

Key outcomes of the CanScreen5/CELAC project

This chapter presents the outcomes on barriers to cancer screening and the interventions that are currently in place. It first provides aggregate data on barriers to the cancer screening pathway, followed by aggregate data on existing interventions to improve cancer screening programmes, and then the key messages.

3.1 Prioritized barriers to the cancer screening pathway

There was great variability among the barriers selected by countries.

For **protocols and guidelines**, including building capacity to deliver services in accordance with the protocols, the prioritized barriers were related to inadequate governance for assessing the training needs of the screening providers, screening providers not following the recommended protocols, and insufficient

monitoring of compliance with such recommendations. The least selected barrier was no regular updating of screening guidelines.

At the step of **identification of the eligible population and invitation to screening**, most of the countries selected an inadequate population register as a prioritized barrier. The population register was not complete, was not updated in a timely manner, or was missing some of the eligible population, such as immigrants and individuals who are homeless. The least selected barriers were data protection regulations preventing access to contact information of the eligible population, and eligibility criteria varying from a defined protocol according to location.

The barriers prioritized as the most relevant to increasing **screening participation** were not having an adequate system for monitoring screening participation, inadequate

feedback to health professionals about screening participation, difficulties in scheduling screening appointments, and health professionals not promoting screening. Many barriers at this step were selected by only 1 or 2 countries, such as a lack of trust in the health-care system, the screening centre being far away, negative attitudes of health professionals, and no financial coverage of the direct costs of screening (cost of appointment, cost of collection of test, cost of test analysis, etc.).

With respect to the **successful operation of the programme**, countries selected the following prioritized barriers: insufficient infrastructure and/or financial resources for screening, inadequate monitoring and evaluation, and limited public promotion of the screening programme. The least selected barriers at this step of the cancer screening pathway were related to opportunistic

screening: the outcomes of opportunistic screening not being shared, and the additional financial burden on the health-care system from such out-of-programme activities.

For **follow-up**, a large proportion of the countries selected the following prioritized barriers: insufficient monitoring of non-responders to follow-up; difficulties in sharing information because of inadequate linkage between the screening registry, primary care, and patients for the screening organization; and not having a system in place to ensure appropriate management of screen-positive individuals. Several barriers at this step were selected by only 1 country, such as poor adherence by providers to the officially adopted guidelines on follow-up management, people distrusting the health-care system, no financial coverage of the direct costs of the diagnostic workup (cost of appointment, cost of procedure, cost of test analysis, etc.), and unaffordable indirect costs of diagnosis (cost of travel, loss of a day's wages, cost related to care of dependents, etc.).

For barriers to **treatment**, most of the countries selected the following prioritized barriers: delays in initiation of treatment, insufficient monitoring of individuals diagnosed with precancer or cancer, and a lack of systematic monitoring and evaluation of treatment outcomes. The least selected barriers were the treatment centre being far away, the unavailability of effective treatment to all people who require it, the personal beliefs of patients preventing them from undergoing treatment, no financial coverage of the direct costs of treatment, and unaffordable indirect costs of treatment.

Table 1 shows the dimensions of barriers and the most prioritized barriers within each dimension by representatives of the health authorities of 27 countries in CELAC.

Table 1. Dimensions of barriers and most prioritized barriers within each dimension by representatives of the health authorities of 27 countries in the Community of Latin American and Caribbean States (CELAC)

Dimension of barrier and most prioritized barriers	Number of countries (%)
Information system	27 (100)
Population register is not accurate or complete	19 (70)
Population register is not updated in a timely manner with changes of contact information	17 (63)
Inadequate system for monitoring screening participation	12 (44)
Quality assurance	26 (96)
Insufficient monitoring of individuals diagnosed with precancer or cancer	17 (63)
Insufficient monitoring and evaluation of non-responders to follow-up	11 (41)
Monitoring and evaluation are inadequate and insufficient	10 (37)
No systematic monitoring or evaluation of treatment outcomes	10 (37)
Protocols and guidelines	24 (89)
Insufficient number of professionals trained on the screening protocols and guidelines	13 (48)
Screening guidelines are not regularly developed or adopted	7 (26)
Screening protocols and guidelines are not regularly updated	6 (22)
Governance	23 (85)
No well-defined organizing system in place to ensure appropriate management of screen-positive individuals (fail-safe mechanism)	14 (52)
Inadequate planning and/or logistics to deliver screening services	8 (30)
Complex and/or unclear administrative procedures delay amendment of the screening protocol	8 (30)
Availability	21 (78)
Insufficient infrastructure and/or financial resources for screening	14 (52)
Insufficient trained human resources for screening	11 (41)
Insufficient infrastructure and/or financial resources for further assessment	10 (37)
Accessibility	21 (78)
Delays in initiation of treatment not related to availability of health services	15 (56)
System-level delays for diagnosis after screening	6 (22)
Appointments for screening make it difficult for people to attend	4 (15)
Expected barriers (not financial) in access to cancer diagnosis in case of a positive screening result	4 (15)
Expected barriers (not financial) in access to cancer treatment in case of a cancer diagnosis	4 (15)
The treatment centre is far	4 (15)
User-provider interaction	16 (59)
Health professionals not disseminating information about or promoting screening	9 (33)
Limited public promotion of the screening programme	7 (26)
Current system does not address personal beliefs about follow-up (e.g. fatalism)	1 (4)
Acceptability	13 (48)
Limited health literacy, or beliefs and values that lead to non-participation in screening	6 (22)
Health professionals' attitudes and established patterns of practice prevent screening	5 (19)
Patients do not undergo treatment because of a variety of personal beliefs	4 (15)
Affordability	11 (41)
Unaffordable indirect costs of treatment	6 (22)
No financial coverage (total or partial) of direct costs of screening	4 (15)
No financial coverage (total or partial) of direct costs of treatment	4 (15)

Source: Mosquera et al. (2024) [27].

3.2 Existing interventions to improve cancer screening programmes

All of the countries reported having implemented some forms of interventions to improve cancer screening programmes (Table 2). The definitions of interventions are included in Annex 2.

Most of the countries had some intervention in place to **increase demand** for screening among the eligible population. The most frequently reported interventions were group education ($n = 23$; 85%), mass media campaigns ($n = 22$; 82%), and small media campaigns ($n = 22$; 82%). Few of the countries had a system in place for inviting individuals ($n = 4$; 15%), which is done through home visits, or for providing individual incentives ($n = 3$; 11%).

The most frequently reported interventions to **increase access** to screening were mobile units ($n = 16$; 59%), followed by the provision of alternative screening centres ($n = 13$; 48%), scheduling out-of-hours appointments for screening ($n = 8$; 30%), and patient navigation ($n = 6$; 22%). Only 2 countries (7%) addressed out-of-pocket costs.

Patient navigation is a cross-cutting intervention that can help overcome barriers at different steps of the cancer screening pathway. Navigation to increase participation in cancer screening was reported to be implemented in 6 countries. However, 3 of those countries reported specific barriers that could be addressed by patient navigators: for example, no follow-up of non-responders to the initial screening invitation, people experiencing practical issues (care of dependents, disability, language, etc.) that lead to non-participation in screening, and health professionals not sharing information about or promoting screening.

At the **provider level**, 19 countries (70%) reported conducting training of health professionals on cancer screening delivery. A lower proportion of the countries ($n = 11$; 41%) reported organizing training in laboratory sciences, pathology, and radiology. The least reported intervention, which was implemented in only 4 countries (15%), was having provider reminders and recall. Of the 19 countries that reported training health professionals, 5 ranked some type of barrier related to provider education as a priority: insufficient number of professionals trained on

the screening protocols and guidelines, screening providers not following protocols and procedures, and health professionals not sharing information about or promoting screening.

At the **policy and system level**, most of the countries ($n = 18$; 67%) reported having universal health coverage, which helps to overcome many of the barriers. As an intervention to promote screening participation, giving a day off work to attend screening was in place in 6 countries (22%).

Table 2. Interventions to improve cancer screening programmes by type of intervention and number of countries, from 27 countries in the Community of Latin American and Caribbean States (CELAC)

Type of intervention	Number of countries (%)
<i>User-directed interventions to increase demand</i>	
Group education	23 (85)
Mass media campaigns (television, radio, billboards)	22 (82)
Small media campaigns (brochures or leaflets, newsletters, flip charts, videos, social media)	22 (82)
One-on-one education	21 (78)
Individual reminders and recall	6 (22)
Individual invitation	4 (15)
Individual incentives	3 (11)
<i>User-directed interventions to increase access</i>	
Mobile units	16 (59)
Alternative screening centres	13 (48)
Scheduling out-of-hours appointments	8 (30)
Patient navigation	6 (22)
Provision of transportation	4 (15)
Self-sampling tests for cervical cancer	3 (11)
Reduction of out-of-pocket costs	2 (7)
<i>Provider-directed interventions</i>	
Training on screening delivery	19 (70)
Training in laboratories	11 (41)
Training in pathology	11 (41)
Training in radiology	11 (41)
Provider assessment and feedback	11 (41)
Provider incentives	6 (22)
Provider reminders and recall	4 (15)
<i>Policy and system-level interventions</i>	
Universal health coverage	18 (67)
Day off work to attend screening	6 (22)

Source: Mosquera et al. (2024) [27].

Key messages

- To the best of our knowledge, this is the first systematic assessment of barriers to the cancer screening pathway from the health system perspective and existing interventions to improve cancer screening programmes in the CELAC context.
- More than 75% of the countries prioritized issues related to the availability of services, which is the first barrier that the population might face to participate in cancer screening services. This barrier covers issues related to infrastructure, financial resources, and human resources.
- All of the countries in the region prioritized barriers related to the information system, such as the population register not being accurate or complete (70%) or not being updated in a timely manner with changes of contact information (63%).
- All of the countries except one prioritized barriers related to quality assurance; the most prioritized barrier (63%) was insufficient monitoring of individuals diagnosed with precancer or cancer.
- There was diversity among the dimensions of the barriers prioritized as the most relevant by countries, with no clear pattern by region or by the level of organization of the screening programmes. The prioritization will be influenced by the socioeconomic context of each country, the health system organization, and the cancer burden.
- Ideally, the information collected in this project should be complemented with views from the population and from providers. Also, it would be important to analyse whether there are differences across socioeconomic groups.
- Most of the countries reported having universal health coverage (67%). However, women had to pay for diagnostic and treatment services for breast cancer and cervical cancer in about 40% of the countries.
- After identifying potential interventions to overcome barriers, countries will have to prioritize the interventions on the basis of the local context, enablers, the effectiveness of the interventions, the available expertise, the feasibility of implementation, the legal framework, and/or the return on investment. Then, stakeholders will need to be engaged to work on an action plan to overcome each barrier. This plan should include a SMART objective (specific, measurable, actionable, relevant, and time-bound) and a system to monitor and evaluate the interventions.
- Further analysis is required to assess why some countries that implement an intervention to overcome a specific prioritized barrier are not successful.