



Regional Integrated Action Plan: PLATFORM FOR EXCHANGE OF EXPERIENCE AND TECHNICAL ASSISTANCE ON CERVICAL CANCER PREVENTION AND CONTROL IN SOUTH AMERICA



### EXPERIENCE-SHARING AND TECHNICAL ASSISTANCE PLATFORM FOR CERVICAL CANCER PREVENTION AND CONTROL IN SOUTH AMERICA

**UNASUR "Region Free from Cervical Cancer"** 

REGIONAL PLAN FOR TECHNICAL ASSISTANCE TO THE COUNTRIES OF RINC-UNASUR FOR CERVICAL CANCER CONTROL AND ELIMINATION

**Project FIC – RINC/UNASUR** 



### **TABLE OF CONTENTS**

- 1. Acknowledgements, 3
- 2. Preface, 6
- 3. Introduction, 9
- 4. Background, **18**
- 5. Methods and strategic information, 20
- 6. General objective, 23
- 7. Specific objectives, **23**
- 8. Instrumentation of the proposal, 25
  - 8a. Technological Platform for Technical Assistance PlaTeAT, **25**
  - 8b. Regional Plan activities for each priority thematic component, 33
- 9. Follow-up and evaluation, 77
- 10. Financial implications, 78
- 11. Annexes, **78**
- 12. References, 84



#### **1. ACKNOWLEDGEMENTS**

This document was produced by the Network of National Cancer Institutes and Institutions (RINC/UNASUR) in collaboration with the UNASUR South American Institute of Government in Health (ISAGS/UNASUR).

**Principal authors:** Luiz Antonio Santini (coordinator); Silvina Arrossi and Rengaswamy Sankaranarayanan (technical consultants); Carlos Santos Ortiz, Guillermo Rodríguez, and José Jerónimo (technical advisors); Walter Zoss (executive manager of RINC/UNASUR); and Lucía Delgado Pebe (coordinator of RINC/UNASUR).

Revision: Felix Rigoli, Angela Acosta (ISAGS)

RINC gratefully acknowledges the technical contributions of the experts who are part of its **Cervical Cancer Control Working Group** (in alphabetical order): Biviana Paredes, Devi Puerto, Els Dams, Francis Rafael Contreras Rivera, Gisela Abreu Ruiz, Liz Almeida, Lorena Báez Alcaíno, Lucía Delgado, Luisa Bolivar, Maria Asunción Sole Plá, Maria Beatriz Kneipp Dias, Milton Soría Humerez, Nelly Elena Maldonado, Nensy Bandhoe, Orlando Benito Martínez Granera, Rosa Laudi, Walkiria Bermejo Bencomo, and Wilson Aridio Mejía Mejía.

RINC highlights the collaboration of the members of **RINC/UNASUR Social Communication Working Group** and of Julieta Zalacaín Colombo of the National Cancer Institute of Argentina.

It also recognizes the indispensable support of the **National Cancer Institute/Brazil (INCA)**, without which it would not have been possible to prepare this document.

RINC is similarly thankful for the support of UICC, represented by Melissa Rendler García, Rolando Camacho, and Cristian Álvarez; of IARC, represented by Rolando Herrero and Rengaswamy Sankaranarayanan; and regional PAHO/WHO, represented by Silvana Luciani, and subregional PAHO/WHO for South America, represented by Enrique Gil.



We would like to thank the **PAHO/WHO Subregional Office for South America** for its support in the translation of this document.

**Edition:** RINC/UNASUR Technical Secretariat. Carlos Junior (graphic design and layout), and Mariângela Ferreira de Carvalho (secretary).



#### **2. PREFACE**

To date, cervical cancer is the only cancer for which scientific knowledge and effective technical and technological solutions exist that permit interventions in all stages of its natural history. This makes it possible to visualize not only a reduction in mortality of people already affected, but also a drastic reduction in its incidence, and even total elimination of the disease.

However, this is not a simple task and requires great effort by governments and societies where the disease still has a significant epidemiological and socioeconomic impact. In Latin America, 70% of cervical cancer mortality occurs in the countries of South America—approximately 20,000 cases per year.<sup>1</sup>

Mortality from cervical cancer is a glaring indicator of poverty and inequality, since the disease burden and risk of death is greater in the poorest countries of the region and in the poorest regions of middle income countries.

For this reason, the ministers of health in the Union of South American Nations (UNASUR), on the proposal of the Network of National Cancer Institutes and Institutions (RINC), selected as a priority strategy the preparation of a Regional Integrated Action Plan based on an "Experience-Sharing and Technical Assistance Platform for Cervical Cancer Prevention and Control in South America" for the purpose of achieving a "Region Free from Cervical Cancer."

Development of the Plan presented herein was supported by funding from UNASUR through the Common Initiatives Fund (FIC) and support from the South American Institute of Government in Health (ISAGS), which provided access to these resources, as well as technical, administrative and infrastructure support. Contributions were also made by specialists from all the UNASUR countries and technical personnel from other Latin American and Caribbean countries, along with the active involvement of leaders, researchers, and technical personnel from the World Health Organization (WHO), the International Agency for Research on Cancer (IARC-WHO), the Pan American Health Organization (PAHO), and the Union for International Cancer Control (UICC).

The plan was developed between 2015 and early 2017 and had a compact expert team (Executive Committee), support from the technical secretariat of RINC, located at the National Cancer Institute - Brazil (INCA), and support from ISAGS. On this topic, I would like

6



to point out that an important factor in the success of the production of this document was the methodology adopted by RINC.

The RINC management model is very simple, made up of a Management Board, formed by representatives named by the ministries of health of the countries of South America (UNASUR) and Latin America, in addition to thematic working groups and a technical secretariat.

The thematic working groups are defined by the Management Board, according to the following criteria:

- 1. Epidemiological priorities.
- 2. Each country's needs on the specific issue.
- **3.** Cooperation from each country in terms of technical and technological capability, available resources, and infrastructure.

This model is quite different from the conventionally recommended process that establishes, above all, that the first step that countries should take to work on cancer control is to have a structured cancer control plan.

In the proposal for the Regional Plan, this departure from the conventional approach is deliberate, based on the often frustrating experience of the countries in the region, produced by the expectation of implementation of national plans that could not be carried out. Historically, the health conditions in each country and the health system models, with different capacities and limitations, have often been obstacles to the implementation of solutions that include complex requirements for organization and infrastructure. The result has been that the possibility of generating simpler and more feasible solutions in line with local conditions has often been inhibited by the requirements related to the need for having a structured cancer control plan.

The proposal of this Regional Plan, based on experience and resource sharing among the countries participating in this process, regarding not only technical know-how, but also cultural identities, accrued experience, and solidarity, may be a factor in the success of its implementation.

Another factor that can contribute to success in the implementation of this Regional



Plan is Latin America's accumulation of experience in regional cooperation. As the oldest historical experience of regional cooperation in health, PAHO is itself an example of unquestionable success.

One critical aspect is the type of relationship with international organizations. In this regard, a key priority for the work of the Regional Plan is coordination among the different initiatives with the cumulative expertise, proposals, and experience of the different international agencies and work coalitions, to obtain synergy in action at the territorial level in each country and in the region. This synergy is not simple as there are different levels of interests, interventions, and activities in each of these institutions. Research projects, cooperation on specific actions, and other initiatives often overlap and very often involve the same workforce, which is quite limited in the region. Therefore, priorities are more likely to succeed if they are developed to focus on the territory and political and technical commitment of the countries involved.

I would like to point out that one of the pillars for the success of this Regional Plan is that it has been developed with the involvement of all of the region's countries, which have made available to the Plan the best of their human, technical, and infrastructure resources, not measured in financial value, but supported solely by their feelings of responsibility and solidarity with the people of our region.

The challenge for implementation of the Regional Plan in a five-year period consists of the formation of a team in the framework of RINC that is responsible for overseeing the Plan, with the capacity to mobilize governments and society, including the public and private sectors, plus international agencies.

> Luiz Antonio Santini Coordinator of the Executive CommitteeCoordinator - Executive Committee



#### **3. INTRODUCTION**

In the world, approximately 500,000 women are diagnosed every year with cervical cancer and 250,000 die from the disease.<sup>1</sup> Eleven percent of these deaths occur in Latin America, where it is the second most commonly diagnosed cancer in women. In South America, approximately 45,000 women are diagnosed annually and almost 20,000 die from the disease.<sup>1</sup>

#### Table 1. Distribution of the burden of cerv ical cancer in countries of South America

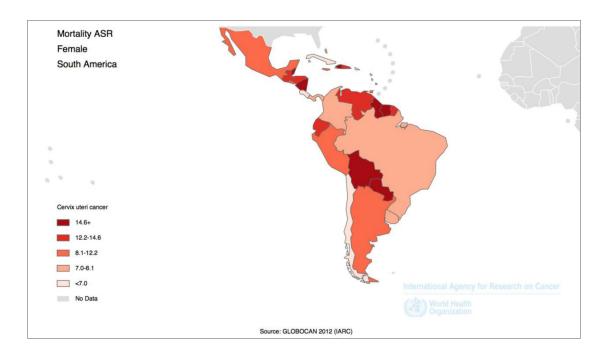
Country	Incidence			Mortality		
	No.	%	ASR (W)	No.	%	ASR (W)
South America	45 008	11.0	20.4	19 374	9.3	8.6
Argentina	4 936	8.2	20.9	2 127	6.8	8.4
Bolivia	2 029	29.4	47.7	845	21.4	21.0
Brazil	18 503	8.6	16.3	8 4 1 4	8.1	7.3
Chile	1 441	7.2	12.8	734	6.1	6.0
Colombia	4 661	12.6	18.7	1 986	10.4	8.0
Ecuador	2 094	16.9	29.0	1026	14.4	14.0
Paraguay	1 022	23.9	34.2	439	18.7	15.7
Peru	4 643	19.0	32.7	1 715	12.3	12.0
Uruguay	402	6.3	19.0	175	4.7	7.1
Venezuela	4 973	21.9	32.8	1 799	15.9	12.3

\*age-standardized rate (women)

(Source: Globocan, 2012)



In Latin America, 70% of cervical cancer mortality occurs in South America, home to the countries with the greatest mortality, including Bolivia, Ecuador, and Paraguay (Map 1).



Map 1. Distribution of cervical cancer mortality in Latin America

Cervical cancer is the cancer that most harshly reflects social and gender inequalities in health. It is a disease that affects women of all ages, particularly those from the poorest social classes, exposed to different situations of vulnerability, and this is unacceptable, since it is an almost completely preventable disease with the currently available scientific and technological know-how. It mainly affects socially vulnerable women, who do not have access to screening services. When these women fall ill or die, it has devastating consequences for the living conditions of their families, causing job and income loss and missed school days for children.<sup>2</sup> Thus, cervical cancer not only affects the poorest women, it is also a factor that generates poverty and social vulnerability. However, estimates by IARC-WHO show that if effective actions are not taken, cervical cancer mortality will continue to increase and it is expected that in 2030 more than 300,000 women will die from cervical cancer in medium- and low-resource countries, almost 50% more than current mortality.<sup>1</sup>

In terms of health policies, it is now said to be a disease that can be eradicated, that it has no reason to exist in the 21st century and that, in international and national public health



spheres, the highest level of involvement by the authorities is imperative to achieving the objective of a world free from cervical cancer.

However, even though organized prevention programs are the strategy to prevent cervical cancer, such programs tend not to exist in Latin America, and South America in particular, and where they do exist, they suffer from problems related to coverage, quality, and provision of the different services involved.<sup>3,4</sup>

A survey conducted by RINC-UNASUR in several countries in the region found great heterogeneity with regard to technologies used, target population, and the definition of organized programs.<sup>4</sup> In general, the countries agreed that they face problems linked to access to screening, with long shifts, long waiting periods, low coverage of the target population, over-screening of women at low risk and at young ages, and lack of diagnosis and treatment of positive cases. All these factors relate to the operation of the health system, which encompasses all the organizations, institutions, and resources whose principal objective is to carry out activities aimed at improving health. This is a fundamental aspect to take into account in cervical cancer prevention, since in order for the strategy to achieve high effectiveness, it will be necessary to take into account not only aspects linked to technology, but also those components of health systems that are essential to the implementation of organized prevention programs and to timely and appropriate testing and treatment for women who are positive in screening studies: information systems and communication/ education strategies, aspects linked to financing technology and service delivery, availability of trained human resources, the level of governance of the system as a framework for the application of standards and regulations, and the population as both active agents and recipients of prevention policies.

In recent decades, scientific and technological advances have led to the emergence of new technologies; two of them—the human papillomavirus (HPV) vaccine as a primary prevention strategy and the HPV test as a secondary prevention strategy—are based on discovery of the causal relationship between HPV and cervical cancer and are based on developments in molecular biology.

It is now recognized that HPV vaccination, combined with cervical screening, has a potential to reduce the burden of the disease that would have been difficult to imagine only

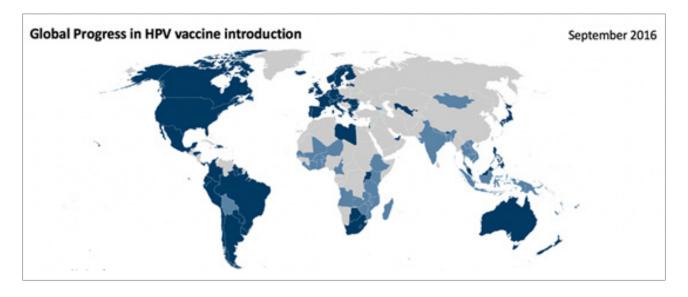
11



a few decades ago. It has been estimated that 80-100% HPV vaccine coverage and screening at least twice in the lifetime of adult women could lead to a drastic reduction in the burden of the disease worldwide, with approximately 15 million cases prevented in coming decades at the global level.<sup>5</sup> The existence of screening strategies based on low-cost technology, such as visual inspection with acetic acid (VIA) or with Lugol's iodine (VILI), means that the disease control scenario can be adapted to the conditions of each country's health system.

South America has become a pioneering region for these technologies. For example, Map 2, which shows the status of HPV vaccine adoption, reveals the great regional advances with regard to inclusion of the vaccine in national and pilot programs.



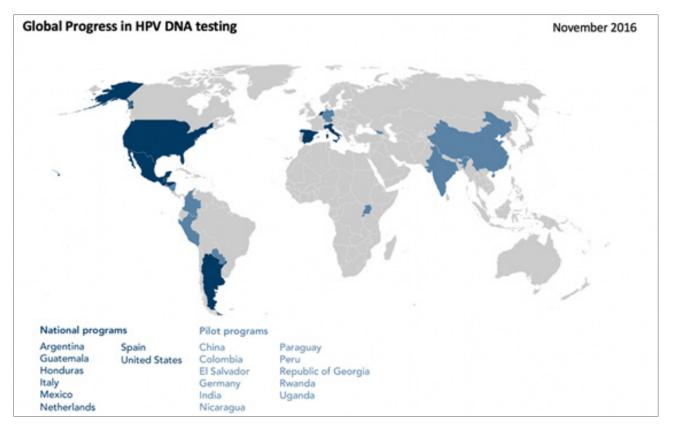


Source: Cervical Cancer Action, 2016.

Something similar is happening with regard to the introduction of HPV testing. Map 3 clearly shows that even though countries are just starting to adopt the technology, South America has been a pioneer in integrating it into national programs, as in the case of Argentina, or into pilot projects, as in the case of Colombia and Peru.



#### Map 3. Adoption of HPV testing



Source: Cervical Cancer Action, 2016.

The systematization and transfer of experiences and knowledge that has accompanied the integration of new technologies acquired in recent years is essential to ensure that countries overcome the limitations that historically have affected their prevention programs, guaranteeing a true reduction in cervical cancer incidence and mortality. It is important to take this into account since there is still a need to overcome limitations regarding coverage of HPV vaccine, screening, and processes related to diagnosis, follow-up, and treatment of precancerous lesions and cancer in South American countries.

The transfer of experiences and methodologies among the countries in the region will result in rational utilization of existing knowledge and resources, preventing overlaps and duplication of resources and activities. This availability of technology, added to the enormous experience and expertise in the region today—with countries and research groups pioneering the implementation of cervical cancer prevention actions—means that South America has a window of opportunity to achieve the goal of a region free from cervical cancer.

In this regard, the UNASUR South American Council of Health (CSS) has mandated the Network of National Cancer Institutes and Institutions (RINC/UNASUR) to develop a plan for



technical assistance to the region's countries in order to prevent an increase in new cases and unnecessary deaths from cervical cancer. The Plan was designed in collaboration with significant regional institutions and international organizations, such as IARC, PAHO/WHO, and UICC, which formed an Advisory Group together with the RINC Cervical Cancer Control Working Group.

Furthermore, it is important to mention that other agencies and organizations are also carrying out initiatives, since it is the intention of the Regional Plan to coordinate with these initiatives, increasing capacities and preventing overlap.

Since 2015, the foundation of the United States Centers for Disease Control and Prevention— CDC Foundation—has been carrying out the project for Improving Data for Decision-making in Global Cervical Cancer Programs. This project, financed by the Bill and Melinda Gates Foundation, has developed a tool (IDCCP Toolkit) for planning, monitoring, and evaluation of cervical cancer prevention programs, and cost analysis, among other things.

Another important strategy to mention is one being carried out by the Asia-Pacific Economic Cooperation (APEC) forum, specifically through a roadmap that is meant to become a strategic guide for actions in the member countries of this alliance.

IARC-WHO also has an important presence in the region, basically through ESTAMPA, a multicentric human papillomavirus screening and triage study. The main objective of this project is to evaluate different triage techniques to identify women who test positive for HPV and need follow-up, diagnosis, and treatment. It is being carried out in several countries of the region, including Argentina, Chile, Uruguay, Paraguay, and Colombia. The ESTAMPA project is not only aimed at producing local knowledge on a subject as basic as triage, but is also a generator of research capacity at the regional level and potentiator of the implementation of organized screening programs based on HPV testing at the local health system level.

PAHO/WHO's technical assistance for actors and agents involved in cervical cancer prevention has undoubtedly been one of the greatest potentiators of the actions carried out in the region in recent decades. In recent years, two documents have been crucial to the integration of new prevention technologies: Comprehensive cervical cancer control: a guide to essential practice (WHO 2014) and Integration of HPV testing in cervical cancer screening programs: a manual for program managers (PAHO 2016). PAHO, as a mainstay of technical assistance in health in Latin America, has experience, expertise, and working



capital that will be fundamental and indispensable to implementation of the UNASUR Regional Plan.

UICC has been another key actor in fomenting a network for technical know-how and expertise sharing. In addition to the technical support and ongoing training that UICC promotes, in 2016, it held the Cervical Cancer Control in Latin America and the Caribbean Roundtable, based on a situation assessment of cervical cancer prevention in Latin America. At the roundtable, networks were consolidated, and the assessment by Dr. Rolando Camacho became one of the basic inputs for preparation of the Regional Plan. It is fundamental to continue these coordinated efforts, building the strengths of both institutions and initiatives.

Another initiative involved in the region is the United Nations Interagency Task Force on the Prevention and Control of Noncommunicable Diseases, headed by WHO (WHO 2016). This team has developed a joint five-year global program, through which seven of the United Nations system organizations (IARC, the United Nations Entity for Gender Equality and the Empowerment of Women—UN Women, IAEA, UNAIDS, UNFPA, UNICEF, and WHO) provide support to governments to prevent and combat cervical cancer. This team has objectives that are complemented by the UNASUR Regional Plan, basically with respect to providing global leadership, as well as technical assistance to governments to build and sustain comprehensive and high-quality of cancer control programs.

This list of international agencies and initiatives is not exhaustive, but is presented to explicitly indicate the integrated and coordinated work that is already being done or that is planned for the coming years. In this regard, it is important to point out the work of international institutions that, in coordination with these and other partnerships, have a long tradition of work in the region: PATH, Pink Ribbon Blue Ribbon, the United States National Cancer Institute, EngenderHealth, Basic Health International, and the International Cancer Control Partnership (ICCP), among others.

Finally, elimination of cervical cancer in South America is a unique opportunity for us as inhabitants of the region, and an inescapable responsibility as leaders and key actors in the prevention and control of this disease. The objectives of the Regional Plan presented in this report are framed in the 2030 Agenda of the Sustainable Development Goals (SDGs), adopted by world leaders in September 2015 in a historic summit of the United Nations. The SDGs officially took effect on 1 January 2016. With these new universally applicable goals, in the next 15 years



countries will intensify efforts to end poverty in all its forms, reduce inequality, and combat climate change, ensuring, at the same time, that no one is left behind. One of the targets of SDG Goal 3 is: By 2030, reduce by one third premature mortality from noncommunicable diseases through prevention and treatment (United Nations 2016 http://www.un.org/sustainabledevelopment/health/). Implementation of the Regional Plan will be an invaluable contribution to the countries of South America fulfilling the agreements related to the SDGs. This not only means honoring the signed agreements, but above all, freeing South American women from disease and death due to cervical cancer.



#### **TARGET AREAS**

The Plan will target three areas that are considered necessary for meeting the goal of eliminating cervical cancer.

• Vaccination of girls by age 14.

Expansion of women's screening coverage within the framework of prevention programmes.

> Timely and appropriate treatment of women with precancerous lesions and CC diagnosed within the framework of each country's programs.



#### 4. BACKGROUND

South-South cooperation in social sectors has received growing attention from the Southern Hemisphere's poorest countries in the last 30 years, with regulatory frameworks that have produced advances in this model of cooperation. In South America, regional integration efforts based on common values and ideals and the benefits of "cooperation among peers" have gained strength through popular support from democratically-elected governments and through socioeconomic development in the majority of the region's countries in the 21st century.

UNASUR was established in 2008 as a political body that responds to economic and other demands, but also goes beyond this area, unlike other regional initiatives that preceded it. In its Constitutive Treaty,<sup>8</sup> UNASUR includes a strong social component among the geopolitical interests set forth: "...eliminating socioeconomic inequality, in order to achieve social inclusion and citizen participation, strengthen democracy, and reduce asymmetries...." The priority of health as a strategic line of action is expressed from the beginning as a fundamental human right and the key to social development, thus favoring the reduction of inequities.

RINC, implemented in the framework of UNASUR in July 2011, bases its work on the identification of common demands and challenges among countries, sharing of best practices, and regional integration, in addition to being guided by the strategic guidelines and objectives of the UNASUR Health 2010–2015 Five Year Plan.<sup>35</sup>

RINC has recognized cervical cancer as a priority in its activities because it is an important public health problem exacerbated by poverty. To identify potential steps for action and propose work plans to ensure that cervical cancer control is included in countries' health policies, RINC created the Cervical Cancer Prevention and Control Working Group in 2012, with technical personnel and experts from the Latin American region.

As a first step, the Group did a survey to provide an efficient, rapid initial assessment of the situation of each country and learn which particular areas would be important for carrying out work projects in each one. Eight (8) countries of the region responded to the questionnaire.<sup>4</sup>

The first in-person meeting of the Group in August 2012, in Buenos Aires (the "Buenos

<sup>\*)</sup> El Plan Quinquenal UNASUR Salud 2010-2015 fue establecido por el Consejo de Salud de la UNASUR y delinea las acciones y actividades que deben cumplir en este campo los países miembros de UNASUR.



Aires initiative"), was attended by representatives from PAHO, UICC, and IARC-WHO, and the Group's constituents. Taking the survey as a starting point, they agreed to establish as a regional priority the implementation of an experience-sharing and technical assistance platform for five key areas in effective cervical cancer control: 1) diagnosis, treatment, and follow-up; 2) program registration, monitoring, and evaluation systems; 3) screening based on visual inspection with acetic acid and see-and-treat; 4) introduction of HPV testing and operational research on its introduction (IARC/ESTAMPA Project); and 5) introduction of the HPV vaccine.

During the ensuing three years (2012 to 2015), RINC carried out some of the activities planned in that platform, considering the Network's financial constraints and the opinions of UNASUR Member States. For example, a course was given on "Secondary Prevention of Cervical Cancer Based on Visual Inspection with Acetic Acid and Cryotherapy", with technical personnel from nine countries, to implement and disseminate evidence-based projects adapted to the respective cervical cancer screening programs.

Another important achievement was the support that RINC provided to PAHO for preparation of the publication "Integration of HPV testing in cervical cancer screening programs: a manual for program managers"<sup>7</sup> as a principal activity of Component 4: Introduction of HPV testing. The manual provides up-to-date information for planning and implementation of cervical cancer programs using HPV testing for primary screening.

With support from UICC, a review was also carried out of existing cervical cancer information and epidemiological surveillance systems in Latin America and the Caribbean, for the purpose of sharing experiences and lessons learned, and learning about advantages, limitations, and other aspects aimed at developing the systems and minimum indicators necessary for monitoring and evaluation of programs in the region.<sup>10</sup> The review was completed in six countries with systems in place: Argentina, Brazil, Cuba, Nicaragua, Uruguay, and Venezuela. Chile and Colombia did not send their data in time to be included in the analysis. However, the subsequent activities in this key component were not implemented, including actions to implement or improve information systems (for example, developing generic software based on a set of basic indicators for monitoring and evaluating programmatic activities or ensuring transfer of technology to the countries that need it and training human resources).



Based on the progress achieved by RINC/UNASUR in the region, and with the challenge of drastically lowering cervical cancer incidence rates and eradicating mortality, in June 2015, UNASUR Secretary General Ernesto Samper launched the campaign "UNASUR Region Free from Cervical Cancer." An additional objective was to adopt a strategy that would also strengthen citizen participation in health processes.

In September 2015, at the 9th Regular Meeting of the South American Council of Health (CSS) (Council of UNASUR Ministers of Health) in Montevideo, Uruguay, RINC was mandated (Declaration No. 06/2015) to develop a Regional Plan of Integrated Actions (Experience-sharing and Technical Assistance Platform for Cervical Cancer Prevention and Control in South America) to reduce the incidence of the disease and eliminate associated mortality in the region, in support of the UNASUR campaign. The Declaration was subsequently ratified by the Council of UNASUR Ministers of Foreign Affairs (Resolution CMRE/RESOLUTION No. 24/2015), which granted RINC access to the UNASUR regular annual budget under the Common Initiatives Fund (FIC) category in order to implement the Regional Plan.

#### 5. METHODS AND STRATEGIC INFORMATION

To develop the Regional Plan, RINC/UNASUR maintained a close relationship with its Cervical Cancer Prevention and Control Working Group, the technical entity of the Network in charge of actions on this issue since 2012, as an ongoing source for consultation. The working group members are responsible for the national cervical cancer control programs of the UNASUR Member States and of other Latin American countries (with the exception of Guyana, which thus far has not participated). Their technical contributions were essential for all stages in the preparation of this document, from the analysis of the current status of cervical cancer and of the programs and services in each country, to approval of the actions proposed in the Plan. During this process, the Group held three in-person meetings: in Buenos Aires, Argentina (November 2015); in Santiago, Chile (April 2016); and in Rio de Janeiro, Brazil (October 2016). Furthermore, its members participated in an epidemiological survey in 2016 to compile current data and suggestions for this document.

RINC also had support from leading international organizations that participate significantly in cervical cancer prevention, control, and research efforts in Latin America and have specific projects in the region: IARC-WHO, PAHO/WHO, and UICC. These three



institutions have formed an Advisory Group, which has contributed technical assistance and political and logistical backing to preparation of the Plan.

The methodology used in the process is based on the RINC/UNASUR technical proposal, analyzed and adopted by CSS in its Declaration No. 06/2015, and in Resolution CMRE No. 24/2015 of the Council of Ministers of Foreign Affairs, which established eight (8) stages for preparation of the Plan:

- 1. Identify the plan coordinator and select two consultants who are experts on the topic.
- 2. Map the practices and actions being carried out to address cervical cancer in South American countries, analyze their strengths and weaknesses, and evaluate the potential of integration projects for the Integrated Plan of Action in South America.
- 3. The Working Group (coordinator and two selected consultants) will prepare a pre-proposal.
- 4. Present an Executive Summary of the Regional Plan to be submitted for the consideration of the Heads of State of UNASUR.
- 5. Organize a meeting with the consultants, international experts, and the countries of the region to form a multidisciplinary technical team (advisory group) with representatives from each of the 12 South American countries. The meeting would have 20 to 25 participants and would last two or three days. At the meeting, the previously formulated preliminary document would be presented and evaluated.
- 6. Hold the meeting of the multidisciplinary technical team (Executive Committee) with the RINC/UNASUR Cervical Cancer Prevention and Control Working Group to integrate their contributions.
- 7. Complete the Regional Integrated Action Plan.
- 8. Submit the Regional Integrated Action Plan to the consideration of CSS

1) Identification, selection, and approval of the Plan's coordinator and the two consultants were carried out in two stages. In the first, the RINC Cervical Cancer Control Working Group proposed names among the leading cervical cancer control experts in the region and the



international community. In the second stage, the names of Dr. Luiz Antonio Santini (for Plan coordinator), Dr. Silvina Arrossi, Dr. Rengaswamy Sankaranarayan (as technical consultants), in addition to three technical advisors (Dr. Carlos Santos Ortiz, Dr. Guillermo Rodríguez, and Dr. José Jerónimo) were approved in the online meeting of the RINC Management Board-- the Network's highest decision-making body, formed by national cancer institute directors and/ or national cancer program coordinators. It was decided that these experts would form an Executive Committee.

2), 3) and 4) In charge of reviewing country technical reports, which gather epidemiological information and synthesize evidence concerning the best cervical cancer prevention and control strategies in the region, the Executive Committee proposed activities based on the nine strategic components on key areas, taking into account the new challenges posed in the Regional Plan of Action. An Executive Summary of the Plan was prepared, considering the issues for the effective reduction in cervical cancer incidence and elimination of mortality in South America, and it was submitted to the UNASUR Health Pro Tempore Presidency, in Montevideo, and to the UNASUR General Secretariat, since the meeting of the UNASUR Council of Heads of State and Government scheduled for Quito was not held.

**5)** UICC invited the Plan's Executive Committee to attend the "Regional Cervical Cancer Control Roundtable" in Santiago, in April 2016, with support from the Ministry of Health of Chile and the presence of experts from IARC-WHO, PAHO and area specialists from various countries, who are also part of the RINC Cervical Cancer Control Working Group. This proved to be an excellent opportunity to meet the objectives of Activity 5: 1) Formation of the Advisory Group with representatives from UICC, IARC, and PAHO; and 2) Learn and discuss more about the needs of each country and present the Executive Summary.

6) For the purpose of adopting the revisions by consensus in Santiago, the Executive Committee submitted a technical report to the RINC Management Board (the Network's directing council) at its VI Ordinary Meeting, at the Ministry of Public Health of the Eastern Republic of Uruguay, in Montevideo, on 17-18 May 2016. The Management Board issued resolutions on the report, proposing that the name of the Regional Campaign launched by the UNASUR Secretary General in 2015 ("Region Free from Cervical Cancer") should be integrated into the Plan and that the Plan would have a 5-year period for its complete execution, starting with its approval by the CSS.

22



7) Next, the Executive Committee coordinated several activities with support from the Network's Technical Secretariat, including implementation of the RINC Social Working Communication Group (which developed the proposal for strategic component 9 of the plan: "Communication, Advocacy, and Public Education") and online and in-person meetings, technical visits, and a workshop to ensure cytology quality standards. The Plan's strategy is grounded in the database and information provided by all the countries surveyed and by the Advisory Group specialists.

**8)** ISAGS, as the project's executing entity according to the Commitment Letter signed with UNASUR, will be responsible for delivering the Plan to the UNASUR General Secretariat.

#### **6. GENERAL OBJECTIVE**

Provide a platform for sharing experiences and technical assistance among the region's countries in order strengthen cervical cancer prevention and control programs and contribute to reducing cervical cancer incidence and mortality in the UNASUR member countries.

#### **7. SPECIFIC OBJECTIVES**

**1.** Provide evidence and technical assistance to reduce barriers to access to diagnosis, follow-up, and treatment of precancerous lesions and cancer.

**2.** Provide technical assistance and transfer regional knowledge and experiences for implementation or optimization of a national-level cervical cancer control program.

**3.** Provide technical assistance and transfer regional knowledge and experiences for integration of possible screening methods to be implemented in organized programs:

a. Visual inspection with acetic acid (VIA) and see-and-treat.

- **b.** Conventional cytology (Pap test).
- **c.** HPV testing.

**4.** Transfer knowledge about current programs to countries that decide to integrate HPV vaccination.

**5.** Strengthen registration, monitoring, and evaluation systems in cervical cancer prevention programs.



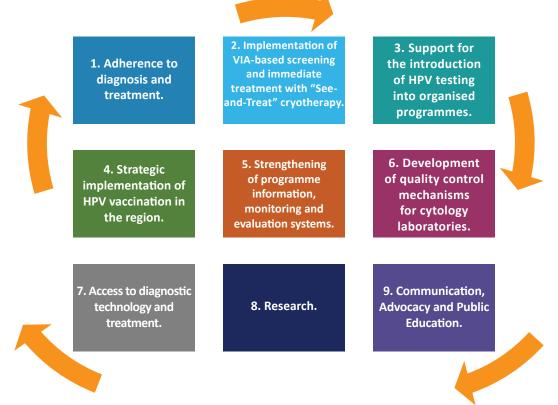
In order to achieve the proposed objectives, development of the Plan was based on an initial **Experience-sharing and Technical Assistance Platform for Cervical Cancer Prevention and Control in South America**, which was designed by members of the RINC-UNASUR Cervical Cancer Control Working Group in 2012, and then confirmed and expanded in November 2015. The working group, which has representatives from 11 of the 12 UNASUR Member States (Guyana has not requested participation), identified nine thematic components that constitute the priority core work areas to ensure the Project's specific objectives (Figure 1):

1. Adherence to diagnosis and treatment;

- 2. Implementation of VIA-based screening and immediate treatment with "See-and-Treat" cryotherapy;
- 3. Support for the introduction of HPV testing into organized programs;
- 4. Strategic implementation of HPV vaccination in the region;
- 5. Strengthen program information, monitoring, and evaluation systems;
- 6. Development of cytology laboratory quality control mechanisms;
- 7. Access to diagnosis and treatment technology;
- 8. Research;
- 9. Communication, advocacy, and public education.

#### Figura 1







#### 8. IMPLEMENTATION OF THE PROPOSAL

Implementation of the proposed Regional Plan consists of two parts: a) establishment of a **Technological Platform for Technical Assistance (PlaTeAT is the acronym in Spanish)**, which will provide support and strengthen the activities proposed within the framework of the component topics; and b) the **activities proposed for each priority component**.

#### 8 a. TECHNOLOGICAL PLATFORM FOR TECHNICAL ASSISTANCE (PLATEAT)

#### **General Objective**

Creation of a Technological Platform for Technical Assistance (PlaTeAT) is proposed to improve professional practices, data quality, and access to information, promoting constant sharing among its users. To this end, PlaTeAT will use tools and resources that are online, dynamic and interactive, widely available and easily accessible, and updatable.

Figure 2. What is the PlaTeAT?



## What is it?

- PlaTeAT is a virtual platform, consisting of dynamic, interactive and friendly tools for the user, that aims to improve professional practices and provide access to information on cervical cancer (CC).
- It encourages exchange between experts and provides technical assistance in real time user inquiries.
- It is a means for the systematization of knowledge and expertise available in the Region, that will allow the subsequent creation of devices adapted to local realities, which will become replicable.
- It is an instrument for stardarizing training procedures, indicators and criteria, allowing to create where there are none and to consolidate existing information and monitoring systems of CC.



#### Rationale

In a broad sense and as PAHO indicates, "information and communication technology is essential to ensuring advances in universal health coverage and health outcomes, as well as to advancing the agenda for women's rights and gender equality."<sup>11</sup> Use of information and communication technologies (ICTs) for health is now a clear reality at the global level, despite the existing so-called digital divide in the use and development of these technologies between high-income countries and medium- and low-income countries. Thus, we understand this proposal as a basic step to exploring and developing different cervical cancer prevention capacities in the region, generating innovative applications, and at the same time contributing to bringing in different regional and international actors. The Platform is oriented in that direction: to provide the region with online resources and tools, and dynamic and updatable content that is adaptable to different needs, in accordance with regional contexts, and applicable to different programmatic scenarios. In turn, the Platform is aligned with PAHO/WHO recommendations, with the ultimate aim of eradicating cervical cancer mortality and lowering incidence of the disease.

Specifically, PlaTeAT has great potential: more and better access to information on different materials for the assembly of devices necessary for effective disease prevention; standardization of training criteria; unification of terminology; creation of a common pool of usage indicators for the different areas; assessment of deficiencies in approaches; and development of enriched content based on interaction with regional experiences. Interactivity is the key to this framework: through online training and technical assistance through forums, together with the preparation of practical guides and common documents, this approach makes it possible to focus on the creation of "products" that convey knowledge and to provide accessible and replicable knowledge to all individuals involved in the health system (policymakers, physicians, coordinators, health workers, etc.). This makes it possible to standardize processes and adapt general cervical cancer guidelines to different settings, provided that there are common premises for the work. PlaTeAT also fosters user autonomy, having forums with specialists and online courses to solve problems and answer questions, thereby simplifying and improving the learning process.

Furthermore, inherent in the need to produce more cost-effective strategies and

26



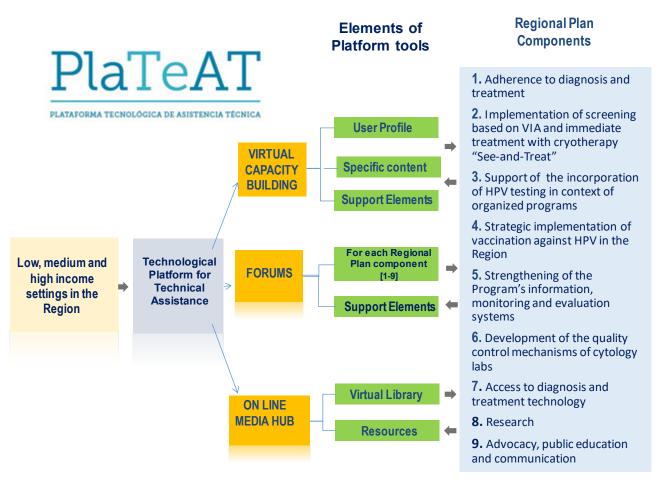
interventions, we understand that it costs considerably less to develop PlaTeAT than to teach on-site courses (which involve availability of facilities, time, travel expenses, per diem, scheduling, etc.), and there are greater benefits: reaching more people and institutions; the possibility of obtaining comparable data; and the creation of an interactive space adapted to the new scientific evidence and technology advances in HPV prevention and cervical cancer management. The aim, therefore, is to integrate knowledge, expertise, communication technologies, and scientific advances in cervical cancer control. It is also desirable, during the process, to engender a culture of accountability for the results obtained in order to strengthen political and health system decision-making at the regional, national, and local level with regard to implementation of the components in the Regional Plan.

We understand that the main guiding principles for obtaining a sustainable impact on the outcomes of the different cervical cancer prevention programs are the creation of evidencebased policies, multisectoral collaborations, and public awareness about obtaining effective interventions to manage cervical cancer as a result. In this way, PlaTeAT looks to the future to become a base for dynamic and updatable work that contributes significantly to multisectoral cooperation, with a view to 2021 as the target for achieving definitive eradication of cervical cancer in Latin America. From this perspective, a key aspect of the Regional Plan is coordinated work with international cervical cancer control agencies and initiatives in the region. This is the case, for example, of the abovementioned roadmap proposed by the countries of the APEC forum, the CDC initiative to develop information system indicators, and the United Nations Coalition for cervical cancer control, among others. This is expected to contribute to improving information sharing among agencies and coalitions in order to foster best practices and health policies aimed at attaining the objectives of the Regional Plan.

27







#### **Specific Objectives of PlaTeAT**

- 1. Facilitate ongoing technical exchange among those involved in cervical cancer prevention.
- 2. Conduct training on priority topics in the Regional Plan's nine components.
- 3. Provide a bank of scientific resources on available screening tests and treatment techniques, which is updated and receives ongoing input from users.
- 4. Support design and implementation of information systems and of a minimum set of indicators for monitoring and evaluating the region's prevention programs.
- 5. Provide support for training of trainers (ToT) to replicate training on screening and treatment techniques at the local level.
- 6. Provide a forum to respond to queries about follow-up and treatment protocols, as well as online exchanges to improve medical practice.
- 7. Start collecting scientific evidence on primary and secondary cervical cancer prevention, and guidelines from WHO and other pertinent agencies.



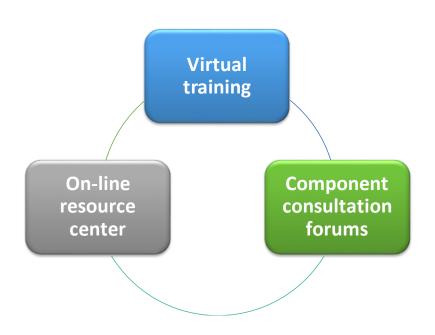
- 8. Encourage real-time response to consultations on the different obstacles that may arise in vaccine implementation.
- 9. Facilitate systematization of information and production of data on program implementation by UNASUR countries.
- 10. Facilitate field studies (multicentric studies) and dissemination of their results.

PlaTeAT will be structured around three basic tools (Figure 4): **a) online training courses**, **b) information-sharing forums, and c) an online resource center,** which will facilitate and strengthen attainment of most of the different objectives for the respective components, while enabling integration of different regional know-how and experiences into the work carried out for every component.

Figure 4. Platform tools



## How is it structured?

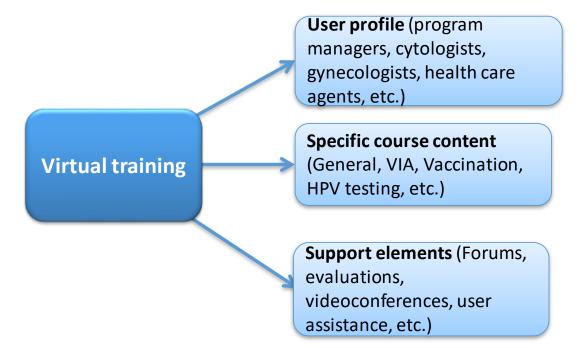




**1. Online training** (e-learning) to comprehensively address cervical cancer and its prevention in the following core areas: primary and secondary cervical cancer prevention; use of different screening technologies (HPV testing, VIA, cytology); follow-up and treatment of precancerous lesions and cancer; and monitoring and information systems. The monitoring module will be prepared in coordination with similar initiatives underway in the region (e.g., the IDCCP group that develops indicators for the Toolkit). In turn, course content will adapt to the different profiles of the different agents involved in cervical cancer prevention.

Figure 5.



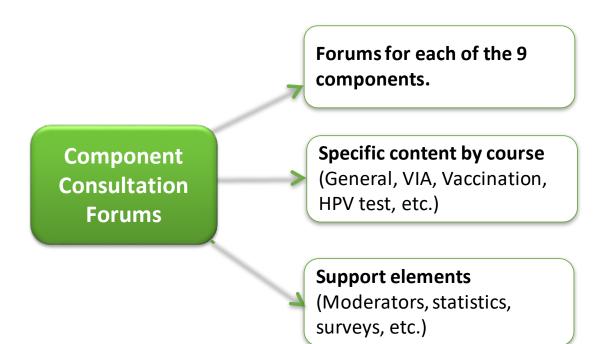




**2. Consultation forums and information sharing** for the Regional Plan's components. This is a tool to improve specific practices as part of technical assistance, helping to provide feedback for the components and to answer specific questions from users. The forums will be based on the nine thematic components that comprise the Plan. They will also include online surveys that will encourage user involvement and provide rapid knowledge assessment, complementing the objectives and activities of all the components.

Figure 6.



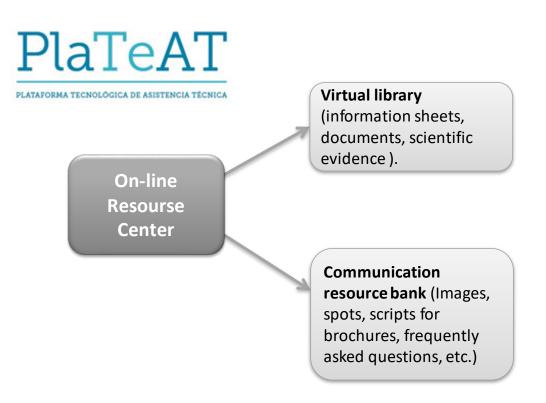




**3. The online resource center** will be a place for dynamic storage of different training materials, information on courses and institutions, case studies, documents, graphic resources, communication strategies, etc.

This online center will be an online library of images, communication materials, manuals, information sheets, publications, information on research projects, etc. This tool will be run in coordination with agencies that have similar initiatives, such as APEC, PATH, and others.

Figura 7.



This structure will enable constant updating of content, in step with the scientific evidence and the recommendations of international agencies, rooted in the Latin American experience. In turn, the activities held in PlaTeAT will provide feedback for the work planned for each component and will enable the ongoing revision of the activities and resources available in the platform: online training courses will encourage subsequent exchanges in the information-sharing forums and will provide materials for the online resource center. Thus, PlaTeAT is designed to be an ideal vehicle to integrate and link the nine components of the Regional Plan. The tools in PlaTeAT will enable integrated and interactive development of content through surveys, publications of results, counseling material, work with indicator systems, online courses, graphic resources, etc.



#### 8 b. ACTIVITIES OF THE REGIONAL PLAN BY PRIORITIZED THEMATIC COMPONENT



• These are the activities to be carried out in each of the nine components to achieve the goals of the Regional Plan.

• These are studies, workshops, meetings that nurture the PlaTeAT and, at the same time, are nurtured by it.

• These multi-sector collaborations give the basis of the PlaTeAT and will be

modified interactively by it.



Component 1

### ADHERENCE TO DIAGNOSIS AND TREATMENT OF PRECANCEROUS LESIONS AND CANCER



## Component 1. ADHERENCE TO DIAGNOSIS AND TREATMENT OF PRECANCEROUS LESIONS AND CANCER

Cervical cancer prevention in the framework of organized prevention programs involves three main stages: screening, diagnosis, and treatment. The key concept here is that screening does not cure, but diagnosis and treatment do. To this end, different processes must be carried out, such as sample collection, delivery of results, evaluation of screening-positive women, and access to colposcopy and biopsy in appropriate cases, as well as delivery of those results and subsequent referral to treatment, if necessary. This is a complex process, since different problems tied to health system organization and to access barriers can threaten proper coordination and the outcome of the process. In South America, lack of follow-up and treatment is one of the main problems affecting countries, with abandonment at this stage ranging from 18% to 70%, depending on the country and area.<sup>12-16</sup> Countries also have a shortage of information on this topic and problems with availability of human resources and materials for diagnosis and treatment.<sup>17</sup>

The Plan includes a proposal for systematization of strategies used in the region to increase adherence to follow-up and treatment, to be able to provide and replicate technical assistance for their implementation in the different countries. The proposal also includes counseling when results are delivered, as well as use of a scale to measure the social and psychological impact of HPV testing (Escala Psico-Estampa), which has been validated by Colombia's National Institute of Oncology, Argentina's National Cancer Institute, and IARC-WHO, with support from RINC.

#### **General Objective of Component 1**

Strengthen UNASUR country capacities to achieve timely diagnosis and treatment of 100% of women with precancerous lesions and cancer.

#### **Specific Objectives of Component 1**

1. Conduct a regional assessment of access barriers and actions/strategies that should be carried out to follow up on screening-positive women.

Component 1



- 2. Implement and/or strengthen national information systems for monitoring and evaluation of adherence to diagnosis and treatment of screening-positive women.
- Implement use of the scale to measure the social and psychological impact of HPV testing.
- 4. Prepare and disseminate systematic implementation of counseling for delivery of results to patients.

#### **Proposed Activities**

# Objective 1: Conduct a regional assessment of access barriers and actions/strategies that should be implemented to follow up on screening-positive women.

**a.** A regional survey of key actors in UNASUR countries' health systems on timeliness of diagnosis and adherence to treatment, and on access barriers and actions/strategies implemented to follow up on screening-positive women and increase adherence to diagnosis and treatment. The survey will be implemented through PlaTeAT. The following dimensions will be investigated:

- Baseline in each country of the percentage of abandonment of diagnosis and treatment by screening-positive women.
- Political, regulatory, technical/technological, geographical, economic, physical, and human resources barriers, among others, that affect women's follow-up and adherence to diagnosis and treatment.
- Organization of the health system for diagnosis and treatment of screening-positive women.
- Resources (human, equipment, etc.) available to follow up on patients.
- Strategies implemented to follow up on screening-positive women and increase adherence to diagnosis and treatment.
- Existence and type of information system used for patient follow-up, in coordination with Component 4.

Component 1



- Implementation and adherence to the recommendations of clinical practice guidelines for diagnosis and treatment.
- Results of the survey will be systematized and disseminated through the Technological Platform.

**b.** In addition, a regional workshop will be held for 1) joint and multidisciplinary analysis of survey results, and 2) design and implementation of strategies to resolve the main barriers identified, considering the following dimensions:

- Strengthening of surgical, radiotherapy, and chemotherapy treatment systems through investments in infrastructure, education, and specialized training.
- Identification of best practices for training technical personnel in the different treatment modalities with minimum quality standards, in resource-limited areas.

Furthermore, the results of the survey and of the regional workshop will be condensed in a specific publication.

**c.** Implementation of a multicentric study to investigate patients' main fears, myths, and misconceptions with regard to positive results from the different screening techniques. The results of this study will be a fundamental input in the development of the counseling strategy. In addition, the evidence produced will enable the design and creation of communication and advocacy materials, which will be developed together with Component 9 and subsequently integrated into the PlaTeAT online resource center.

# Objective 2: Implement and/or strengthen national information systems for monitoring and evaluation of adherence to diagnosis and treatment of screening-positive women.

**a.** Definition of a basic set of indicators of access to diagnosis and timely treatment in order to trace patients from screening tests to colposcopy, to biopsy, and to initiation of treatment. This dimension of the component will be implemented in coordination with the activities proposed in Component 5 for strengthening information systems, and program monitoring and evaluation. The definition of indicators related to follow-up and treatment will be included as a specific item.

**b.** Integration of the basic set of indicators into PlaTeAT, primarily through the online training course in the specific module and their inclusion in the online resource center.



**c.** Integrate the set of basic indicators of follow-up into the information management system which will be designed and developed in the framework of the activities proposed for Component 5.

**d.** Technical assistance to countries to facilitate inclusion of the basic indicators in the software that already exists. This will be done through the consultation forums and technical assistance visits to countries that request them.

# Objective 3: Implement use of the scale to measure the social and psychological impact of HPV testing.

**a.** Design and implementation of a multicentric study to measure the social and psychological impact of HPV testing. This will be done in coordination with Component 3, specific to HPV testing.

**b.** Regionally disseminate and promote use of the scale to measure the social and psychological impact. This will be done through PlaTeAT, with its integration into the online training course and the online resource center.

# Objective 4: Prepare and disseminate systematic implementation of counseling for delivery of results to patients.

**a.** Preparation of a methodological guide for counseling for delivery of results, aimed at health professionals. This methodological guide will be accompanied by the design of support materials for counseling, which will be included in the online resource center's materials bank..

**b.** Design and implementation of studies that evaluate the effectiveness of counseling to reduce the social and psychological impact of a positive HPV test, in coordination with Component 3, specific to HPV testing.

**c.** Training of health professionals for implementation of counseling. This will be implemented through PlaTeAT courses.



### Component 2 IMPLEMENTATION OF VIA-BASED SCREENING AND "SEE-AND-TREAT"



### **Component 2 - IMPLEMENTATION OF VIA-BASED SCREENING AND "SEE-AND-TREAT"**

As its name indicates, visual inspection is a technique to visualize precancerous lesions after applying acetic acid or Lugol's iodine to the cervix. It is a relatively simple and lowcost technique; a wide range of professionals can do it after brief training; relatively little infrastructure is needed; and above all, it enables using see-and-treat, i.e., treatment immediately after obtaining a positive result. Its use in various areas of Latin America has provided thousands of women in low-income contexts access to screening and treatment. As has already been pointed out, diagnosis and treatment of precancerous lesions is affected by multiple factors, and barriers. As a result, the opportunity to have a screening tool that permits immediate on-site treatment represents an advantage for cervical cancer prevention programs. One alternative treatment is cryotherapy, which has reasonably good therapeutic performance, is less expensive, easy to learn and use, and does not require anesthesia.

Peru has extensive experience in this field through the National Institute for Neoplastic Diseases (INEN) and its Center of Excellence for Cervical Cancer Training, which, with support from IARC, PATH, and JHPIEGO, developed and validated educational packages around this approach, which is being used in Peru and other Latin American countries.

Implementation of see-and-treat requires an appropriate regulatory framework so that nonmedical professionals can provide screening and treatment. For example, in Colombia, Resolution 2003/2014,<sup>18</sup> which defines eligibility criteria for health service providers, includes cervical cancer screening with cytology, HPV, or VIA VILI. The human talent standards permit physicians and nurses to carry out VIA VILI. Colombia has recently published comprehensive roadmaps for breast cancer and cervical cancer care, as part of the new Comprehensive Model for Health Care, under the Comprehensive Health Care Policy.<sup>19</sup> According to these roadmaps, regulated by a Ministry of Health resolution, cryotherapy will be carried out by nurses. In Peru, professional midwives ("obstetras") and nurses can perform VIA,<sup>20</sup> but the regulations do not authorize them to perform cryotherapy, which at this time is done under medical supervision. As a result, work needs to be done for countries to have an appropriate regulatory framework that facilitates implementation of the strategy.

According to information provided by PAHO, at least twelve countries in the region have



integrated or are in the process of integrating see-and-treat (Figure 5),<sup>21</sup> and they provide the basis for human resources training and technical support for implementation.

Figure 5. Implementation	of see-and-treat in	countries of the region

	Integrated into the national program	Pilot Project
RINC full members	Bolivia Colombia Paraguay Peru Surinam	
<b>RINC Associate members</b>	Guatemala Nicaragua Panama	Honduras
Others	Guyana El Salvador Belize	Haiti Grenada

The Plan includes a proposal for training human resources for implementation of seeand-treat, development of regional training centers, design and support for implementation of quality control mechanisms and tools for monitoring and evaluation, and technical support for the countries.

**General Objective of Component 2:** Support implementation of VIA-based screening as part of the see-and-treat framework in countries that wish to integrate it as a screening and treatment method.

### **Specific Objectives of Component 2**

- 1. Carry out a needs assessment in the region, and potentially in countries or areas within countries, for implementation of VIA in the see-and-treat framework.
- 2. Train a critical mass of VIA providers within the framework of see-and-treat.
- 3. Support creation of a regulatory framework and standards for nonmedical health workers to be providers of VIA and cryotherapy.
- 4. Develop quality control mechanisms and tools to monitor the strategy.
- 5. Provide technical support to countries for implementation of VIA and see-and-treat.



### **Proposed Activities**

Objective 1: Carry out a needs assessment in the region, and potentially in countries or areas within countries, for implementation of VIA in the see-and-treat framework.

a. Conduct a regional survey of key actors in the health systems of UNASUR countries to assess needs related to implementation of the strategy. The survey will be done through PlaTeAT and will investigate the following dimensions:

- Health authorities' interest in implementation of the strategy.
- Needs for human resources training.
- Main barriers and facilitators to implementation of the strategy.
- Local actors who should be included in the decision-making process for integration of see-and-treat.
- National regulations on provision of screening and treatment techniques in the framework of cervical cancer prevention.
- Actions necessary to revise standards that explicitly exclude the possibility of including nonmedical professionals.
- Obstacles and facilitators to the creation of a regulatory framework and standards for nonmedical health workers to provide VIA and cryotherapy. Actors will be identified to build partnerships that facilitate revision of regulations.

### **Objective 2:** Train a critical mass of VIA providers within the framework of see-and-treat.

Human resources training will adopt as a reference the educational package developed and validated by the Center for Training in VIA of INEN in Peru, which has vast experience in training providers and teachers (using an educational pyramid scheme).

a. Implementation of in-person and partially in-person courses on VIA and cryotherapy, aimed at health workers of UNASUR countries, based on the training needs identified in the survey mentioned in the previous activity.



**b.** Implementation of in-person and partially in-person ToT in VIA and cryotherapy. Work with countries to identify and select the participants of ToT courses to ensure they have the proper profile.

The partially-in-person module of both courses is included in RINC's PlaTeAT, with its integration into the Online Training Course and tutoring by the Peru team.

# **Objective 3: Support creation of a regulatory framework and standards for nonmedical health workers to be providers of VIA and cryotherapy.**

**a.** Hold consensus meetings with the main regional gynecological scientific societies to discuss the results of the survey mentioned in Objective 1 of the component and reach consensus on basic minimum criteria to allow nonmedical professionals to carry out see-and-treat.

**b.** Development of a model to revise the regulation and standards on practice by nonmedical professionals for application of see-and-treat.

**c.** Implementation of pilot projects in countries selected for the application of the model to revise the regulation and standards on the practice of nonmedical professionals.

### **Objective 4: Develop quality control mechanisms and tools to monitor the strategy.**

**a.** Hold online working meetings, using the PlaTeAT consultation forum's interactive tools, to design procedures, techniques, and recommendations for see-and-treat quality control.

**b.** Participatory definition of minimum indicators for monitoring of see-and-treat, in coordination with Component 5 on Information Systems.

**c.** Hold consensus meetings with national and international scientific societies, and other relevant actors, concerning quality control criteria and proposed indicators.

**d.** Development of training entities to implement the control mechanisms. This activity will be held through courses and supervisory visits, as well as their inclusion in the PlaTeAT online training course.



**Objective 5: Provide technical support to countries for implementation of VIA and seeand-treat.** 

This activity will be carried out in coordination with PAHO and other pertinent agencies. Technical assistance will be provided through PlaTeAT, and through regional technical exchange and training workshops and technical assistance visits:

**a.** Inclusion of a specific module on VIA in the PlaTeAT online training course, which can be accessed according to the different profiles of the trainees (managers, prevention program personnel, medical professionals, etc.). Topics will include effectiveness of see-and-treat, target population, frequency, quality control, etc.

**b.** Technical assistance visits to countries. Support will be provided for the travel and accommodation of experts selected according to the needs of the country requesting technical assistance.

**c.** Use of the PlaTeAT consultation forum's interactive tools (video conferences, audio, online surveys, etc.) to answer questions in real time about the different obstacles that may arise with implementation of see-and-treat. Online document sharing and online discussions will also be held, including in the consultation forum.

**d.** The PlaTeAT online resource center will make available communication materials on VIA and cryotherapy from the different countries, so they can be used in local trainings, or as guides for preparing new materials. This activity will be carried out in coordination with Component 9 in the Regional Plan, "Communication, Advocacy, and Public Education." Scientific evidence on VIA and cryotherapy will be included, as well as guides and manuals with recommendations from PAHO and other pertinent agencies..



### Component 3 SUPPORT FOR INTEGRATION OF HPV TESTING INTO ORGANIZED PROGRAMS



## Component 3. SUPPORT FOR INTEGRATING HPV TESTING INTO ORGANIZED PROGRAMS

HPV testing is a screening tool based on the molecular biology of the HPV virus; the test can detect infection by approximately 14 of the 17 oncogenic types of HPV. Given the high prevalence of HPV in young women, screening is recommended starting at age 25 or 30 years. Sensitivity of the HPV test is close to 95%<sup>22-23</sup> and it has a high negative predictive value, permitting a five- or ten-year testing interval.<sup>24-27</sup> It can be processed automatically or semi-automatically and is replicable, simplifying quality control.<sup>7</sup> It also allows for self-collection of vaginal samples by women, strengthening screening acceptability.<sup>7</sup> The test's specificity has still not been well-defined and therefore the risk of replacing cytology with HPV testing has not been well quantified. In fact, HPV testing does not reveal whether the woman has any lesions, which means that those who test positive require a triage test, such as visual inspection or cytology. In several Latin American countries, HPV testing and triage cytology are carried out together, but the cytology sample is only read for women who test positive for HPV. This involves the need to organize the care network and ensure access to triage.

Different studies have shown that HPV testing is effective at reducing cervical cancer incidence and mortality as show by the data in a study by Dr. Sankaranarayan carried out in India with more than 100,000 women and published in 2009 in the New England Journal of Medicine.<sup>28</sup> Furthermore, several studies in Mexico have shown that HPV test sensitivity is close to 95%.<sup>22-23</sup> In Argentina, a demonstration project carried out from 2012 to 2014 in Jujuy province showed the high effectiveness of HPV testing in an actual programmatic context in a medium/low income area.<sup>29</sup> Various countries are progressively adopting HPV testing for primary screening, particularly in Latin America. Mexico and Argentina have been pioneers and now Colombia and Peru are also integrating the test in pilot schemes or using progressive integration.

One of the principal characteristics of HPV testing is that allows the woman herself to take the vaginal sample (self-sampling).<sup>7</sup> This is a simple procedure that the woman can carry out calmly in the convenience and privacy of her home. Various studies have shown a high correlation between vaginal self-sampling and sample collection by a health professional for HPV detection. It has also been shown that women prefer it over having a



physician conduct a Pap test. It has a high sensitivity, although less than that obtained when a medical professional collects the sample. In Latin America, pioneering studies showed the high acceptability of self-sampling, as did those carried out in Nicaragua, Mexico, and Argentina. The MARCH study showed that self-sampling for HPV detected three times more CIN2+ (cervical intraepithelial neoplasia grade 2+) lesions and four times more invasive cancer than Pap tests.<sup>30</sup> In Argentina, the EMA project showed that self-collection offered by health workers in a woman's home makes it possible to obtain four times greater screening coverage than that achieved by conventional screening, carried out by physicians in health centers.<sup>31</sup> The project also showed that the strategy was acceptable and that women preferred it, in particular because it made it possible for them to overcome the different access barriers to screening, mainly those linked to their role as caregivers to the family and the home.<sup>32</sup> Self-collection does not permit Pap triage testing, which means that effective integration is necessary to ensure women have access to follow-up testing.

This component will make it possible to provide technical assistance to the countries that decide to integrate HPV testing, providing technical support for its introduction within the framework of an organized program and training of human resources in the different components involved in its implementation: sampling, organization and quality control of HPV laboratories, communication of results, triage techniques, development of communication/ dissemination strategies, establishment of service networks, and self-sampling.

General Objective of Component 3: Support implementation of HPV-testing-based screening in countries that wish to integrate it as a screening method.

#### **Specific Objectives**

- Provide technical assistance and training for integration of HPV testing within the framework of organized prevention programs.
- 2. Facilitate sharing of information and scientific evidence about the available tests.
- 3. Establish joint procurement mechanisms to facilitate access to the technology.
- 4. Design, support, and carry out research studies that provide evidence for effective implementation of HPV testing in the region.



### **Proposed Activities**

Objective 1: Provide technical assistance and training for integration of HPV testing within the framework of organized prevention programs.

This activity will be carried out in coordination with PAHO and other pertinent agencies. Technical assistance will be provided through PlaTeAT, and through regional technical exchange and training workshops and technical assistance visits:

**a.** Inclusion of a specific module on HPV testing in the online training course, which can be accessed according to the different profiles of the trainees (managers, prevention program personnel, medical professionals, etc.). Topics will include effectiveness of the different tests, triage techniques, target population, frequency, etc.

**b.** Technical assistance visits to countries. Support will be provided for the travel and accommodation of experts selected according to the needs of the country requesting technical assistance.

# **Objective 2: Facilitate sharing of information and scientific evidence about the available tests.**

**a.** Use of the PlaTeAT consultation forum's interactive tools (video conferences, audio, online surveys, etc.) to answer questions in real time about the different obstacles that may arise with implementation of HPV testing. Online document sharing and online discussions will also be held, including in the consultation forum.

**b.** The PlaTeAT online resource center will make available communication materials on HPV testing from the different countries, so they can be used in local trainings, or as guides for preparing new materials. This activity will be carried out in coordination with Component 9 in the Regional Plan, "Communication, Advocacy, and Public Education." Scientific evidence on HPV tests will also be included, as well as guides and manuals with recommendations from PAHO and other pertinent agencies.



### **Objective 3: Establish joint procurement mechanisms to facilitate access to the technology.**

Work in coordination with the Access to Technology Component with the Technical Group on Universal Access to Medicines (GAUMU) of UNASUR and PAHO.

# Objective 4: Design, support, and carry out research studies that provide evidence for effective implementation of HPV testing in the region.

This objective will be reached through coordinated work with the Research Component.

**a.** Support research projects aimed at providing scientific evidence concerning strategies to implement HPV testing in the region.

**b.** Support and contribute to the ESTAMPA Research Project, led by IARC-WHO.



## Component 4 STRATEGIC IMPLEMENTATION OF HPV VACCINATION IN THE REGION



### **Component 4. STRATEGIC IMPLEMENTATION OF HPV VACCINATION IN THE REGION**

Introduction of the HPV vaccine is an effective and safe component within a comprehensive approach to cervical cancer control and prevention. The HPV vaccine is an important opportunity to significantly reduce the burden of this disease around the world. An integrated approach that complements the use of the HPV vaccine (primary prevention) with screening for early detection of lesions (secondary prevention) will make it possible to significantly reduce the incidence of cervical cancer in the coming decades.

WHO recognizes the importance of cervical cancer and other diseases related to HPV as a public health problem and recommends including vaccination against this virus as a part of national vaccination programs, on the basis of the following key considerations:

- Prevention of cervical cancer and other HPV-related diseases is a public health priority.
- Available HPV vaccines are safe and effective to prevent infection and related disease.
- Vaccine introduction is programmatically feasible and financing can be secured.

Currently, two HPV vaccines are marketed in South America to prevent cervical cancer: one bivalent and one tetravalent, which both target oncogenic genotypes 16 and 18. The tetravalent vaccine was authorized in 2006 and the bivalent one in 2007. Their introduction in immunization programs in different countries around the world has been ongoing, particularly in Latin America, which has seen great progress in vaccine integration. To attain maximum effectiveness, both the bivalent and tetravalent vaccines should be administered before onset of sexual activity; i.e., before the first exposure to HPV infection. Both vaccines prevent infection by oncogenic types 16 and 18, responsible for approximately 70% of all cervical cancer cases. The bivalent vaccine is approved for use in women, and the tetravalent vaccine for use in women and men, although WHO does not recommend vaccination of men as a priority in low-income countries. It is very important to take into account that vaccinated women should continue with screening to prevent lesions associated with the types of HPV that vaccination does not prevent. Along these lines, a comprehensive strategy based on HPV vaccination of girls before their 14th birthday and screening according to each country's specific standards and regulations is recommended.

The Plan will include the design of specific actions so that countries that integrate the



vaccine can ensure high coverage for all doses, especially in populations of girls with low access to screening, diagnosis, and treatment services. The following objectives have been defined in the context of the transfer of experiences and methodologies among the region's countries and in Component 4 of the RINC-UNASUR Working Group's plan (introduction of HPV vaccine):

### **General Objective of Component 4**

Strengthen introduction of HPV vaccination in national vaccination schedules.

#### **Specific Objectives**

- 1. Provide technical assistance and training for introduction of the HPV vaccine in national vaccination schedules.
- 2. Systematize regional experiences on HPV vaccination strategies, identifying good practices to be replicated.
- 3. Strengthen immunization program registration, monitoring, and evaluation systems.
- 4. Establish a protocol to address possible anti-vaccination movements that will limit their impact on implementation of vaccination.

### **Target Groups**

- \* Immunization programs in all the region's countries.
- \* Cervical cancer prevention and control programs in all the region's countries.
- \* Professionals, national experts, and health decision-makers involved in cervical cancer prevention.

### **Proposed Activities**

# Objective 1: Provide technical assistance and training for introduction of the HPV vaccine in national vaccination schedules

This activity will be carried out in coordination with PAHO and other pertinent agencies.



Technical assistance will be provided through PlaTeAT, and through regional technical exchange and training workshops and technical assistance visits:

**a.** The training course will have a specific module on the HPV vaccine and can be accessed according to the different profiles of the trainees (vaccine suppliers, vaccinators, prevention program personnel, etc.). Topics on effectiveness, safety, target population, types of vaccine, dose, frequency, etc. will be included.

**b.** Use of the consultation forum's interactive tools (video conferences, audio, online surveys, etc.) to answer questions in real time about the different obstacles that may arise with implementation of vaccination. Online document sharing and online discussions will also be held, including in the consultation forum.

**c.** The online resource center will make available communication materials on vaccination from the different countries, so they can be used in local trainings, or as guides for preparing new materials. This activity will be carried out in coordination with Component 9 in the Regional Plan, "Communication, Advocacy, and Public Education." Scientific evidence on vaccination will be included, as well as guides and manuals with recommendations from PAHO and other pertinent agencies.

**d.** Technical assistance visits to countries. Support will be provided for the travel and accommodation of experts selected according to the needs of the country requesting technical assistance.

Objective 2: Systematize regional experiences on HPV vaccination strategies, identifying good practices to be replicated for attaining high coverage.

**a.** A mixed-methods study will be designed and carried out that will include a survey on vaccination program characteristics and results in each country and a qualitative study based on interviews with the people in charge of immunization programs, aimed at obtaining evidence on practices that have been either beneficial or detrimental to high coverage. The results will be used as input for a guide to good HPV vaccination practices and for technical assistance to countries.

b. Preparation of a manual on regional experience with HPV vaccination. This will be



based on consolidation of experiences in the different countries. It will be a basic input for the PlaTeAT online training course.

**c.** Organization of regional workshops to discuss the results of systematization, share experiences regarding strategies used for HPV vaccination in the region's countries and share information on lessons learned, and devise the best tools for data and information gathering (coverage and safety). The workshops will also be used to reach consensus on priority elements for communication about vaccination and to discuss common strategies for addressing challenges. Work groups will be included to address the concrete situation in each country, differentiating among those that have not implemented vaccination, those that have a pilot study, and those that have functioning national programs.

# Objective 3: Strengthen HPV vaccine coverage registration, safety, and evaluation systems in the region.

This objective will be coordinated with Component 5 on Information Systems.

**a.** Regional workshops, with subject-matter experts (immunization, school vaccination, and health center program coordinators, separately or together).

**b.** Consensus on tools to collect coverage and safety data. Agreement on which minimum and common indicators will be used to measure coverage, using the methodology described in Component 5: Strengthen program information, monitoring, and evaluation systems.

Objective 4: Establish a protocol to address possible anti-vaccination movements that will limit their impact on implementation of vaccination.

**a.** A qualitative research study that investigates and analyzes the mechanisms that generate rumors and fuel the anti-vaccination movement in those countries where this has occurred (Peru, Colombia, etc.): stakeholders, role of the media, opinions among the public and medical professionals, health system response, etc.

**b.** Preparation of a rumor management protocol, establishing parameters for response



by the health system, and tools for communication with the public, health professionals, and mass media.

**c.** Workshops with key health system actors, to train them to manage anti-HPV-vaccine rumors and reactions.



## Component 5 STRENGTHEN PROGRAM INFORMATION, MONITORING, AND EVALUATION SYSTEMS



## Component 5. Component 5. STRENGTHEN PROGRAM INFORMATION, MONITORING, AND EVALUATION SYSTEMS

Monitoring and evaluation of strategies is a key component of organized programs. An effective and efficient early cervical cancer detection program requires data that has been collected, analyzed, and interpreted through an integrated epidemiological surveillance system for program planning, management, service delivery, and evaluation, to reduce the number of cervical cancer cases and deaths.33 A recent report on cervical cancer control policies in Latin America and the Caribbean mentions that countries have identified information systems as a priority for cervical cancer prevention program monitoring and evaluation.<sup>34</sup> However, underutilization of these systems is common in the region and several countries do not have them.<sup>4</sup>

In 2015, the UNASUR Network of National Cancer Institutes and Institutions (RINC) did an analysis of existing information systems, to systematize and encourage the exchange of methods and software among countries.<sup>10</sup> The report concluded that the purpose of current systems is to monitor timely cervical cancer detection, provide estimates of cervical cancer morbidity and mortality with different degrees of precision, and enable partial or full evaluation of the effectiveness of their cervical cancer prevention and control programs. Furthermore, most are characterized by simplicity, flexibility, quality data, acceptability, and representativeness, which are all essential attributes for well-functioning information systems.

On the basis of this assessment, and taking into account the strengths of existing systems, this component will include specific actions so that all the region's countries can implement new information systems and improve existing ones, emphasizing technology transfer, development of generic software, training of human resources, and development of a set of basic indicators for monitoring and evaluation of programmatic activities.



### **General Objective of Component 5**

Move forward with construction of systems and minimum indicators necessary for monitoring and evaluation of cervical cancer programs in the region.

### **Specific Objectives**

- 1. Establish a common minimum set of indicators (MSI) for monitoring and evaluation of cervical cancer prevention programs in the region's countries.
- 2. Train and provide technical assistance to human resources on the use of indicators for program monitoring.
- Design and install a generic computer program to obtain information on cervical cancer diagnosis, follow-up, and treatment for UNASUR countries that do not have information systems.

### **Proposed Activities**

## Objective 1: Establish a common minimum set of indicators (MSI) for monitoring and evaluation of cervical cancer prevention programs in the region's countries.

**a.** Systematization of the work indicators used by UNASUR countries for monitoring and evaluation. This systematization will be integrated into an MSI, following a survey conducted through PlaTeAT.

**b.** Implementation of a participatory methodology for establishment of an MSI. To this end, the proposal is to work in coordination with Project IDCCP (Improving Data for Decision Making in Global Cervical Cancer Programs) of the United States Centers for Disease Control and Prevention (CDC), integrating the tool into this project (toolkit). This will include, among other activities to be determined, a regional workshop of experts from UNASUR countries and members of IDCCP and from other relevant international agencies, such as PAHO. Cervical cancer prevention program coordinators and technical personnel will participate as will expert scientists and relevant actors in the process. Work will also be coordinated with the activities related to monitoring and evaluation included in Components 1, 2, 3, and 4 of the Regional Plan.

**c.** A pilot study of adoption of an MSI in selected countries. Integration of an MSI will begin in those countries that initially agree to integrate them into their information systems. To this end, specific work agreements will be developed and technical assistance will be provided for collection of indicators and their subsequent analysis. The results of these pilot tests will serve as a model for work for the rest of the UNASUR countries.

**d.** Integration of an MSI into the open-source software that will be made available to countries that do not currently have information system software.

# **Objective 2:** Train and provide technical assistance to countries on implementation of information systems.

**a.** Inclusion of an MSI in PlaTeAT, specifically in the monitoring and evaluation module of the online training course and in the online resource center. In addition, work will be done with the communication and advocacy component to promote their dissemination among health authorities in the region's countries.

**b.** Production of specific content (manuals, presentations, videos, tutorials, etc.) to be used in the online course (to be implemented through the "PlaTeAT online training courses" tool) on the preparation of indicators and monitoring schemes.

**c.** Establishment of a specific sub-module in Component 5 within the PlaTeAT consultation and information-sharing forum, aimed at answering questions, solving problems, and promoting the sharing of experiences with the use of an MSI in different countries.

Objective 3: Design and install a generic computer program to obtain information on cervical cancer diagnosis, follow-up, and treatment for UNASUR countries that do not have information systems.

**a**. Design and implementation of a generic computer program to set up information systems. This will be based on the experience of MOVICÁNCER in Nicaragua, which is working with the University of Michigan School of Public Health to develop a generic version of SIVIPCAN (the information system used in Nicaragua).



**b.** A technical workshop on systems and information with representatives from the programs in those countries to work on defining the specific characteristics that should be integrated in this generic software for local application. This is especially relevant for countries that currently do not have information systems, so that they can obtain the software and receive specific training.

**c.** Provision of technical assistance to provide support for local implementation of the software, through in-person visits to the countries, as well as through the PlaTeAT consultation and information-sharing forums.



### Component 6

DEVELOPMENT OF CYTOLOGY LABORATORY QUALITY CONTROL MECHANISMS



## COMPONENT 6. DEVELOPMENT OF CYTOLOGY LABORATORY QUALITY CONTROL MECHANISMS

The organization of the cytology laboratories is another building block of organized prevention programs; however, most South American countries face problems with their operation. Lack of internal and external quality control is a widespread problem in the region and in many cases there are no specific recommendations or standards for their operation. This is a crucial problem to take into account when organizing screening, since high screening coverage will not have an impact if the diagnostic quality of the test is poor. The Plan will emphasize the organization of internal and external quality control systems and mechanisms, human resources training, and the development and adoption of basic regulations and standards to ensure high-quality cytology reading.

#### **General Objective of Component 6**

Design and set up a quality management system for cytology laboratories in RINC-UNASUR countries.

#### **Specific Objectives**

- Design a basic (internal and external) quality control protocol for use by cytology laboratories.
- 2. Set up an external quality assessment program that the region's countries can use.
- 3. To establish an external quality assessment programme that can be used by countries of the region.
- 4. Advise or assist in the improvement of external and/or internal quality control of cytology laboratories in RINC-UNASUR countries.



### **Proposed Activities**

**Specific Objectives 1 and 2:** Design a basic (internal and external) quality control protocol for use by cytology laboratories and define a minimum set of indicators to be adopted and used by cytology laboratories to monitor diagnostic accuracy.

Integration of MSI in the open-source software that will be made available to countries that do not currently have information system software.

**a.** A situation assessment of quality control in cervical cancer program cytology laboratories in the different countries. To this end, an in-person seminar/workshop will be held with cytology laboratory representatives, where the results of a prior survey will be presented and work will begin to build consensus on the quality control system.

**b.** Online working meetings, through the PlaTeAT consultation forum, to finalize consensus on laboratory quality control procedures, techniques, and recommendations.

**c.** Participatory determination of minimum indicators for cytology laboratory monitoring, in coordination with the Information Systems Component.

**d.** Consensus meetings with national and international scientific societies, and other pertinent actors, concerning quality control criteria and proposed indicators.

# Objective 3: Set up an external quality assessment program that the region's countries can use.

**a.** Redesign and improvement of the external quality assessment program in Uruguay, to enable countries in the region to participate if they so request.



Objective 4: Advise or assist in the improvement of external and/or internal quality control of cytology laboratories in RINC-UNASUR countries.

**a.** Inclusion of laboratory quality control protocols and indicators in a specific module of the PlaTeAT online training course.

**b.** Inclusion in the online resource center of materials and protocols that are developed.

**c.** Coordination of activities with the communication component for dissemination and implementation of protocols by laboratories in the region.

**d.** Video conferences, online grand rounds, and periodic information sharing through the PlaTeAT consultation and information sharing forum, aimed at dynamic remote technical assistance.

e. Technical visits by experts for assistance and in-service training.



### Component 7

ACCESS TO SCREENING AND VACCINE TECHNOLOGY



### Component 7. ACCESS TO SCREENING AND VACCINE TECHNOLOGY

As part of the introduction of the HPV vaccine and of screening tests based on detection of viral DNA, it is essential to facilitate the procurement of equipment. Access to technology is crucial for countries to be able to ensure a continuous supply of vaccines and tests for the target population. Along these lines, transparency in the pricing system, regional procurement, and technical assistance for UNASUR countries constitute the core activities proposed in this Component, and they will be carried out in collaboration with the UNASUR and PAHO Technical Group on Universal Access to Medicines (GAUMU).

**General Objective of Component 7** 

Facilitate procurement of HPV screening and vaccine technology.

**Specific Objectives** 

- Provide technical assistance to UNASUR countries on procedures and mechanisms for procurement of technology.
- 2. Produce a price database for different technological tools.
- 3. Among UNASUR countries, facilitate information-sharing about the pricing system and procurement mechanisms for available technologies.

### **Proposed Activities**

Specific Objective 1. Provide technical assistance to UNASUR countries on procedures and mechanisms for procurement of technology.

**a.** An assessment of procurement mechanisms for HPV vaccine and HPV tests in the region, and of the main barriers to and facilitators of access to technology.

**b.** A regional meeting to present the results of the assessment and propose a regional and consensus-based strategy to facilitate technology procurement mechanisms related



to cervical cancer prevention. This meeting will be held together with PAHO, with the participation of GAUMU.

Specific Objective 2. Produce a price database for different technology tools.

In collaboration with GAUMU/UNASUR, a database will be set up of prices paid by countries that have integrated HPV testing and HPV vaccination.

Specific Objective 3. Among UNASUR countries, facilitate the exchange of information about the pricing system and procurement mechanisms for available technologies.

**a.** Use of the interactive tools in the consultation forum to answer questions about prices and mechanisms for technology procurement.

**b.** The online resource center will make the products of the assessment and of the regional workshop available for consultation by all countries involved.

The following are recommendations from the cytologists that attended the Seminar for Development of Quality Control Mechanisms for Cervical Cytology Laboratories, in March 2017, in Montevideo, as a stage in the Plan's preparation.

- Recommend that each country's cervical cancer program coordination team should budget for external quality control.
- Recommend that cervical cancer prevention coordination teams should include a cytopathologist to be in charge of laboratory quality.
- Recommend including a cytopathology laboratory representative in cervical cancer programs.
- 2017: Continue with this working group and facilitation assistance..
- Hold semiannual or annual meetings with this working group (assess country rotation).
- Suggest that countries should follow accreditation on ISO standards.



## Component 8 RESEARCH



### **Component 8 - RESEARCH**

It is essential to carry out research to support the RINC plan of action in order to respond to the questions and challenges facing South America in cervical cancer control, making this a priority crossing-cutting component.

The research component will include setting a regional agenda of priority research topics, in the framework of the three focus areas established by the Plan, and the creation of working partnerships with regional and international institutions. Human resources training on basic, social, epidemiological, and implementation research will also be planned. A central aspect of the proposal will be to support research for the validation and development of screening technologies and local vaccines. The Plan includes a proposal for financing mechanisms to carry out the research agenda, as well as identification of funding sources.

### **General Objective of Component 8**

Develop a platform of multicenter studies (projects between two or more countries and projects that involve working partnerships with regional and international institutions) according to a regional agenda of priority subjects within the framework of the three areas of approach established by the Plan.

### **Specific Objectives**

- Conduct studies on cervical cancer prevention emphasizing implementation of the HPV vaccine.
- 2. Conduct studies on early cervical cancer detection with different screening techniques.
- 3. Conduct studies on access to diagnosis and treatment.



### **Proposed Activities**

### Specific Objectives 1, 2, and 3

**a.** Hold three workshops (one for each focus area) with researchers from the region and leaders in cervical cancer control from RINC member countries to establish a regional agenda of priority research topics.

**b.** Identify funding sources and adapt projects to them.



Component 9

## COMMUNICATION, ADVOCACY, AND PUBLIC EDUCATION



### **Component 9. COMMUNICATION, ADVOCACY AND PUBLIC EDUCATION**

The Plan includes actions to establish cervical cancer control as a maximum priority on the public health agendas of the region's countries. It will integrate the perspective and involvement of patient organizations, civil society organizations, and anti-cancer leagues, among others. Social marketing actions will be planned along with joint efforts with other coalitions and partnerships created internationally and for other regions of the world.

Preparing communication strategies for cervical cancer control and eradication involves considering, among other issues, the importance of disseminating appropriate messages to promote HPV vaccination and screening and ensure support across the continuum of followup and treatment (if necessary), starting with accompanying women along the way with clear and scientifically validated information.

Despite being a highly preventable disease, cervical cancer is imbued with connotations tied to death (because it is cancer) and to sexuality (because of the anatomical site where it occurs, the cervix, and because HPV is a sexually transmitted virus). These two issues (which should be considered and deconstructed), in many cases accompanied by incorrect information that only contributes to strengthening myths, have the effect of keeping women away from health services, preventing access to screening and to other tests that may be necessary, with negative consequences for their health. As a result, the different sectors and actors who promote actions to make cervical cancer control a priority issue on the political agenda of the region's countries need to share the same scientific evidence and a common-sense framework for publicizing explanations and appropriate practices to ensure the effectiveness of their different communication strategies.

Advocacy is a strategy that combines individual and community actions to generate commitment to health policies. It is a long-term strategic, organized, and participatory process aimed at policymakers at different levels, to bring about changes in laws, policies, programs, and budget allocations. Decision-making occurs at the highest levels of private and public institutions. Advocacy actions are systematically planned and each stage requires specific knowledge and skills. For a problem to be the target of advocacy, it has to involve a situation that can be modified by a change in policy, and a policy response must be suggested. Thus,



cervical cancer control has to raise the awareness of other actors and be widely felt by those who advocate for it and by the general public.

Furthermore, the media are appreciated as key actors in shaping public discourse. The strategy for advocacy in the media involves strategic approaches to put issues on the media agenda for public discussion. The idea is to highlight, organize, and establish information, using arguments that are amplified through different channels, bringing together resources and obtaining the commitment and acceptance of political and social leaders. The concept involves bringing information together more than disseminating it, focusing on raising social issues for discussion in the media, with a view to promoting debate and responsible coverage..

## **General Objective of Component 9**

Promote inclusion of cervical cancer as a public health priority, encouraging appropriate communication and information concerning the disease.

## **Specific Objectives**

- Adopt communication and advocacy strategies to put cervical cancer on the public agenda regionally and in each RINC-UNASUR member country as a priority public health problem.
- 2. Implement a media advocacy project to place cervical cancer control on the media agenda and in the public sphere.
- 3. Carry out actions to foster appropriate communication regarding cervical cancer aimed at professionals, patients, and the general public.



# **Proposed Activities**

Objective 1: Adopt a communication and advocacy program to put cervical cancer on the public agenda as a public health problem in each RINC-UNASUR member country.

**a.** Preparation of a situation assessment on the hierarchy and scope of structures that deal with public policies on cervical cancer control at the national level, in each country in the region. This assessment will serve to create a database and to map actors (governmental and social) and interest groups in each RINC-UNASUR member country.

**b.** Based on the situation assessment, develop specific advocacy strategies for identified groups of actors.

**c.** Organization of several meetings/workshops with national and international nongovernmental organizations, with a view to obtaining their support for cervical cancer prevention and designing joint communication and advocacy actions.

**d.** Carry out a cervical cancer publicity strategy involving public figures identified with women's health problems: athletes, opinion makers, artists, etc.

**e.** Carry out a regional mass public campaign with the slogan: "For a Region Free from Cervical Cancer".

**f.** Establishment of a regional award on cervical cancer in different categories: "Good Practices Award," "Clinical Evidence Award," and "Social Responsibility Award".

Objective 2: Implement a media advocacy project to put cervical cancer control on the media agenda and in the public sphere.

**Target Groups**: Owners of media outlets, media outlet directors, opinion leaders, journalists, communicators, opinion makers, and representatives of social organizations and international organizations.

**a.** Hold a workshop with journalists and communicators to establish guidelines on how to treat cervical cancer in the news and promote responsible coverage.

**b.** Create a resource bank for journalists and communicators, consisting of different sections: research reports, infographics, systematization of experiences and innovative cervical cancer prevention projects, media kits, and other graphic and audiovisual materials.

**c.** Preparation of an electronic publication (manual) on good communication guidelines concerning the different stages of cervical cancer (prevention, follow-up, treatment, and control) and focusing on the objectives and target groups for the different communication strategies. Possible contents include general information on cervical cancer epidemiology and key messages to be disseminated through graphic media, social networks, etc.

The publication will also contain action protocols for communication in crisis situations, such as those that may arise with implementation of a new technology such as a specific type of HPV test, or the HPV vaccine.

**d.** Creation of a media observatory to evaluate coverage of the topic of cervical cancer control with regard to the quantity of publications (in time and space), identification of spokespeople, characteristics of contents, how the media address cancer itself, the different stages of the prevention continuum, and control of cancer once it occurs. Content and discourse analysis is proposed as a technique to classify content according to categories defined a priori and explore the meanings that surround and shape cervical cancer.

**e.** An annual international seminar to educate and update journalists and communicators on how to handle information about cervical cancer in the region (aimed at journalists working for private media outlets as well as professionals and technical personnel working in the areas of media and communications in government agencies and social organizations).

**f.** Establishment of an annual regional award for journalism on cervical cancer.

Objective 3: Carry out actions to foster appropriate communication regarding cervical cancer aimed at professionals, patients, and the general public.

Target Groups: Health professionals, patients, general public.

**a.** Set up a communication resource bank on cervical cancer control, destined for health



workers engaged in health promotion, disease prevention and health education activities. Communication and education resources (leaflets, booklets, slides, flipcharts etc.) will be systematized and made available to be used in training members of health teams and women from the community.

**b.** Development of a database of specialists, as part of the PlaTeAT online resource center, so that different actors (journalists, health professionals/technical personnel, and scientists) can access validated sources of information.

**c.** Preparation of free-access information content on different general aspects of cervical cancer, such as causes and types of prevention, screening methods, types of treatment, etc.

**d.** A workshop with experts on cervical cancer prevention and communicators to establish guidelines for spokespeople and communication management in crisis situations relating to implementation of the HPV vaccine.

**e.** Design of a manual for crisis situation management relating to implementation of the HPV vaccine.



#### 9. FOLLOW-UP AND EVALUATION

In view of the differences among the health systems of the region's countries, and considering that the Plan has a five-year implementation period after its approval, it is necessary to create a mechanism for coordination and management of the Plan. This mechanism should include an expert team with the capacity to identify groups and individuals to join efforts and mobilize governments and societies, including the public and private sectors, plus international organizations that are potential partners. Many actors are probably already working on the issue and can support the Plan's initiatives with their experience. But some groups still not informed about the guidelines proposed here could become enthusiastic about participating and adopting the document as a conceptual framework.

Another aspect to be considered is the fact that many of our countries have national cancer control programs and plans that are updated periodically and used to orient health policies and public spending. Representatives from the countries in the RINC Cervical Cancer Prevention and Control Working Group can and should work together and jointly with the National Coordinators of UNASUR Health in each country to ensure that cervical cancer is included in these plans.

Cervical cancer prevention and control are multifaceted issues that require a variety of perspectives. Through this approach, opportunities and possibilities are increasing for implementation of the proposals presented here for achieving comprehensive control and a South American region truly free from cervical cancer.

77



### **10. FINANCIAL IMPLICATIONS**

It is calculated that the estimated total cost of the Plan, including both implementation and maintenance of PlaTeAT with its corresponding activities, and the activities associated with the specific objectives of each the nine thematic components, will be US\$6,694,200.00.

However, this figure does not include activities that countries undertake within their health systems and that will be funded through multisectoral initiatives at the local level.

The following table presents the budget for the Plan:

PlaTeAT (common to the nine components)	Year 1	Year 2	Year 3	Year 4	Year 5	Total by Component
Bringing the PlaTeAT into operation - incorporating the first outcomes of workshops and surveys, producing and adapting content for the courses of the various components						
Systematising information produced at forums, reviewing courses (including/eliminating), technical adjustments and inclusion of new functions						US\$ 1.805.300,00
Coordinating content of the PlaTeAT + administrative support for content, activities, on-line events etc., by component						
Technical adjustments, incorporating new functions, extending the scope of the Platform						
Total	US\$ 398.700,00	US\$ 351.650,00	US\$ 351.650,00	US\$ 351.650,00	US\$ 351.650,00	



1. Adherence to diagnosis and treatment	Year 1	Year 2	Year 3	Year 4	Year 5	Total by Component
Design and implementation of thematic modules for inclusion in the PLATEAT	Included in budget for the PlaTeAT					
Survey of UNASUR countries (using PlaTeAT tools) to detect barriers to access to diagnosis and treatment	US\$ 11.500,00					
Participation in regional workshop to specify set of basic indicators Organized by Component 5.	Included in budget for Component 5					
Technical adjustments, incorporation of new functions, extending scope of the Platform.	US\$ 133.500,00	US\$ 133.500,00				
Qualitative multi-centre study (fears/ myths about women who test positive); based on 3 countries, coordinated with Component 3	US\$ 300.000,00	US\$ 300.000,00				
Inclusion of survey results in the PlaTeAT + updating of virtual course on barriers to access		Includec	l in budget for the F	PlaTeAT		US\$ 1.296.700,00
Preparation of methodological guide to counselling, destined for health personnel		US\$ 15.000,00				
Two-day seminar to examine survey results and design strategies to address barriers identified		US\$ 56.700,00				
Design and printing of communication and advocacy materials based on findings of multi-centre studies (for 12 UNASUR countries – coordinated with Component 9)		US\$ 146.000,00	US\$ 146.000,00	US\$ 146.000,00		
Technical assistance visits for inclusion of the indicators in information systems - 1 per year		US\$ 10.500,00	US\$ 10.500,00	US\$ 10.500,00	US\$ 10.500,00	
Total	US\$ 445.000,00	US\$ 528.200,00	US\$ 156.500,00	US\$ 156.500,00	US\$ 10.500,00	



2. Implementation of VIA-based screening and immediate "See-and- Treat" cryotherapy treatment	Year 1	Year 2	Year 3	Year 4	Year 5	Total by Component
Design and implementation of thematic module for inclusion in the PLATEAT	Included in budget for the PlaTeAT					
Survey of UNASUR countries to detect needs for tech. support, human resource capacity building for implementation of "See-and-Treat"	US\$ 11.500,00					
Face-to-face trainer training courses (in the framework of technical visits)		Included in bu	idget for the tec	hnical visits		
Documentary analysis to detect screening and CC guidelines and report to PlaTeAT (2 months)	US\$ 6.000,00					
Meeting with scientific societies to reach consensus on survey findings	Called by way of the PlaTeAT (video-conference)					US\$ 116.500,00
Participation in the regional workshop to specify the set of basic indicators organised by Component 5.	Included in budget for the component 5					
Give and update the virtual course on VIA and cryotherapy in the PlaTeAT		Included ii	n budget for the	PlaTeAT		
Technical assistance visits (training, supervision, process audits, seminars, capacity-building) for countries introducing IVA - 2 per year	US\$ 21.000,00	US\$ 21.000,00	US\$ 21.000,00	US\$ 21.000,00	US\$ 21.000,00	
Total	US\$ 32.500,00	US\$ 21.000,00	US\$ 21.000,00	US\$ 21.000,00	US\$ 21.000,00	

3. Support for introduction of HPV testing into organised programmes.	Year 1	Year 2	Year 3	Year 4	Year 5	Total by Component
Design and implementation of the thematic module for inclusion in the PlaTeaT	Included in budget for the PlaTeAT					
Technical assistance visits (training, supervision, process audits, seminars, capacity-building) for countries introducing HPV testing - 2 per year	US\$ 21.000,00	US\$ 21.000,00	US\$ 21.000,00	US\$ 21.000,00	US\$ 21.000,00	
Participation in the regional workshop to specify the set of basic indicators organised by Component 5.	Included in budget for the Component 5					US\$ 468.400,00
Give and update virtual course on HPV testing on the PlaTeAt		Includec	l in budget for th	e PlaTeAT		
Regional workshop to identify HPV research needs		US\$ 56.700,00		US\$ 56.700,00		
Set up fund for publication of scientific papers on HPV testing	US\$ 50.000,00	US\$ 50.000,00	US\$ 50.000,00	US\$ 50.000,00	US\$ 50.000,00	
Total	US\$ 71.000,00	US\$ 127.700,00	US\$ 71.000,00	US\$ 127.700,00	US\$ 71.000,00	



4. Strategic implementation of HPV vaccination in the region.	Year 1	Year 2	Year 3	Year 4	Year 5	Total by Component
Design and implementation of the thematic module for inclusion in the PlaTeAt	Included in budget for the PlaTeAT					
Technical assistance visits (training, supervision, process audits, seminars, capacity-building) for countries introducing HPV vaccine	USD 10.500,00	US\$ 10.500,00	US\$ 10.500,00	US\$ 10.500,00	US\$ 10.500,00	
Participation in the regional workshop to specify the set of basic indicators organised by Component 5	Included in budget for Component 5					
Hold a regional workshop to design and implement strategies for removing the main barriers to access to diagnosis and treatment	US\$ 56.700,00					
Mixed study (surveys and interviews) of best practices to favour coverage	US\$ 92.000,00					US\$ 684.700,00
Preparation of a regional manual on vaccination (assembly, design and printing)	US\$ 80.000,00					
Qualitative study (interviews + focus groups) on the genesis of rumour and anti-vaccine movements	US\$ 55.000,00	US\$ 55.000,00				
Seminar with round tables by country for exchange of information on vaccination		US\$ 56.700,00				
Workshops for capacity-building in management of anti-vaccination rumour		US\$ 56.700,00	US\$ 56.700,00	US\$ 56.700,00	US\$ 56.700,00	
Design of a guide for management of anti-vaccination rumour			US\$ 10.000,00			
Total	US\$ 294.200,00	US\$ 178.900,00	US\$ 77.200,00	US\$ 67.200,00	US\$ 67.200,00	

5. Strengthening programme information, monitoring and evaluation systems.	Year 1	Year 2	Year 3	Year 4	Year 5	Total by Component
Design and implementation of the thematic module for inclusion in the PlaTeAt	Included in budget for the PlaTeAT					
Technical assistance visits to support software implementation		US\$ 10.500,00	US\$ 10.500,00	US\$ 10.500,00	US\$ 10.500,00	
Implementation of regional workshop to specify the set of basic indicators for monitoring and evaluating CC prevention	US\$ 56.700,00					
Design and implementation of generic software for establishing information systems (based on MOVICANCER), drawing on results of the technical workshop	US\$ 10.000,00					US\$ 165.400,00
Pilot test of minimum common indicators (in the framework of technical visits)		Included in technical visit				
Technical workshop with representatives of programmes that adopt the generic software		US\$ 56.700,00				
Total	US\$ 66.700,00	US\$ 67.200,00	US\$ 10.500,00	US\$ 10.500,00	US\$ 10.500,00	



6. Development of cytology laboratory quality control mechanisms	Year 1	Year 2	Year 3	Year 4	Year 5	Total by Component
Design and implementation of the thematic module for inclusion in the PlaTeAt	Included in budget for the PlaTeAT					
Technical assistance visits to support implementation of the cytology quality control system - 2 per year	US\$ 21.000,00	US\$ 21.000,00	US\$ 21.000,00	US\$ 21.000,00	US\$ 21.000,00	
One meeting of cytologists yearly in different countries	US\$ 56.700,00	US\$ 56.700,00	US\$ 56.700,00	US\$ 56.700,00	US\$ 56.700,00	US\$ 388.500,00
Participation in the regional workshop to specify the set of basic cytology indicators	Included in budget for component 5					
Total	US\$ 77.700,00	US\$ 77.700,00	US\$ 77.700,00	US\$ 77.700,00	US\$ 77.700,00	

7. Access to Screening and Vaccine Technology	Year 1	Year 2	Year 3	Year 4	Year 5	Total by Component
Design and implementation of the thematic module for inclusion in the PlaTeAt	Incluido en cotización de PlaTeAT					
Hold two meetings, one to set out a Consensual, regional strategy to facilitate mechanisms for technology procurement jointly with the PAHO and with participation by the GAUMU, the second to review the process.	US\$ 56.700,00			US\$ 56.700,00		US\$ 128.400,00
Survey of UNASUR countries to perform a diagnosis of HPV vaccine and HPV test procurement mechanisms existing in the region, as well as the main factors hindering and facilitating access to the technology	US\$ 15.000,00					033 128.400,00
Total	US\$ 71.700,00			US\$ 56.700,00		
8. Research	Year 1	Year 2	Year 3	Year 4	Year 5	Total by Component
Design and implementation of the thematic module for inclusion in the PlaTeAt	Included in budget for the PlaTeAT					
				1		

ida Regional works research needs

kshop to identify HPV ds	Included in budget for the component 3			
Total	US\$ 56.700,00	US\$ 56.700,00	US\$ 56.700,00	



9. Communication/Advocacy/ Grassroots Education	Year 1	Year 2	Year 3	Year 4	Year 5	Total by Component
Design and implementation of module for inclusion in the PlaTeAt	Included in budget for the PlaTeAT					
Regional workshop for journalists, communication experts and health professionals connected with counselling (2 days)	US\$ 56.700,00					
Survey of UNASUR countries to perform a diagnosis of the situation	US\$ 15.000,00					
Annual communication seminar	US\$ 56.700,00	US\$ 56.700,00	US\$ 56.700,00	US\$ 56.700,00	US\$ 56.700,00	US\$ 620.200,00
Annual prize	US\$ 37.000,00	US\$ 37.000,00	US\$ 37.000,00	US\$ 37.000,00	US\$ 37.000,00	
Production of manual on best practices (assembly, design and printing)		US\$ 80.000,00				
Design of communication materials		Included in budget for Component 1		Included in budget for Component 1		
Total	US\$ 165.400,00	US\$ 173.700,00	US\$ 93.700,00	US\$ 93.700,00	US\$ 93.700,00	

Coordination	Year 1	Year 2	Year 3	Year 4	Year 5	Total by Component
Coordination of implementation of the Project in the region by 2 experts	US\$ 120.000,00	US\$ 120.000,00	US\$ 120.000,00	US\$ 120.000,00	US\$ 120.000,00	
Coordination travel	US\$ 50.000,00	US\$ 50.000,00	US\$ 50.000,00	US\$ 50.000,00	US\$ 50.000,00	US\$ 850.000,00
Total	US\$ 170.000,00	US\$ 170.000,00	US\$ 170.000,00	US\$ 170.000,00	US\$ 170.000,00	
TOTAL COST OF TECHNICAL ASSISTANCE PLAN		US\$ 6.694.200,00				



## **11. REFERENCES**

- Ferlay J, Soerjomataram I, Ervik M, Dikshit R, Eser S, Mathers C, et al. GLOBOCAN 2012 v1.1., Cancer incidence and mortality worldwide: IARC Cancer Base No.11 [Internet]. Lyon: IARC-WHO; 2013. [accessed 17 March 2017]. Available at: http://globocan.iarc.fr
- 2. Arrossi S, Matos E, Zengarini N, Roth B, Sankaranarayanan R, Parkin. The socio-economic impact of cervical cancer on patients and their families in Argentina, and its influence on radiotherapy compliance. Results from a cross-sectional study. GynecolOncol. 2007; 105(2):335:40.
- 3. Lazcano-Ponce EC, Moss S, Alonso de Ruíz P, Salmerón Castro J, Hernández Avila M. Cervical cancer screening in developing countries: why is it ineffective? The case of Mexico. ArchMed Res. 1999; 30(3):240:50.
- 4. Red de Institutos Nacionales de Cáncer (RINC-UNASUR). Grupo Operativo de Control de Cáncer de Cuello Uterino. Informe sobre la situación del Control de Cáncer de Cuello Uterino en 8 países de Latinoamérica. Río de Janeiro, Brazil: RINC; 2012.
- 5. Simms KT, Hall M, Smith MA, Lew JB, Hughes S, Yuill S, et al. Optimal management strategies for primary HPV testing for cervical screening: cost-effectiveness evaluation for the National Cervical Screening Program in Australia. PLOS One. 2017. 12(1):e0163509.
- 6. World Health Organization (WHO). Comprehensive cervical cancer control: a guide to essential practice. 2nd Edition. Geneva: WHO; 2014.
- 7. Pan American Health Organization (PAHO). Integration HPV testing in cervical cancer screening programs: a manual for program managers. Washington, DC: PAHO, 2016.54
- Union of South American Nations (UNASUR). Constitutive Treaty. Brasilia: UNASUR; 2008. [accessed 17 March 2017]. Available at: http://www.gsdrc.org/docs/open/regionalorganisations/unasur,%202008,%20establishing%20treaty.pdf
- Union of South American Nations (UNASUR). Resolución 04/2011 de la constitución de la Red de Institutos Nacionales de Cáncer (RINC/UNASUR) por el Consejo de Salud Suramericano - Río de Janeiro, Brazil, 25 July 2011. Brasilia: UNASUR; 2011. [accessed 17 March 2017]. Available at: http://bit.ly/2nrgUIB
- 10. Red de Institutos Nacionales de Cáncer (RINC-UNASUR). Sistemas de Información de los Programas de Prevención de cáncer cérvicouterino en América Latina y El Caribe. Red de Institutos e Instituciones Nacionales del Cáncer. Río de Janeiro: RINC-UNASUR; 2016. Available at: http://bit.ly/20q6yJV



- 11. Organización Panamericana de la Salud (OPS). Página Oficial. [Internet]. [accessed 17 March 2017]. Available at: http://bit.ly/2opY6Kz
- 12. Arrossi S, Maceira V, Paolino M, Sankaranarayanan R. Acceptability and uptake of HPV vaccine in Argentina before its inclusion in the immunization program: a population-based survey. Vaccine. 2012; 30(14):2467-74.
- 13. Wiesner C, Cendales R, Murillo R, Piñeiros S, Tovar S. Seguimiento de mujeres con anormalidad citológica de cuello uterino en Colombia. Rev salud pública. 2010; 12(1):1-13.
- Gage JC, Ferreccio C, Gonzales M, Arroyo R, Huivin M, Robles SC. Follow-up care of women with an abnormal cytology in a low-resource setting. Cancer Detect Prev 2003; 27(6):466-71.18.
- 15. Dzuba IG, Calderon R, Bliesner S, Luciani S, Amado F, Jacob M. A participatory assessment to identify strategies for improved cervical cancer prevention and treatment in Bolivia. Rev Panam Salud Publica 2005 Jul; 18(1):53-63.
- 16. Hernández-Alemán FR, Ornelas-Bernal LA, Apresa-García T, Sánchez-Garduño S, Martínez-Rodríguez OA, Hernández-Hernández DM. Motives for abandoning the health care process for precancerous lesions of the uterine cervix. RevInvestClin. 2006 May-Jun;58(3):217-27.
- Murillo R, Almonte M, Pereria A, Elena F, Gamboa O, Jerónimo J, Lazcano-Ponce-E. Cervical Cancer Screening Programs in Latin America and the Caribbean. Vaccine 2008; 26s:137-148.
- Ministerio de Salud y Protección Social. Resolución Número 00002003 de 2014. Colombia: Ministerio de Salud y Protección Social; 2014. [accessed 17 March 2017]. Available at: http://bit.ly/1S7ojp3
- 19. Ministerio de Salud y Protección Social. Resolución Número 03202 de 2016. Colombia: Ministerio de Salud y Protección Social; 2016. [accessed 17 March 2017]. Available at: http://bit.ly/2nnAOTV
- 20. Ministerio de Salud. Resolución Ministerial No. 1013-2016. Lima: Ministerio de Salud, 2016. [accessed 17 March 2017]. Available at: http://bit.ly/2mWachu
- 21. Cervical Cancer Action. Maps. VIA map. [Internet]. [accessed 17 March 2017]. Available at: http://bit.ly/2oi26zm
- 22. Salmerón J, Lazcano-Ponce E, Lorincz A, Hernández M, Hernández P, Leyva A et al. Comparison of HPV-based assays with Papanicolaou smears for cervical cancer screening in Morelos State, Mexico. Cancer Causes Control. 2003; 14(6):505-12.



- 23. Lazcano-Ponce E, Lörincz AT, Salmerón J, Fernández I, Cruz A, Hernández P, et al. A pilot study of HPV DNA and cytology testing in 50,159 women in the routine Mexican Social Security Program. Cancer Causes Control. 2010; 21(10):1693-700.
- 24. Sherman ME, Lorincz AT, Scott DR, Wacholder S, Castle PE, Glass AG, et al. Baseline cytology, human papillomavirus testing, and risk for cervical neoplasia: a 10-year cohort analysis. J Natl Cancer Inst. 2003; 95(1):46-52.
- 25. Cuzick J, Szarewski A, Mesher D, Cadman L, Austin J, Perryman K, et al. Long-term followup of cervical abnormalities among women screened by HPV testing and cytology. Results from Hammersmith study. Int J Cancer. 2008; 122(10):2294-2300.
- 26. Ronco G, Giorgi-Rossi P, Carozzi F, Confortini M, Dalla Palma P, Del Mistro A, et al. Efficacy of human papillomavirus testing for the detection of invasive cervical cancers and cervical intraepithelial neoplasia: a randomised controlled trial. Lancet Oncol. 2010; 11(3):249-57.
- 27. Kitchener HC, Gilham C, Sargent A, Bailey A, Albrow R, Roberts C, et al. A comparison of HPV DNA testing and liquid based cytology over three rounds of primary cervical screening: extended follow up in the ARTISTIC trial. Eur J Cancer. 2011;47(6):864-871.
- 28. Sankaranarayanan R, Nene BM, Shastri SS, Jayant K, Muwonge R, Budukh AM, et al. HPV screening for cervical cancer in rural India. N Engl J Med. 2009; 360(14):1385-94.
- 29. Arrossi S, Thouyaret L, Laudi R, Marín O, Ramírez J, Paolino M. Implementation of HPVtesting for cervical cancer screening in programmatic contexts: the Jujuy demonstration project in Argentina. Int J Cancer. 2015; 137(7):1709-18.
- 30. Lazcano-Ponce E, Lorincz AT, Cruz-Valdez A, Salmerón J, Uribe P, Velasco-Mondragón E, et al. Self-collection of vaginal specimens for human papillomavirus testing in cervical cancer prevention (MARCH): a community-based randomised controlled trial. Lancet. 2011; 378(9806): 1868-73.
- 31. Arrossi S, Thouyaret L, Herrero R, Campanera A, Magdaleno A, Cuberli M, et al. Effect of self-collection of HPV DNA offered by community health workers at home visits on uptake of screening for cervical cancer (the EMA study): a population-based cluster-randomised trial. Lancet Glob Health. 2015; 3(2):85-94.
- 32. Arrossi S, Ramos S, Straw C, Thouyaret L, Orellana L. HPV testing: a mixed-method approach to understand why women prefer self-collection in a middle-income country. BMC Public Health.2016; 16:832.
- 33. Arrossi S. Cancer registration and information systems in Latin America. Lancet Oncol. 2015; 16(14):1400-1.



- 34. Strasser-Weippl K, Chavarri-Guerra Y, Villarreal-Garza C, Bychkovsky BL, Debiasi M, Liedke PE, et al. Progress and remaining challenges for cancer control in Latin America and the Caribbean. Lancet Oncol. 2015; 16(14):1405-38.
- 35. UNASUR HEALTH. 2010-2015 Five Year Plan. South American Health Council. Caracas: UNASUR; 2010. Available at: http://www.isags-unasur.org/uploads/biblioteca/1/bb[67] ling[3]anx[149].pdf



## Coordination Profª Drª Lucía Delgado Pebe y Prof. Dr. Álvaro Luongo

Executive Commission Dr. Luiz Santini (coordinator), Dra. Silvina Arrossi (consultant), Dr. Rengaswamy Sankaranarayan (consultant), consultants: Dr. Carlos Santos Ortiz, Dr. Guillermo Rodríguez, Dr. José Jeronimo

> Technical Secretary Executive Manager - Lic. Walter Zoss

www.rinc-unasur.org | rinc@rinc-unasur.org | 55 (21) 3207-1835 Praça Cruz Vermelha nº23 - 4º Floor - Cep.: 20230-130 - Rio de Janeiro - RJ - Brasil