

Expert Consultation on Colorectal Cancer Screening in Latin America and the Caribbean

Report from the PAHO meeting held on
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BACKGROUND

In the Americas, colorectal cancer is the fourth most common cancer, responsible for approximately 246,000 new cases and 112,000 deaths each year. It is predicted that colorectal cancer cases will increase by 60% to 396,000 new cases, by 2030. The highest colorectal cancer incidence rates are observed in Canada, Uruguay, and Barbados, while the countries in Central America have the lowest rates.

Colorectal cancer is amenable to screening and early detection, as it predominantly develops from non-malignant precursor lesions which can be detected and treated effectively. Guidelines for colorectal cancer screening have been developed by numerous national medical associations. These generally include beginning screening, in an average risk population, at age 50 years until age 75 years. The recommended modalities for screening vary according to the specific guideline, but generally include fecal occult blood testing (FOBT), fecal immunochemical test (FIT), flexible sigmoidoscopy or colonoscopy. Regardless of the test, an organized screening program with established processes and procedures to achieve a high coverage, high treatment rate, and quality assurance are needed in order to be effective.

While colorectal cancer screening programs have been established in Canada and the USA, most countries in Latin America and the Caribbean (LAC) do not yet have such programs, or screening guidelines, and services for colorectal cancer are often not available in the public sector. Furthermore, guidance is lacking on how to effectively implement evidence based and high quality colorectal cancer screening programs, particularly in limited resource settings.

Based on this context, the Pan American Health Organization, in collaboration with the USA Centers for Disease Prevention and Control (CDC) convened an expert consultation on colorectal cancer screening. The objectives of the meeting were to:

- present available knowledge and evidence on colorectal cancer screening methods;
- discuss strategies, successful experiences and challenges in implementing high quality colorectal cancer screening programs in the countries of the Americas; and
- exchange ideas and identify opportunities to create and/or strengthen colorectal cancer screening programs in the region, including feasible quality assurance and program performance standards.

The meeting gathered 26 participants from 14 countries along with representatives from the World Health organization (WHO), the Pan American Health Organization (PAHO) and the International Agency for Research on Cancer (IARC). The participants represented the Ministries of Health and the National Cancer Institutes of the countries in the Americas.

The meeting began with remarks about the colorectal cancer situation and challenges in Latin America and the Caribbean, by Silvana Luciani from PAHO's Regional Program on Noncommunicable Diseases; followed by remarks from Mona Saraiya from the CDC Cancer Division, about how the experiences from the USA's colorectal cancer screening program can offer important lessons for other countries in the region. A series of presentations on country experiences and challenges took place, as well as a discussion on feasible strategies for establishing a colorectal cancer screening program in Latin America and the Caribbean. This report summarizes the presentations and discussions from the meeting, and the ideas that emerged on how to proceed with improving the situation for colorectal cancer screening in the region.

SESSION 1: SCIENTIFIC EVIDENCE ON COLORECTAL CANCER SCREENING

The first session of the meeting reviewed the WHO position on cancer screening in limited resource settings; the different colorectal cancer screening modalities with its advantages and disadvantages; and the quality control requirements for colorectal cancer screening. The presentations of this first session, served as the basis for discussion during the rest of the meeting.

WHO Guidance on Cancer Early Detection and Screening in Limited Resource Settings

An overview of the WHO position on establishing cancer screening programs in limited resources settings was presented by Andre Ilbawi from WHO's Cancer Program. In such settings, WHO suggests prioritizing early diagnosis in people with symptoms, over screening in asymptomatic people. The difference between early detection and screening is that the latter identifies the disease in a general population, while early diagnosis identifies the symptoms requiring much less resources. To be effective, a well organized and accessible program is need with quality assurance processes. For screening, population coverage of at least 70% is needed. Well organized cancer screening and early detection programs can reduce treatment costs, improve outcomes and reduce mortality at a population level. On the other hand, low incidence of disease, and low quality of the screening test and processes impact negatively on the effectiveness of screening programs.

Some countries report having screening programs, but with participation lower than 50%. This means that, even when screening is offered, it is ineffective given that much of the population is not aware, does not utilize or does not have access to the service. The tools and know-how to increase screening participation are available, but it is necessary to apply them to increase coverage.

Another key aspect is that the cancer screening programs must be integrated in comprehensive cancer control programs that ensure not only the diagnosis but also a timely referral and access to effective treatment.

Colorectal Cancer Screening Modalities: Summary of evidence

The various screening tests available for colorectal cancer screening was presented by Jesus Garcia-Foncillas, Director of the Oncohealth Institute of Spain. Colorectal cancer develops slowly from precursor lesions, which can take 10 to 15 years to develop into cancer. This provides a window of time for screening. Colorectal cancer screening recommendations varies according to the level of risk in the population, and can be summarized as: in an average risk populations, screen from ages 50 years to 75 years; in a high risk population, screening should begin at a younger age than 50 years of age. This populatin includes those with a family history of colorectal cancer, inflammatory disease, genetic syndromes (i.e. Lynch syndrome) or previous cancer history.

The various tests that are available for colorectal cancer screening were presented and include the following.

Colonoscopy: this uses a flexible tube with a small camera to view the colon and detect abnormalities, including polyps. If polyps are found, they may be removed during the colonoscopy. This is an effective test, but it requires bowel preparation and sedation.

Colonography: this uses low dose radiation CT scanning to view the colon. It is less invasive than colonoscopy, but works best with lesions larger than 10mm. The advantages are that it is fast and does not require sedation. It does, however require bowel preparation, uses radiation, and a follow-up colonoscopy may still be needed.

Fecal Occult Blood/Fecal Immunochemical Test (FOBT/FIT): this test examines blood in the stool that could be a sign of cancer or large polyps. A positive test result will need to be followed up with a colonoscopy. These tests are the most commonly used in population based colorectal cancer screening programs. The FIT has an advantage over the FOBT because it does not require bowel preparation before taking the test.

Fecal DNA Test: this test detects the DNA from cancer cells that can be exfoliated from the colorectal cavity by the feces. The test is more precise than the FOBT/FIT, it is also non-invasive and easy to use. There are some commercially available tests –Cologuard- that can be performed at home and sent to a laboratory for analysis.

Serum test: this test, although not commonly used, detects the overexpression of colorectal cancer markers through a blood test.

Program Requirements for an Effective Colorectal Cancer Screening Program

The requirements to establish effective colorectal cancer screening programs were presented by Larry von Karsa, former head of the IARC quality assurance group. He highlighted that the best screening programs are those that are organized and population-based, and that have a high participation rate. This can be achieved using different strategies, such as individual invitations or mass media communications. The screening programs must have evidence-based screening guidelines, a good health system structure, quality assurance methods, and an information system to register the population, screening test results and treatment.

Quality is what maintains a good balance between benefits and harms of the screening programs. Thus, quality must be included as a key component in the budget of screening programs, and assigned 10%-20% of the program budget. The decision to establish screening programs cannot be based on what the cancer problem is today, because it takes many years to establish a screening program, so it is very important to plan it in advance.

Discussion during session1

During the group discussion, it was noted that we cannot wait for an ideal screening technology, but that organized screening programs need to begin to be planned now, given the rising burden of colorectal cancer in most countries in the region. The key is to establish a program which is feasible within the context of the existing health care system, and with available resources, and to develop strategies to achieve a high participation rate.

SESSION 2: SHARING EXPERIENCES FROM NORTH AMERICA

In this session, participants reviewed the experiences with colorectal cancer screening in the Americas, beginning with Canada and the USA which have well established programs.

Canada's Colorectal Cancer Screening Guideline

The Canadian Preventive Health Task Force issued new colorectal cancer screening guidelines for Canada in February, 2016, which was presented by Maria Bacchus, chair of the guideline committee. The general recommendation is to screen the average risk population aged 50-74 years, using FOBT or FIT every 2 years, and in those with abnormal test results, follow up with colonoscopy. Screening was not recommended for those aged 75 years and older. In developing the guideline, the GRADE methodology was used and evidence was reviewed for effectiveness, harms and patient preferences. The new guidelines are being promoted through the Canadian Medical Association Journal.

Colorectal Cancer Screening Program in Ontario, Canada

The experiences from the Ontario colorectal cancer program were presented by Linda Rabeneck, from Cancer Care Ontario. The program was launched in 2009, following a three year pilot project and two years of preparatory work to obtain political and public support and funding for the program. The program has reached a screening coverage of 60% of the target population, a 4% positive rate on FOBT, and a follow up rate of 80%. The information system, InScreen has been useful to capture information to monitor the program results, as well as assure follow up of patients with positive screening test results. Fostering clinical champions, obtaining media attention and having notable spokespersons were identified as having a positive effect in the program, in terms of educating the public about colorectal cancer, and increasing public participation in screening.

CDC Colorectal Cancer Screening Program

The CDC colorectal cancer screening program, which provides service to underinsured or uninsured people, was initiated in 2009 following a demonstration project. The CDC program targets those aged 50-64 years of age (those over 65 years of age are covered by Medicare), using annual FOBT/FIT or colonoscopy every 10 years. Over 60,000 people have been screened and public education and outreach is ongoing to increase participation in the program. One of the biggest challenges is to maintain quality of the screening test, as it varies greatly by screening

site. A monitoring and evaluation component of the program uses established indicators to evaluate the impact of the program.

Perspectives on Colorectal Cancer Screening in Puerto Rico

Puerto Rico has recently initiated a colorectal cancer screening program, adhering to the USA guideline. Awareness of colorectal cancer continues to be low in the Puerto Rican population, and an education campaign is underway to stimulate participation in the screening program. Social media messages, provider information and client reminders to be screened are part of this campaign. The program is new, and it is too early to measure screening coverage and impact of the program, but great efforts are underway to have a well organized program, utilizing the primary health care network throughout Puerto Rico.

Discussion during session 2

The main lessons learned from the Canada and USA experiences on colorectal cancer screening are that public education, outreach, and patient reminders are critical to achieve a high screening coverage; that time is needed to sufficiently plan, pilot and scale up a colorectal cancer screening program; and political and technical buy-in and stakeholder support from medical professionals and the public are needed prior to launching the program.

SESSION 3: COLORECTAL CANCER SCREENING IN LATIN AMERICA AND THE CARIBBEAN: ACHIEVEMENTS AND CHALLENGES: Part I

Although colorectal cancer rates are generally increasing in Latin America and the Caribbean, very few countries in the region have yet developed a screening program. In this session, representatives from Ministries of Health of the following countries presented the situation of colorectal cancer in their country, the status of their screening program, and the challenges and facilitating factors to establish an effective program in the country.

Argentina

Colorectal cancer is the third leading cause of cancer in the country. In 2012, Argentina established a national colorectal cancer screening program, using the European colorectal cancer screening guideline. The program targets an average risk population aged 50-74 years with annual screening using the FIT test, and the high risk population aged 50-74 with colonoscopy.

Health promoters and community health agents are used to education the population and encourage screening. The information system, SITAM, collects and analyzes patient and program information. Training and quality assurance tools have been developed. The challenges and barriers for the program include: low public awareness and low screening participation, bottlenecks and delays with colonoscopy services, and sustainable long term program funding.

Chile

Colorectal cancer is the fourth cause of cancer in Chile, although rates are increasing. There currently is no colorectal cancer screening program, due to limited resources and limited political and stakeholder buy-in to create a program. A pilot project, called PRENEC was implemented in one area in Chile, Magallanes, which resulted in positive outcomes but illustrated the challenges and bottlenecks with colonoscopy. The Ministry of Health is interested in expanding the pilot project to other sites, but would require resources and assistance. Chile has universal coverage and access for cancer diagnosis and treatment, including colorectal cancer.

Costa Rica

Colorectal cancer is the fourth common cancer type, and the country does not yet have a colorectal cancer screening program. Costa Rica does have a public health system that provides cancer diagnostic and treatment services to the population. A pilot project for colorectal cancer screening is being considered by the Ministry of Health. The noted barriers are limited funding, low public awareness, no national guidelines, and there is limited capacity, including limited human resources to manage the referrals at the secondary level of care.

Mexico

Colorectal cancer is the fourth common cancer type in Mexico, which does not yet have a colorectal cancer screening program. A small pilot project using colonoscopy was conducted in a hospital. Colorectal cancer diagnosis and treatment is included in the cancer program, and the public health insurance “Seguro Popular” provides coverage for cancer diagnosis and treatment. Cancer registration is being strengthened in the country.

Peru

Colorectal cancer is the fifth most common cancer in Peru, which is typically detected at advanced stages in the country. There is no colorectal cancer screening program. Colorectal cancer diagnosis and treatment is covered through the national cancer program, “Plan Esperanza”, which was established in 2011 and is improving access to care. Challenges remain with limited trained health providers in some geographical areas, and low level of awareness of the population regarding colorectal cancer.

Discussion during session 3

The common barriers across the countries in the region to establish a colorectal cancer screening program were noted. These include limited resources, low awareness and cultural beliefs about cancer, limited health system capacities for population based screening. There was general agreement that countries should begin now to plan for a future colorectal cancer screening program, by promoting awareness, understanding the health system needs for the program, building stakeholder buy in and working towards securing sustainable financing.

SESSION 4: COLORECTAL CANCER SCREENING IN LATIN AMERICA AND THE CARIBBEAN: ACHIEVEMENTS AND CHALLENGES: Part II

Following a break, additional country presentations were made on the status of their colorectal cancer screening program, challenges and facilitators to implement an effective program.

Bahamas

Colorectal cancer is the third leading cancer, following prostate and breast cancer in the Bahamas. There are five gastroenterologists in the country, and no organized screening program, although there is an opportunity to develop one, with the recent National Health Insurance. Colonoscopy is the most commonly used method, although barium enema, FOBT, and CT colonoscopy are also used in the country. Low public awareness, poor physician compliance, limited health system resources, and limited stakeholder support for colorectal cancer screening are the biggest challenges. A media campaign has been undertaken to promote awareness and sensitize the public. A cell phone app has been developed, ‘Adenoma Detection App’ as a tool to promote quality assurance and patient follow up. More advocacy and education is needed.

Barbados

Colorectal cancer is the third most common cancer. The country does not have a colorectal cancer screening program. The population has good access to primary care, although access to colonoscopy is by referral, and there are only 2 gastroenterologists. One facilitator for the future establishment of a screening program is the existence of a good public health system, with a good cancer registry. There is a need to educate the public and physicians about colorectal cancer screening, and to create public demand and political support to establish a program.

Brazil

In Brazil, colorectal cancer is the fourth common cancer, although it is more common in the south of the country. The country does not have a colorectal cancer screening program, nor are there national screening guidelines, but FOBT and colonoscopy are available in some health services. The challenges for establishing a colorectal cancer screening program are the resources needed to cover the large country, and the need to increase capacity of colonoscopy services. The public health system, SUS, provides coverage and access to health services for the majority of the population and this is a factor which could facilitate the development of an effective screening program.

Cuba

Colorectal cancer is the fourth most common cancer in Cuba. Although there is no organized colorectal cancer screening program, Cuba has a national comprehensive cancer program since 2007 which provides early detection, diagnosis and treatment services to the population. FOBT is the most commonly used test and the Cuba national biotechnology institute has produced its own test. The country guidelines for colorectal cancer screening are annual testing with FOBT in those aged 50 years and older. A pilot program was initiated and plans are to expand it within 5 years. The main challenge is limited awareness of colorectal cancer in the population.

Suriname

Colorectal cancer is the fourth most common cancer, and most cases are detected at late stages. There is no colorectal cancer screening program, and the Dutch guideline is used in the health system. There is progress towards developing a national cancer program, and this is an opportunity to include activities and services for colorectal cancer. The biggest barriers for establishing a colorectal cancer screening program including limited awareness, cultural barriers

towards cancer screening, limited health care infrastructure, and limited health human resources (there are 2 gastroenterologists in country).

Discussion during session 4

The discussion was about how best to integrate screening services within a health system with limited infrastructure. Regardless of these barriers, however, it was agreed that public awareness, educating the target population and policy makers about colorectal cancer screening and creating political will for cancer screening are important first steps in establishing a program.

SESSION 5: BARRIERS, CHALLENGES AND NEEDS FOR COLORECTAL CANCER SCREENING

The meeting participants discussed the common barriers, challenges and country needs to establish and sustain quality screening programs for colorectal cancer. The discussion was moderated by Stephen Taplin who noted that the screening process occurs at multiple levels, from the patient to the national health policy level. The discussion focused on the question, “what affects the implementation of colorectal cancer screening in your country?”

The cultural barriers and low public and provider awareness were noted. People seek medical attention when it is too late, and the population does not participate in screening programs. Also, politicians do not feel the urgency to invest more in cancer screening and the poor economic situation in some countries limit the ability to create a new colorectal cancer screening program. The characteristics of the health systems and their fragmentation were also highlighted as a major barrier. Lastly, the challenge in many countries with limited health human resources, especially cancer specialists was noted.

The type of support that countries need to overcome these barriers was discussed. It was noted that the international health organizations and medical associations were partners that could help advocate for investing in colorectal cancer screening programs. First conducting a pilot program for colorectal cancer screening was recommended, and then expanding it, based on the lessons learned. Chile, Costa Rica and Brazil noted their intentions to begin a colorectal cancer screening program. For this, assistance was suggested for developing guidelines, training providers, media campaigns, information systems, and quality assurance procedures. There are lessons that can be learnt from the breast and cervical cancer screening programs.

SESSION 6: STRATEGIES TO ADDRESS THE BARRIERS, CHALLENGES AND NEEDS

In this session, participants discussed feasible and realistic strategies to meet country needs for improving the colorectal cancer situation. Strategies were discussed on how best to elevate colorectal cancer screening in the public health agenda, to promote investments and build infrastructure for cancer screening, diagnosis and treatment, and sensitize the population about screening. The following topics were discussed in further detail.

Primary Prevention Strategies

Healthy living and health promotion messages and campaigns should include messages about colorectal cancer prevention and screening. The purpose is to raise awareness and understanding about colorectal cancer, the dietary and lifestyle risk factors associated with colorectal cancer risk, and promote health diets that could reduce cancer risks. These strategies could be developed and implemented at regional, national, and subnational levels, by the main stakeholders from the public health community.

Training

Training of primary care providers in education, counseling and screening methods was highlighted as an important strategy that could be implemented immediately. This would include integrating information about colorectal cancer screening and early detection within the medical school and nursing school curricula, as well as conducting special training sessions. The need to train more providers for colonoscopy was noted, and there were questions raised about the possibilities for task shifting in this area.

Adaptation of screening guidelines

The available screening guidelines have been developed predominantly by countries with robust health systems and sufficient resources for population based screening programs. These guidelines need to be adapted for use in limited resource settings, and with the input from the main and influential stakeholders in the country. For example, most guidelines call for screening beginning at 50 years of age, but in a limited resource setting, it may be more effective and

feasible to limit screening to those 60 years of age and first achieve a high screening coverage in this population before expanding the target age group. The guideline must also consider which screening test is suitable for the context and conditions in the country. The FOBT and the FIT are good and affordable, but new technologies are becoming available.

Plan the services to meet the demand

It is important to plan the program, based on the population size, distribution, availability of services, and geographical location of the highest concentration of colorectal cancer. Furthermore, to ensure the follow up of screened patients, secondary level of care services need to be able to accommodate the quantity of referrals from primary care level, as a result of the screening. This will avoid saturating the health services, and creating bottlenecks for colonoscopy.

SESSION 7: QUALITY ASSURANCE AND PERFORMANCE STANDARDS FOR COLORECTAL CANCER SCREENING PROGRAMS

Given the importance of quality assurance in cancer screening, a session was devoted to discuss the minimum standards for quality assurance and how to implement a quality assurance program in limited resource settings. It was agreed that the European guide for quality assurance in colorectal cancer screening is a very thorough framework that could be used by countries in this region. It includes indicators and standards for: invitation coverage, uptake rate, time from testing to results, referral rate, compliance with colonoscopy, and treatment rate.

Quality assurance needs to be integrated as part of planning a colorectal cancer screening program. A pilot program should be initiated first, and it should consider infrastructure needs, equipment needs, and human resource and financial needs. Planning for a sufficient number of providers and sufficient equipment to perform the expected volume of colonoscopies are important. The screening process must include quality checks at all stages of the process: invitations, screening participation, correct collection of samples, transportation of the samples, processing, and returning results to patients. Once a pilot project is successful, the transition to expansion must also consider quality assurance procedures. It was noted that the quality assurance program must be adapted to the reality of the conditions in the health system.

SESSION 8: COLLABORATION AND TECHNICAL SUPPORT

Given the international organizations participating in the meeting, participants discussed the technical cooperation that could be offered to establish colorectal cancer screening programs in the region. Representatives from PAHO noted that the presentations and information discussed in this meeting would be communicated and disseminated to the Ministries of Health in the Americas. Development of education materials, such as factsheets, and training courses through the PAHO Virtual Public Health Campus were also proposed. WHO is producing a guidance document on early detection, as well as guidance on technologies and personnel needed for cancer early detection. The CDC colorectal cancer program, and the Puerto Rico cancer program have available factsheets which could be used and adapted for other country programs. The European guidelines for quality assurance on colorectal cancer screening offer an important resource for countries to use and adapt in developing their national program.

CONCLUSIONS

Colorectal cancer is the fourth most common cancer in the Americas and it is predicted that, by 2030, its incidence will have a 60% increase in the region and LAC will account for the greatest part of this increase. Colorectal cancer is amenable to screening and early detection, yet most countries in Latin America and the Caribbean (LAC) do not yet have such programs. Limited awareness about colorectal cancer, cultural barriers and misconceptions about cancer screening, limited resources and low priority for cancer screening in public health programs are all barriers to establishing colorectal cancer screening programs in the region. Yet, Canada, the USA and Argentina have experiences in establishing and implementing population based colorectal cancer screening programs. These lessons were shared during the meeting, and serve as a stimulus to support other countries to introduce similar programs.

As follow up to this expert consultation, PAHO will continue to work with CDC and other regional partners to provide the technical cooperation to Member States to improve the situation of colorectal cancer in the region.

APPENDIX 1: Agenda

Wednesday, March 16, 2016	
9:00am	WELCOME AND OPENING REMARKS <i>Silvana Luciani</i> , Advisor, Cancer Prevention and Control, PAHO <i>Mona Saraiya</i> , Medical Officer, Cancer Division, CDC
9:15am	SESSION 1: SCIENTIFIC EVIDENCE ON COLORECTAL CANCER SCREENING WHO guidance on cancer early detection and screening in limited resource settings <i>André Ilbawi</i> , Technical officer, WHO Cancer Program Colorectal cancer screening modalities: summary of evidence <i>Jesús Garcia-Foncillas</i> , Director, Oncohealth Institute, Madrid, Spain Program requirements for an effective colorectal cancer screening program <i>Larry von Karsa</i> , Former Head, Quality Assurance Group, IARC Questions and answers
10:30am	COFFEE BREAK
11:00am	SESSION 2: SHARING EXPERIENCES FROM NORTH AMERICA Canada's recent evidence review and new colorectal cancer screening guideline <i>Maria Bacchus</i> , Deputy Head Medicine, AlbertaHealth Services Colorectal cancer screening program considerations and experiences from Ontario's program <i>Linda Rabeneck</i> , Vice President, Prevention and Cancer Control, Cancer Care Ontario The CDC colorectal cancer screening program: experience and lessons learned <i>Djenaba Joseph</i> , Medical Director, CDC Colorectal Cancer Program Perspectives on colorectal cancer screening from a USA Territory-Puerto Rico <i>Guillermo Tortolero-Luna</i> , Director, Cancer Control and Population Sciences University of Puerto Rico Comprehensive Cancer Center
12:30pm	LUNCH
1:30pm	SESSION 3: COLORECTAL CANCER SCREENING IN LAC: ACHIEVEMENTS AND CHALLENGES (I) ARGENTINA: <i>Ubaldo Gualdrini</i> , Colorectal Cancer Program, National Cancer Institute CHILE: <i>Lorena Baez</i> , Ministry of Health. COSTA RICA: <i>Melissa Ramírez Rojas</i> , Ministry of Health. MEXICO: <i>Erika Ruiz García</i> , National Cancer Institute PERU: <i>Tatiana Vidaurre</i> , National Institute of Neoplastic Diseases
3:30pm	COFFEE BREAK
3:45pm	SESSION 4: COLORECTAL CANCER SCREENING IN LAC: ACHIEVEMENTS AND CHALLENGES (II) BAHAMAS: <i>Eugene Cooper</i> , Princess Margaret Hospital BARBADOS: <i>Erika Springer-Cyrus</i> , Queen Elizabeth Hospital BRAZIL: <i>María Beatriz Kneipp Dias</i> - National Cancer Institute CUBA: <i>Gisela Abreu Ruiz</i> , Ministry of Health SURINAME: <i>Els Dams</i> , Ministry of Health
5.30pm	Adjourn

Thursday March 17, 2016	
9:00am	RECAP of the discussions and results of the first day. Silvana Luciani, PAHO
9:15am	<p>SESSION 5: BARRIERS, CHALLENGES AND NEEDS FOR COLORECTAL CANCER SCREENING Moderator: Stephen Taplin, NCI</p> <p>Moderated discussion to identify the common barriers, challenges and country needs to establish and sustain quality screening programs for colorectal cancer.</p> <ul style="list-style-type: none"> • What are the challenges that your country faces to establish accessible CRC screening? • What are the socioeconomic, political, geographical and cultural barriers for establishing CRC screening programs in your country? • What kind of support would your country need to overcome the barriers to establish CRC screening? • Who are the main stakeholders in the country that can provide that support?
10:30am	COFFEE BREAK
10:45am	<p>SESSION 6: STRATEGIES TO ADDRESS THE BARRIERS, CHALLENGES AND NEEDS Moderator: Jesus Garcia-Foncillas, OncoHealth Institute</p> <p>Moderated discussion to identify feasible and realistic strategies to meet country needs for improving the colorectal cancer situation.</p> <ul style="list-style-type: none"> • What strategies can be used in LAC countries based on the successful experiences presented on day 1? • What strategies can be used to put CRC in the political agenda, promote investment, build screening capacity and sensitize the population about screening? • Which screening approaches could be used in limited resources settings?
1:00pm	LUNCH
2:00pm	<p>SESSION 7: QUALITY ASSURANCE AND PERFORMANCE STANDARDS FOR COLORECTAL CANCER SCREENING PROGRAMS Moderator: Larry Von Karsa, IARC</p> <p>Discussion on a proposed minimum standard for quality assurance and performance standards for a high quality colorectal cancer screening program.</p> <ul style="list-style-type: none"> • What are the indicators proposed for a quality CRC program in LAC? • What are the minimum standards for quality control that are feasible for LAC? • What are the considerations for endoscopy, laboratory and pathology quality controls—equipment, safety and efficiency of the services.
3:00pm	<p>SESSION 8: COLLABORATION AND TECHNICAL SUPPORT</p> <p>Discussion on the external technical support that PAHO, WHO, CDC, and other organizations may be able to offer to countries in Latin America and the Caribbean for colorectal cancer screening.</p>
3.30pm	<p>NEXT STEPS Discussion and agreement on next steps for a regional approach to improve colorectal cancer screening and early detection.</p> <p>CONCLUSIONS</p>
4.00pm	End of the Meeting

APPENDIX 2: List of participants

Country	Name	Affiliation
Argentina	Ubaldo Gualdrini	National Cancer Institute
Bahamas	Eugene M. Cooper	Princess Margaret Hospital
Barbados	Erika Springer-Cyrus	Queen Elizabeth Hospital
Brazil	Sandro José Martins	Ministry of Health
Brazil	Maria Beatriz Kneipp Dias	National Cancer Institute
Canada	Linda Rabeneck	Cancer Care Ontario
Canada	Maria Bacchus	Alberta Health Services
Chile	Lorena Baez Alcaíno	Ministry of Health
Cuba	Gisela Abreu Ruiz	Ministry of Health
Costa Rica	Melissa Ramírez Rojas	Ministry of Health
Mexico	Erika Ruiz García	National Cancer Institute
Peru	Tatiana Vidaurre	National Cancer Institute
Peru	Jorge Ferrandiz Salazar	Ministry of Health
Puerto Rico	Guillermo Tortolero-Luna	University of Puerto Rico Comprehensive Cancer Center
Spain	Jesús García-Foncillas	OncoHealth Institute
Suriname	Els Dams	Ministry of Health
USA	Greta Massetti	CDC
USA	Mona Saraiya	CDC
USA	Djenaba Joseph	CDC
USA	Paul Pinsky	NIH/NCI
USA	Stephen Taplin	NIH/NCI
IARC-France	Larry Von Karsa	IARC
WHO-Geneva	Andre Ilbawi	WHO
PAHO-Washington DC	Silvana Luciani Bernardo Nuche Tabatha Santos	PAHO