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A. PLAN OF ACTION FOR CERVICAL CANCER PREVENTION AND CONTROL 2018-2030: PROGRESS REPORT

Background

1. The purpose of this document is to report to the Governing Bodies of the Pan American Health Organization (PAHO) on progress with the implementation of the Plan of Action for Cervical Cancer Prevention and Control 2018-2030, approved at the 56th Directing Council of PAHO in September 2018 (1). The plan aims to support the Member States in strengthening comprehensive cervical cancer control programs to reduce cervical cancer. In 2020, the World Health Organization (WHO) launched the Global Strategy to accelerate the elimination of cervical cancer as a public health problem, defined as an incidence threshold of four cases per 100,000 women and establishing targets of 90% Human Papillomavirus (HPV) vaccine coverage, 70% screening coverage, and 90% treatment coverage (2). This report highlights cervical cancer prevention and control challenges and opportunities in the Americas, based on the indicators for each of the plan's four strategic lines of action as described below.

2. Although preventable, cervical cancer is one of the leading cancers in women in Latin America and the Caribbean. Cervical cancer incidence varies from 6.1 cases per 100,000 in North America;¹ rates are similar in the Caribbean (13.7 cases per 100,000) and Central America (13.8 cases per 100,000); and higher incidence is evident in South America (15.4 cases per 100,000) (3). Cervical cancer related mortality ranges from two deaths per 100,000 women in Canada to 19 deaths per 100,000 in Paraguay, while also being the leading cause of cancer deaths in women in Bolivia, Belize, Honduras, Nicaragua, and Paraguay. Compared to mortality rates in North America (2.1 deaths per 100,000), mortality is threefold higher in Central America (6.8 deaths per 100,000) and approximately fourfold higher in South America (7.8 deaths per 100,000) and the Caribbean (8.2 deaths per 100,000).

3. While cervical cancer rates have decreased in the United States and Canada over the past forty years due to organized screening and treatment programs, this has not been the experience in most Latin American and Caribbean countries that have not been able to implement high-quality cytology-based screening programs. Of concern, there has recently

¹ This rate reflects numbers in Canada and the United States of America.

been an increase in cervical cancer incidence in Brazil, Chile, Costa Rica, and Ecuador (3). Human Papillomavirus vaccination offers a critical opportunity to prevent cervical cancer. To date, 44 countries and territories have introduced the vaccine in national immunization programs in the Americas. Three countries and one territory (Cuba, Nicaragua, Venezuela and French Guiana, respectively) are still yet to introduce the HPV vaccine in their vaccination programs.

Analysis of Progress Achieved

4. Three years since the approval of the plan, there has been progress towards meeting the targets of the indicators in the plan, despite substantial setbacks in its implementation during the COVID-19 pandemic. To measure progress, information relating to the indicators was obtained from several resources, including the Global Cancer Observatory of the International Agency for Cancer Research, the 2021 World Health Organization Cervical Cancer Country Profiles, the International Atomic Energy Agency's Directory of Radiotherapy Centres, as well as internal communication with other units in the Pan American Sanitary Bureau (PASB) working on various components of the Plan.

Strategic Line of Action 1: Improve cervical cancer program organization and governance, information systems, and cancer registries

5. Adequate organization of cervical cancer programs favors more effective coverage of vaccination and screening programs. It also contributes to ensuring adequate follow-up of women with abnormal screening test results, which significantly impacts cervical cancer incidence and mortality. According to the 2021 WHO Cervical Cancer Country Profiles, there has been a significant increase in the number of countries and territories with new comprehensive cervical cancer screening programs, referral systems, and management guidelines, supported by the technical assistance of PASB based on the latest global WHO guidelines on comprehensive cervical cancer control. Various countries have updated their program plans to include HPV testing as part of the services provided. There has not been an increase in population-based cancer registries in the Region, which are vital for monitoring and evaluating cancer care and outcomes. Challenges remain on ascertaining whether existing policies and recommendations constitute comprehensive national cancer plans.

Objective 1.1: Develop and update comprehensive national cervical cancer plans aimed at reducing cervical cancer incidence and mortality in alignment with related global and regional plans

Indicator, baseline, and target	Status
1.1.1 Number of countries and territories with current comprehensive cervical cancer plans Baseline (2017): 10 countries Target (2030): 25 countries	In 2021, 30 countries reported having a national screening program for cervical cancer (4).

Objective 1.2: Improve monitoring and evaluation of cervical cancer programs, including screening coverage, treatment rates, and cervical cancer incidence and mortality	
Indicator, baseline, and target	Status
1.2.1 Number of countries and territories producing routine monitoring reports on their cervical cancer program Baseline (2017): 9 countries Target (2030): 25 countries	A total of 12 countries produced routine monitoring reports on their cervical cancer control programs. ²
1.2.2 Number of countries and territories with population-based cancer registries and published incidence and mortality statistics Baseline (2017): 11 countries Target (2030): 19	By 2021, 11 countries had maintained their cancer registries in the Americas. There has been no progress on this indicator (5).

Strategic Line of Action 2: Strengthen primary prevention through information, education, and HPV vaccination

6. HPV vaccines are cost-effective tools for preventing cervical cancer. They are an essential primary prevention strategy, along with community mobilization, health education, and information. However, health information and education campaigns need to be strengthened. To meet specific information needs of individuals and communities, PASB launched the regional communication campaign It's Time to End Cervical Cancer with this regional plan of action in 2018 and the Global Elimination Strategy in November 2021. In addition to these campaigns, there has been information dissemination on cervical cancer control and HPV vaccination. However, the COVID-19 pandemic adversely affected countries' vaccination strategies. In 2019, half of the countries in the Region had reached approximately 50% HPV vaccination coverage for girls aged 9-14, but in 2020 only a quarter of the countries had achieved at least 50% coverage of HPV vaccination. Nonetheless, despite the pandemic, El Salvador introduced the HPV vaccine, and cervical cancer campaigns have taken place in Chile.

Objective 2.1: Develop and implement national education and information campaigns for HPV and cervical cancer prevention	
Indicator, baseline, and target	Status
2.1.1 Number of countries and territories with ongoing HPV and cervical cancer education and information campaigns Baseline (2017): 9 countries Target (2030): 25 countries	Nine countries have education and information campaigns on cervical cancer. There has been no progress on this indicator. ³

² Source: Literature and desk review of national cervical cancer program reports.

³ Source: Literature and desk review of national cervical cancer program reports.

Objective 2.2: Implement HPV vaccination in a sustainable manner as part of national immunization programs	
Indicator, baseline, and target	Status
2.2.1 Number of countries and territories with greater than 80% HPV vaccine coverage in the target female age group according to national guidelines Baseline (2017): 2 countries Target (2030): 15 countries	Two countries report having 80% or greater HPV vaccine coverage in the target age group. There has been no progress on this indicator. ⁴

Strategic Line of Action 3: Improve cervical cancer screening and precancer treatment through innovative strategies

7. The Papanicolaou (Pap) test has historically been used for cervical cancer screening, and has led to an average annual reduction of 2.6% in cervical cancer mortality in countries with high screening coverage and robust health systems (6). Mass screening with Papanicolaou has been less effective in reducing cervical cancer mortality in developing countries, mainly because of shortcomings in laboratory infrastructure, equipment, logistic challenges associated with screening, and the limitations of the Pap test, which has a sensitivity of approximately 50% (7). HPV testing is a more effective screening test, and its use in screening programs along with innovative approaches, such as “screen and treat,” have been proven to effectively prevent cervical cancer in different settings (8, 9). Mexico led the way by introducing HPV testing over a decade ago, and Argentina, Canada, El Salvador, and the United States of America are among the countries that have added HPV testing to their screening protocols. Demonstration projects on HPV testing in countries such as Chile, Colombia, Guatemala, Honduras, Nicaragua, and Peru have shown that it is feasible. However, there continues to be limited uptake of HPV testing, which is key to the elimination of cervical cancer. While the Regional Revolving Fund for Strategic Public Health Supplies (Strategic Fund) can support to offer HPV tests at a reduced price by conducting bulk procurement, there continues to be limited uptake by the Member States. In many countries, cervical cancer guidelines need to be updated to include HPV testing.

8. Due to the COVID-19 pandemic, cancer screening services have been disrupted, with 17% of countries in the region reporting 50% or more services disrupted due to reduced care seeking, redirected health resources, or other reasons (14). As such, PASB has recommended modifications to ensure continuity of cancer screening that include, for example, the use of self-sampling with HPV tests to reduce barriers to access screening (10). However, most countries have insufficient budgets to procure HPV tests for their cervical cancer programs. There continues to be limited information available about follow-up rates for women with abnormal screening or diagnostic test results, and

⁴ Source: PAHO Immunization Unit—2020.

therefore no data available for the indicator on treatment rates. This signals the importance of improving information systems in country programs.

Objective 3.1: Increase equitable access to and coverage of cervical cancer screening and precancer treatment	
Indicator, baseline, and target	Status
3.1.1 Number of countries and territories with at least 70% screening coverage among women aged 30-49 or according to national policies for screening by age group Baseline (2017): 7 countries Target (2030): 20 countries	A total of 23 countries in the Americas report that at least 70% of women aged 30-49 years had been screened for cervical cancer in the last five years (4).
3.1.2 Number of countries and territories with a treatment rate of at least 70% among women with abnormal screening test results Baseline (2017): No data available Target (2030): 10 countries	There are no data available on this indicator due to the lack of information that track follow-up of screened women. PAHO is working closely with Member States to include this indicator in their cervical cancer programs.

Strategic Line of Action 4: Improve access to services for cancer diagnosis, treatment, rehabilitation, and palliative care

9. Cancer treatment gaps persist in the Region, particularly for radiotherapy services, and while the COVID-19 pandemic had initially interrupted cancer treatment services, the availability of cancer treatment has been maintained (11). PAHO continues to collaborate with the International Atomic Energy Agency to strengthen radiotherapy services required to treat women with invasive cervical cancer in 11 countries, through the Programme of Action for Cancer Therapy. Cancer medicine access and availability, particularly for high-cost drugs, continue to be a challenge. While the Strategic Fund includes essential cancer medicines, including those used to treat women with cervical cancer (12), there continues to be limited uptake by Member States. Strengthening palliative care has become even more critical during the COVID-19 pandemic, and PASB has been building capacity in this area, through a monthly tele-mentoring program with providers of palliative care services.

Objective 4.1: Increase equitable access to cancer treatment and palliative care services	
Indicator, baseline, and target	Status
4.1.1 Number of countries and territories with publicly available cancer treatment services Baseline (2017): 27 countries Target (2030): 30 countries	In 2021, 33 countries had reported having cancer treatment services generally available (at least surgery, chemotherapy, and/or radiotherapy) (4,13).

Objective 4.1: Increase equitable access to cancer treatment and palliative care services	
Indicator, baseline, and target	Status
4.1.2 Number of countries and territories utilizing the PAHO Strategic Fund for essential cancer medicines Baseline (2017): 3 countries Target (2030): 15 countries	Four countries are using the Strategic Fund to procure essential cancer medicines. ⁵
4.1.3 Number of countries and territories with palliative care services included in primary care Baseline (2017): 10 countries Target (2030): 20 countries	In 2021, 13 countries had reported having palliative care services in primary care facilities (4).

Lessons Learned

10. There have been several opportunities, as well as challenges, to implement this plan of action and improve cervical cancer and control programs. Forty-four countries and territories now include HPV vaccines as part of their national immunization programs. However, there are still challenges with reaching high coverage in the target group of girls aged 9-14. Screening coverage appears to have increased. However, HPV testing, which is a more effective screening method, has not yet been fully introduced in programs. Additionally, there is little information on the treatment rates and, in turn, on the effectiveness of screening programs. The launch of the Global Strategy for cervical cancer elimination provides an opportunity to increase the political will, commitments, and investments for programs. New technical guidance on cervical cancer prevention programs has been developed in collaboration with WHO to have the most up-to-date evidence for decision-making policies, and several countries are using these tools to improve their cervical cancer programs. In addition, government officials have been actively engaged in the PAHO monthly tele-mentoring program (ECHO Latin America Project) to discuss the barriers and challenges to implementation in order to accelerate the elimination of cervical cancer.

11. Cervical cancer programs have been affected by the COVID-19 pandemic, with lower coverage of HPV vaccination as noted above and 54% of countries reporting disruptions in cancer screening services (14). HPV vaccination programs, which are largely school based, have been affected by school closures, which led to lower coverage of HPV vaccination. Misinformation regarding vaccines has also adversely impacted many countries in the Region. The pandemic has also provided opportunities to increase the capacity for cervical cancer screening (11). Countries have increased their capacity for detection of SARS-CoV-2 using molecular diagnostic platforms, and these can also be used for HPV diagnosis. However, there are many barriers for HPV testing implementation,

⁵ Source: Regional Revolving Fund for Strategic Public Health Supplies.

such as out-of-date cervical cancer guidelines, lack of adequate budget for procurement of HPV tests, and high prices of HPV tests in the Region. There is a need to work more closely with Member States and companies through the Strategic Fund to ensure materials and equipment for cervical cancer prevention and control are accessible to countries of the Region.

Action Necessary to Improve the Situation

12. Considering the status of cervical cancer programs described in this report, the following actions are recommended:

- a) Consider, as part of post COVID-19 health system strengthening: *i*) build back HPV vaccination campaigns in communities, schools, and health clinics to improve coverage in girls aged 9-14; *ii*) repurpose PCR testing platforms (that are available for COVID testing) towards HPV testing for cervical cancer screening; *iii*) promote self-sampling for HPV testing to reduce costs and ensure equitable access to secondary prevention care for women; and *iv*) continue/increase the use of telemedicine technologies for education, tele-mentoring, and patient follow-up, which can expand knowledge and adherence to recommended WHO guidelines for cervical cancer prevention and control.
- b) Develop national cervical cancer elimination plans, with a designated government official to lead the initiative and with a multidisciplinary team representing immunization, adolescent and women's health, and cancer prevention and care.
- c) Ensure that sufficient funding is allocated in the government health budget for cervical cancer prevention and control, including HPV vaccination, HPV testing, and treatment. National health budgets should include a specific line item for procurement of HPV tests.
- d) Utilize the Revolving Fund for Access to Vaccines for procurement of HPV vaccines and utilize the Strategic Fund for essential cancer medicines, as well as for forecasts and procurement of HPV tests and equipment.
- e) Update national cervical cancer guidelines, based on the new WHO guidelines for screening and treatment, and ensure that the workforce is updated with the current evidence and skills required for screening and treatment of cervical precancer and invasive cervical cancer.
- f) Continue supporting training and education, particularly in primary care workers, through virtual platforms for cervical cancer program planning accompanied by in-field country implementation.

Action by the Executive Committee

13. The Executive Committee is invited to take note of this report and provide any comments it deems pertinent.

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