

# CERVICAL CANCER IN WOMEN WITH HIV IN LATIN AMERICA AND THE CARIBBEAN

## UPDATE AND STEPS TOWARDS ELIMINATION

This update presents the results of a study implemented following collaboration between the International Community of Women Living with HIV (ICW-Latina), Pontificia Universidad Javeriana de Bogotá, and the Pan American Health Organization (PAHO).

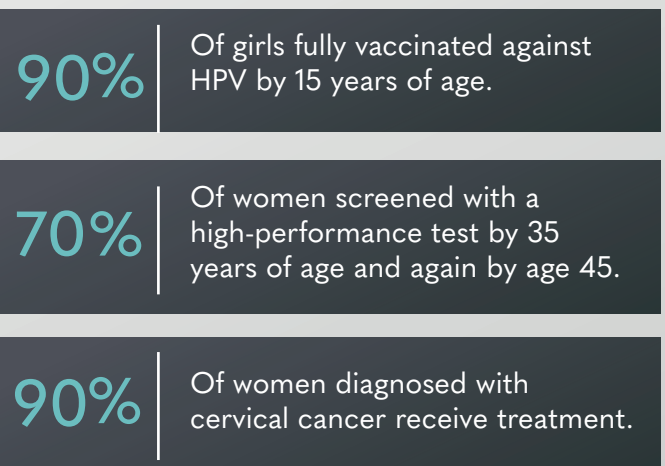
### THE PATH TOWARDS ELIMINATING CERVICAL CANCER

The World Health Organization’s (WHO) global strategy to eliminate cervical cancer as a public health problem sets out the 90-70-90 targets to be achieved by 2030.<sup>1</sup> These targets (**Figure 1**) are based on the preventable nature of the disease and aim to improve prevention and control through three interventions:

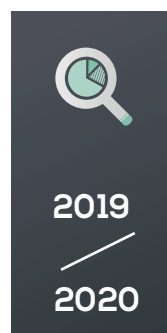
- 1 Human papillomavirus (HPV) vaccination;
- 2 Regular screening for HPV infection and precancerous lesions;
- 3 Timely treatment of precancerous lesions and cancer.

There is strong evidence on the efficacy of this set of interventions in reducing the incidence and mortality of the disease and moving towards eliminating it as a public health problem. WHO also recommends to prioritize actions among populations most at risk, ensuring their access to prevention and treatment services, and the adequacy of these services to their specific characteristics and needs. It is well known that women with HIV have a higher risk of developing cervical cancer. However, there is little information or data on this higher risk in the Region of the Americas.

**FIGURE 1:** 90-70-90 targets set by WHO to eliminate cervical cancer.



**Source:** Adapted from Global strategy to accelerate the elimination of cervical cancer as a public health problem (WHO, 2020).



This study, carried out between 2019 and 2020, aims to provide information and data that can accelerate the implementation of health policies that address the particular situation of women with HIV with respect to cervical cancer.

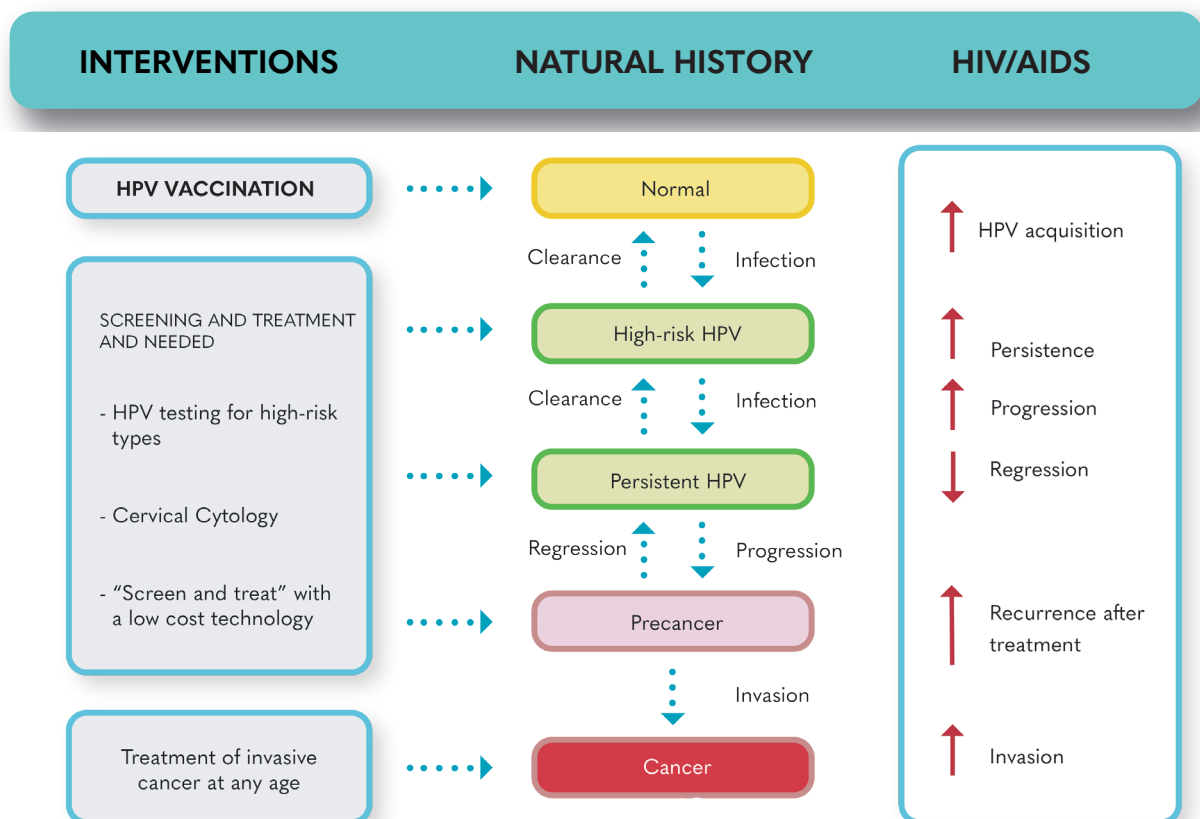
## WOMEN WITH HIV ARE AT HIGHER RISK OF DEVELOPING CERVICAL CANCER

Improved access to higher-quality antiretroviral treatment (ART) has had a very positive impact on the quality of life of women with HIV and has also reduced mortality rates. However, these improvements come with the challenge of providing acceptable services for other associated diseases that affect these women in particular, including cervical cancer. Women with HIV are more likely to have persistent infection with high-risk types of HPV and

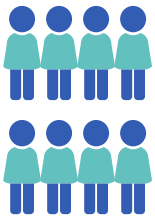
develop precancerous lesions and cancer more rapidly. This higher risk is due to conditions such as immunosuppression caused by HIV, HIV-HPV interactions, or structural changes (Figure 2).

For these reasons, since the beginning of the HIV pandemic, cervical cancer has been considered an AIDS-defining illness in women with HIV.

**FIGURE 2:** Interventions to address cervical cancer throughout its natural history and complications associated with HIV co-infection.



**Source:** Adapted from World Health Organization. WHO report on cancer: setting priorities, investing wisely and providing care for all. Geneva: WHO; 2020.



MORE THAN  
800,000 WOMEN  
ARE LIVING WITH HIV IN LATIN  
AMERICA AND THE CARIBBEAN

## CERVICAL CANCER IN WOMEN WITH HIV IN LATIN AMERICA AND THE CARIBBEAN

More than 800,000 women are living with HIV in Latin America and the Caribbean. Thanks to the improvement in access to ART and the reduction of mortality (**Figure 3**), it is expected that this number will continue to increase in the coming years.

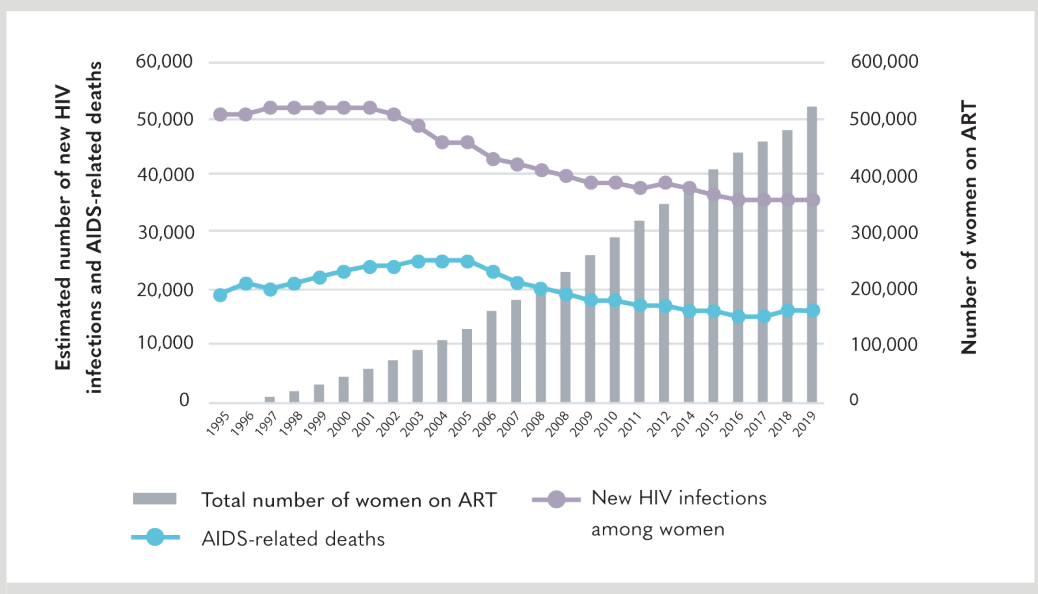
Despite abundant global evidence on the increased risk of cervical cancer in women with HIV, there is very limited information on Latin America and the Caribbean specifically.<sup>ii</sup> The lack of information makes it harder to implement public policies that properly address HPV co-infection in women with HIV.

This can create significant gaps in terms of improving the quality of life of these women and **eliminating cervical cancer in Latin America and the Caribbean.**

To address this lack of information, ICW Latina, Pontificia Universidad Javeriana, and PAHO carried out this study, in which they analyzed and collected data obtained from four sources were. These sources were:

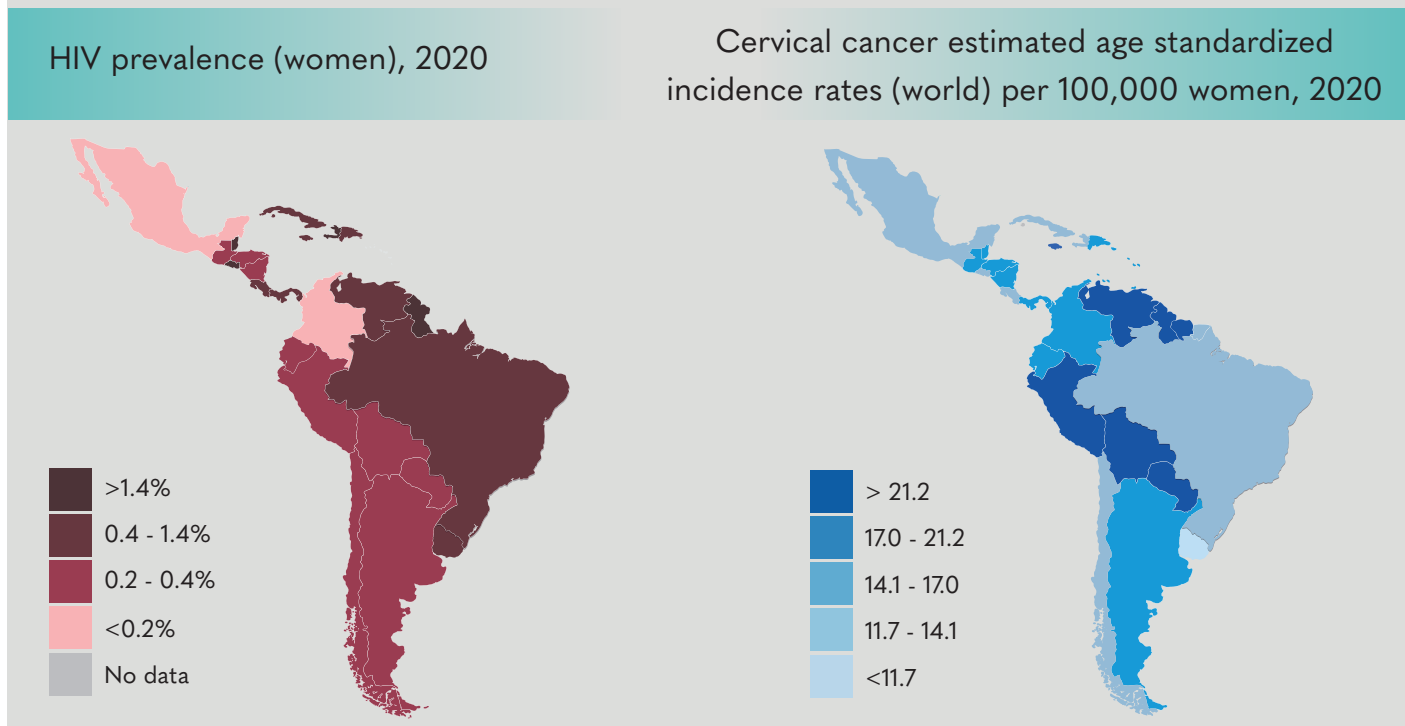
- 1 A systematic review of literature and summary of the results of published studies;
- 2 A survey on cervical cancer control, conducted by ministries of health of PAHO member countries;
- 3 A survey on sexually transmitted infections;
- 4 An online survey of women with HIV.

**FIGURE 3:** HIV incidence, mortality, and access to antiretroviral treatment among women in Latin America and the Caribbean.



**Source:** Pan American Health Organization. Based on data from UNAIDS. WHO/UNAIDS Spectrum HIV 2020 estimates. GARPR and GAM country reports 2000–2019.

**FIGURE 4:** HIV prevalence and cervical cancer among women in Latin America and the Caribbean.



**Source:** AIDSinfo. Global data on HIV epidemiology and response. UNAIDS, 2020 and GLOBOCAN, International Agency for Research on Cancer (IARC), 2020.

## KEY FINDING 1

### HPV prevalence among women with HIV in Latin America and the Caribbean

More than half of the women with HIV included in the studies (51.0%) had high-risk HPV. The prevalence of HPV was higher in younger populations, which is also the case in the general population. Women in ART had the same risk of acquiring high-risk HPV as untreated women. However, it was observed that HIV-positive women with a low CD4 cell count (less than 200 cells/mm<sup>3</sup>) were up to four times more likely to acquiring high-risk HPV<sup>1</sup>. Studies conducted in other regions have shown that early initiation of ART reduces the risk of persistent high-risk HPV infections. This is another reason to provide access to ART immediately after diagnosis, as recommended by WHO.

Available data suggests that in Latin America and the Caribbean women with HIV have an increased risk of high-risk HPV infection, which is consistent with data from other regions.



#### HOW WAS THE INFORMATION COLLECTED?

A systematic review of the literature was conducted to obtain information on HPV prevalence among women with HIV in Latin America and the Caribbean specific to age, CD4 count and antiretroviral treatment. A total of 294 articles were found, of which just 19 (comprising 6,157 women in total) met the inclusion criteria.

1. (4.86 OR; 95% CI: 2.21 to 10.65).

## KEY FINDING 2

### Prevalence of precancerous cervical lesions in women with HIV in Latin America and the Caribbean

In line with the higher prevalence of high-risk HPV in women with HIV, the prevalence of high-grade precancerous lesions (i.e., very likely to develop into cancer if left untreated) was 1.90% among these women in Latin America and the Caribbean (ranging between 0% and 8% among the studies analyzed).

The two studies that compared this figure with prevalence in the general population reported a higher prevalence of lesions among women with HIV.

When looking at age groups, higher rates of high-grade precancerous lesions are seen in women with HIV under 25 years of age (around 4%) and between ages 35 and 44 (around 6%). This is consistent with the increased prevalence of high-risk HPV at these ages.

Available data suggests that women with HIV in Latin America and the Caribbean have an increased risk of developing high-grade precancerous lesions.



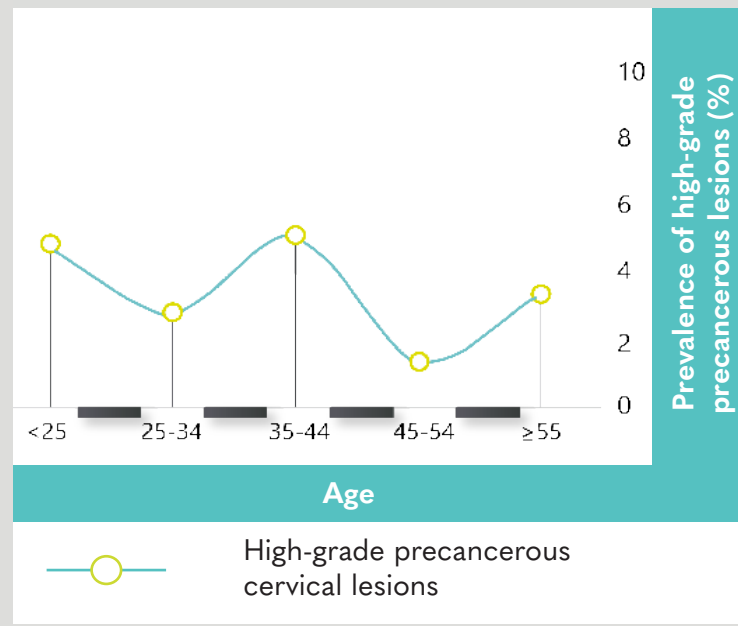
Cervical cancer screening in Honduras



#### HOW WAS THE INFORMATION COLLECTED?

A systematic review of the literature was conducted to obtain information on the age-specific prevalence of precancerous lesions among women with HIV in Latin America and the Caribbean. 46 articles were found and 14 of them (comprising 12,633 women with HIV and 1,218 without HIV) met the inclusion criteria.

**FIGURE 5:** Prevalence of high-grade precancerous lesions in women with HIV in Latin America and the Caribbean.



**Source:** Data from the systematic literature review commissioned by PAHO (2020).





## KEY FINDING 3

### Prevalence of invasive cervical cancer among women with HIV in Latin America and the Caribbean is three times higher than in other women

Aggregate data from the review showed an incidence of cervical cancer of 79.1 per 100,000 women with HIV, about three times that of the general population (27.9 per 100,000 women).

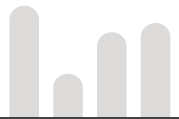
Given the lack of data, we were unable to establish the rate of progression/regression of high-grade cervical precancerous lesions to cancer among young women with HIV in the region. On a global level, we know that this rate of progression is highest among women with HIV, leading to a higher risk of invasive cancer. <sup>iii</sup>

As in other regions, women with HIV in Latin America and the Caribbean have a significantly higher risk of developing cervical cancer.



#### HOW WAS THE INFORMATION COLLECTED?

A systematic review of the literature was conducted to obtain information on the prevalence of age-specific cervical cancer among women with HIV in Latin America and the Caribbean. 120 articles were found, of which three (comprising a total of 9,769 women with HIV and 1,218 without HIV) met the inclusion criteria.



## KEY FINDING 4

### Acceptability of the HPV vaccine and cervical cancer screening among women with HIV in Latin America and the Caribbean

The systematic literature review also sought information from studies on the acceptability of and access to the HPV vaccine and cervical cancer screening among women with HIV.

In this regard, the review showed that there was no available information specific to the region. This information is essential for guiding vaccination and screening services in women with HIV.



#### HOW WAS THE INFORMATION COLLECTED?

A systematic review of the literature was conducted to obtain information on the acceptability of cervical cancer prevention services among women with HIV, but no information was found.



HPV vaccination in Brazil



## KEY FINDING 5

### Specific policies on HPV vaccination and cervical cancer screening for women with HIV in Latin America and the Caribbean

**Nineteen countries (58%)** reported having specific policies or recommendations for cervical cancer control among women with HIV.

#### HPV vaccination in the region

WHO recommends that girls aged 9 to 14 with HIV receive the HPV vaccine following a three-dose regimen (0, 1-2, 6 months). Although there is no specific WHO recommendation, adult women with HIV could also benefit from the vaccine. In fact, some public health organizations recommend vaccination in women with HIV up to 26 years of age. If these women receive the vaccine, it should also be administered following the three-dose regime.

**Eleven countries** offer vaccination to women with HIV up to 26 years of age, and **two countries** offer vaccination to all women up to 26 years of age.



HPV vaccination is an established indicator for Global AIDS Monitoring (GAM). Despite this, there are no programmatic data in the region on vaccination coverage among women with HIV.



#### HOW WAS THE INFORMATION COLLECTED?

In 2020, PAHO conducted a country survey that included questions in three categories: HPV vaccination, cervical cancer screening, and treatment of precancerous lesions. In each category, information was collected on ages, objectives, clinical guidelines, program characteristics (preventive service delivery strategy) and information systems. This information was supplemented with the responses of STI program managers to a WHO survey evaluating interventions under the global STI strategy. The information collected was verified against the countries' official documents.

#### Cervical cancer screening

WHO recommends that women with HIV be screened for cervical cancer from 25 years of age (compared to 30 years of age for the general population). Follow-up at three years is recommended for negative results.

**FIGURE 6:** Countries with specific recommendations or standards for cervical cancer control among women with HIV.



**Source:** Survey conducted among countries in Latin America and the Caribbean (PAHO, 2020)

**Twelve countries** recommend starting screening in women with HIV before the age of 25. Almost all countries recommend more frequent screening (from every six months to one year) for women with HIV. **Eight countries** give specific recommendations on the frequency of screening in women with HIV.

There is limited data on screening coverage among women with HIV, and this is only available for **four countries**. Coverage ranges from 11% to 81%. In terms of screening coverage in the general population, only four countries reach the target of 70% screening coverage.

Finally, **six countries** have precancerous lesion treatment guidelines for women with HIV.

Most countries reported a waiting time for treatment of precancerous lesions of one to four weeks after diagnosis. There are no specific WHO recommendations regarding the treatment of precancerous lesions and invasive cancer in women with HIV. However, given that precancerous lesions can progress to invasive cancer more quickly in women with HIV, ensuring timely treatment is essential.

Several countries in the Region have specific screening and treatment recommendations for precancerous lesions in women with HIV. However, data on the coverage of these interventions is scarce.

## KEY FINDING 6

### Perception of cervical cancer prevention and control services among women with HIV in Latin America and the Caribbean

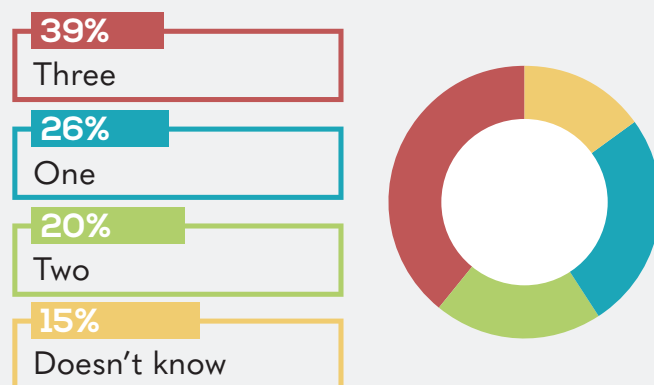
#### HPV vaccination

40% (176/440) of the women surveyed did not know that a vaccine existed. Women who knew about the vaccine had heard about it through campaigns aimed at the general population or through information offered at care centers.

#### Reported coverage of HPV vaccination

Among the women surveyed, 15% (66/440) said they had received the HPV vaccine, but only 39% (25/66) received three doses; 20% (14/66) received two doses; and 26% (17/66) received a single dose. Nearly two-thirds of these women were vaccinated in HIV clinics and a small percentage (6%) paid for the vaccine (**Figure 8**).

**FIGURE 8:** Number of vaccine doses given to vaccinated women (n = 66).



#### HOW WAS THE INFORMATION COLLECTED?

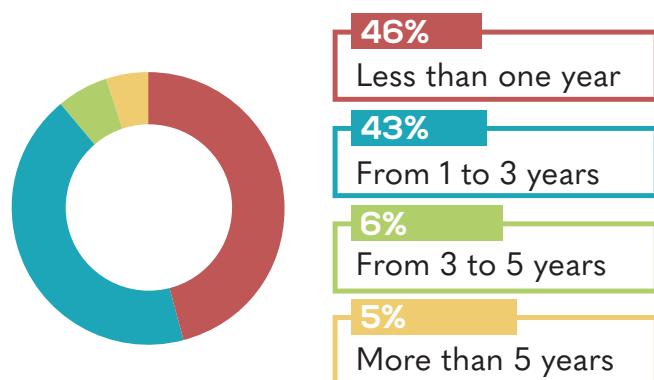
In 2019, ICW Latina conducted an online survey of women with HIV to document their experiences of using cervical cancer prevention and control services in their countries. A total of 440 women from 14 countries were asked about their knowledge of the services available for the prevention and control of cervical cancer and their experiences of using these services.



## Cervical cancer screening

Among the women who responded to the ICW survey, 86% (387/440) reported that they had undergone screening tests for cervical cancer. Eighty-nine percent (344/387) of them underwent screening in the last 3 years (**Figure 9**); 39% (151/387) of them went to HIV clinics for the screening service; and 29% (112/387) paid for the screening service. Receiving the results took more than one month in at least 21% of cases.

**FIGURE 9:** Time between screening test and receipt of results (n = 387).



**Source:** Survey conducted among women with HIV (ICW-Latina, 2020).

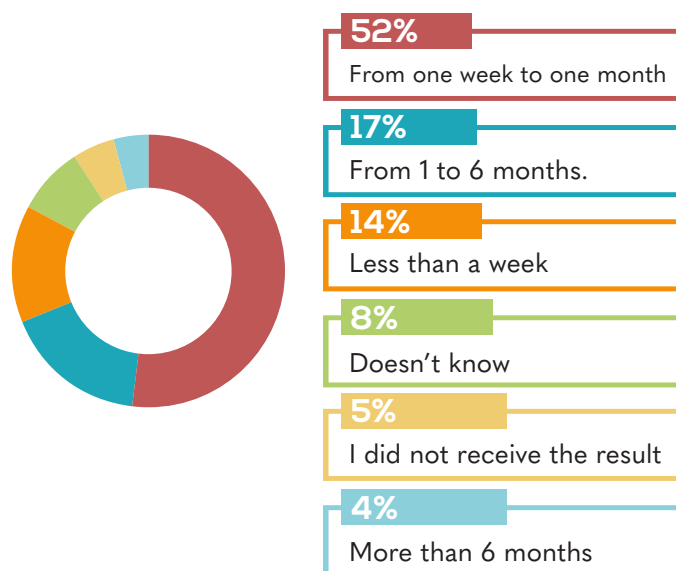
## Treatment of precancerous lesions

Of the total number of women who underwent screening (387), 35 had abnormal results and 43 did not know the results. Of the 11 women who said they had received treatment, nine had to pay for this service.

## Satisfaction with services

Among the women who responded to the satisfaction with services question, 83% (337/406) reported that they were satisfied or very satisfied with the treatment from staff and practices related to cervical cancer control care (**Figure 10**).

**FIGURE 10:** Time between screening test and receipt of results (n = 387).



**Source:** Survey conducted among women with HIV (ICW-Latina, 2020).

## INFORMATION GAPS

Despite globally available information on the increased risk of women with HIV to develop cervical cancer, specific information for Latin America and the Caribbean is limited:

- There is no available information on the acceptability and affordability of cervical cancer prevention and control services.
- The lack of unique identifiers and the fragmentation of health information systems make it difficult for HIV programs and cervical cancer programs to exchange information. This exchange of information would be very useful for monitoring interventions and directing actions to improve services in an integrated way.
- Despite HPV vaccination coverage among women with HIV being a global indicator that should be measured as part of Global AIDS Monitoring (GAM), there are no programmatic data on this indicator in the region. Moreover, only four countries provide data on screening coverage among women with HIV.

## GAPS IN POLICIES AND ACCESS TO SERVICES

- Most countries' guidelines include recommendations or guidance on the prevention and control of cervical cancer. However, these are not necessarily aligned with WHO recommendations.
- Eight countries do not give any specific recommendations on the frequency of screening in women with HIV.
- Just four countries in the region reach the 70% screening coverage target in the general population; and one country alone reaches this target in women with HIV.
- There is little knowledge of the HPV vaccine among women with HIV, which affects the demand for this important intervention for cervical cancer prevention.
- Of the women who said they received the HPV vaccine, only 39% received the three-dose regimen recommended by the WHO.
- In terms of cervical cancer screening, 61% of women who were screened had to go to another facility different than the HIV clinic to receive this services. This could affect the coverage of cervical cancer services among women with HIV.
- It seems to be common for women to pay for cervical cancer screening, which creates an additional barrier to prevention.



Commemoration of World AIDS Day, 2020

## RECOMMENDATIONS AND GOOD PRACTICES

- Increasing regional knowledge of cervical cancer problems in women with HIV is essential for improving their quality of life and reducing mortality from this disease.
- In line with the WHO concept of people-centered care, women with HIV should have the option to access cervical cancer services free of charge in clinics where they receive HIV care.
- Countries should prioritize access to cervical cancer services for women with HIV. This can be achieved by integrating services, improving patient navigation services, disseminating information on cervical cancer prevention and treatment, and eliminating out-of-pocket costs.
- Strengthening information systems is critical for the availability, quality, and integration of data enabling strategic and timely decisions to eliminate cervical cancer among women with HIV.
- It is essential to forge partnerships between different stakeholders, both inside and outside the health sector, in order to help the region to move forward in its response to cervical cancer.
- Involving affected women in policies, as well as service planning, monitoring, and evaluation is critical to the success of the actions taken, as is clearly documented with the HIV response in the region and globally.

**During the information analysis, some good practices were identified for the management of cervical cancer among women with HIV. However, there are still challenges to overcome in order to improve access to cervical cancer prevention and control services for these women. Improvements in this area are vital to eliminating this disease as a public health problem.**

## REFERENCES

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iii Bruni L, Albero G, Serrano B, Mena M, Gómez D, Muñoz J, et al. Human Papillomavirus and Related Diseases Report: World. ICO/IARC Information Centre on HPV and Cancer (HPV Information Centre); 2019 Jun.



This document has been developed as part of the technical cooperation agreement signed between the Pan American Health Organization (PAHO) and the International Community of Women Living with HIV-AIDS (ICW-Latina). Through this agreement, both organizations will develop and implement dissemination and communication activities for the promotion, prevention and treatment of sexually transmitted infections aimed at improving the quality of health of women living with HIV in Latin America and the Caribbean.