



**PREVENT
GLOBAL
HPV CANCERS**

Recommendations to Promote HPV Vaccination: Evidence-Based Messages to Motivate Parents to Vaccinate

**A Practical Guide for Health Insurance Companies
and Health Authorities in Colombia**



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About this Guide

This messaging guide is designed for health insurance companies, government health authorities, and other entities seeking to take action to prevent cervical cancer in Colombia through increased rates of HPV vaccination.

Health insurance companies and government authorities can utilize this guide which includes proven strategies, evidence-based messaging, and communication techniques that resonate with parents and foster trust to develop an action plan to empower parents and increase HPV vaccination rates. An action plan template is included in the resource section of this guide to help prioritize activities.

Unless otherwise cited, data and information informing this guide comes from formative research conducted by the Inter-American Development Bank, La Liga Colombiana Contra el Cancer, and the Government Lab at Universidad del Rosario. Read more about this research [here](#).

THE ROLE OF HEALTH INSURANCE COMPANIES IN INCREASING HPV VACCINATION RATES

In Colombia, health insurance companies are responsible for the population under their care, organizing the healthcare service network, and managing healthcare quality. With universal health insurance coverage in Colombia, health insurance companies play a key role in promoting and ensuring the uptake of HPV vaccination and other cancer prevention initiatives. Thanks to their extensive reach, health insurance companies can impact various stakeholders in vaccination, such as healthcare providers and parents. They also have the unique opportunity to facilitate access to the HPV vaccine and implement various programs and incentives to boost vaccination rates.

THE ROLE OF GOVERNMENT INSTITUTIONS IN INCREASING HPV VACCINATION RATES

Colombian government institutions such as the Ministry of Health and Secretariats of Health play a crucial role in shaping and implementing public health policies, including vaccination programs. The comprehensive data collected by government agencies can inform targeted interventions and facilitate the development of effective evidence-based strategies to address specific challenges to HPV vaccination. Moreover, as key stakeholders in the healthcare system, government institutions are well positioned to collaborate with health insurance companies and civil society organizations to create a unified and impactful approach to enhance HPV vaccination rates across the population.

Government-led HPV vaccination programs help prevent the spread of infectious disease, reducing the overall burden on the healthcare system. Vaccinated populations are healthier and less likely to miss work in the future due to illness.

Colombia
is trying to recover
from a drop in
vaccination rates

97% to **9%**



[2]

ONLY

3 in 10
girls in Colombia

have completed the HPV
vaccine series by age 15

[3]

20.8
million
women

aged 15 years or
older are at risk of
developing cervical
cancer in Colombia

[1]

Every day more than
6 women die
from cervical cancer
in Colombia



[3]

Cervical cancer
is the **3rd** most common cancer
among women in Colombia

[1]

Elimination is Possible

Cervical cancer, caused by HPV, is an urgent public health problem that can be solved. In 2020, the World Health Organization [4] launched a global initiative to eliminate cervical cancer which set targets for three important strategies: HPV vaccination, cervical cancer screening, and treatment. Currently, 193 countries, including Colombia, are committed to eliminating cervical cancer. To achieve elimination, 90% of girls between 9 and 14 years of age need to be vaccinated by 2030.

Additionally, the elimination of cervical cancer requires addressing barriers to healthcare access and ensuring equitable distribution of resources. Collaborative efforts among healthcare providers, governmental authorities, health insurers, and civil society organizations, including cancer organizations, are essential for implementing effective prevention, detection, and treatment programs.

WORLD HEALTH ORGANIZATION Achieving Elimination

Vision: A world free of cervical cancer

90%

of girls fully vaccinated with HPV vaccine by 15 years of age

70%

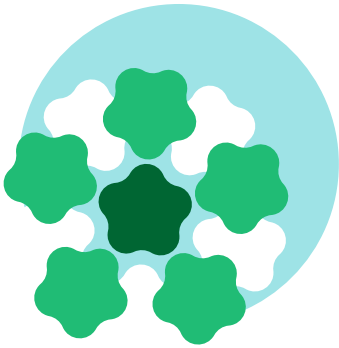
of women screened with an HPV test at 35 and 45 years of age

90%

of women identified with cervical disease receive treatment for precancerous lesions or invasive cancer

Elimination threshold: < 4 cases of cervical cancer per 100,000 women per year

Why Prioritise HPV Vaccination?



HPV VACCINATION HELPS PREVENT 6 TYPES OF CANCER

HPV is very common. While HPV infection has no treatment, there is a powerful vaccine that is extremely effective at preventing HPV and HPV cancers. Two high-risk HPV types, HPV16 and HPV18, are covered by all HPV vaccines used in Colombia and are associated with more than 60% of cervical cancer cases in Colombia [1].



THE HPV VACCINE IS SAFE AND EFFECTIVE

Since its debut in 2006, the HPV vaccine has been introduced in the national immunization programs of more than 100 countries, and millions of girls and boys have been vaccinated [5]. The Global Advisory Committee on Vaccine Safety (GACVS) has found no adverse events of concern based on several large, high-quality studies .



AGE MATTERS

The HPV vaccine is most effective when given at younger ages, and girls and boys can start receiving the HPV vaccine at age 9. Several studies have shown the importance of vaccinating against HPV at younger ages. A longitudinal study published in 2021 reported that England's National Health Service (NHS) vaccination program was able to prevent cervical cancer, reducing cases by 87% in women who received at least one HPV vaccine before their 14th birthday [7]. Cervical cancer cases prevented among women who received the HPV vaccine between 14-16 years dropped to 62%, and those vaccinated between 16-18 years reduced cancer cases by 34% [8].

As of September 30th, 2023, the Secretaria de Salud announced the expansion of the HPV vaccine through the free immunization program. The program covers one dose of the HPV vaccine for girls 9-17 who have not yet been vaccinated. In addition, all 9-year-old boys are eligible to receive one dose of the HPV vaccine.*

*Secretaria de Salud guidelines are subject to change

Challenges to HPV Vaccination In Colombia

HPV vaccination rates of less than 11% for series completion lag significantly compared to other vaccines administered through the National Immunization Program in Colombia, despite the impact and health benefits of HPV vaccination [1]. Research conducted in Colombia elicited key community knowledge, attitudes, and beliefs, contributing to lower HPV vaccination uptake [9]. The findings included:

KEY PARENTAL KNOWLEDGE AND BELIEFS

- **Government Support:** The perceived decrease in government support for the HPV vaccine since the events in Carmen de Bolívar contributes to mistrust in the community and adds complexity to parental decision-making to vaccinate their children. Health professionals believe that a more explicit endorsement from the government would increase trust and make parents more likely to accept the vaccine recommendation.
 - **Expectation of a provider recommendation:** Parents expect a recommendation from their doctor for the HPV vaccine; many wait to receive a recommendation from their doctor to vaccinate. It is critical to increase recommendations to parents through multiple channels of communication, including from their healthcare providers.
 - **HPV vaccine viewed as 'non-essential':** Although the HPV vaccine is part of the complete vaccination schedule and appears on the vaccination card, parents do not put the same effort into vaccinating their daughters against HPV as they deem other vaccines "more essential." Parents frequently believe the HPV vaccine does not appear on the national vaccination card and is not a part of the free National Immunization Program.
 - **Lack of urgency to vaccinate:** It is difficult for parents and pediatricians to appreciate the benefits of vaccination and the resulting immunity in the short term because HPV infections usually do not cause illness until adulthood. There is no immediate perceived consequence for failing to receive the HPV vaccine. HPV vaccination thus becomes something that parents feel they can put off for the future.
 - **Lack of information and visibility:** Information about the benefits of HPV vaccination is not readily available to parents in Colombia. In addition, prompts to receive the vaccine and reminders for parents are not consistent or frequent. As a result, parents place a lower emphasis on vaccinating their children with the HPV vaccine.
-



Take Action

Actions Health Insurance Companies and Health Authorities Can Take

Health insurance companies and health authorities play a critical role in preventing HPV cancers. Each can work to improve HPV vaccination rates and make a tangible impact on reducing the burden of HPV cancers. Studies from Colombia indicate that parents are the main decision-makers in their children's vaccinations [2]. The actions below, informed by evidence from research in Colombia, focus on reaching parents through messaging that addresses their knowledge, attitudes, and beliefs and nudges them to vaccinate their children [9].



ACTION 1

Form a Team

It is important to determine who is going to do the work of developing and implementing an HPV vaccine communication plan.



Identify people within your organization who engage in HPV vaccination work, including but not limited to those who will:

- Review current communication practices (examples: email/SMS campaigns, social media, reminder phone calls)
- Design communication for the public, healthcare providers, and insured populations
- Manage HPV vaccination data



Determine the frequency the team will meet to assess current activities, develop an action plan, monitor progress, and celebrate success.



Engage external partners that are needed for success, for example:

- Central health authorities
- Local cancer organizations
- Health centers or providers
- Medical professional societies
- Other health insurance companies
- Schools/ministry of education
- Influential individuals in the community



ACTION 2

Assess and Review

Before creating a plan it is important to understand current efforts in HPV vaccination. If a recent audit of HPV activities has occurred, you can skip this step and move on to planning. If not, use the guidance below to gather HPV vaccination activities.



Review your HPV vaccination data and consider the following:

- Compare the last several years to the current year
- Compare vaccination rates for HPV to other adolescent vaccines
- Compare geographies or other variables that can help you focus on a target population



Assess the strategies your organization currently employs to communicate about HPV vaccination to members, healthcare providers, and the public (for example, website, social media, brochures, emails, member portal, etc.)

Review current messages for any misalignment with the following recommended message framing:

- HPV vaccination is framed as cancer prevention. Framing HPV vaccination as cancer prevention (rather than prevention for a sexually transmitted infection) is the most effective framing
- Provides clear directions for parents on the timing of HPV vaccination
- Makes clear the HPV vaccine is free for targeted ages
- Language is clear and simple
- Communicates physician and central health authority support for the HPV vaccine
- Communicates that HPV vaccination is part of completing the regular/recommended vaccine schedule



Make note of any current messaging that is not in alignment with the recommended framing.



ACTION 3

Make a Plan

After forming a team, reviewing data, and assessing your current HPV vaccine communication, create an [action plan](#) that will guide your HPV vaccination communication work. Consider the following actions in your plan:



Determine the target audience(s) for your communication based on the HPV vaccination data found during Action 2.



Identify barriers and facilitators that may impact the effectiveness of the message. For example, cultural beliefs, social paradigms, and/or geographical barriers. This may vary according to each region of the country.



Determine messages for the target audience using [recommended messages](#), modify your current messages, or create new messages based on the following frames:

- Increase trust in the vaccine by sharing physician and institutional support and the vaccine's safety.
- Remind parents of their responsibility to get their children vaccinated against HPV.
- Provide decision aids and clear direction for parents to schedule a specific time when they can vaccinate their children.



Parents and caregivers view physicians as the most trusted source of medical information; thus, they wait for physicians to recommend the vaccine for their children. *Health insurance companies and government institutions should strategically engage with healthcare providers to ensure they are properly educated on effective communication with parents [2, 9].*



Develop a communications calendar using recommended messages to prompt parents to vaccinate their children against HPV cancers.

- Communicate with parents through multiple channels, including SMS, email, mailings, patient portal, website, and/or social media.
- Create a budget for the communication plan.
- Procure necessary technologies or subscriptions to deliver messages.
- Partner with other trusted organizations to reach parents to reinforce cancer prevention messaging.



Prepare healthcare systems and healthcare workers by communicating with them about:

- The burden of HPV cancers, including cervical cancer in Colombia
- The pivotal role physicians play in increasing HPV vaccination rates by strongly recommending the HPV vaccine to parents and caregivers
- Key messages to use with parents when recommending the vaccine (and recommended message framing from Action 2)
- HPV vaccination rates for the clinic compared to other doctors, clinics, or coverage rates of other vaccines in the expanded immunization program
- The importance of using in-clinic reminders such as posters and parent handouts that reinforce key messaging about HPV vaccination
- Future HPV vaccination campaigns that will be directed at parents



ACTION 4

Monitor and Refine

It is important to track your HPV vaccination communication actions and outcomes. Here are some key elements to consider:



Establish a goal(s) for the communication plan.



Determine which metrics you will track to evaluate the goal and how often you will monitor them.



Identify which messages/images/emoticons work best with your population.



Engage the target audience in evaluating the strategies and effectiveness of the messages.

- For example, conduct surveys or focus groups to gather feedback on the clarity and impact of your communications.



Refine your communication plan as you review the results of your efforts.



Recognize and celebrate success and lessons learned within your organization and with your partners.

Most Impactful Messages

To address current challenges to HPV vaccination uptake, this guide recommends a set of field-tested messages that health insurance companies and government health authorities can use to support parents’ decisions to vaccinate their children against HPV [9].

Please note that the original messages tested were all signed by the Secretary of Health and referred to “daughters” only since boys hadn’t yet been added to the program.

Behavioral Tactic	Recommended Message Content
<p>Highlight physician and institutional support and the safety of the vaccine.</p>	<ul style="list-style-type: none"> • Hi [Parent’s name], medical doctors recommend that you vaccinate your child against HPV. There is a vaccine waiting for your child at the nearest vaccination center. [central health authority or health insurance company] • Hi [Parent’s name], the [central health authority] recommends that you vaccinate your child against HPV. There is a vaccine waiting for your child at the nearest vaccination center. [central health authority or health insurance company] • Hi [Parent’s name], did you know the HPV vaccine is the safest in the vaccination plan? There is an HPV vaccine waiting for your child. [central health authority or health insurance company]
<p>Remind parents of their responsibility to get their child vaccinated</p>	<ul style="list-style-type: none"> • Hi [Parent’s name], your child does not have the HPV vaccine yet 😞. There is a vaccine waiting for your child at the nearest vaccination center [central health authority or health insurance company] • Hi [Parent’s name], your child is supposed to have 21 vaccines on their vaccination card, and they are still missing the vaccine against HPV. There is a vaccine waiting for your child at the nearest vaccination center [central health authority or health insurance company] • Hi [Parent’s name], there is a vaccine waiting for your child at the nearest vaccination center [central health authority or health insurance company]
<p>Provide clear direction and decision aids for parents</p>	<ul style="list-style-type: none"> • Hi [Parent’s name], you have an appointment on the xx of *MONTH* at (X) am/pm to vaccinate your child against HPV. There is a vaccine waiting for your child at the nearest vaccination center [central health authority or health insurance company] • Hi [Parent’s name], 4 of every 10 parents in your town vaccinated their children to protect them from cancer, an increase of 300% since 2016. Secretariat of Health [central health authority or health insurance company]



HPV VACCINATION MESSAGE TIPS:

If you need to revise or create new messages, keep the following in mind:

- **Personalize your message** to attract the recipient’s attention
- **Use emoticons** in your communications, where appropriate, to show that lack of vaccination goes against parents’ responsibility
- **Use simple reminders** to counter parents’ forgetfulness
- **Schedule tentative dates** to spark the intention of parents to vaccinate their children against HPV to follow through on their intentions
- **Leverage the need for completion** by framing the HPV vaccine as the last one from a larger set of vaccines necessary for their child’s health
- **Show a positive trend** to motivate parents to follow the social norm
- **Virtually assign them a vaccine** to give parents an advance sense of loss if they don’t get the vaccine that belongs to them

HPV VACCINATION COMMUNICATION/MESSAGING THINGS TO AVOID:

Things to avoid	Real-world example
Obscure web links to avoid the perception that the message is malicious/spam.	Avoid: <ul style="list-style-type: none"> ⊘ Give your son or daughter all the protection. Look up http://aldrm.co/Eq2vT9s for the closest vaccination point. Secretary of Health
Weak (unclear) messages that leave parents wondering what is the main objective of the message.	Avoid: <ul style="list-style-type: none"> ⊘ Vaccination is the best Christmas gift for your son or daughter. Check at http://aldrm.co/Eq2vT9s for the point closest to your home and go. Health Secretary.
Difficult to understand information that confuses more than informs parents.	Avoid: <ul style="list-style-type: none"> ⊘ Did you know that the probability that your child becomes infected with HPV is 80%?

Organizational Considerations for Health Insurance Companies

SECURE LEADERSHIP SUPPORT FOR HPV VACCINATION

Organizations that do not already have leadership buy-in should start by securing a commitment from their leadership to increase their involvement in HPV vaccination efforts. Fortunately, health insurance companies can leverage available research and data that quantifies the cost burden of cancer and the cost savings associated with HPV vaccination to build a case for support. Building a case for support could include potential cost savings specific to the health insurance company. They can examine their plan's spending on HPV cancers, cancer screenings, and genital warts to help them put forth a tangible explanation to leadership on how investing in HPV vaccination can contribute to the sustainability of the health system, optimize resources, and achieve health outcomes for the target population.

CREATE A CANCER PREVENTION NARRATIVE

A significant barrier to improving HPV vaccination rates is getting past the messaging and narrative that HPV is a sexually transmitted infection. Frequently, one of the first things physicians mention when talking to parents about HPV is how it is transmitted, which can perpetuate stigma around the HPV vaccine and make parents hesitant to vaccinate their child. Health insurance companies have an important role to play in changing the narrative among providers, parents, and within their own organization. Health insurance companies should emphasize cancer prevention and the benefits of immunization in all HPV vaccination efforts, interventions, and communications, and develop a clear and simple message that emphasizes that the HPV vaccine is a cancer-prevention vaccine that is best given on time.

LEVERAGE AND CREATE HPV VACCINATION PARTNERSHIPS

Health insurance companies are not alone in their efforts to improve HPV vaccination rates and reduce the burden of HPV cancers. They can connect with cancer organizations, the Ministry of Health, and the Ministry of Education for resources and collaborative opportunities. Additionally, health insurance companies can consider creating partnerships with health professional organizations.

Case Studies

This section presents the strategies and results obtained in Bogotá and Cali, highlighting the importance of addressing specific barriers that affect HPV vaccination rates. By employing trust-based approaches and understanding local dynamics, a significant impact has been achieved in promoting vaccination and reducing the burden of HPV cancers in Colombia.

Case Study 1: Bogotá

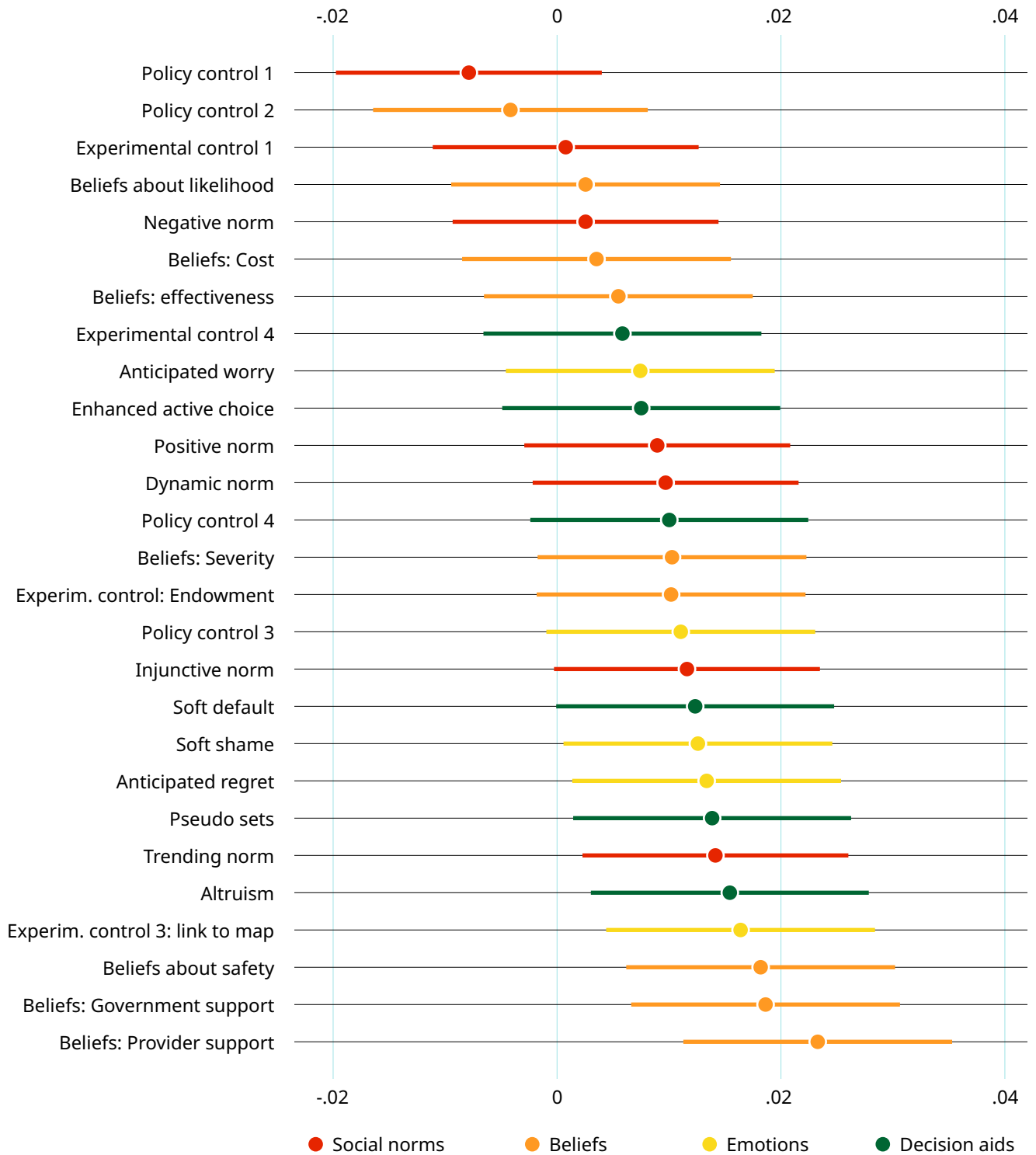
In a series of six extensive field tests conducted in Bogotá, researchers sought to address the challenge of encouraging parents to vaccinate their daughters against HPV [9]. The tests involved 47 distinct methods of communication with parents through text messages, employing behavioral science principles to overcome existing barriers and boost HPV vaccination rates in Bogotá. Administrative data obtained from the Secretariat of Health in Bogotá provided a valuable foundation for evaluating the impact of behaviorally informed text messages on actual HPV vaccinations. The study focused on parents of unvaccinated girls.

The results of the tests, particularly those related to the first dose of the HPV vaccine, revealed key insights. Notably, the most impactful findings indicated that HPV vaccination rates increased significantly when employing messages that addressed mistrust barriers. As depicted in Figure 1, reinforcing a doctor's recommendation, emphasizing the government's support for the vaccine, and framing the vaccine as the safest within the immunization schedule were identified as powerful strategies to increase first-time vaccination rates [9].

These interventions exhibited average vaccination rates of 7.87%, 7.44%, and 7.3%, respectively, representing substantial increases of 43%, 35%, and 32.5% compared to the control group (with a vaccination rate average of 5.5%). Importantly, these results were statistically significant at the 99% confidence level, providing valuable insights for health authorities seeking effective approaches to promote HPV vaccination.

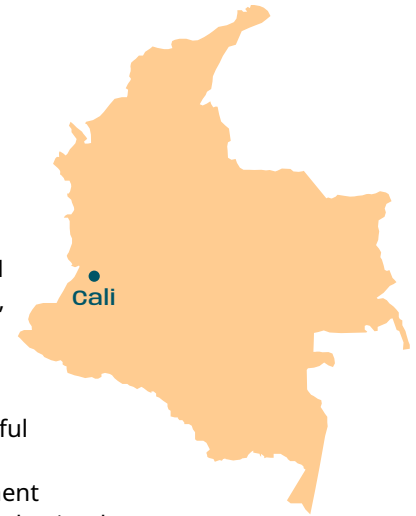


Figure 1. Marginal effects of all message interventions for the first dose



Case Study 2: Cali

To determine if trust-based messages increase HPV vaccination rates in Cali, a team of researchers from the Behavioral Economics Group at the Inter-American Development Bank deployed a communication strategy, specifically through text messages, directed at parents affiliated with the health insurance company SURA in Cali. Focusing on 15,231 parents affiliated with SURA and whose daughters are aged between 9 and 17 years old, the project builds upon existing strategies to enhance the uptake of the HPV vaccine.



The study’s intervention design draws inspiration from a successful project in Bogotá (detailed in case study 1) that aimed to increase HPV vaccination rates. The most impactful messages from the Bogotá project were selected and adapted to the Cali context for implementation. The Cali sample of parents was randomly assigned to one of six treatment arms, including a control group, a placebo group, and four treatment groups applying behavioral economic principles. As Figure 2 shows, these principles include information provision, social norms, trust, and presenting information about HPV vaccination in several different ways. All parents in treatment groups, except for the control group, received weekly text messages from the Health Secretariat over eight weeks from January 10 to February 28, 2023.

Figure 2. Experimental structure

	Week 1 16 Nov	Week 2 23 Nov	Week 3 30 Nov	Week 4 7 Dec	Week 5 14 Dec	Week 6 21 Dec	Week 7 4 Jan	Week 8 11 Jan
Control	No Message							
Placebo	Public Health Message							
T1 Information	Free	Age	Place	Cervical Cancer	Call to action	Online map info	Reminder Free, Age	Simple reminder
T2 Social Norms	Prescriptive norms	Free / age	Dynamic norm	Place / CC	Trending norm	Online map info / Call	Prescriptive Trending + Age	Simple reminder+ Free
T3 Trust	Dr.’s recommend	Free / age	Health Secretariat recommend	Place / CC	Signaling	Online map info / Call	Drs + Health Secretariat + Age	Simple reminder+ Free
T4 Framing	Pseudo sets	Free / age	Reference points	Place / CC	Soft default + endowment	Online map info / Call	Loss Framing + Age	Simple reminder+ Free

Preliminary results show that the trust treatment (T3) yielded a significant increase of 3.2 percentage points compared to the control group, equivalent to a 41% increase over the control group’s vaccination average of 7.85%, with statistical significance at the 99% confidence level.

Resources

- [Action Plan Template](#)
- [Behavioral Economics Toolkit](#)
- [Case Study Template](#)
- [Communication Calendar and Message Development Template](#)

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