

PAHO-CDC Collaboration in Cancer

Supporting PAHO's 7-Point Plan of Action for Cervical Cancer Prevention and Control, Including Strengthening Cancer Registries

Report of Meeting

between

PAHO, CDC, and

Selected Latin American & Caribbean (LAC) Countries

(Atlanta, GA, USA, 29–30 April 2009)

Acknowledgements

This report synthesizes information presented and discussed during the PAHO-CDC-LAC country meeting on collaboration in cancer. The report was written by Silvana Luciani, using notes taken by Charlene Wong and Katherine Roland, and from presentation materials prepared by Adolfo Zarete and Haydee Padilla (Bolivia), Erick Alvarez and Daniel Frade (Guatemala), Kenneth George (Barbados), Veronica Roach, Wayne Haqq and Rosemary Paul (Trinidad & Tobago). We wish to thank all meeting participants from the CDC, PAHO and participating countries for their contributions to the meeting discussions and for input to this report.

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I. Executive Summary

Representatives from country cervical cancer program managers and cancer registry personnel from 4 countries [Barbados, Bolivia, Guatemala, Trinidad & Tobago] met with staff from PAHO and staff from several divisions within CDC: Cancer, STDs, Immunization, HPV laboratory. The purpose was to discuss collaborative activities to support countries with their cervical cancer programs and cancer registries. This activity was programmed as part of the PAHO-CDC cooperative agreement on chronic disease and was a prelude to country missions to assess and evaluate programmatic needs. The meeting objectives were to familiarize CDC staff with the PAHO and Member States' priorities, plans and needs for support with regards to cervical cancer and cancer registration and to brief participants on CDC's capacity to assist Member States to address these needs.

A brief background on PAHO's work in cancer, the Regional Strategy for Cervical Cancer Prevention and Control, and the ProVAC initiative were presented. Member States at the meeting provided a situation briefing on their cervical cancer programs, including HPV vaccine introduction and cancer registries and identified key areas in which they require support. CDC staff presented their various initiatives and showcased an array of programs, research studies, laboratory capacity, cancer registry tools, HPV vaccine policy and program monitoring systems. This was a tremendous opportunity to identify how CDC can partner with PAHO to provide technical assistance and provision of advice and guidance to Member States in cervical cancer control activities, cancer registration and HPV vaccine introduction.

Country needs for technical assistance, according to the PAHO 7 point plan of action for cervical cancer were identified during the meeting. A work plan was developed for joint activities which would be feasible to implement in the next year within the context of the PAHO-CDC cooperative agreement (#5U58DP3248A3-04). All 4 countries identified the conduct of needs assessment/program evaluations, national workshops with key stakeholders for advocacy and awareness raising, and support to improve cancer registration as priority activities. All 4 countries expressed interest to participate in the ProVAC initiative and to receive policy advice and guidance with regards to HPV vaccine implementation. In addition, each country proposed specific requests for assistance in the areas of cancer registration, operational research, and training. We agreed that, by December 2009 visits to 2 countries would take place by a team from PAHO-CDC to participate in national advocacy meetings and to conduct rapid program assessments; and that visits for the same purpose would be organized in 2 more countries in 2010, the selection of which would be determined at a later date, and depend on resources available and other practical issues. The group will continue to communicate regularly, and hold virtual meetings, to plan out the country visits and define in more detail the purpose, agenda and timing of the country visits.

II. Introduction

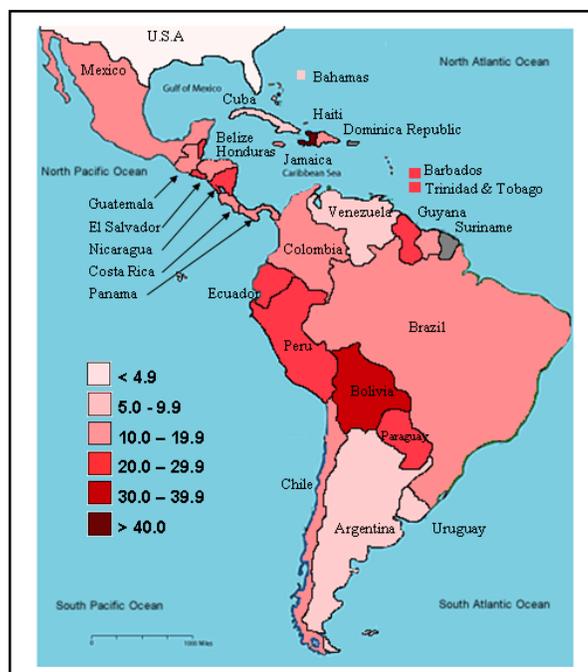
Cancer is the second leading cause of death in Latin America and the Caribbean (LAC) with an estimated 480,000 deaths from cancer in 2002 in this region (Ferlay et al. 2004). Among women, cervical cancer is one of the most commonly occurring cancers and is a leading cause of cancer death in the majority of countries in the Region (Ferlay et al. 2004). Despite the availability of cancer services and cervical cancer screening programs, most countries lack capacity to effectively screen for and prevent cervical cancer. In a 2005 national capacity survey conducted by PAHO, only 50% of the responding Ministries of Health reported having a cancer program and budget line for cancer. All countries in the Americas reported having cervical cancer screening services, yet screening coverage is assessed to be less than 50% of the population in the majority of these programs (PAHO, 2005). Many countries have cancer registries, however most are hospital based and the quality and completeness of data is often poor.

In recognition of the country needs to improve cancer control, and cervical cancer prevention in particular, and cognizant of the wealth of expertise and resources available in the U.S. Centers for Disease Control and Prevention (CDC) and the Pan American Health Organization (PAHO), these two organizations have embarked on a collaborative effort to assist country cancer programs. This collaboration is in the context of a broader PAHO-CDC cooperative agreement for chronic diseases and health promotion.

A first meeting of PAHO-CDC and selected LAC countries was convened in Atlanta, Georgia, USA on 29–30 April 2009 to share information, discuss and plan the types of collaborative activities which could be undertaken to support cervical cancer prevention programs, including HPV vaccine introduction and cancer registries (see

Appendix for meeting agenda). In addition to participants from PAHO, representatives from several divisions of CDC attended the meeting, including the Divisions of Cancer Prevention and Control, Sexually Transmitted Infections, Global Immunization, and the HPV Laboratory. From LAC countries, cervical cancer program managers and cancer registry managers from Barbados, Bolivia, Guatemala and Trinidad & Tobago participated in the meeting. These countries were selected on the basis of expressed need and desire to engage in the PAHO-CDC collaboration in cancer and also to ensure

Cervical Cancer Mortality in LAC



a balance of representation from the Caribbean sub-region, Central America sub-region and South America.

III. Background

A. PAHO's Achievements, Priorities and Plans for Cervical Cancer Prevention

Since 1999, PAHO has been working within the Alliance for Cervical Cancer Prevention, with a generous grant from the Bill & Melinda Gates foundation to improve country capacity for cervical cancer prevention.

PAHO's work has been in three main areas:

- a) operational research to assess the effectiveness of a screen and treat approach in primary care settings using visual inspection screening (VIA) and cryotherapy treatment;
- b) programmatic support to Ministry of Health cytology screening programs to improve the quality and completeness of care, as well as providing guidance on HPV vaccine introduction; and
- c) policy and advocacy to raise political awareness and support for making new investments for cervical cancer prevention.

In this regard, PAHO developed and the Directing Council of Ministers of Health approved a Regional Strategy & Plan of Action for Cervical Cancer Prevention and Control, which provides a tremendous political opportunity to enhance programs.

It calls upon countries, together with PAHO and its partners to implement a 7 point plan of action [see text box]. PAHO has begun implementation of this plan, beginning in priority countries where disease burden is highest.

With regards to HPV vaccine introduction, PAHO's ProVAC initiative is providing tools and technical assistance to countries considering the introduction of new vaccines, including HPV vaccines. This is to help countries collect cost data, conduct cost-effectiveness analysis, and take an evidence based approach to informed decision making regarding new vaccine introduction.

PAHO's Plan of Action for Cervical Cancer Prevention and Control

1. Conduct a situation analysis.
2. Intensify health education, information and counseling.
3. Improve screening and pre-cancer treatment programs.
4. Establish or strengthen information systems and cancer registries.
5. Improve access and quality of cancer treatment.
6. Generate evidence to facilitate decision making on HPV vaccine introduction.
7. Advocate for equitable access and affordable HPV vaccines.

B. Capacity within CDC for Cervical Cancer Prevention and Cancer Registration

There is broad expertise, technical skills and programmatic experience within the Division of Cancer Prevention and Control which could potentially lend support to PAHO and LAC countries. Namely, the National Program of Cancer Registries, the National Breast and Cervical Cancer Early Detection Program, the cervical cancer research and interventions/Landscape Project and the CDC supported Indian Health Service colposcopy training program all could offer resources and assistance. For example, the educational strategies utilized in the B&C program to attract immigrant women to services could provide valuable lessons and be utilized by LAC countries; the colposcopy training services of non-medical personnel could be provided to LAC countries; and the CDC cancer registry offers several tools including registry software and data linkage tools which could be adapted and utilized in LAC cancer registries.

The Global Immunization Division, which works through WHO and has staff persons assigned within PAHO, WHO, and several LAC countries, could participate in future activities on HPV vaccine introduction, given their extensive experience with new vaccine introduction.

Within the STD Division, staff are extensively involved in both Global and US HPV vaccine policy and impact monitoring. They are currently developing a tool for HPV vaccine impact monitoring. The experiences, insights and expertise on HPV vaccine monitoring within this division could provide technical assistance to LAC countries as they begin to develop plans for HPV vaccine implementation and monitoring.

CDC has an HPV laboratory which also serves as the reference laboratory in WHO's HPV LabNet, which helps improve quality of laboratory services for effective surveillance and monitoring of HPV vaccination. The expertise, skills and knowledge within the CDC HPV lab could be utilized to help create sub-regional HPV laboratories with standardized and high quality HPV testing in LAC. Staff from the HPV lab are collaborating with PAHO and the Ministry of Health Jamaica on an HPV prevalence study, which will yield important information about HPV in Jamaica and the Caribbean in general.

TABLE 1: Demographic Information of Countries Involved in the PAHO-CDC Collaboration in Cancer¹

Country	Geographic Size (km ²)	Total Population (thousands)	% Urban Population	Per Capita Gross National Income (US\$)	Life Expectancy At Birth
Barbados	430	295	40%	15,150	77
Bolivia	1,098,00	9,694	62%	1,100	66
Guatemala	108,900	14,017	48%	2,590	70
Trinidad & Tobago	5,128	1,338	13%	12,500	70
United States	9,162,00	308,798	82%	44,710	78

C. Countries' Cervical Cancer Program Status and Expressed Needs

1. Bolivia

Bolivia is ranked as having the second highest rates of cervical cancer cases and deaths, with an estimated incidence rate of 55.0/100,000 and mortality rate of 30.4/100,000 (Ferlay et al. 2004). It is one of the most common causes of death of women aged 35-64 years of age, affecting women in the prime of their lives (Parkin 1997). A cervical cancer program, using Pap testing has been in place since 1984, and although the number of Pap tests has consistently increased each year, the estimated population coverage is only 10% of women. As of 2006, Pap testing, follow up diagnosis and pre-cancer treatment is offered free of charge to all women, as part of the Maternal and Infant Universal Insurance System (SUMI) program. In May 2009, Bolivia received a donation of HPV vaccine from the International Planned Parenthood Foundation (IPPF) and plans to undertake a pilot project to vaccinate 3,500 girls.

Bolivia has prioritized cervical cancer prevention and just launched a national program plan to cover the period 2009-2015. It has well defined objectives, goals and strategies, which includes strengthening primary health care services for active recruitment and follow up of women into the screening program. The plan also includes the use of visual inspection screening (VIA) in areas where access to Pap is limited.

¹ Source: PAHO, 2008

TABLE 2: Cervical Cancer and Cancer Registries in the Countries Involved in the PAHO-CDC Collaboration in Cancer.

Country	Cervical Cancer ^{2,3}		Cervical Cancer Screening Program	Cancer Registry	HPV Vaccine Introduction
	Incidence Rate (per 100,000)	Mortality Rate (per 100,000)			
Barbados	24.9	9.4	National Pap test screening	Barbados national registry initiated in 2007	Cost is a barrier to public sector introduction
Bolivia	55.0	30.4	National Pap test screening since 1984; new plan created for 2009-2015; VIA screening in some areas	Cancer registry in La Paz	Demonstration project to begin May 2008
Guatemala	30.6	17.2	National Pap based screening program since 1980s; new plan created for 2009-2011; VIA screening in some areas	Cancer registry within cancer hospital	Analyzing cold chain and other resource requirements for future introduction
Trinidad & Tobago	27.1	10.7	National Pap test screening since 1970s; HPV testing under consideration	Population based cancer registry since 1994	Cost is a barrier to public sector introduction
United States	7.7	2.3	CDC operates National Cervical and Breast Screening Program	CDC Cancer Registry Program	Introduced in national immunization program in 2007

Bolivia expressed needs for technical and financial support to make the program plan operational, and specifically requested assistance to improve cyto-pathology laboratories, colposcopy, public education and assistance with HPV vaccine introduction.

2. Guatemala

Cervical cancer is the leading cause of cancer death in Guatemala (Ferlay et al. 2004). There are an estimated 5 million women at risk of cervical cancer, 54% living in rural areas and 23 different cultural groups. Pap test screening has been available in Guatemala since the 1980s but in a rudimentary and fragmented manner.

² All rates shown are age-standardized using the World standard population.

³ Source: Ferlay et al. 2004

A national plan for cervical cancer was created for 2009-2011, as part of the National Health Program, which defines clear objectives, goals and strategies to address their challenges: low coverage in rural and marginalized populations, high number of false negatives with Pap testing, lack of quality of colposcopy and patient follow-up care.

With regards to HPV vaccination, Guatemala has begun to analyze what would be needed to vaccinate the estimated 175,000 10 year old girls, and recognize that the cold chain requirements for the current vaccine presentation and 3 dose schedule far exceed their current capacity, and that the cost of the vaccine is unaffordable for a sustainable implementation.

The support needed by Guatemala to implement their national cervical cancer plan include technical assistance with: training, information system, research on HPV DNA testing, and palliative care.

3. Trinidad and Tobago

Cervical cancer is the second most common cancer in women with a crude incidence rate of 18.4/100,000 (2002-2006). Cervical cancer control is of national importance. A national screening program, using Pap testing is operating well, and with cytology laboratory providing results in less than 4 weeks. The program is considering the feasibility of using HPV DNA testing as a primary screening test for women over 30 years of age. Technical assistance needed at this time is: training/certification of gynecologists in colposcopy; assessment of the existing information system, particularly for CIN 2-3 monitoring.

Trinidad and Tobago has a population-based cancer registry, established in 1994, and deemed critically important for the national oncology program. Guidance and software (CanReg) has been provided by IARC, and T&T offers training to other Caribbean countries seeking to set up a cancer registry. The registry maintains records of all cancer cases in T&T, as well as analyzes and interprets data to provide information to government, health professionals and the general public.

The advice, support and technical assistance needed at this time is: to review and advise on management structure and human resource requirements including training for the cancer registry, and advice on the legislative requirements for the registry.

4. Barbados

The Barbados National Registry was created in 2007 to collect timely and accurate national data on occurrence of cancer, stroke and acute coronary events. The challenges for the registry are its sustainability and the 50/50 public/private split of health care services. The pilot phase for cancer surveillance has just commenced, with a focus on breast and prostate cancer.

With regards to HPV vaccine, it is in very limited use in the private sector, and the biggest barrier is the high cost of the vaccine. Efforts are needed to bargain for lower cost HPV vaccines and more cost-effective purchasing methods. Barbados expressed interest to participate in pilot testing of HPV vaccines, particularly in high risk groups.

IV. Discussion

The discussions were focused on how the PAHO 7 point plan of action could be implemented in countries, and what countries would need in terms of support from PAHO and CDC for their cervical cancer programs including HPV vaccine introduction and cancer registries. Table 3 provides a summary of these discussions.

TABLE 3: Priority Technical Cooperation Activities Identified to Support Country Programs

Country	Cervical Cancer Program, Including HPV Vaccine Introduction	Cancer Registry
Barbados	<ul style="list-style-type: none"> ✓ Training: health providers to take a Pap, cytology lab personnel, colposcopy, data collectors, etc. ✓ Education strategies: to reach high risk populations with screening. ✓ Participate in the ProVAC initiative. ✓ Advocacy to make HPV vaccines more affordable. 	<ul style="list-style-type: none"> ✓ Review the newly developed info system/cancer registry. ✓ Financing to assist with registry functions.
Bolivia	<ul style="list-style-type: none"> ✓ Training: enhance capacity in training centres in Sta Cruz, Cochobamba, LaPaz; train cytotechnicians; colposcopy training. ✓ VIA training [Guatemala offered to provide direct assistance to Bolivia] ✓ Participate in the ProVAC initiative and receive advice and assistance on how to introduce the vaccine in a sustainable manner and integrate within adolescent health and cervical cancer programs. ✓ Equipment and supplies: microscopes, other supplies for Pap testing. ✓ HPV prevalence and typing studies ✓ Pilot test the careHPV tests 	<ul style="list-style-type: none"> ✓ Assist with revitalizing the info system/cancer registry. ✓ Participation by PAHO, CDC in the Bolivia Cancer Congress planned in October.
Guatemala	<ul style="list-style-type: none"> ✓ Financial assistance to extend VIA & cryotherapy training of primary care providers; purchase equipment and supplies including cryotherapy units ✓ Pilot test HPV as a primary screening test. ✓ Colposcopy training of ob/gyn, and other providers. ✓ Evaluate effectiveness of current VIA/cryotherapy program. ✓ Participate in the ProVAC initiative 	<ul style="list-style-type: none"> ✓ Strengthen cxca information system and help reinforce with public health decision makers the importance and usefulness of cancer registries/information systems.
Trinidad & Tobago	<ul style="list-style-type: none"> ✓ Colposcopy training of ob/gyn, and other providers. ✓ Participate in the ProVAC initiative and assistance with HPV vaccine introduction. ✓ Evaluate quality of Pap screening in TT. ✓ Assistance with pilot study on HPV testing. 	<ul style="list-style-type: none"> ✓ Review and upgrade the current cxca information system, HSIL surveillance. ✓ Review of the management/structure of the cancer registry. ✓ Training of registry staff. ✓ Review and advise on human resource requirements, and on legislation requirements. ✓ Assistance with data analysis and report generation for 2002-2007.

V. Recommendations

It was recommended that, within 2009-2010 and in the context of a PAHO-CDC collaborative agreement in chronic diseases, that the following activities be undertaken in each country to support cervical cancer control programs and cancer registries, pending funding. It was recognized that these activities would involve various divisions of CDC [Cancer Prevention and Control, Sexual Transmitted Infections, Global Immunization, HPV Laboratory], as well PAHO support from the projects on chronic diseases, immunization, and women's health.

First, a site visit by PAHO-CDC staff to conduct a **needs assessment**/situation assessment of the cervical cancer program and cancer registries was indicated by all countries as one of the essential activities for the collaboration. This would include a comprehensive assessment of each country's program including the screening and pre-cancer treatment services, education strategies, laboratories, information and monitoring systems, and assessment of potential for HPV vaccine introduction. Existing cervical cancer needs assessment tools and methodologies are available from PAHO and from CDC and these could be reviewed and adapted for use in this current collaboration.

Also, there was a recognition by each country that more information needs to be disseminated for greater understanding and awareness of HPV vaccines, HPV and cervical cancer and new screening and precancer treatment technologies. In this regards, there was consensus to organize **national meetings**, together with PAHO-CDC and invite multi-disciplinary stakeholders with representation from governments, non-governmental organizations, universities, churches, women's groups. The purpose would be to sensitize the public health and other communities about the issues and available public health interventions for cervical cancer prevention. The national meetings could be organized at the same time of the needs assessments.

Specific interventions to support each country, based on the needs expressed and noted in Table 3, need to be explored further based on available resources.

VI. Conclusions and Next Steps

It was concluded that PAHO-CDC would work with each of the four countries to organize national meetings as well as conduct cervical cancer program needs assessment/program evaluations. We would aim to complete these activities in two countries before Dec 2009 [Bolivia, Trinidad & Tobago were proposed] and two additional countries in 2010 [Guatemala, Barbados were proposed].

PAHO-CDC will prepare and circulate a meeting report to summarize discussions and agreements. PAHO will then organize virtual meetings with each country and CDC to continue the dialogue on technical assistance to be provided to each country, and specifically to plan the timing and purpose of the country visits for the national stakeholders meeting and needs assessments.

The meeting concluded with appreciation expressed by countries for the support from PAHO and CDC and for a call to ensure that site visits do happen within the coming year.

VII. References

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VIII. Appendix: Meeting Agenda & List of Participants

Meeting Agenda

Goal

To define ways that CDC's cancer, immunization and STD programs can assist the implementation of PAHO's 7 point plan for cervical cancer control and assessing cancer surveillance in Latin America and the Caribbean.

Objectives

1. To familiarize participants with CDC's cancer, STD and immunization programs, resources and capacity for technical assistance for cervical cancer control in LAC.
2. To familiarize CDC staff with PAHO and LAC countries' programs, priorities and plans for cervical cancer control.
3. To define activities in which CDC staff collaborate with LAC and PAHO colleagues to implement the PAHO 7 point plan of action for cervical cancer control and to assess cancer registration.
4. To outline future cervical cancer related activities for the CDC-PAHO cooperative agreements.
5. To elaborate on monitoring systems to evaluate cervical cancer screening and vaccine outcomes.
6. To reach consensus about dates/general time frame for ongoing communications and site visits.

Agenda: Wednesday, 29 April 2009

- 9:00 Introductions/Welcome from CDC/DCPC
- 9:15 Overall goals of meeting/logistics
- 9:45 Background from PAHO
- ✓ Cancer registration and cervical cancer control activities and capacity.
 - ✓ Elaborate on cervical cancer strategic plan (include current status on cancer registries, screening and vaccination).
- 10:15 Background on Division of Cancer Prevention and Control
- ✓ National Program of Cancer Registries: Overview of cancer registration
 - ✓ National Breast and Cervical Cancer Early Detection Program overview and cervical cancer control
 - ✓ Presentation of Landscape project: cervical cancer research and interventions
- 11:00 Immunization activities
- ✓ Overview of Global Immunization Division/HPV vaccine support
 - ✓ CDC activities in LAC/Caribbean

- 11:20 STD activities:
- ✓ US monitoring plans
 - ✓ CDC's involvement outside of U.S. and with WHO
- 11:40 CDC HPV Lab
- ✓ Current role of HPV testing/HPV typing
 - ✓ Progress to date on Labnet
- 12:00 Working Lunch: start discussions
- 1:00 Review of status of cervical cancer prevention and control (including HPV vaccine) and cancer registry activities: Trinidad and Tobago, Barbados, Bolivia, Guatemala
- 2:20-2:30 Break
- 2:30-3:15 Wrap-up and review of agenda for April 30
- 3:30 Surveillance and demo software packages available for use in cancer registration
- 5:30 Adjourn

Thursday, 30 April 2009

- 8:30 Discussion: Session will include how CDC partners can contribute to the 7 point plan of action proposed in the PAHO strategic plan as well as the NCCDPHP/PAHO cooperative agreement around cancer registration.
1. Conduct a situation analysis
 2. Intensify information, education and counseling
 3. Fortify screening and pre-cancer treatment programs
 4. Establish or strengthen information systems (e.g. STD, vaccination related systems) and cancer registries
 5. Improve access to and quality of cancer treatment and of palliative care
 6. Generate evidence to facilitate decision making regarding HPV vaccine introduction
 7. Advocate for equitable access and affordable HPV vaccines
- 12:00 Working lunch
- 1:30 Draft SOW for country visits to take place ~ 9/09
- 4:30 Meeting summary
- 5:00 Adjourn

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