

- The actual target population of 99,896 women was considerably higher than the initial estimate of 80,000.
- 38% coverage was achieved relative to the proposed target of 75%.
- 1.3% of the cytology tests performed yielded an abnormal result.
- 449 women were referred for treatment and only 34.5% received it, which suggests 65.5% losses to follow-up care.

In short, cytology performance was unsatisfactory (1.3% of abnormal results in a high-risk population),

the treatment rate was unacceptably low, and losses to follow-up care excessively high. These poor outcomes triggered a quest for an alternative method for the early detection of cervical cancer and the appropriate and timely treatment of the precancerous lesions detected. The idea was to improve the reliability of the screening test and develop the capacity to offer appropriate treatment without delay. With this in mind, two research studies were planned in which all of the women involved were screened with VIA and cytology; VIA positive women eligible for cryotherapy were given a biopsy prior to treatment and those who were not eligible were referred for gynecological evaluation. VIA negative women with abnormal cytology results were also referred for evaluation. In the first study, 1,519 women were screened with VIA and cytology in Sipaliwini and Brokopondo districts, with a VIA positive/cytology abnormal ratio of 2.7. Of 94 biopsies from VIA positive women with eligible lesions studied, 81% were positive. In a second study conducted on 1,910 women from Nickerie and Sipaliwini districts, the ratio of VIA positivity / cytology was 9.7, and 89.4% of the 277 biopsies taken from VIA positive women with lesions treatable with cryotherapy were abnormal. *Table 10* compares the outcomes of the National Cytology Program with those of the "screen and treat" approach study carried out in Nickerie and Sipaliwini districts. Based on these outcomes, VIA came to be recognized as the most reliable test, which yields immediate results, is significantly cheaper, and avoids treatment delays in remote areas.

Table 10. Comparative results of the National Cytology Program of Suriname (1998-2001) and the “screen and treat” approach in Nickerie and Sipaliwini.

	National Cytology Program	“Screen and treat” study in Nickerie and Sipaliwini
Screening coverage (%)	38.1	63.7
Percentage of cytology tests with an abnormal result	1.3	1.6
VIA positivity rate	NA	15.5
Treatment rate	34.5	95.5
Cost per treated patient (Euros)	7,100	361

Note: NA: Not applicable

Discussion: Lessons learned and issues of interest relating to monitoring and evaluation.

The points outlined below were raised in the plenary session that followed the presentations:

- » Monitoring and evaluation have played a key role in the process of institutionalizing VIA and the “screen and treat” approach, and standardized measurement instruments and indicators need to be put in place to compare outcomes between countries. The Latin American Center for Perinatology, Women and Reproductive Health (CLAP) has developed a very good model for standardization in the region in the area of monitoring and evaluation of maternal and child mortality.
- » Since most countries in the region already have information systems for several diseases and cytology monitoring and evaluation mechanisms in place, the introduction of new evaluation systems is a challenge. For this reason, convincing the Ministry of the Health of the country to incorporate VIA indicators lends institutional solidity to the process.
- » The monitoring and evaluation system should include contents on equipment maintenance and use.
- » Colombia introduced a virtual course available through its National Oncology Institute, which is designed to provide preparatory instruction to professionals who are planning to train in VIA and cryotherapy so that they begin the course with a comparable proficiency level. An images bank is being constructed to be used for monthly virtual provider examinations, which in turn can be used as the basis for prioritizing supervisory visits.

Quality control

During the session moderated by Dr. Nathalie Broutet, the draft WHO proposal for the standardization of quality control in VIA and cryotherapy was presented and discussed. The various sections of the document were reviewed, and the remarks and suggestions of the participants were compiled. The main contributions are summarized below:

» The quality control guide should be included as a module in the “Comprehensive Cervical Cancer Control: A Guide to Essential Practice,” which is currently being updated. The incorporation of additional modules was suggested, including estimating costs, supervision, monitoring, and evaluation.

» The structure of the document could be modified so that the introduction focuses on defining what quality control is and why it is necessary.

» It is important to specify that the recommendations included in the guide should be adapted by countries in accordance with their respective cancer prevention and control regulations.

» Quality contents should be added from the perspective of the community and of women, in terms of satisfaction with services.

Finally, it was agreed that the suggested changes would be incorporated and the new draft circulated among the participants for a second review.



Participant of a VIA/cryotherapy training course in Antigua, Guatemala.

Plenary session discussion on next steps

Following the roundtables on the experiences of the countries, training, monitoring and evaluation, and the review of the WHO proposal on quality control, a plenary session on next steps was held during the latter part of the final day of the workshop. The session included a discussion of strategies for harmonizing approaches and several agreements were reached on how to proceed in order to successfully strengthen VIA and cryotherapy in the public health programs of the countries of the region. The main topics of the discussion are summarized below, grouped into three overarching categories: a) general considerations; b) training and supervision; c) monitoring and evaluation.

A. GENERAL CONSIDERATIONS

- » The region is extremely heterogeneous in terms of the degree to which VIA and the “screen and treat” approach are being implemented. Some countries have an extensive track record and have accumulated many lessons learned, while others are only in the incipient stages. In light of this, the following proposals were offered:
 - To establish a group of experts from the more experienced countries in the region that can guide the process in countries that are only beginning to introduce these techniques.
 - To facilitate the sharing of experiences and foster South-South cooperation, including the possibility of on-site visits.
- » The establishment of a virtual community of practice was proposed in order to discuss the core issues related to VIA and the “screen and treat” approach: education, procedures, quality, monitoring and evaluation, costs, and sustainability. The possibility of using the workshop’s SharePoint as an initial platform to share available resources and tools was discussed.
- » The need to improve the systematization of experiences in order to strengthen and promote South-South cooperation was discussed. Some of the possibilities raised were to identify experiences, form a group tasked with developing a work methodology, and request that the participating countries provide the necessary information. The product could be presented at a follow-up meeting the following year. UNFPA expressed interest in mobilizing resources for this and creating a menu of options for each of the components (training, monitoring, and evaluation).
- » The importance of advocacy, negotiation, and forging partnerships with all of the stakeholders in cervical cancer prevention prior to the introduction of VIA and cryotherapy was reiterated, as this can help avoid or minimize resistance on the part of certain professional groups (mainly gynecologists and pathologists).
- » The inclusion of an activity on cervical cancer screening using VIA and cryotherapy in the next Latin American Congress of Obstetrics and Gynecology (September 2011, Managua, Nicaragua) was proposed.
- » All of the participating countries and organizations agreed to propose that a follow-up meeting be held within a year to measure progress in the points discussed during the workshop.

B. TRAINING AND SUPERVISION

- » The importance of the preparatory work that countries must carry out before launching the VIA and cryotherapy training phase was underscored:
 - Clearly define the country strategy: location of services, professional characteristics of the providers, equipment and input needs.
 - Generate cost estimates in the preparatory phase.

- » There is widespread agreement on the need to use virtual tools to:
 - Prepare professionals in advance of an on-site course, in order to ensure that they have a comparable level of prior knowledge and to make optimal use of training time.
 - Facilitate the evaluation and follow-up of trained providers.
 - Colombia has already developed a virtual course with these characteristics and PATH offered its support for developing this virtual tool for use as a regional resource.
 - Develop an images bank for regional use.

- » It is necessary to involve academia in training efforts. To this end, it would be useful to share in the lessons learned by countries such as Guatemala, which have had successful experiences in this regard.

- » Bolivia was asked to share the education and health promotion curriculum that it presented during the workshop.

- » The following important points concerning the contents of VIA and cryotherapy training courses were underscored:
 - Include contents on the professional-patient relationship in order to surmount the barriers that can arise in the context of service delivery.
 - Adapt training to the needs of the countries and to the different professional categories involved.
 - Adapt the contents to the specific cultural characteristics of each context.

- » With regard to the supervision of trained providers, the following areas are among those requiring standardization and regional agreement:
 - To establish the most appropriate time frame to conduct supervisory visits to trained providers.
 - To standardize the number of women screened with VIA and treated with cryotherapy based on which provider competency will be assessed.

- » UICC has developed a list of available training materials on cervical cancer prevention and control, with links for accessing and downloading them.

- » There was a proposal to improve the workshop preparatory survey and complete the information provided by the countries.

C. MATERIAL RESOURCES

The most relevant issues concerning material resources were:

- » Technical specifications that should guide the procurement of equipment and inputs were suggested:
 - **Acetic acid:** Technical specifications for acetic acid used for visual inspection were suggested. Some organizations, such as Jhpiego, recommend using preparations of acetic acid rather than diluting it in order to reduce the margin of error. Basic Health International indicated that they order acetic acid in the desired concentration and purchase it directly from the factory at a very affordable price. Finally, WHO has held discussions on these technical specifications and its recommendation is to use acetic acid and train providers in how to produce the proper concentration.
 - **Cryotherapy equipment:** WHO has prepared, and will soon publish, a paper on the specific characteristics that cryotherapy equipment should have, which is intended to facilitate the procurement of such equipment by program managers.
- » The possibility of putting together larger equipment orders in order to negotiate better prices and different mechanisms for equipment maintenance were discussed.
- » The need to locate equipment strategically if it is not possible to have cryotherapy available in each one of the centers offering VIA screening was discussed. The relevance and cost-effectiveness of using mobile units was reiterated in this regard.
- » There is general concern over the persistent difficulties associated with equipment maintenance. Equipment sometimes has to be sent abroad when it cannot be repaired in country. Jhpiego's experience in Mozambique is very interesting in this regard. Cryotherapy equipment was acquired in the United States and the manufacturer organized distance training for the Ministry's technical staff in order to install capacity for maintenance in the country.

D. MONITORING AND EVALUATION

- » The need to establish the minimum necessary requirements for evaluation, monitoring, and supervision of VIA and cryotherapy was underscored, with the following comments:
 - On the basis of these minimum requirements, each country can adapt and develop contents based on its specific characteristics and needs.
 - Having a standardized methodology in place will facilitate comparisons of results.
 - In addition to developing indicators, monitoring and evaluation also entails the analysis, interpretation, and application of the results, which can be used to inform continuous quality improvement and decision-making.
- » The need to integrate services is relevant to the information systems component (indicators on HIV, maternal and child health).
- » Sharing experiences with user-friendly information systems and the record forms that have already been developed was suggested. Basic Health El Salvador offered to make the digital information system that it has developed, which was shared during the monitoring and evaluation roundtable, available to the participants.
- » It is important to make an effort to strengthen cancer registries in the countries.

E. PRIORITIES IDENTIFIED

Finally, as a conclusion to the plenary session, the countries identified the following next steps as priorities:

1. Designate or form a group of experts from the most advanced countries in the region to guide the process in countries in the more incipient stages.
2. Adapt Colombia's virtual tool as a regional resource, with the support of PATH.
3. Use the workshop's SharePoint as an initial platform for sharing available resources and tools, and propose the creation of a virtual community of practice.
4. Systematize experiences in order to strengthen and foster South-South cooperation. UNFPA expressed its interest in supporting this project.
5. Establish the minimum requirements necessary for the monitoring, evaluation, and supervision of trained providers components, which countries can adapt based on their circumstances and needs.
6. Hold a follow-up meeting within a year to measure the progress made.

RESULTS

Through the roundtables, the discussions in the plenary session, and the enriching contributions of the participants, the workshop achieved the following results:

- » Deepened knowledge of the available scientific evidence regarding VIA screening, cryotherapy treatment, and the “screen and treat” approach.
- » Knowledge of the experiences and lessons learned by partner organizations and the public health programs of the countries in the region related to screening using VIA and cryotherapy treatment, including strategies for education and to attract women at risk.
- » Sharing of tools and resources available in the region for the training, supervision, quality control, monitoring, and evaluation of VIA and cryotherapy services.
- » Establishment and/or strengthening of partnerships between countries and with partner organizations that facilitate the introduction and institutionalization of VIA and the “screen and treat” approach in cervical cancer prevention and control programs.
- » Identification of priorities and proposals for short-term actions for the standardization of approaches to training, supervision, quality control, monitoring, and evaluation of VIA and cryotherapy services in public health programs

CONCLUSIONS

The main conclusions from the meeting are:

- » There is clear and well-established scientific evidence to support visual inspection techniques for cervical cancer screening and the use of cryotherapy for the treatment of the eligible precancerous lesions detected. There is also sufficient evidence to support the use of the “screen and treat” approach, which consists of VIA screening and cryotherapy treatment in a single visit in order to minimize losses to follow-up care and reduce barriers to access to specialized colposcopic evaluation.
- » The experience of partner organizations and the work of the Ministries of Health of the participating countries have demonstrated the feasibility of implementing these approaches in public health programs in the region.
- » The participating countries with less experience in the use of these strategies have shown great interest, motivation, and enthusiasm about incorporating them in their cervical cancer prevention programs as a means of improving their effectiveness and impact.
- » This is a subjective provider-dependent test and, as such, it must be accompanied by training, supervision, quality control, monitoring, and evaluation components. There are plenty of validated materials and tools available in the region that can be used as a starting point for regional standardization and for the establishment of the desirable minimum requirements for each of these components.
- » One of the main barriers to the introduction of VIA and the “screen and treat” approach has been resistance from specific professional groups, which means that it is important to lay the groundwork for this approach through an awareness and advocacy effort involving all stakeholders involved in cervical cancer prevention.
- » Most countries are facing challenges associated with the availability of high-quality cryotherapy equipment and an adequate maintenance system. Mechanisms should be put in place to reduce the considerable price variations between countries, ensure that equipment meets minimum quality standards, install capacity for equipment maintenance in country, and plan based on the anticipated demand to ensure that cryotherapy is available at least in strategically located centers.

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ANNEXES

- Annex 1** Cervical cancer incidence and mortality in women of all ages in Latin America and the Caribbean by country.
- Annex 2** Agenda of the PAHO Workshop on Cervical Cancer Prevention Strategies using VIA Screening and Cryotherapy Treatment.
- Annex 3** List of participants.
- Annex 4** Survey of experiences with cervical cancer prevention strategies using VIA screening and cryotherapy treatment.
- Annex 5** Plan of action for the implementation of cervical cancer prevention services. Latin American School for Cervical Cancer, INEN, Peru.
- Annex 6** List of furniture, inputs, and equipment necessary to set up an examining room for VIA screening and cryotherapy. Latin American School for Cervical Cancer, INEN, Peru.
- Annex 7** Report on follow-up visits to health centers providing VIA and cryotherapy services.
- Annex 8** Sample schedule for a course on VIA and cryotherapy.
- Annex 9** Sample report form for cervical cancer prevention, Jhpiego.
- Annex 10** Report form for visual inspection with acetic acid, Ministry of Public Health and Social Welfare, El Salvador.
- Annex 11** Daily log, Ministry of Public Health and Social Welfare, El Salvador.
- Annex 12** Forms for daily logs and monthly consolidated reports of VIA and cryotherapy assistance activities.
- Annex 13** Results at a glance. Cervical Cancer Prevention and Control Program, Jhpiego.

Annex 1

Cervical cancer incidence and mortality in women of all ages in Latin America and the Caribbean by country.

COUNTRY	New cases	Age standardized incidence rate	Deaths	Age standardized mortality rate
Argentina	3996	17.5	1809	7.4
Bahamas	31	17.6	17	9.5
Barbados	38	20.8	21	9.9
Belize	33	29.6	17	15.3
Bolivia	1422	36.4	638	16.7
Brazil	24562	24.5	11055	10.9
Canada	1419	6.6	544	1.9
Chile	1478	14.4	721	6.6
Colombia	4736	21.5	2154	10
Costa Rica	403	17.5	158	6.7
Cuba	1603	23.1	684	8.9
Dominican Republic	1299	29.7	591	13.7
Ecuador	1666	27.1	832	13.3
El Salvador	1145	37.2	563	18.2
French Guyana	27	29.1	10	11.7
Guadelupe	-	12.3	-	5.4
Guatemala	1530	30.5	717	15.2
Guyana	161	44.7	74	20.5
Haiti	568	23.9	353	10.1
Honduras	1014	37.8	490	19.7
Jamaica	624	45.7	292	20.2
Martinica	-	17.4	-	3.7
Mexico	10186	19.2	5061	9.7
Nicaragua	869	39.9	414	20.6
Panama	426	25.3	211	12.6
Paraguay	864	35	407	16.6
Peru	4446	34.5	2098	16.3
Puerto Rico	209	7.5	89	2.8
Suriname	66	27.2	27	11.1
Trinidad and Tobago	125	15.8	93	11.5
United States	11069	5.7	3869	1.7
Uruguay	348	16.5	159	6.8
Venezuela	656	31.4	198	14.4

Notes: Age standardized rate: Summary measure of the rate that a population would have if it had a standard age structure. Standardization is necessary when comparing several populations that differ with respect to age because age has a powerful influence on the risk of cancer.

Source: Globocan 2008. Available at URL:<http://globocan.iarc.fr/>

Annex 2

Agenda of the PAHO Workshop on Cervical Cancer Prevention Strategies using VIA screening and cryotherapy Treatment.

AGENDA

June 1, 2011

8:00 am	PARTICIPANT REGISTRATION
9:00 am	OPENING CEREMONY: <i>Dr. Ludwig Ovalle Cabrera.</i> Minister of Health, Guatemala <i>Dr. Pier Paolo Balladelli.</i> PAHO/WHO Representative in Guatemala
9:30 am	BRIEFING ON SECURITY IN GUATEMALA United Nations Department of Safety and Security
9:45 am	INTRODUCTION: VIA screening and cryotherapy treatment. Review meeting purpose and expectations. <i>Dr. Macarena Pérez.</i> PAHO.
10:00 am	Comprehensive approach to cervical cancer prevention. Perspectives from the World Health Organization. <i>Dr. Nathalie Broutet.</i> WHO.
10:15 am	Discussion
10:30am	COFFEE BREAK
11:00am	COUNTRY EXPERIENCES Introduction to country experiences in VIA and cryotherapy. <i>Dr. Erick Álvarez.</i> Ministry of Health. Guatemala.
11:15am	<u>Roundtable:</u> Country experiences in the Region. Moderator: <i>Dr. Erick Álvarez</i>
11:30am	<ul style="list-style-type: none">• Experience in Guatemala. <i>Dr. Erick Álvarez,</i> Ministry of Health. Guatemala.
11:45am	<ul style="list-style-type: none">• Experience in Bolivia. <i>Dr. Lizeth Soraide,</i> Ministry of Health and Sports. Bolivia.
12:00pm	<ul style="list-style-type: none">• Experience in Guyana. <i>Dr. Narine Singh,</i> Regional Health Services.
12:30pm	Discussion. Lessons learned and experiences from other countries. Conclusions

Annex 2

1:00pm	LUNCH
2:00 pm	TRAINING:
2:15 pm	Overview and challenges of training in VIA and cryotherapy. <i>Dr. José Jerónimo. PATH.</i> <u>Roundtable:</u> Approaches and methodologies for training Moderator: <i>Dr. José Jerónimo.</i>
2:30 pm	<ul style="list-style-type: none"> • The experience in Guatemala. <i>Dr. Erick Álvarez. Ministry of Health. Guatemala.</i>
2:45 pm	<ul style="list-style-type: none"> • Methodology for training. How to set up the skills acquired in the courses. <i>Dr. Carlos Santos. Training Center of INEN (Lima).</i>
3:00 pm	<ul style="list-style-type: none"> • Competency based approaches to training providers in VIA and Cryotherapy. <i>Dr. Verónica Reis. JHPIEGO.</i>
3:30 pm	Discussion on issues and lessons regarding training and supervision. Conclusions.
4:00pm	COFFEE BREAK
4.30 pm	HEALTH PROMOTION AND STRATEGIES TO ATTRACT WOMEN AT RISK
4:45 pm	Importance of community involvement and mobilization in increasing women participation. <i>Dr. August Burns. Grounds for Health.</i>
5:00 pm	Health Promotion, the role of health promoters in the VIA-based programs. <i>Lic. Haydee Padilla. PAHO Bolivia</i> Questions and answers
5.30pm	Adjourn

Annex 2

June 2, 2011

8:30 am	
8:30 am	REVIEW of discussions and outcomes from the previous day <i>Dr. Macarena Pérez Castells. PAHO.</i>
8:45 am	RESULTS of the surveys. Current Status of VIA and cryotherapy programs in each country. <i>Dr. Elisa Prieto. PAHO.</i>
9:00 am	QUALITY ASSURANCE: Approach and WHO proposal to standardize quality assurance (who). <i>Dr. Nathalie Broutet, WHO.</i>
9:30 am	Questions and answers. Discussion and feedback from participants on quality assurance proposal.
10:00 am	Conclusions.
10:30am	
COFFEE BREAK	
11:00 am	
11:00 am	MONITORING AND EVALUATION Overview and challenges for monitoring and evaluation in VIA and cryotherapy. <i>Dr. Mauricio Maza. Basic Health.</i>
11:15 am	<u>Roundtable:</u> Strategies for monitoring and evaluation Moderator: <i>Dr. Mauricio Maza.</i>
11:30 am	<ul style="list-style-type: none"> Monitoring and assessment of skills and training. <i>Dr. Manuel Álvarez. Training Center of INEN (Lima).</i>
11:45 am	<ul style="list-style-type: none"> Strengthening the monitoring and evaluation of VIA and Cryotherapy. <i>Sharon Kibwana. JHPIEGO.</i>
12:00 pm	<ul style="list-style-type: none"> The experience in Nicaragua. <i>Lic Ana Cecilia Silva. Ministry of Health of Nicaragua.</i>
12:15 pm	<ul style="list-style-type: none"> The experience in Suriname. <i>Dr. Antoon Grunberg. Ministry of Health of Suriname</i>
12:30 pm	Discussion and Conclusions.
1:00 pm	
LUNCH	

Annex 2

2:00pm	Discussion on how to harmonize the approach to training, quality assurance and monitoring and evaluation. <i>Moderator: Dr. Macarena Pérez. PAHO.</i>
3:30pm	COFFEE BREAK
4:00pm	Agreements on how to proceed with ensuring high quality VIA and cryotherapy services in cervical cancer programs.
4:45pm	Conclusions and next steps. <i>Dr. Macarena Pérez. PAHO.</i>
5.00pm	Adjourn

Annex 3

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Annex 4

REVIEW OF THE EXPERIENCE

WITH STRATEGIES FOR CERVICAL CANCER SCREENING WITH VISUAL INSPECTION WITH ACETIC ACID (VIA) AND TREATMENT WITH CRYOTHERAPY

COUNTRY:

Contact details of the person completing this questionnaire

Name and Surname:	
Position:	
Responsibility regarding VIA/cryotherapy activities:	
<input type="checkbox"/> Overall responsible for cervical cancer program	
<input type="checkbox"/> Provide training for VIA and cryotherapy	
<input type="checkbox"/> Supervision and quality assurance	
<input type="checkbox"/> VIA/cryotherapy monitoring and evaluation	
<input type="checkbox"/> Other (specify):	
Email address:	
Telephone number:	
Date:	/ /

The present review has been designed to gather basic information on how VIA screening and the “screen and treat” approach (VIA screening followed by cryotherapy treatment in a single visit) are being used in countries in the Americas.

The questionnaire has been divided in two parts. The first part explores the challenges and opportunities that countries have encountered when introducing VIA and the “screen and treat” approach as well as the expectations for the PAHO Workshop on cervical cancer prevention strategies using VIA screening and cryotherapy treatment to be held in Guatemala, 1-2 June 2011. The second part intends to collect information on VIA and the “screen and treat” approach according to the following sections: I. Norms and regulations; II. Health care activities; III. Human resources and training; IV. Material resources; V. Quality assurance, monitoring and evaluation; VI. Technical assistance and cooperation.

PART ONE

CHALLENGES, OPPORTUNITIES AND EXPECTATIONS FOR THE WORKSHOP

1. How is VIA screening used in your country?

- As part of the Cervical Cancer Program in selected areas with a national scope
- As part of the Cervical Cancer Program in selected areas with no or limited cytology
- Demonstration projects
- Only performed by NGOs
- Only performed by the private sector

Additional comments:

2. How is the “screen and treat” approach used in your country?

- As part of the Cervical Cancer Program in selected areas with a national scope
- As part of the Cervical Cancer Program in selected areas with no or limited cytology
- Demonstration projects
- Only performed by NGOs
- Only performed by the private sector

Additional comments:

3. **In your opinion, what are the main advantages for your country that VIA offers over other options for cervical cancer screening? In which way has VIA contributed to improve the impact of your country’s cervical cancer program?**
4. **In your opinion, what are the main advantages for your country the “screen and treat” approach offers over other options for screening and treatment of precancerous lesions? In which way has the “screen and treat” approach contributed to improve the impact of your country’s cervical cancer program?**
5. **In your opinion, what are the main challenges faced in your country when introducing VIA into the cervical cancer public health program? What strategies has your country adopted to overcome these difficulties?**
6. **In your opinion, what are the main challenges faced in your country when introducing the “screen and treat” approach into the cervical cancer public health program? What strategies has your country adopted to overcome these difficulties?**

Annex 4

7. **Does your country plan to scale up the use of VIA?**

Yes

No

If the answer is positive, specify how:

8. **Does your country plan to scale up the use of the “screen and treat” approach?**

Yes

No

If the answer is positive, specify how:

9. **How can partner organizations contribute to the implementation of VIA and the “screen and treat” approach in your country?**

Contributing to the development of a training curriculum for VIA/“screen and treat” approach within the country

Supporting provider training for VIA/“screen and treat” approach

Contributing to the supervision and retraining of providers

Supporting the development of a plan for monitoring, evaluation and quality assurance of VIA and the “screen and treat” approach in the context of the Cervical Cancer Prevention and Control Program

Providing tools and materials for VIA/“screen and treat” approach implementation

Additional comments:

10. **What are your expectations for the PAHO Workshop on cervical cancer prevention strategies using VIA screening and cryotherapy treatment to be held in Guatemala, 1-2 June 2011?**

PART TWO

VIA AND THE “SCREEN AND TREAT” APPROACH

SECTION I. NORMS AND REGULATIONS

1. **In your country, is VIA screening part of the national guidelines for cervical cancer screening?**

- Yes
- No
- In process

If the answer is positive, please attach the guidelines

2. **In your country, is the “screen and treat” approach part of the national guidelines for cervical cancer screening?**

- Yes
- No
- In process

If the answer is positive, please attach the guidelines

3. **Regarding VIA and the “screen and treat” approach, is there a person in your country responsible for training, quality assurance, evaluation and monitoring and ensuring that the norm is followed?**

- Yes
- No

If the answer is positive, specify:

- Name:
- Position:
- Organization/institution:

4. **In your country, what sources of funding are used for the implementation and sustainability of VIA screening? And for the “screen and treat” approach?**

- Country health program budget
- Donor funds
- Mixed donor and country funds

5. **What type of personnel is authorized to perform VIA screening according to your country’s norm? (mark as many options as needed)**

- Gynecologists
- General practitioners
- Nurses
- Professional midwives
- Health promoters
- Others (specify):

Annex 4

6. **What type of personnel is authorized to perform the “screen and treat” approach according to your country’s norm? (mark as many options as needed)**

- Gynecologists
- General practitioners
- Nurses
- Professional midwives
- Health promoters

Others (specify):

7. **What type of health care facility is authorized to perform VIA screening according to your country’s norm? (mark as many options as needed)**

- Health care facilities in the primary level of care
- Health care facilities in the secondary level of care
- Others (specify):

Additional comments:

8. **What type of health care facility is authorized to perform “screen and treat” approach according to your country’s norm? (mark as many options as needed)**

- Health care facilities in the primary level of care
- Health care facilities in the secondary level of care
- Others (specify):

Additional comments:

9. **What is the target age group for VIA screening and cryotherapy treatment? What is the recommended screening interval?**

10. **Are there algorithms for VIA screening and follow up of abnormal results? In case of a positive answer, please attach the algorithm.**

- Yes
- No

11. **What is the pathway followed by women with a VIA positive result?**

- Cryotherapy treatment of eligible lesions in the same visit (“screen and treat” approach) and referral for colposcopic evaluation of women with non eligible lesions for cryotherapy treatment
- Referral of all VIA positive women for colposcopic evaluation and biopsy of lesions for histologic confirmation before treatment

Additional comments:

12. **What is the follow up protocol for VIA positive women treated with cryotherapy according to the “screen and treat” approach?**

Annex 4

SECTION II. HEALTH CARE ACTIVITIES

13. According to geographic areas/regions in your country, how many health care facilities are currently performing VIA screening?

Geographic area/region	2006	2007	2008	2009	2010	2011

Note: Add as many rows as needed.

Additional comments:

14. According to geographic areas/regions in your country, how many health care facilities are currently performing the “screen and treat” approach?

- The “screen and treat” approach is being implemented in the same health care facilities as VIA screening

Geographic area/region	2006	2007	2008	2009	2010	2011

Note: Add as many rows as needed.

Additional comments:

15. How many women have been screened with VIA in the last year by geographic area/region?

Geographic area/region	Number of women screened using VIA	Number of eligible women for VIA screening

Note: Add as many rows as needed.

16. What is the average of VIA positive women?

17. How many VIA positive women have been treated with cryotherapy in the last year by geographic area/region?

Geographic area/region	Número de mujeres tratadas con crioterapia	Número de mujeres elegibles para el tratamiento con crioterapia

Note: Add as many rows as needed.

Annex 4

18. How many VIA positive women have been referred for colposcopic evaluation in the last year?

If this information is available by geographic area/region, please specify:

Geographic area/region	Number of women referred for colposcopic evaluation

Note: Add as many rows as needed.

19. What is the percentage of VIA positive women lost to follow up?

Annex 4

SECTION III. HUMAN RESOURCES AND TRAINING

20. **Who is responsible for provider training for VIA/cryotherapy?**

- The Ministry of Health, through its own training program
- The Ministry of Health, through partner organizations
- International organizations

Specify the name of partner organizations supporting the training of providers:

21. **Who is giving the training courses?**

22. **How is provider training for VIA/cryotherapy carried out?**

Organization giving the training:
Title of the course:
Course duration Number of theoretical hours: Number of practical hours:
Profile of participants:
Number of trainees per course:
Number of trainers per course:
Contents of the course:
Training methodology:
Evaluation of competency of the trainees:

23. **Is there an accreditation system for VIA/cryotherapy providers? What does the accreditation system consist of and what is its validity? What organism or academic institution issues this accreditation?**

Annex 4

24. How many VIA/cryotherapy providers have been trained in the last 3 years according to professional category?

Year	Training	Gynecologists	General Practitioners	Nurses	Midwives	Paramedic personnel
2008	VIA					
	"Screen and treat"					
	Education & communication					
2009	VIA					
	"Screen and treat"					
	Education & communication					
2010	VIA					
	"Screen and treat"					
	Education & communication					
2011 (1 ^{er} semestre)	VIA					
	"Screen and treat"					
	Education & communication					

25. How many trained providers are currently performing VIA/cryotherapy?
26. How many providers does the country expect to train in the next 1-2 years?
27. Is there a mechanism for retraining VIA/cryotherapy providers? What does it consist of? How often are providers expected to take these refreshment courses?
28. How many VIA/cryotherapy providers have taken refreshment courses and how often
29. How many providers have never performed VIA/cryotherapy after completing their training? What are the causes of this situation?
30. Is there a training of trainers course?
- Yes
- No

Additional comments:

31. How is the training of trainers performed?

Organization giving the training:
Title of the course:
Course duration Number of theoretical hours: Number of practical hours:
Profile of participants:
Number of trainees per course:
Number of traineres per course:
Contents of the course:
Training methodology:
Evaluation of competency of the trainees

Annex 4

SECTION IV. MATERIAL RESOURCES

32. **What type of cryotherapy equipment is used in your country? Specify manufacturer and**
33. **What type of refrigerant gas (nitrous oxide or carbón dioxide) is used by cryotherapy equipments in your country? Are there difficulties to warrant refrigerant gas supply? In case of a positive answer, specify:**
34. **How many cryotherapy equipments are there available? What is the performance of these equipments?**
35. **Is there a system to warrant equipment maintenance?**
36. **In your country, what is the average cost per month of using VIA screening and cryotherapy treatment in a health care facility?**

Annex 1 provides a list of equipment and supplies for VIA/cryotherapy to facilitate costing of these activities.

Annex 4

SECTION V. QUALITY ASSURANCE, EVALUATION AND MONITORING

37. **How is the quality of VIA screening and cryotherapy treatment maintained in your country?**

38. **Are there indicators specifically developed for IVAA/cryotherapy evaluation and monitoring?**

- Yes
- No

In case of a positive answer, please attach the indicators.

39. **Are any of the following indicators collected and monitored?**

- Coverage of the eligible population (percentage of eligible women in the target population with at least one VIA test in a 3 to 5 years period depending on the specified screening interval)
- VIA test positivity (Percentage of women reported positive/invasive cancer on VIA)
- Compliance to colposcopy (Percentage of VIA positive women undergoing colposcopy following a positive VIA test)
- Detection rate of cervical cancer precursors (Number of precancerous lesions detected per 1,000 women who had a VIA test in a 12 month period)
- Compliance to treatment (Percentage of women detected to have cervical precancers or cancers completing appropriate treatment)
- Cure rate following cryotherapy treatment (Percentage of women detected negative on one year follow up VIA subsequent to cryotherapy treatment of cervical precancers)

40. **Is there a person responsible for quality assurance?**

- Yes
- No

41. **How often is evaluation and monitoring carried out?**

42. **Is a report produced with the results of evaluation and monitoring?**

- Yes
- No

In case of a positive answer, please attach the report.

43. **Is there an information system with the capacity to collect the data needed to build the indicators for evaluation and monitoring?**

44. **How are the results from the evaluation and monitoring used to improve VIA and cryotherapy quality?**

Annex 4

SECTION VII. TECHNICAL ASSISTANCE AND COOPERATION

45. Does your country receive technical assistance and cooperation from partner organizations regarding VIA screening and the “screen and treat” approach?

- Yes
- No

Please, provide the name of the organization(s)/institution(s) and the type of technical cooperation provided to the country

Organization/Institution	Type of technical cooperation	Year of initiation of technical cooperation	Funding

Note: Please add as many rows as needed.

46. Any other comments regarding VIA/cryotherapy implementation in your country?

Annex 4

ANNEX I. EQUIPMENT AND SUPPLIES FOR VIA AND CRYOTHERAPY

The following table lists a series of equipment and supplies needed for VIA and cryotherapy. Please add or remove articles as needed. Next to each article, a space is provided to indicate the approximate number used per month (if applicable as some items are purchased once) and the price per unit. The following table lists a series of equipment and supplies needed for VIA and cryotherapy. Please add or remove articles as needed. Next to each article, a space is provided to indicate the approximate number used per month (if applicable as some items are purchased once) and the price per unit.

Equipment	Amount per month	Price per unit
Gas cylinder		
Cryotherapy gun		
Regulator		
Probe tips		
Plastic sleeve		
Rubber stopper		
Flexible hose to connect regulator to cryotherapy unit		
Other		
Clinical supplies	Amount per month	Price per unit
Specula		
Sponge forceps		
Cotton Balls		
Containers (plastic cups) to hold 5% acetic acid		
Other		
Clinical solutions	Amount per month	Price per unit
5% acetic acid		
Normal saline		
Other		
Other supplies	Amount per month	Price per unit
Soap		
Cleaning gloves		
Other		

Annex 5

PLAN OF ACTION FOR THE IMPLEMENTATION OF CERVICAL CANCER PREVENTION SERVICES.

Latinoamerican School of Cervical Cancer, INEN, Peru.

Timeline:

Health Care Facility:

Responsible:

Activities	Responsible	Necessary support/ resources	Period of time	Comments
INFRASTRUCTURE AND SUPPLIES				
COMMUNITY-ORIENTED EIC ACTIVITIES (HEALTH PROMOTION)				
VIA AND CRYOTHERAPY SERVICES IN THE HEALTH CARE FACILITY				

Annex 6

List of furniture, inputs, and equipment necessary to set up an examining room for VIA screening and cryotherapy services. Latin American School of Cervical Cancer, INEN, Peru.

VIA	Amount per health care facility
Gyn examination table	01
Acetic Acid (vinager) 3-5%	Depending on the use
Graves Speculum	08 (5 medium y 3 large)
Cotton	05 rols/month per health care facility
Gauze swabs	02 boxes / month
Stool with wheels	01
Source of light (100 watts flexible lamp) or flash light	01
Stopwatch or wall clock	01
Sheets for the examination table	03
Rubber sheets to cover the beds	02
Plastic buckets for disinfection	02, one for soapy water, another one for sodium hypochlorite (Jik)
Plastic containers	01
Gloves	02 pares
Latex disposable gloves	1.800 (3 boxes with 50/box) per month
0.5% chlorine disinfectant solution	Depending on use
Instrument tray with wheels	01
Biosecurity plastic bags	01 paquet of 100 /month
Powder detergent	02 large

Cryotherapy	Amount per health care facility
Cryotherapy equipment (including 2 probe tips)	01
Cylinder with N ₂ O or CO ₂	01
Monkey wrench to adjust the gas connection	01

Annex 7

REPORT ON FOLLOW UP VISITS TO HEALTH CENTERS PROVIDING VIA AND CRYOTHERAPY SERVICES

SECTION I: DETAILS OF THE VISIT

Date of the visit:	
Name of the health care facility:	
Region:	District:
Person responsible for supervision:	
Person contacted:	

SECTION II: IMPLEMENTATION OF MONITORING, TREATMENT AND HEALTH PROMOTION

Annex 7

A. PROGRAM MONITORING	YES	NO	N/A
1. a) Does the health care facility provide VIA services?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If the answer is "Yes",			
b) How often are these services provided?			
2. a) Does the health care facility provide cryotherapy services?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If the answer is "Yes",			
b) How often are these services provided?			
c) Is cryotherapy offered and administered immediately after VIA?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Review the clinical records and compare them to the monthly reports.			
a) Are there any inconsistencies or discrepancies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If the answer is "Yes",			
b) Describe the inconsistency or discrepancy:			
4. How many women between 30-50 years of age have been screened with VIA in the past ____ months?(do not include the current month)			
5. How many of the women between 30 and 50 years of age who were screened with VIA had a positive result? (consider the same period of time as in question 4)			
a) Calculate the positivity rate: $\frac{\text{VIA positive (answer to question 5)}}{\text{Number of women screened (answer to question 4)}}$			
6. How many VIA positive women between 30 and 50 years of age received cryotherapy treatment (during the same period of time as in question 4)?			
a) Calculate the percentage receiving cryotherapy: $\frac{\text{Number of women treated with cryotherapy (answer to question 6)}}{\text{Number of VIA positive women (answer to question 5)}}$			
7. Is there a registry to enable follow up of women treated with cryotherapy?			
8. Is there a registry to enable follow up of women referred for treatment?			
B. INFRASTRUCTURE, EQUIPMENT AND PERSONNEL	YES	NO	N/A
Does the health care facility have a private area to monitor cervical cancer and treatment activities (VIA and cryotherapy)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the health care facility have a gynecological examination table?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there an appropriate source of light to provide the services?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there enough speculums in the health care facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there an adequate provision of acetic acid?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there cryotherapy equipment and gas available?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there physicians trained to provide VIA and cryotherapy if needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there midwives trained to provide VIA and cryotherapy if needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. IEC ACTIVITIES	YES	NO	N/A
Are there health promotion materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In average, how many educative sessions or similar events were organized in the community per month in the last 6 months?			

Annex 7

In average, how many educative sessions or similar events were organized in the health care facility per month in the last 6 months?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In average, how many women were reached through health promotion activities per month in the last 6 months?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do health promoters use IEC materials in the activities they organize in the community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION III: SUMMARY OF THE ASSESSMENT OF COMPETENCIES OF THE HEALTH CARE PROVIDERS IN A HEALTH CARE FACILITY

Instructions: List in the following table all the providers observed during the supervision visit.

Note:

- A provider qualifies as competent in VIA after:

-Screening 100 women.

-Correctly completing every step of the VIA checklist.

-Answering correctly to 85% of all visual and practical questions.

-Correctly identifying all cases of invasive cancer in the visual exam with slides.

- A provider qualifies as competent in cryotherapy after:

-Treating 5 women.

-Correctly completing every step of the cryotherapy checklist.

-Correctly identifying all normal cases and precancerous lesions.

	FOR ALL VIA PROVIDERS					ONLY FOR CRYOTHERAPY PROVIDERS		
Name of the provider	Visual evaluation 85 %: Correctly identifies VIA positives and negatives and makes the right therapeutic decision. (Y/N)	Visual evaluation: All cases of invasive cancer correctly identified. (Y/N)	Total number of women screened with VIA	Each step of the checklist was completed satisfactorily (Y/N)	Competent in VIA (Y/N)	Total number of patients treated with cryotherapy to date	Each step of the checklist was completed satisfactorily (Y/N)	Competent in cryotherapy (Y/N)

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SECTION IV: SUMMARY OF THE SUPERVISION

A. ACHIEVEMENTS

Please list here:

B. CHALLENGES

Please list here:

C. IDENTIFIED ACTIONS ACCORDING TO SECTIONS "A" AND "B"(SPECIFY PERSON RESPONSIBLE AND THE TIMELINES FOR EACH ACTION)

Please list here:

Annex 7

SECTION V: SUMMARY OF THE PROVIDER SUPERVISION	
A. COMPLETE THE FOLLOWING QUESTIONS FOR EACH PROVIDER	
1. Name of the provider:	
2. Number of women screened with VIA:	
3. Screening results:	
4. Percentage of normal cases and precancerous lesions correctly identified:	
5. All cancer cases correctly identified (Y/N):	
6. All steps in the VIA checklist correctly completed (Y/N):	

COMPLETE THE FOLLOWING QUESTIONS FOR EACH CRYOTHERAPY PROVIDER:	
1) Number of patients treated with cryotherapy:	
2) All steps in the cryotherapy checklist correctly completed (Y/N):	

VERIFICATION LIST FOR CLINICAL COMPETENCIES	
<p>Instructions: Mark with an “S” (satisfactory) if the task was completed satisfactorily, with an “U” (Unsatisfactory) if it was not completed satisfactorily, or with “N/O” if it was not observed.</p> <ul style="list-style-type: none"> • Satisfactory: The task is performed according to standard procedure. • Non Satisfactory: Unable to complete the task according to standard procedure. • Not Observed: The task or competency was not performed by the provider during the evaluation by the supervisor. 	
CHECKLIST FOR COUNSELING AND CLINICAL PERFORMANCE OF VIA	PROVIDERS
STEP/TASK	
A. COUNSELING BEFORE VIA	
1) Greet the woman respectfully and in a cordial manner.	
2) If the woman hasn't received any counseling regarding cervical cancer screening, proceed to do so before performing the pelvic examination (VIA).	
3) Confirm that the woman has come for VIA services.	
4) Assess the woman's knowledge about cervical cancer.	
5) Respond to the woman's needs and concerns regarding VIA.	
6) Provide information to the woman about the procedure and what to expect.	
COMPETENCY/ACTIVITY PERFORMED SATISFACTORILY	
B. PREPARATION TO PERFORM VIA	
1) Ensure that the instruments, supplies and the source of light are available and ready for use.	
2) Verify that the woman has emptied her bladder, and if necessary, washed the genital area.	
3) Ask the woman to remove enough clothing so that pelvic examination may be performed. Assist the woman to position herself on the examination table and drape her for pelvic examination.	
4) Wash hands thoroughly and dry them carefully. Perform abdominal examination.	
5) Put on new gloves or surgical gloves adequately disinfected. If possible, wear a second glove in one hand.	

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6) Arrange the necessary instruments and supplies in a disinfected tray.	
COMPETENCY/ACTIVITY PERFORMED SATISFACTORILY	
C. VISUAL INSPECTION WITH ACETIC ACID	
1) Inspect the external genitalia and identify the uretra and the Skene and Bartolino glands.	
2) Insert and adjust the speculum to clearly see the cervix. If you are using an external glove, immerse that hand in a 0.5% chlorine solution and take off the glove reversing it. - If the glove is disposable, dispose it in a plastic bag in a leak-proof container. - If the surgical glove is going to be reused, place it in a 0.5% chlorine solution for 10 minutes.	
3) Move the source of light in order to see the cervix clearly.	
4) Inspect the cervix for the presence of cervicitis, ectropion, tumors, Nabothian cysts or ulcers. Clean the cervix with a cotton swab if necessary. Dispose the swab.	
5) Identify the external orifice of the cervix, the squamocolumnar junction and the transformation zone.	
6) Swab the cervix with acetic acid and wait for one minute. Dispose the swab.	
7) Verify if the cervix bleeds easily. Verify if there are dense areas or acetowhite epithelium.	
8) Remove acetic acid from the cervix and vagina with a clean swab. Dispose the swab.	
9) Remove the speculum. - If the VIA test was negative, place the speculum in a container for decontamination using 0.5% chlorine solution for 10 minutes. - If the VIA was positive, place the speculum in a tray or recipient.	
10) Perform a bimanual examination and rectovaginal examination if indicated.	
COMPETENCY/ACTIVITY PERFORMED SATISFACTORILY	
D. TASKS AFTER VIA	
1) Clean the source of light with 0.5% chlorine solution or alcohol.	
2) Place both gloved hands in a 0.5% chlorine solution. Remove the gloves. - If the gloves are disposable, dispose them in a plastic bag in a leak-proof container. Gloves should be disposed if a rectovaginal examination has been performed. - If the surgical gloves are going to be reused, place them in a 0.5% chlorine solution for 10 minutes.	
3) Perform hand hygiene.	
4) If the VIA test is negative, ask the woman to get dressed.	
5) Register the results of the VIA test in the woman's medical record.	
6) Discuss the VIA test result with the woman and respond to her questions.	
7) If the VIA test was negative, explain to the woman when she needs to come back.	
8) If the VIA test was positive or suspicious of cancer, explain the next steps.	
9) After counseling, treat the woman or refer her for further evaluation.	
COMPETENCY/ACTIVITY PERFORMED SATISFACTORILY	

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E. COUNSELING AFTER VIA	
1) Ensure that the woman will be able to come back at any time if she needs further counseling or medical assistance.	
2) Provide instructions for follow up.	
COMPETENCY/ACTIVITY PERFORMED SATISFACTORILY	

1. CHECKLIST FOR COUNSELING AND CLINICAL PERFORMANCE OF CRYOTHERAPY	PROVIDERS
A. COUNSELING BEFORE CRYOTHERAPY	
1) Explain the reasons why treatment is recommended and describe the procedure.	
2) If the woman is pregnant, verify that she is less than 20 weeks into her pregnancy.	
3) Inform the woman of possible side effects and alternative treatments to cryo-therapy.	
4) Ask for the woman's consent to be treated.	
COMPETENCY/ACTIVITY PERFORMED SATISFACTORILY	
B. PREPARATION	
1) Ensure that the instruments, supplies and the source of light are available and ready for use.	
2) Verify that the cryotherapy equipment and the gas (CO ₂) are ready to be used.	
3) Explain the procedure and encourage the woman to ask questions.	
4) Verify that the woman has emptied her bladder recently (30 minutes). Assist the woman to position herself on the examination table and drape her for pelvic examination.	
5) Perform hand hygiene.	
6) Put on new gloves or surgical gloves adequately disinfected. If possible, wear a second glove in one hand.	
7) Arrange the necessary instruments and supplies in a disinfected tray.	
COMPETENCY/ACTIVITY PERFORMED SATISFACTORILY	
C. CRYOTHERAPY	
1) Insert and adjust the speculum to clearly see the cervix of the uterus. If you are using an external glove, immerse that hand in a 0.5% chlorine solution and take the glove off reversing it. - If the glove is disposable, dispose it in a plastic bag in a leak-proof container. - If the surgical glove is going to be reused, place it in a 0.5% chlorine solution for 10 minutes.	
2) Move the source of light in order to see the cervix clearly.	
3) Identify the external orifice of the cervix, the squamocolumnar junction as well as the location and size of the lesion (apply diluted acetic acid if necessary). Dispose the swab.	
4) Point the probe at the ceiling and press the freeze button for 1 second and then the defrost button for 1 second.	
5) Place the cryotip on the cervix, apply continuously for a 3 minute freeze.	

Annex 7

6) Wait for 5 minutes. Repeat the procedure (step 5). Close the tank valve.	
7) Inspect the cervix for bleeding. If there is bleeding, apply pressure to the area using a clean cotton swab. Dispose the swab.	
8) Remove the speculum and place it in a container for decontamination using 0.5% chlorine solution for 10 minutes.	
COMPETENCY/ACTIVITY PERFORMED SATISFACTORILY	
D. TASKS AFTER CRYOTHERAPY	
1) Clean the source of light with 0.5% chlorine solution or alcohol.	
2) Place both gloved hands in a 0.5% chlorine solution. Remove the gloves. - If the gloves are disposable, dispose them in a plastic bag in a leak-proof container. Gloves should be disposed if a rectovaginal examination has been performed. - If the surgical gloves are going to be reused, place them in a 0.5% chlorine solution for 10 minutes.	
3) Perform hand hygiene.	
4) Check to be sure that the woman is not having excessive cramping before she sits up, gets off the table and gets dressed.	
5) Provide the woman instructions for self-care at home and follow up.	
6) Record the results of treatment and follow-up schedule in the woman's record.	
7) Ask the woman to remain at the health care facility for at least 15 minutes before going home.	
COMPETENCY/ACTIVITY PERFORMED SATISFACTORILY	

Annex 8

Sample schedule for a VIA and cryotherapy course. Jhpiego.

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
Class Assessment of knowledge and competencies Demonstration	Brief session at class Clinical practice Discussion of cases	Brief session at class Clinical practice Discussion of cases	Clinical practice Discussion of cases	Mid course evaluation Clinical practice Discussion of cases	Session at class Clinical practice
Lunch					
Session at class Practice at class Summary	Session at class Practice at class Summary	Session at class Practice at class Summary	Session at class Practice at class Summary	Evaluación de Imágenes Practice at class Summary	Plan Evaluation of the course End of the course
HW	HW	HW	HW	HW	

Annex 9

Sample report form for cervical cancer prevention, Jhpiego.

Client Assessment and VIA Testing

Figure 6-2. Sample Cervical Cancer Prevention Record Form

REPRODUCTIVE HISTORY

Age _____ Parity _____ Currently pregnant (weeks) _____
 Current contraceptive _____ Age of first intercourse _____

Menstrual Bleeding Pattern

Regular (23–35 day interval)
 Irregular _____
 Postcoital spotting or bleeding

STI History

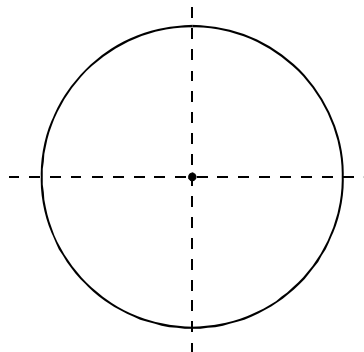
Number of sexual partners: Had an STI
 Patient _____ Patient _____
 Spouse _____ Spouse _____

Risk Factors

Smoker Previous abnormal Pap smear _____
 HIV/AIDS Mother or sister(s) with cervical cancer _____
 Chronic corticosteroid use _____

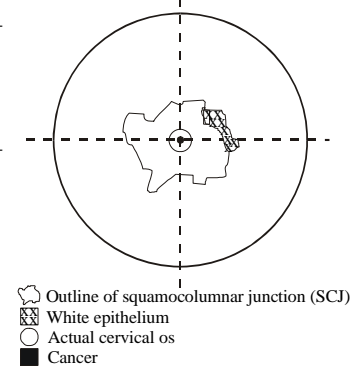
EXAMINATION

Vulva _____
 Vagina _____
 Cervix _____



Bimanual examination
 Uterus _____
 Adnexa _____
 Rectovaginal examination
 (if indicated) _____

Example of Cervical Map



MANAGEMENT

Normal VIA (Test-negative)

Counseled to return in _____ years for testing

STI Suspected

Treated _____
 Referred _____

Abnormal VIA (Test-positive)

Counseled about cervical cancer risk and treatment options

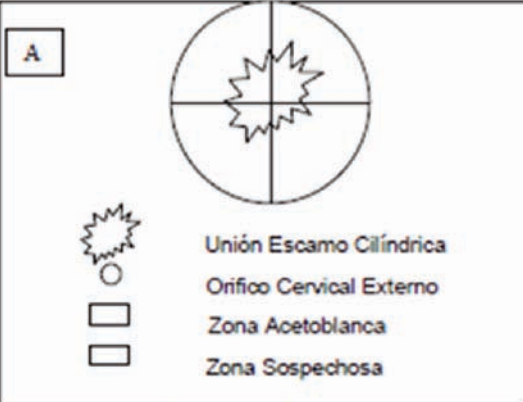
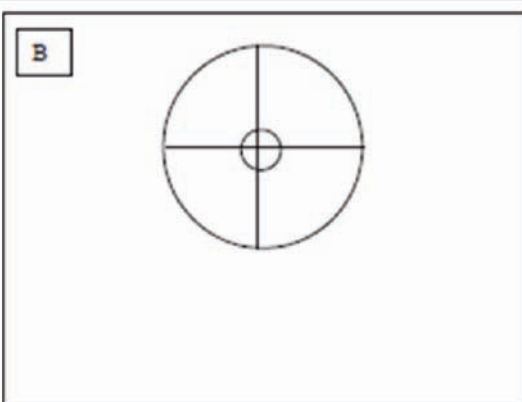
Accepts recommended treatment
 Treatment provided
 Cryotherapy (Instructions given)
 Other (Instructions given) _____
 Return visit date _____

REFERRAL

Suspected cervical cancer Lesion extends to vaginal wall
 Lesion > 75% Pregnancy (> 20 weeks)
 Lesion > 2 mm beyond cryoprobe, including tip of probe Referred for further testing or treatment

Annex 10

Report form for visual inspection with acetic acid, Ministry of Public Health and Social Welfare, El Salvador.

Ministerio de Salud Pública y Asistencia Social Inspección Visual con Ácido Acético (IVAA)	
REGION: _____	Unidad de Salud: _____
Nº de expediente: _____	Fecha: _____
Promotor de Salud Responsable:	
Nombre: _____	Edad: _____
Direccion: _____	
Dpto.: _____	Teléfono: _____ DUI: _____
FUR: _____	FUP: _____ Paridad: _____ Fecha ultimo PAP: _____
Diagnostico Concomitante	
Vaginitis <input type="checkbox"/> Pólipo <input type="checkbox"/> Cervicitis Sangrante <input type="checkbox"/> Condilomatosis <input type="checkbox"/> Otros: _____	
Procedimiento y descripción de la IVAA:	
Identifique el Orificio Cervical Externo (OCE) y dibuje con una línea la unión escamocilíndrica y la zona de transformación, aplicar el Acido Acético y esperar 1 minuto, observar si aparecen área de lesiones blancas o lesiones sospechosas de neoplasias y esquematice en el cuadro B según muestra el cuadro A	
<div style="border: 1px solid black; padding: 5px;"> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin-right: 5px;">A</div>  </div> </div>	<div style="border: 1px solid black; padding: 5px;"> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin-right: 5px;">B</div>  </div> </div>
<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Localización de la Lesión por cuadrantes:</p> <p>Superior Derecho <input type="checkbox"/> Inferior Derecho <input type="checkbox"/></p> <p>Superior Izquierdo <input type="checkbox"/> Inferior Izquierdo <input type="checkbox"/></p> <p>Penetra canal endocervical si <input type="checkbox"/> No <input type="checkbox"/></p> </div>	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Resultado de la IVAA:</p> <p>Positivo <input type="checkbox"/> Negativo <input type="checkbox"/></p> <p>Lesión Extensa <input type="checkbox"/></p> <p>Sospecha de Invasión Si <input type="checkbox"/> No <input type="checkbox"/></p> </div>
<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Seguimiento:</p> <p>Control en 1 Años <input type="checkbox"/> Control de 2 Años <input type="checkbox"/></p> <p>Referido a Colposcopia <input type="checkbox"/></p> <p>Control post Crioterapia <input type="checkbox"/></p> <p>Referencia a Oncología por lesión Visible <input type="checkbox"/></p> </div>	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Motivo de Referencia:</p> <p>No acepta tratamiento <input type="checkbox"/> Duda Diagnostica <input type="checkbox"/></p> <p>No hay Equipo disponible <input type="checkbox"/></p> <p>Sospecha de Cáncer <input type="checkbox"/> Lesión Extensa <input type="checkbox"/></p> <p>Penetra canal <input type="checkbox"/> Embarazo <input type="checkbox"/></p> </div>
<p style="text-align: center;">Aplicación Crioterapia si <input type="checkbox"/> no <input type="checkbox"/></p>	
<p>Nombre y firma de Responsable: _____</p>	

Annex 12

Forms for daily logs and monthly consolidated reports of VIA and cryotherapy assistance activities.

Health Care Facility:

Month:

Year:

INDICATORS/AGE GROUP	<30	30-49	>49	Total
# Patients				
PURPOSE OF THE VISIT				
1. First time VIA				
2. Follow up of a previous VIA test after one year				
3. Follow up of a previous VIA test after 3 years				
4. Postponed cryotherapy				
5. Referral				
FIRST VIA TEST RESULT				
1. VIA (+)				
2. VIA (-)				
3. Suspicion of cancer				
MANAGEMENT OF VIA (+) AND SUSPICION OF CANCER CASES				
Cryotherapy (total)				
a) Cryotherapy on the same day				
b) Postponed cryotherapy				
c) Return for postponed cryotherapy				
REFERRAL RATE AFTER FIRST VIA				
1. Lesion suspicious of cancer				
2. Extensive lesion or lesion extended on to the vaginal wall				
3. Other				
REFERRED PATIENTS				
1. Patient referred for an unconfirmed VIA positive result				
2. Patient referred for an unconfirmed VIA positive result treated with cryotherapy				
3. Patient referred for a confirmed VIA positive result				
FOLLOW UP AT ONE YEAR AFTER CRYOTHERAPY				
1.- VIA (+)				

Results at a Glance

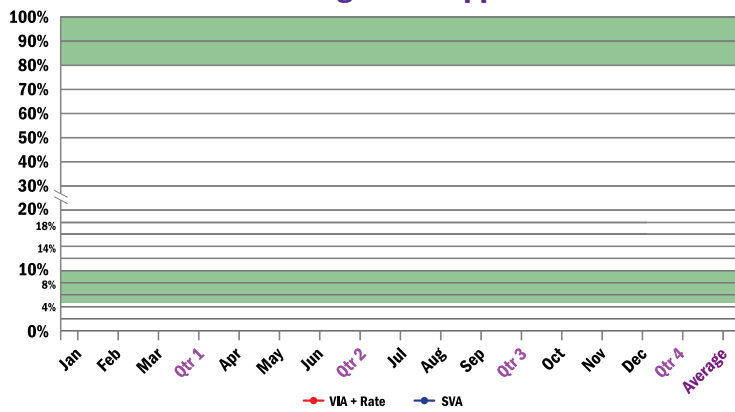
Country: Guyana Site: _____ Year: _____

The Cervical Cancer Prevention and Treatment Programme

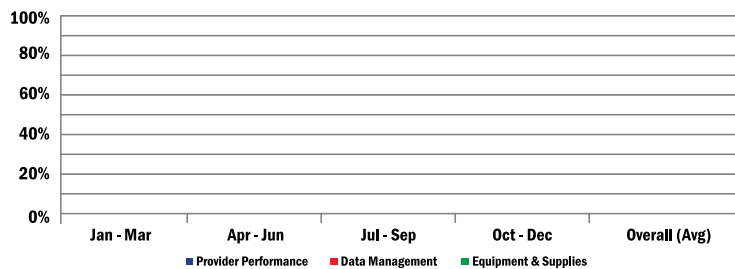
Number of New Cervical Cancer Screenings



VIA Positive Rate and Single Visit Approach Rate

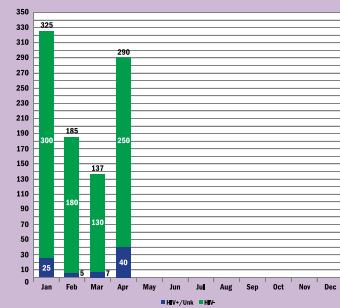


Percent Achievement of Performance Standards

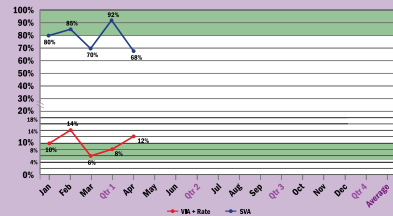


Sample Data

Number of New Cervical Cancer Screenings (Monthly Summary Form: Indicator #4)



VIA Positive Rate and SVA Rate



VIA Positive Rate and SVA Rate: Calculations

VIA Positive Rate
 Total # of new women with VIA positive result (Ind. # 5) / Total # of new women screened (Ind. #4) X 100
 Example: 4 new VIA+ women / (40 total women screened) X 100 = 10 %

SVA Rate for New Patients
 Total # of VIA+ women receiving immediate cryotherapy (Ind. #11) / Total # immediate cryotherapy + Total # postponed cryotherapy (Ind. # 11) X 100
 Example: 3 women received immediate cryo / (3 women immediate cryo + 1 woman postponed cryo) X 100 = 75%

Percent Achievement of Performance Standards

