RINC
NETWORK OF NATIONAL CANCER INSTITUTES AND INSTITUTIONS

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Technical Assistance Plan for Cervical Cancer Control in South America

Executive Summary

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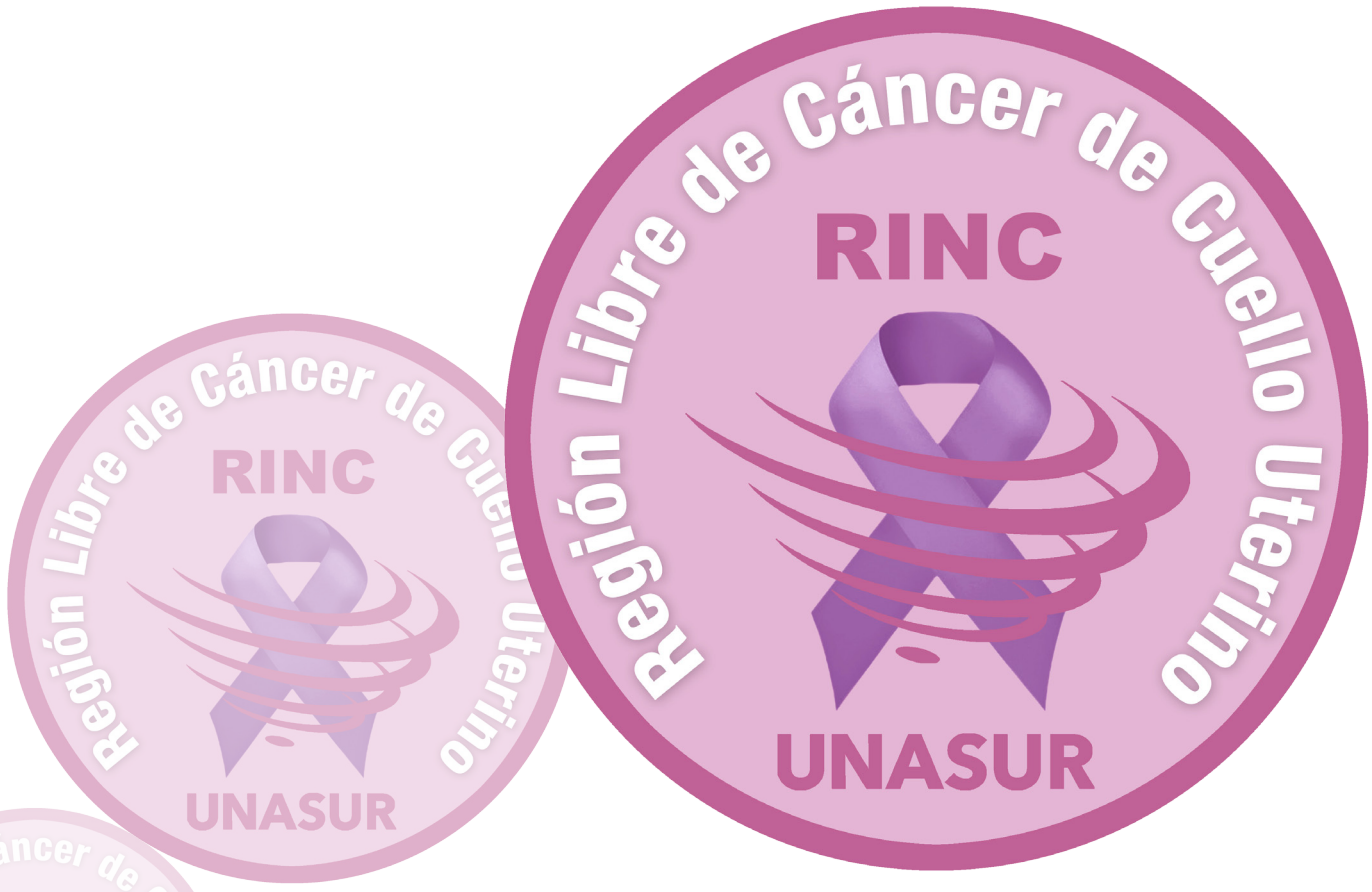
Cervical cancer is one of the leading causes of death by disease among South American women. The UNASUR South American Health Council (CSS) has mandated the Network of National Cancer Institutes and Institutions (RINC/UNASUR) to develop a Technical Assistance Plan and assist the region's countries with a view to drastically reducing the incidence of this disease and eliminating related mortality.

Overall objective

South America Cervical Cancer-Free



Focus areas

- **Vaccinating girls by age 14.**
- **Extending screening coverage of women in the framework of prevention programmes.**
- **Ensuring timely and appropriate treatment of women diagnosed with cervical cancer in the framework of each country's programmes.**

Why put out a Call to Action in the Region?

1

In Latin America, cervical cancer is the second most-diagnosed tumour in women. Worldwide, more than 500,000 women are diagnosed with cervical cancer each year and 250,000 die from the disease. Eleven percent of these deaths occur in Latin America.

2

Seventy percent of deaths from cervical cancer in Latin America occur in South America, which includes the countries with the region's highest mortality rates, for example, Bolivia, Peru and Paraguay. Every year in South America, approximately 45,000 women are diagnosed with cervical cancer and 20,000 die from the disease.

3

In health policy terms, cervical cancer is considered to be an eradicable disease with no reason to exist in the 21st century, given that it is preventable and treatable with currently available scientific and technological knowledge. If these are applied in organised programmes in the countries, it is possible to reduce the incidence rates drastically and eliminate mortality from tumours caused by human papillomavirus (HPV).

4

Cervical cancer is the tumour that most cruelly reflects social and gender inequalities. It is a disease affecting mainly poorer women with little access to early detection and treatment services.

What do the experts say?

Various different world leaders identify cervical cancer as a leading public health problem. Dr Rengaswamy Sankaranarayan, department head at the WHO International Agency for Research on Cancer (IARC/WHO) and a leading source on control of cervical cancer, acknowledges that "in comparison with other regions of the world, South America, has made great progress in implementing cervical cancer prevention programmes".

" ..., the RINC/UNASUR initiative, in particular, working through the UNASUR countries, will be an added catalyst towards improving prevention of cervical cancer still further and eliminating the disease as an important public health problem in South America".

Dr Rengaswamy Sankaranarayanan
Special Advisor on Cancer Control – IARC

IARC director, Christopher Wild, regards cervical cancer as "a cancer whose causes we understand well and for which we have solutions that, with the proper political commitment, can be put in place".

It is also agreed that women's health and needs should be a priority in the region. World Bank President Jim Yong Kim, in his recent declarations on the Zika virus, has emphasised women's ability to foster change in their respective surroundings: "Across all regions, women can be powerful agents of change to help lift economies out of poverty and build resilience in the face of fast-moving threats and shocks such as Zika – especially when they are able to make themselves heard and exert decisive control over their own health and lives".

"This is a cancer whose causes we understand well and for which we have solutions that, with the proper political commitment, can be put in place".

Dr Christopher Wild – Director, IARC

Currently ongoing global and regional initiatives and collaborations on cancer in women have recognised the urgent need to overcome the barriers that prevent equitable access to health information and services. In 2013, the Pan American Health Organization (PAHO) launched the Women's Cancer Initiative, in support of the Regional Cervical Cancer Prevention Strategy and Action Plan. PAHO director, Dr Carissa Etienne, has spoken of "the major need to create a platform for dialogue and exchange among the various sectors and with the various initiatives, with a view to developing a more systematic and coordinated approach to institutionalising these efforts within public health programmes throughout the region."

""Across all regions, women can be powerful agents of change to help lift economies out of poverty and build resilience in the face of fast-moving threats and shocks".

Jim Yong Kim – President, World Bank Group

In 2015, the Cervical Cancer Action Coalition set in motion a global initiative to address the mounting burden of cervical cancer on low- and middle-income countries in the next five years, with the goal of increasing collaboration, commitment and investment to guarantee that all women and girls are protected.

As part of commemorations of World Cancer Day last February 4, United Nations Secretary-General Ban Ki-Moon declared that "Cancer affects all countries, but those with fewer resources are hit hardest. Nothing illustrates this better than the burden of cervical cancer".

"The more than 20,000 deaths per year in South America are important reason enough for us to join forces to combat this disease", declared UNASUR Secretary-General, Ernesto Samper, in June 2015 at the launch of the campaign "South America cervical cancer-free". That call to the nations of our region to commit to cervical cancer prevention and control opened up a very substantial framework of political support in the UNASUR for bringing action up to scale and developing a regional plan.

Introduction

Worldwide, more than 500,000 women are diagnosed with cervical cancer each year and 250,000 die from the disease. Eleven percent of those deaths occur in Latin America, where it is the second most-diagnosed tumour in women. Every year in South America, approximately 45,000 women are diagnosed with cervical cancer and 20,000 die from the disease. Seventy percent of deaths from cervical cancer in Latin America occur in South America, which includes the countries with the region's highest mortality rates, for example, Bolivia, Peru and Paraguay.

Cervical cancer is the tumour that most cruelly reflects social and gender inequalities in health. It is a disease that affects women of all ages, but particularly poorer women exposed to situations of vulnerability. This is unacceptable, because – given currently available scientific and technological expertise – the disease is almost completely avoidable.

In health policy terms, it is considered to be an eradicable disease which has no reason to exist in the 21st century. It is urgent that health authorities, in their international and national public health efforts, commit thoroughly to the goal of achieving a world free of cervical cancer.

Although cervical cancer can be curbed by a strategy of organised prevention programmes, Latin America – and particularly South America – characteristically lack such programmes and these, where they do exist, suffer from shortfalls in coverage, quality and provision of the various services involved.

A survey conducted in several countries in the region by the UNASUR Network of National Cancer Institutes and Institutions found widely differing situations as regards the technologies used, the target populations and the programme specifications.

Generally speaking, the countries agree that they face problems of access to screening, over-long shifts, long waiting times, low target population coverage, over-screening of low-risk and younger women, and lack of diagnosis and treatment for positive cases.

All these factors reflect the functioning of the health system, which comprises all the organisations, institutions and resources whose main goal is to pursue activities directed to improving health. This is one fundamental aspect to be borne in mind in cervical cancer prevention. In order to achieve a highly effective strategy, it is

fundamentally important to contemplate not only technology-related factors, but also those components of the health system that are key to implementing organised prevention programs and to achieving timely and appropriate examination and treatment of women who screen positive. These include information systems and communication and education strategies, technology funding and service provision factors, supply of trained human resources, the level of system governance framing application of standards and regulations, and the population both as an active stakeholder and as beneficiary of prevention policies.

In recent decades, scientific and technological advances have made for the emergence of new technologies. Two of these – the anti-HPV vaccine as a primary prevention strategy and the HPV test as a secondary prevention strategy – rest on the discovery of the causal association between HPV and cervical cancer and are grounded in developments in molecular biology. In addition, there are other screening strategies based on low-cost technology, especially Visual Inspection with Acetic Acid (VIA) and Lugol's iodine, application of which have features making them particularly appropriate for areas and populations with extremely poor access to health services.

The availability of this technology, added to the enormous experience and expertise that exist today in the region, where countries and research groups have pioneered implementation of cervical cancer prevention actions, offer South America a window of opportunity for attaining the goal of a cervical cancer-free region. In that regard, the UNASUR South American Health Council has mandated the Network of National Cancer Institutes and Institutions (RINC/UNASUR) to develop a Plan for Technical Assistance to the region's countries with a view to curbing any growth in new cases and preventing unnecessary deaths from cervical cancer. The plan will be designed in collaboration with IARC, PAHO/WHO, Union for International Cancer Control (UICC), Program for Appropriate Technology in Health (PATH) and other prominent regional and international institutions, which will form an advisory group together with the RINC Cervical Cancer Control Operating Group.

Development of the plan will build on the platform for exchange of experience and technical assistance in cervical cancer

prevention and control in Latin America, which was designed by members of the UNASUR RINC Operating Group in 2012 and was confirmed and extended in November 2015. The operating group identified nine components, which set priority directions for work towards guaranteeing that the goals of screening, diagnosis and treatment of precancerous lesions and cancer and anti-HPV vaccination of young girls are met.

It is also intended that the various different strategies to be proposed and designed can be applied in different areas within the countries, stratified by a criterion of existing levels of resources and development (low, medium and high).

Component 1

Adherence to diagnosis and treatment

Preventing cervical cancer within the framework of organised prevention programmes is a process involving the three fundamental phases: screening, diagnosis and treatment. The key concept here is that screening does not cure. What cures is the process of diagnosis and treatment – which entails completing a series of other different processes, including sample taking, delivery of results, evaluation of women who test positive, access to colposcopy and biopsy where appropriate, as well as the subsequent return of results to the women, and referral for treatment where necessary. This is a complex process, because a series of problems connected with health system organisation, such as barriers to access, can undermine proper coordination and the final outcome of the process. In South America, lack of follow-up and treatment is one of the main problems affecting the countries, where dropout rates at this stage range from 18 to 70 percent, depending on the country and the area considered. The countries also suffer from an information deficit on this subject and problems with supply of human resources and diagnostic and treatment materials.

The plan will include a proposal to systematise strategies applied in the region to increase adherence to follow-up and treatment, so that these can be replicated and technical assistance provided for implementing them in the various countries.

A proposal will also be developed to introduce counselling when results are delivered, as well as to implement a scale to measure social and psychological impact, which is being validated by the National Cancer Institutes of Colombia and Argentina, with support from RINC and IARC.

Component 2

Implementation of VIA-based screening and immediate "See and Treat" cryotherapy

Visual inspection is a technique that enables precancerous lesions to be detected by applying acetic acid or Lugol's iodine to the cervix. This technique is relatively simple and low-cost, can be used, after brief training, by a wide range of health personnel, requires little infrastructure and, above all, allows a "See and Treat" strategy to be pursued, i.e., treatment can be carried out after a positive result is obtained on application of acetic acid or Lugol's iodine. In many areas of Latin America, its use has enabled thousands of women to access screening and treatment, particularly considering that, as already mentioned, the process of diagnosis and treatment is hampered by multiple factors and barriers and that having a screening tool to hand that permits immediate, on-the-spot treatment represents an advantage for prevention programmes.

The plan will include a proposal for human resource capacity building for implementation of the "See and Treat" strategy, development of regional training centres, design of quality control mechanisms, technical support and monitoring and evaluation tools.

Component 3

Support for incorporating HPV testing into organised programmes

The HPV test is a screening tool based on the molecular biology of the HPV virus. It detects infection by approximately 14 of the 17 oncogenic types of HPV. Given the high prevalence of HPV in young women, it is recommended from age 25 or 30. It is a tool with greater than 95 percent sensitivity and high negative predictive value, enabling testing to be spaced at 5- or 10-year intervals.

Test processing is automatic or semiautomatic and reproducible, simplifying quality control processes. It also enables vaginal self-sampling, potentially making screening more acceptable. Its specificity has not yet been clearly defined and, as a result, the risk of replacing cytology with HPV testing has not yet been quantified. Initial HPV testing does not actually indicate whether the woman has a lesion, requiring that those who test positive undergo a triage test, such as visual inspection or cytology. In several Latin American countries, HPV testing and cytology triage are undertaken together, although the latter is read only for women who test HPV-positive. This entails the need to set up the care network and guarantee access to triage testing.

A number of studies have shown that HPV testing is effective in reducing incidence of, and mortality from, cervical cancer, as shown by the data of Dr Sankar's first study, conducted in India with more than 100,000 women and published in 2009 in the New England Journal of Medicine. Also, three studies in Mexico have shown the HPV test to offer sensitivity in excess of 95 percent. In Argentina, the demonstration project carried out between 2012 and 2014 in Jujuy province showed the HPV test to be highly effective in a real programme context in a low- and middle-income zone. Steadily, a number of countries are adopting the HPV test for primary screening, particularly in Latin America. This has been pioneered by Mexico and Argentina, and today Colombia and Peru are incorporating the text into pilot or gradual introduction schemes.

One of the key features of the HPV test is that it enables women themselves to do vaginal self-sampling. This is a simple procedure that women can perform at their leisure in the comfort and privacy of their homes.

A number of studies have shown that vaginal self-sampling and sampling by a health professional correlate strongly in detecting HPV. It has also been shown that women prefer self-sampling to cytology performed by doctors. It is highly (around 75 percent) sensitive, although this is lower than obtained when sampling is done by a medical professional.

In Latin America, pioneering studies have been conducted showing the acceptability of self-sampling, as in Nicaragua, Mexico and Argentina. The MARCH study showed that HPV test self-sampling detected three times more CIN2+ lesions and four times more invasive cancer than the Papanicolau test. In Argentina, the EMA project showed that self-sampling offered by health workers in the women's homes made for four times greater screening coverage than achieved with conventional screening by doctors in health centres. The project also showed the strategy to be acceptable to women, who preferred it particularly because it enabled them to of surmount the various barriers to accessing screening, particularly those connected with their role as providers of care for the family and home. Self-sampling does not allow triage Pap to be conducted jointly, so that, in order for its introduction to be effective, women must be guaranteed access to subsequent follow-up examinations.

This component will make it possible to provide technical assistance to the

countries that decide to incorporate HPV testing, by providing technical support for its introduction within the framework of an organised programme, and human resource capacity building in the various different components involved in its implementation: sample taking, HPV laboratory organisation and quality control, communicating results, triage techniques, developing communication/spread strategies, establishing service networks, self-sampling and so on.

Component 4

HPV vaccination implementation strategy for the region

At present, two HPV vaccines are marketed in South America to prevent cervical cancer – one, bivalent and the other, tetravalent – both targeting oncogenic genotypes 16 and 18.

The tetravalent vaccine was first authorised in 2006 and the bivalent vaccine, in 2007. They have been steadily introduced into immunisation programmes in countries around the world and particularly in Latin America, where introduction can be seen to have advanced greatly throughout the region. In order to achieve maximum effectiveness with either bivalent or tetravalent vaccine, it must be administered before the onset of sexual activity, i.e., before first exposure to infection with HPV. Both prevent infection with oncogenic types 16 and 18, which are responsible for approximately 70 percent of cervical cancer tumours. The bivalent vaccine is approved for use in women and the tetravalent vaccine, in women and men, although the WHO does not recommend vaccinating men as a priority in low-income countries.

It is very important to bear in mind that vaccinated women should continue with screening, so as to detect lesions associated with infection by HPV types that the vaccine does not prevent. In this connection, a comprehensive strategy based on vaccinating girls against HPV before age 14 is recommended, together with screening according to standards and regulations specific to each country.

The plan will include the design of specific actions so that countries that incorporate or have incorporated the vaccine can guarantee high coverage with the complete doses, particularly in populations of girls with little access to screening, diagnostic and treatment services.

Component 5

Strengthening programme information, monitoring and evaluation systems

Strategy monitoring and evaluation form a key component of organised programmes. However, Latin America characteristically makes only partial use of such systems, which in several countries are non-existent. In 2015, a study of existing information systems was conducted, in the framework of the UNASUR Network of National Cancer Institutes and Institutions (RINC/UNASUR), for the purpose of systematising and fostering exchanges of methods and software among countries. The study concluded that the systems in place permit timely monitoring of detection of cervical pathology, provide estimates of the magnitude of cervical pathology-related morbidity and mortality, and enable the effectiveness of cervical cancer prevention and control programmes to be assessed. Meanwhile, they are characteristically simple, flexible, acceptable, representative and offer quality data, which are essential attributes for information systems to function properly.

The plan will include specific actions to enable countries to implement information systems and improve existing ones, with the emphasis on technology transfer, development of generic software, human resource capacity building, and development of a set of basic indicators for programme activity monitoring and evaluation.

Component 6

Dequality control mechanisms

The organisation of cytology laboratories is another fundamental component of organised prevention programmes and, nonetheless, most South American countries face problems in how their laboratories operate. The lack of internal and external quality controls is a widespread problem in the region and, in many cases, there are no specific recommendations or standards for how they should operate. This is a key problem to bear in mind when organising screening, because high screening coverage will have no impact if test diagnostic quality is poor.

The plan will place emphasis on organising internal and external quality control systems and mechanisms, human resource capacity building and the development and establishment of basic rules and standards to guarantee high-quality reading of cytology.

Component 7

Access to diagnostic and treatment technology

The plan will include the development and implementation of measures directed to establishing a transparent system of prices and strategies for the procurement of materials and medicinal products (HPV test, vaccines, cancer treatment equipment). The possibility that this could be done with support from the UNASUR Technical Group on Universal Access to Medicines and the PAHO, through its Rotating Fund, is under consideration.

Component 8

Research

Research to support the RINC/ Operating Group action plan is an essential component in responding to the questions and challenges facing South America in cervical cancer control, and thus constitutes a priority theme cutting across all the other components.

The research component will include both setting a regional agenda of priority research topics framed by the three focus areas established by the plan and building working alliances with regional and international institutions. Planning will also contemplate human resource capacity building for basic, social, epidemiological and implementation research. One central theme of the proposal will be support for research to validate and develop local screening and vaccine technologies.

The plan will include a proposal of mechanisms for funding to carry out the research agenda, as well as for identifying funding sources.

Component 9

Advocacy

The plan will include the development of measures so that cervical cancer control is established as a top priority on the public health agendas of countries of the region.

It will embody the vision and commitment of patients' organisations, civil society organisations, cancer leagues and so on. Also planned will be social marketing actions and joint work with other coalitions and alliances established internationally and for other regions of the world.

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