

# Elimination of cervical cancer in Latin America (Project ECHO-ELA): lessons from phase one of implementation

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#### **ABSTRACT**

We describe the outcomes of The Extension for Community Healthcare Outcomes-Elimination of Cervical Cancer in The Americas (ECHO-ELA) program, which was developed as a tri-lateral cooperation between Pan American Health Organization (PAHO), the U.S. National Cancer Institute (NCI) and The University of Texas MD Anderson Cancer Center (MD Anderson). The program's purpose is to disseminate strategies for cervical cancer prevention and is structured around the three pillars of the World Health Organization's (WHO) Cervical Cancer Elimination Strategy and the associated 90-70-90 target goals. The target audience includes health authorities from Latin American and Caribbean countries, as well as PAHO's non-communicable disease Focal Points in country offices as well as clinical and public health collaborators. The virtual sessions are held in Spanish for 1.5 hours every month using the ECHOf B format. From May 2020 to June 2021, 14 ECHO sessions were held with an average of 74 participants per session (range: 46 - 142). We conducted two anonymous surveys (baseline and follow up) and two focus groups. Respondents stated that the topics they learned the most about included the state of HPV vaccination in the region and strategies for implementing HPV vaccination. Identified needs included support between ECHO sessions and country-specific technical assistance. The ECHO-ELA program provides a forum for increased collaboration between countries in Latin America/ Caribbean and the dissemination of best-practice strategies to reach the WHO Cervical Cancer Elimination target goals.

#### **Keywords**

Cancer of cervix; public health; health policy; Latin America.

Cervical cancer is a major public health problem in Latin America and the Caribbean, highlighting disparities in prevention and treatment of this preventable illness. Nearly 60 000 new cases and over 31 000 deaths per year occur in countries of this region, accounting for 80.0% of new cases and 83.3% of deaths from cervical cancer in the Americas (1). This is thought to be related to issues with access to robust screening and prevention programs and problems with follow up after a diagnosis of pre-invasive or invasive disease (2). Additionally, there are disparities in the distribution of cervical cancer incidence and mortality throughout the region, with higher-income countries reporting fewer incident cases and deaths per year (3-5).

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To better address the global disparities seen in cervical cancer, the World Health Organization's (WHO) Director General issued a global call to action in May 2018 to eliminate cervical cancer (6,7). A strategic plan was launched in November 2020 to eliminate cervical cancer as a public health problem (7). The WHO global strategy to eliminate cervical cancer as a public health problem is based on three pillars: 90% of girls fully vaccinated against human papillomavirus (HPV) by age 15; 70% of women screened with a high-performance test at ages 35 and 45 years; and 90% of women identified with cervical disease (precancer and cancer) having received adequate treatment and care (7).

In line with the call for coordinated action, in September 2018, the Ministries of Health in the Americas adopted a regional plan of action for cervical cancer prevention and control (2018-2030) (8) to assist member states in strengthening their capacity to implement evidence-based and effective strategies towards cervical cancer prevention and treatment. The goal of this action plan is to reduce incidence and mortality indicators in the region by one-third by 2030.

In 2019, the Pan American Health Organization (PAHO) convened two regional cervical cancer and HPV immunization meetings with regional health authorities to advance the implementation of the regional action plan. A need identified in those meetings was to continue promoting effective strategies for HPV vaccination, HPV testing, and treatment of precancer and invasive cancer. To that end, the Project ECHO® (Extension for Community Healthcare Outcomes) telementoring program was identified as an effective platform to use for this purpose.

To recognize and address barriers to attaining the three WHO elimination strategy targets and to disseminate evidence-based tools to accelerate the success of regional programs, PAHO, The University of Texas MD Anderson Cancer Center (MD Anderson) and the US National Cancer Institute (NCI) developed and implemented a Project ECHO® program to address cervical cancer control in Latin America. Along with health-system strengthening, provider training, and the development and use of novel technologies for cervical cancer prevention, Project ECHO is an effective tool to address disparities in cervical cancer (9).

Project ECHO is an evidence-based strategy that aims to facilitate knowledge sharing through engaging networks of colleagues with the guidance of subject-matter experts. The format of learning is case-based discussions with complementary lectures as appropriate (10,11). MD Anderson has implemented programs to increase clinical capacity for cervical cancer prevention and treatment in Texas, Latin America (12,13) and globally (11). This program is different from previous clinical-based ECHOs as it seeks to address public health policy and implementation challenges as part of its learning objectives instead of clinical patient-related issues.

The collaboration to develop the ECHO-ELA program was facilitated by the combined expertise, missions and reach of the three parties involved in this program (The ECHO-ELA team), the convergence of interests in addressing cervical cancer disparities in low-resource settings and the tracked history of collaboration among the institutions (14). In addition, the NCI is a WHO Collaborating Center for Cancer Control, supporting the global WHO cervical cancer elimination strategy.

Our primary goal was to identify and address barriers to reaching the targets of the cervical cancer elimination strategy in The Americas through the joint development of an ECHO program. By disseminating evidence-based information and increasing opportunities for problem solving through case-based learning among leaders in cervical cancer prevention and in regional Ministries of Health, we posited that the ECHO program would help to address the barriers that were identified and could serve as a possible template for other region of the world facing similar barriers. In this report, we seek to describe the outcomes of the initial program, including attendance and participant perceptions.

#### **METHODS**

#### **Program development**

The PAHO office and MD Anderson signed a Memorandum of Understanding in 2018 to promote collaborative efforts around cancer prevention and control. As part of that collaboration, the MD Anderson team gave a presentation about Project ECHO at the "Regional meeting about HPV Vaccination towards the Elimination of Cervical Cancer" in Mexico City, Mexico in October 2019. This meeting was organized by PAHO and attended by numerous regional stakeholders in cancer control, including service-providers, academic institutions, and civil society organizations (15). Following this meeting, the NCI joined the efforts through a joint assignment of an NCI employee to PAHO and began to contribute to the development of the ECHO-ELA program in collaboration with PAHO and MD Anderson in January 2020.

To continue to build on the collaboration, a webinar was organized by the ECHO-ELA team in April 2020 to inform the PAHO Non-Communicable Disease (NCD) Focal Points across country offices in Latin America about this new initiative. The webinar's purpose was to introduce the Project ECHO format, propose the ECHO-ELA project, and share a preliminary one-year curriculum. Following the webinar, PAHO issued a formal invitation through its country offices to Latin American Ministries of Health, including Immunization and Cancer Screening Program Managers and cervical cancer stakeholders (i.e., researchers, clinicians, civil society members, etc.).

#### Structure of the Project ECHO sessions

The Project ECHO sessions were held once a month for a duration of 1.5 hours. The sessions were held in Spanish and conducted on the Zoom meeting platform. Brazilian and Spanish-speaking Caribbean participants were invited to participate and assistance with Portuguese-Spanish translation was provided if needed when Brazilian participants asked programmatic questions or needed clarification. Two of the faculty speak Portuguese and provided assistance with translation of materials to Portuguese on an as-needed basis.

Agenda items for the meetings included ground rules for participation, updates and summaries of previous ECHO sessions, case presentations by local participants and lectures to disseminate best practices among the ECHO participants. During the ECHO-ELA sessions, participants were encouraged to disseminate the registration details with other colleagues, which were also made publicly available on a dedicated webpage on the PAHO website (16). Monthly reports in Portuguese and Spanish on each of the ECHO-ELA sessions were also disseminated

on the PAHO website and included in the PAHO cancer newsletter to continue to promote participation in ECHO-ELA.

We invited regional experts on HPV vaccination, cervical cancer screening, and cervical cancer treatment to serve as regular faculty for this program. The faculty were asked to provide feedback on curriculum development, present lectures, facilitate the case discussion during the ECHO sessions, and serve as local experts to summarize discussions and provide the most up-to-date information for the participants in the region.

The curriculum was structured according to the three targets of the WHO Elimination Strategy. Our initial curriculum ran for 14 months, from May 2020 to June 2021. During this period, three lectures focused on vaccination, five on updates and WHO recommendations for screening, and four on treatment. Additionally, three lectures were presented to introduce and develop the background and framework for the ECHO-ELA program, as well as to discuss comprehensive national cervical cancer control plans.

#### **Program evaluation surveys**

Two surveys were developed using REDCap (Research Electronic Data Capture) and tested by members of the ECHO-ELA team (MLV, SSM, SL) before the program implementation. The surveys consisted of a baseline assessment and an end-program follow-up survey. The surveys were sent to all ECHO-ELA registered participants via individualized emails and were provided in Spanish.

The goal of the baseline survey was to gather demographic information about the ECHO-ELA participants as well as to understand the participants' expectations for joining the program as well as any learning objectives that they had. The goal of the follow-up survey was to assess the participants level of satisfaction with the program, to examine the self-reported benefits gained by participating in the program, and to glean recommendations for program improvement for future iterations.

#### **Focus groups**

Two focus groups were conducted entirely in Spanish at the completion of the initial ECHO-ELA 14-month curriculum. The focus groups were led by a qualified new member of the ECHO-ELA team (SBM) who had not been involved in the curriculum to avoid bias, with the guidance of a team member with expertise in qualitative methods and focus groups (SSM). The focus group guide was developed by ECHO-ELA team members (MLV, SSM, and SBM) and covered the following key topic areas: didactic lectures and case-based discussions, knowledge gained, skill building, systems change, collaborations, and barriers and facilitators to reaching the WHO 90-70-90 cervical cancer elimination targets, while allowing for other related topics to be discussed by participants. Each focus group consisted of 2 faculty members and 5 ECHO-ELA participants.

ECHO-ELA participants who attended more than 60% of the meetings (n=14) were invited to attend the focus groups. 60% was selected as a threshold in order to ensure focus group participants were those who had attended a majority of the 14 meetings. All of the invited 14 participants attended the two focus groups, which were conducted virtually via Zoom.

Interviews were recorded (with participants' permission) and lasted 90 minutes. Audio recordings were transcribed using a professional transcription software service (Sonix).

Implementing an interpretivist paradigm, qualitative data analysis of transcripts was guided by a constant comparative method consistent with grounded theory (17, 18). Transcripts were independently reviewed and coded by three team members (SSM, MLV, SBM). Subsequently, team members met to discuss themes until a consensus was reached on salient themes and organized clearly by focus group topic areas (19).

#### **RESULTS**

#### **ECHO** session attendance

The Project ECHO sessions recurred monthly between May 2020 and July 2021 (n=14 ECHO sessions and one inaugural lecture). Through the dissemination of the registration link, 294 participants from 22 countries registered to participate in the program. Fourteen Project ECHO sessions were held with an average of 74 participants per session. Additionally, the program had six facilitators participating and 149 individuals in attendance.

## Baseline evaluation: participant demographics, capacity assessment and learning objectives

Of the 149 invitations, 84 participants (56.4%) completed the anonymous baseline survey, representing 17 countries in The Americas (Table 1).

TABLE 1. ECHO-ELA participant demographics (baseline)

	Countries Participating, n(%)		
Argentina	8 (9.4)		
Brazil	7 (8.2)		
Chile	1 (1.2)		
Colombia	9 (10.6)		
Costa Rica	6 (7.1)		
El Salvador	1 (1.2)		
United States	1 (1.2)		
Guatemala	4 (4.7)		
Honduras	14 (16.5)		
Mexico	3 (3.5)		
Panama	3 (3.5)		
Paraguay	6 (7.1)		
Peru	6 (7.1)		
Dominican Republic	1 (1.2)		
Uruguay	5 (5.9)		
Venezuela	9 (10.6)		
Professional Credentials, n(%)			
Doctorate (non-MD)	13 (15.3)		
MD	47 (54.1)		
Masters Degree	12 (14.1)		
Nurse	3 (3.5)		
Student	2 (2.4)		
Other/Unknown	8 (9.4)		

With respect to desired learning objectives, the majority of participants (n=69, 81.2%) stated that their main objective was to understand the challenges and opportunities other countries in the region faced in the implementation of action plans towards the elimination of cervical cancer. Many also expressed an interest in increasing their knowledge about planning and monitoring a national comprehensive cervical cancer control plan.

Table 2 details the perceived country capacity when asked if they felt there was "enough capacity" in their country by topic area. Half of participants perceived that their country has enough capacity for HPV vaccination, but fewer participants perceived that their countries had sufficient capacity for screening, treatment, and palliative care. Still fewer perceived that their countries had the capacity for research, community outreach and education, and financing of clinical services.

TABLE 2. Participant perception of their country's capacity, by topic

Perceived country capacity by topic	n (%)
HPV vaccination	42 (50.6)
Cervical cancer treatment	32 (39.0)
Cervical cancer screening	26 (31.7)
Palliative care	23 (28.4)
Research and monitoring (including cancer registries)	19 (23.8)
Community outreach and educational campaigns	18 (22.0)
Financing for clinical services	16 (19.8)

#### Follow-up surveys for participants

Of the 294 follow-up surveys distributed, 115 (39.1%) responded. When asked about the topics they felt were highest yield, participants most frequently selected regional HPV vaccination updates(n=82,79.6%) and experiences of other countries implementing HPV vaccination programs (n=77, 74.8%), followed by updates in implementing HPV testing in the region (n=76, 73.8%) (Table 3).

Participants were asked to indicate how their expected learning objectives compared with what they had learned at the ECHO-ELA sessions. Fifteen participants (15.6%) reported that their expectations about the program were not met; the remainder of participants stated that their expectations were either met or exceeded (n=81, 84.4%).

When we asked about program satisfaction, 92% (n=103) of the participants indicated that they agreed or strongly agreed that they had learned important lessons from the case-based discussions. Likewise, 93.8% (n=105) agreed or strongly agreed that the quality of the organization and management of the ECHO sessions was appropriate. Finally, 78.6% (n=88) agreed or strongly agreed that participating in the ECHO-ELA sessions had increased their capacity to solve problems related to the cervical cancer elimination strategy in their working context.

#### **Outcome of focus groups**

The two focus groups each had 7 participants for a total of 14 participants. Each focus group had two ECHO-ELA Faculty members in attendance. Focus group participants represented

TABLE 3. Most high-yield topics learned as reported on participant surveys

Most important learned topics	n (%)
Regional situation of HPV vaccination programs	74 (79.6)
Experiences implementing HPV vaccination	
Regional situation of HPV testing	
Comprehensive programs that can be used to reach elimination targets	70 (68.0)
Conceptual approach towards the Elimination of Cervical Cancer	66 (64.1)
New scientific information	65 (63.1)

eight Latin American countries (out of the 16 originally participating countries)

#### 1. Didactic lectures and case studies

Focus group participants reported suggestions in the following categories: a. Presentation format, b. Sustainability, c. Small Group discussions, and d. Virtual Platform.

#### a. Presentation format

Participants suggested that the structure of the didactic lectures should be based on theoretical frameworks to differentiate between small (non-evidence based) projects and established programs. It was also suggested that verbiage was kept from being too technical, particularly when discussing treatment for cervical cancer.

#### b. Sustainability

Participants highlighted the need to go beyond the implementation of one-time projects with an end date and discuss how to sustain and adopt/adapt best practices and interventions.

#### c. Small Group Discussions

Smaller group discussion following the presentation is preferred over large groups to allow for more engagement and increased communication.

#### d. Virtual Platform

A few focus group participants suggested the need for a virtual platform to be established for ECHO-ELA individuals to continue the discussion following the monthly sessions.

#### 2. Knowledge gained

Focus group participants reported themes related to: a. Learning from neighboring countries, b. Disseminating learned information, c. Standard Development, and d. Additional Programmatic Guidance and Support.

#### a. Learning from Neighboring Countries

All participants found the ECHO-ELA information to be highly enriching. Participants highlighted that they appreciated learning from neighboring countries as this enabled them to draw parallels about program implementation between countries with similar context and resources as their own.

#### b. Disseminating learned information

Participants reported sharing information learned from the program with their colleagues, leadership, and mentees through professional conferences, meetings, and workshops.

# Additional Programmatic Guidance and Support Participants expressed a need for additional in-depth, country specific programmatic guidance and support

for participants to continue developing strategies to advance towards their respective 90-70-90 WHO cervical cancer elimination goals.

#### 3. Skill Building & Systems Change

Focus group participants reported themes related to: a. Training and Capacity Building, b. Confidence Building, and c. Systems Change.

#### a. Training and Capacity Building

Participants mentioned that their educational vision was transformed by ECHO-ELA and the 90-70-90 WHO cancer elimination goals.

#### b. Confidence Building

Participants reported that ECHO-ELA has given them the confidence that their country-specific efforts are well-aligned with WHO's 90-70-90 goals.

#### c. Systems Change

Participants highlighted the importance of having broader strategic planning and systems thinking to present multi-level impact and benefits to key leaders and decision makers.

#### 4. Collaborations

Most participants mentioned having developed a collaboration with a neighboring country to seek consultation, share resources, and/or discuss potential future collaborations. Participants reported themes related to: a. COVID-19 Strategies and b. Engagement of Additional Researchers.

#### a. COVID-19 Pandemic

Participants would like to continue generating strategies to address the 90-70-90 WHO cervical cancer elimination goals during a pandemic and continue collaborating among countries.

#### b. Engagement of Additional Researchers

Participants would like to identify and invite additional organizations from Latin America and across the globe that are conducting cervical cancer research, beyond their Ministries of Health, *Seguros Sociales* and National Institutes of Cancer.

#### 5. 90-70-90 Barriers and Facilitators

The themes that emerged among participants related to the 90-70-90 barriers include: a. Cultural Norms, b. Pandemic, and c. Vaccine Access

#### Barriers

#### a. Cultural Norms

Participants highlighted that Latin American countries need to change cultural norms to end the negative social stigma towards cervical cancer and increase the value of women's health.

#### b. COVID-19 Pandemic

Participants were concerned that the pandemic has increased challenges towards eliminating cervical cancer and the added stress on existing resources may not allow some Latin American countries to meet the 90-70-90 WHO cervical cancer elimination goals.

#### c. Vaccine Access

Participants highlighted that one of the biggest barriers to HPV vaccination is the shortage of vaccines. The shortage is causing a gender disadvantage as the HPV vaccine is not available for boys in most countries in the

region. The lack of awareness and education surrounding the importance of prevention among teenagers is another barrier, and limited clinic hours make this inaccessible to adolescents. Anti-vaccine groups and vaccine hesitancy are also major barriers to meeting the 90% HPV vaccination rate.

#### d. Standard Development

Participants suggested addressing the development of standards to clarify the basic equipment needed and ways to allow for clear access to treatment. They also reiterated the need for novel health technologies and capacity building of the local workforce to sustain these efforts.

The themes that emerged among participants related to the 90-70-90 facilitators included: a. HPV Vaccine Best Practices and b. Increased Awareness and Education

#### **Facilitators**

#### a. HPV Vaccine Best Practices

Participants stated that HPV vaccination in public and private school settings (the latter being more receptive) have been proven to be very successful.

#### b. Increased Awareness and Education

Participants highlighted the importance of increasing public awareness and education about cervical cancer prevention, screening, and treatment. Multi-level education efforts were recommended including at the provider level and at the community level.

Focus group participants also praised the ECHO-ELA team members for their expertise, professionalism, and impressive efforts to convene a considerable number of key cancer stakeholders to meet monthly in a very efficient manner.

#### **DISCUSSION**

Multicenter and sector collaborations continue to be fundamental in the task to reach the target goals of the WHO Cervical Cancer Elimination Strategy. This project sought to accomplish this at a regional level by bringing together countries in the Latin America region to build upon their elimination efforts. This collaboration between governments and academic institutions has been fundamental to assess regional barriers to reaching the desired targets of the WHO Elimination Strategy. This unique program is an example of a way to increase collaboration and improve outcomes at the country level.

One of the key components of this program is that it brought together participants with diverse professional credentials from across 22 countries, most of whom were affiliated with either a Ministry of Health or an academic center. The majority of participants felt that the program met or exceeded their expectations and their learning objectives across multiple educational topics were met. The topics of interest included a broad range so as to appeal to the program participants' diverse work/educational backgrounds and included vaccination, cancer control plans, palliative care, and screening/treatment of invasive cancer. In summary, the program has positively impacted both participants' collaboration with neighboring countries as well as their confidence to develop regional strategies that are aligned with the WHO's 90-70-90 target goals.

Participants' overall positive attitudes towards the program are in line with prior programs establishing knowledge-sharing collaboratives. Such programs have similarly found that these workshops and programs offer participants an opportunity to discuss key issues surrounding their target disease with regional and international experts across a large swath of topics (20). Both HICs and LMICs benefit from knowledge sharing relationships, though prior research has emphasized that their topic interests and needs differ and that this is an important consideration (21). Our program is unique in that it was focused on cervical cancer alone and that it involved participants from both HICs and LMICs within one region.

A limitation of the program is that, while the overall participation exceeded target numbers initially, these numbers decreased throughout the duration of the program. However, the final participation numbers were still in excess of the original expectations. We believe the drop in participation could be due to participants' diverse expectations about the program or due to difficulties with arranging meeting times. This represents an advantage to the ECHO-ELA regular participants, as the smaller group allowed for opportunities of interaction and cross-fertilization for different country participants.

The need for additional programmatic guidance and support was voiced during the focus groups discussion. Focus groups participants expressed a need for additional country-specific, in-depth programmatic guidance and support to continue developing and implementing strategies to advance towards the WHO 90-70-90 targets. Clearly, given the different regional and local contexts, combined with varying levels of organization of cancer services and levels of cancer control activities, further guidance adapted to the local settings and needs would enhance the participants' experience of the ECHO-ELA sessions. Although the scope and format of ECHO programs is unlikely ideal for developing targeted interventions for specific settings, it serves as an important platform for identifying those needs as well as identifying regional examples of interventions that could be adapted locally.

Due to the unique nature of this program, we are also considering areas for evaluating the long-term impact of the program and to address difficulties with case-based discussions that are not clinical in nature. Efforts are being made to educate the participants about how non-clinical cases could best be presented and to encourage programmatic/public health related questions to be incorporated in the discussions.

Going forward, the ECHO-ELA team has incorporated some of the participant suggestions including more focused collaborations, additional support for countries requesting these interactions, and breakout sessions during the ECHO-ELA main sessions. An additional area we are exploring is the provision of a platform for ongoing discussions between meetings, which could include setting up a sustainable learning collaborative for the region.

**Author contributions.** SB contributed substantially to the writing of the manuscript, as well as the second iteration of data analysis. SLS, MLV, MM, and MPS were instrumental in the planning, conceptualization, data collection, data analysis, and focus group work. They also contributed to the initial draft of the manuscript. KMS and MPS contributed to the conceptualization and planning of the program. SA, JM, MTCO, LDO, and MPS participated in the program as faculty leaders. SBM, SL, JR, ET, and KMS were involved in the editing and reviewing process of the manuscript.

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**Conflicts of interest**. None declared.

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#### **REFERENCES**

- 1. Sung H, Ferlay J, Siegel RL, Laversanne M, Soerjomataram I, Jemal A, et al. Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. CA Cancer J Clin. 2021;71:209–49.
- Cervical Cancer is Major Health Problem in Latin America [Internet]. Popul. Ref. Bur. 2000 [cited 3 Aug 2023]. Available from: https://www.prb.org/resources/cervical-cancer-is-major-health-problem-in-latin-america/
- 3. Murillo R. Social inequalities in cancer in Latin America. Reducing Soc Inequalities Cancer Evid Priorities Res [Internet]. World Health Organization: International Agency for Research on Cancer; 2019. p. 223–6. Available from: http://www.ncbi.nlm.nih.gov/pubmed/33534498
- 4. Wild CP. Social Inequalities and cancer: the imperative to act. Reducing Soc Inequalities Cancer Evid Priorities Res [Internet]. World Health Organization: International Agency for Research on Cancer; 2019. p. 1–6. Available from: http://www.ncbi.nlm.nih.gov/pubmed/33534498 NEW
- 5. Singh G. Global Inequalities in Cervical Cancer Incidence and Mortality are Linked to Deprivation, Low Socioeconomic Status, and Human Development. Int J MCH AIDS. 2012;1:17–30.
- Canfell K. Towards the global elimination of cervical cancer. Papillomavirus Res (Internet). Elsevier B.V.; 2019;8:100170. Available from: https://doi.org/10.1016/j.pvr.2019.100170
- 7. Global strategy to accelerate the elimination of cervical cancer as a public health problem [Internet]. World Heal. Organ. 2020 [cited 3

- Aug 2023]. Available from: https://www.who.int/publications/i/item/9789240014107
- 8. Plan of Action for Cervical Cancer Prevention and Control 2018-2030 [Internet]. Pan Am. Heal. Organ. 2018 [cited 3 Aug 2023]. Available from: https://www.paho.org/en/documents/cd56r9-plan-action-cervical-cancer-prevention-and-control-2018-2030
- 9. Lopez MS, Baker ES, Maza M, Fontes-Cintra G, Lopez A, Carvajal JM, et al. Cervical cancer prevention and treatment in Latin America. J Surg Oncol. 2017;115:615–8.
- Arora S, Thornton K, Murata G, Deming P, Kalishman S, Dion D, et al. Outcomes of Treatment for Hepatitis C Virus Infection by Primary Care Providers. New Engl J Med. 2011;364:2199–207.
- 11. Varon ML, Baker E, Byers E, Cirolia L, Bogler O, Bouchonville M, et al. Project ECHO Cancer Initiative: a Tool to Improve Care and Increase Capacity Along the Continuum of Cancer Care. J Cancer Educ [Internet]. Springer US; 2021;36:25–38. Available from: https://doi.org/10.1007/s13187-021-02031-0
- Lopez MS, Baker ES, Milbourne AM, Gowen RM, Rodriguez AM, Lorenzoni C, et al. Project ECHO: A telementoring program for cervical cancer prevention and treatment in low-resource settings. J Glob Oncol. 2017;3:658–65.
- Varon ML, Baker E, Estrada EE, Schmeler K, Pareja R. Advancing gynecologic oncology in Latin America through Project ECHO. Int J Cancer. 2020;147:1638–48.
- 14. Frech S, Brew R, Luciani S, Piñeros M, Stevens LM, Mohar A, et al. Perspectives on strengthening cancer research and control in Latin America through partnerships and diplomacy: Experience of the national cancer institute's center for global health. J Glob Oncol. 2018;2018:1–11.
- 15. Pan American Health Organization. HPV vaccination: Towards the Elimination of Cervical Cancer in the Americas [Internet].

- Washington DC.PAH. 2019 [cited 3 Aug 2023]. Available from: https://www.paho.org/en/documents/hpv-vaccination-to-wards-elimination-cervical-cancer-americas-mexico-oct-2019
- 16. Pan American Health Organization. ECHO Latin America ELA Project: Monthly teleconferences on cervical cancer prevention programs [Internet]. PAHO. Washington DC. [cited 3 Aug 2023]. Available from: https://www.paho.org/en/topics/cervical-cancer/echo-latin-america-ela-project-monthly-teleconferences-cervical-cancer
- 17. Corbin J, Strauss A. Basics of qualitative research. Sage Publications; 1990.
- Glaser BG. The Constant Comparative Method of Qualitative Analysis. Soc Probl. 1965;12:436–45.
- 19. Lincoln Y, Guba E. Naturalistic Inquiry. Sage Publications; 1985.
- Mendoza-Cervantes D, Otero I, Zujewski JA, Salazar JF, Córdova GL, Muha C, et al. Building a network of health professionals for breast and cervical cancer control in the Andean region. J Glob Oncol. 2018;2018:1–8.
- 21. Perin DMP, Vogel AL, Taplin SH. Assessing knowledge sharing in cancer screening among high-, middle-, and low-income countries: Insights from the international cancer screening network. J Glob Oncol. 2019;2019:1–8.

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## Eliminación del cáncer cervicouterino en América Latina (Proyecto ECHO-ELA): aprendizajes de la primera fase de implementación

#### **RESUMEN**

Se describen los resultados del programa ECHO® (Extension for Community Healthcare Outcomes) para la eliminación del cáncer cervicouterino en las Américas (ECHO-ELA), que se concibió como una cooperación trilateral entre la Organización Panamericana de la Salud (OPS), el Instituto Nacional del Cáncer de los Estados Unidos (NCI) y el centro contra el cáncer MD Anderson (MD Anderson) de la Universidad de Texas. La finalidad del programa es difundir las estrategias para la prevención del cáncer cervicouterino, y está estructurado en torno a los tres pilares de la estrategia para la eliminación del cáncer cervicouterino de la Organización Mundial de la Salud (OMS) y los objetivos 90-70-90 conexos. El público destinatario comprende autoridades de salud de países de América Latina y el Caribe, así como los puntos focales de la OPS para las enfermedades no transmisibles en las Representaciones en los países, además de colaboradores en el ámbito clínico y de la salud pública. Las sesiones virtuales se llevan a cabo en español, durante 1,5 horas cada mes, utilizando el formato ECHO®. De mayo del 2020 a junio del 2021 se celebraron 14 sesiones de ECHO, con un promedio de 74 participantes por sesión (límites: 46-142). Se realizaron dos encuestas anónimas (al inicio y de seguimiento) y dos grupos de opinión. Los encuestados declararon que los temas sobre los que más aprendieron fueron la situación de la vacunación contra el VPH en la región y las estrategias para poner en marcha la vacunación contra el VPH. Entre las necesidades mencionadas figuraban el apoyo entre las sesiones de ECHO y la asistencia técnica específica para cada país. El programa ECHO-ELA brinda un foro para una mayor colaboración entre los países de América Latina y el Caribe y para difundir las estrategias sobre las mejores prácticas, a fin de alcanzar los objetivos de la OMS de eliminación del cáncer cervicouterino.

Palabras clave Cáncer cervic

Cáncer cervical; salud pública; política de salud; América Latina.

### Eliminação do câncer do colo do útero na América Latina (Projeto ECHO-ELA): lições da primeira fase de implementação

#### **RESUMO**

Este trabalho descreve os resultados do programa Extension for Community Healthcare Outcomes para eliminação do câncer do colo do útero nas Américas (ECHO ELA), desenvolvido na forma de cooperação trilateral entre a Organização Pan-Americana da Saúde (OPAS), o Instituto Nacional do Câncer dos Estados Unidos (NCI) e o MD Anderson Cancer Center da Universidade do Texas (MD Anderson). O programa visa a disseminar estratégias para a prevenção do câncer do colo do útero e está estruturado em torno dos três pilares da estratégia de eliminação do câncer do colo do útero da Organização Mundial da Saúde (OMS) e das Metas 90-70-90 associadas. O público-alvo inclui autoridades sanitárias de países da América Latina e do Caribe, bem como os pontos focais de doenças não transmissíveis nas representações da OPAS nos países, além de colaboradores clínicos e de saúde pública. Todos os meses, são realizadas sessões virtuais de uma hora e meia em espanhol usando o formato ECHO®. No período de maio de 2020 a junho de 2021, foram realizadas 14 sessões do ECHO, com uma média de 74 participantes por sessão (variação: 46 a 142). Foram realizadas duas enquetes anônimas (linha de base e acompanhamento) e dois grupos focais. Os entrevistados afirmaram que os tópicos sobre os quais mais aprenderam foram a situação da vacinação contra o HPV na região e as estratégias para implementar a vacinação contra o HPV. As necessidades identificadas incluíam apoio entre as sessões do ECHO e assistência técnica específica para o país. O programa ECHO ELA oferece um fórum para aumentar a colaboração entre os países da América Latina e do Caribe e difundir melhores práticas para atingir as metas de eliminação do câncer do colo do útero da OMS.

#### Palavras-chave

Câncer de colo uterino; saúde pública; política de saúde; América Latina.