ECONOMIST IMPACT

Bridging the Equity Gap

Women's Cancer Care in Colombia

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Contents

About this report

"Bridging the Equity Gap: Women's Cancer Care in Colombia" is a research briefing by Economist Impact that examines the landscape of cervical and breast cancer care in Colombia, and focuses on identifying disparities and opportunities for delivering equitable outcomes for women.

This briefing paper explores how socioeconomic, cultural, and health system factors contribute to inequities in cancer prevention, diagnosis, treatment, and after-care for women in Colombia. Based on this information, actionable insights have been developed for stakeholders, including policymakers, non-governmental organizations (NGOs), healthcare professionals, and advocacy groups, in order to promote equitable cancer care.

Economist Impact has conducted an initial evidence review and expert interviews to bring a unique perspective to this country briefing. We thank the Colombian stakeholders who participated in the expert interviews and shared their insights and experiences (in alphabetical order):

- Dr **Gloria Inés Sánchez**, PhD, Professor, Faculty of Medicine, Universidad de Antioquia
- **Gustavo Campillo,** President, Fundación RASA
- Dr **Wilson Cubides Martínez,** MD, Executive Director, La Liga Colombiana Contra el Cáncer

This research was led by Alcir Santos Neto and Debora Ramires Pelisson and conducted by Maria Clara Silva. The article was authored by Dr Radha Raghupathy, edited by Alcir Santos Neto, and copyedited by Maria Ronald. Latifat Okara and Kati Chilikova supervised and directed the research program.

Introduction

Breast cancer is the most common cancer among women in Colombia and, despite advances in early detection and treatment, its mortality rate has been increasing over the past couple of decades.[1,2,3] The prevalence of breast cancer in Colombia is projected to further increase at a concerning rate, from 691 per 100,000 in 2024 to 739 per 100,000 in 2030 (see Figure 1), marking a 5.5% rise over six years. This trend highlights the persistent rise in breast cancer mortality despite advances in early detection and treatment, with Colombian women facing higher risks of aggressive subtypes like luminal B and triple-negative breast cancer (TNBC). In contrast, while cervical cancer prevalence in Colombia remains significantly higher than the LATAM average (which is projected to range from 148 per 100,000 in 2024 to 146 per 100,000 in 2030), Colombia's prevalence is expected to decline by 0.3%, from 189 per 100,000 in 2024 to 188 per 100,000 in 2030 (see Figure 2). This suggests slow but positive progress in reducing mortality.[4] Although cervical cancer control appears to be improving in Colombia, the prevalence remains well above the World Health Organization's (WHO) target of less than 4 per 100,000, highlighting significant gaps in prevention and treatment accessibility.[5,6] These gaps, along with health system barriers, limited early detection, and disparities in care, contribute to poor outcomes, leaving Colombia far from achieving WHO goals for both breast and cervical cancer care.[1,7] To bridge this gap, Colombia must strengthen screening programs, expand access to treatment, and address structural inequities in cancer care.

Figure 1: Prevalence of Breast Cancer in Colombia, 2024-2030[8]

Rate per 100,000 people

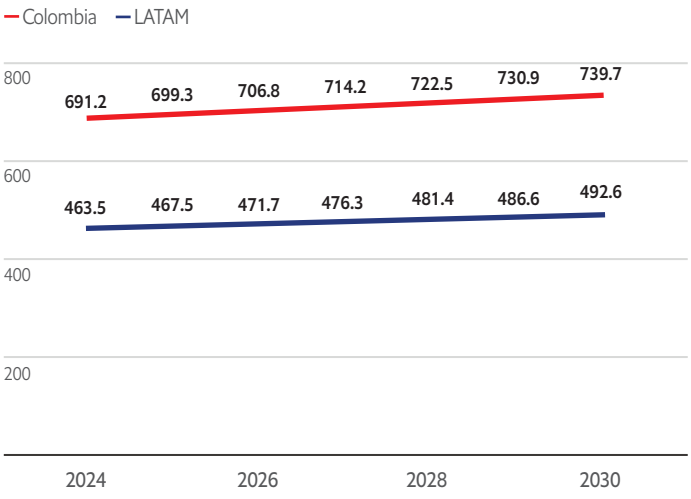
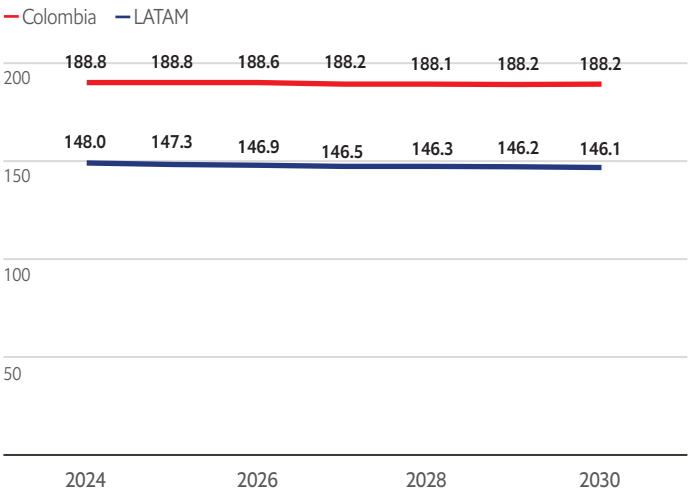


Figure 2: Prevalence of Cervical Cancer in Colombia, 2024-2030[8]

Rate per 100,000



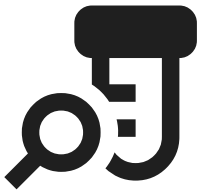
Cervical cancer is largely preventable through Human papillomavirus (HPV) vaccination, yet vaccination coverage rates in Colombia have been suboptimal. The country introduced its school-based HPV vaccination program in 2012; by 2013, the first dose coverage had reached 98% of school-aged females. However, an episode in the town of Carmen de Bolivar where families claimed that the vaccine made girls sick resulted in a mass psychogenic reaction to the vaccine, with over 600 girls across the country reporting adverse events. The vaccination program suffered a significant setback, with coverage plummeting to just 20% by the end of 2014. This decline has proved persistent; by 2023, coverage had only recovered to an estimated 52% of eligible females.[9,10] Cultural barriers to vaccination are evident based on data showing lower HPV vaccination coverage rates of approximately 23% among Indigenous women as compared to the national average.[11] It is particularly important to improve vaccination efforts in this subgroup, given their tendency to be nomadic, which results in lower adherence to cervical cancer screening and follow-up.[11]

Although early detection of breast and cervical cancer is improving in Colombia, many women still present with advanced-stage disease at diagnosis. This is a critical concern, and is driven by a lack of awareness and inadequate access to screening, both of which are addressable.[12] For instance, only 28% of cervical cancers in Colombia are diagnosed at an early stage, while nearly 30% of breast cancers and 25% of cervical cancers are diagnosed in advanced stages.[13] National programs provide Pap smears or HPV-based screening for cervical cancer and mammogram-based screening for breast cancer, but uptake is modest.[14] For instance, mammography uptake was estimated at only about 33% in 2017.[15]

30% of breast cancers and **25%** of cervical cancers are diagnosed in advanced stages

"Uterine cancer mostly occurs in the less developed regions of Colombia, in departments farthest from urban centers located in the central mountain range of the Andes."

Dr Gloria Inés Sánchez, Professor, Faculty of Medicine, Universidad de Antioquia



20% Of indigenous women in the Amazon have never had a Pap test (as compared to the 13% national average)[16]

Educational, cultural, and access barriers impact screening coverage. Studies conducted among Indigenous women living in remote areas such as the Colombian Amazon have demonstrated that misinformation, feelings of shame, fear, and distrust towards health services play significant roles in the reluctance to undergo cervical cancer screening.[17] Women from lower socioeconomic levels who are unemployed and whose health decisions depend on others are less likely to have had a Pap test.[18] Similarly, those living in rural areas are also less likely to have had a Pap test than those living in urban centers.[19] Access to treatment and palliative care for women's cancers in Colombia also varies based on geography and the type of insurance coverage. Urban areas, private insurance, and contributory insurance schemes offer better access to care and better outcomes.[20,21,22]

These challenges underscore the urgent need to examine how demographic, socioeconomic, and geographic factors shape disparities in cancer outcomes for women in Colombia. By understanding these dynamics, we can identify actionable solutions to bridge the equity gap in cancer care. In this brief, we explore the causes of disparities in women's cancer care and outcomes in Colombia, the opportunities for bridging these disparities, and provide specific calls to action for the full spectrum of stakeholders.

Unraveling inequalities in women's cancer care in Colombia

In Colombia, the interaction of demographic, geographic, and socioeconomic factors results in significant disparities in women's cancer outcomes. Colombia is divided into five regions. The eastern or Andean region is the center of economic and political power, populated mainly by Whites and Mestizos. The Atlantic lowlands or Caribbean areas are second to the eastern region in commercial activity. The Pacific coast is sparsely inhabited chiefly by people of African descent and has minimal commercial activity. The Llanos and Amazonian rainforests or the Amazon-Orinoquía region is also sparsely populated, with the remote areas of the Amazonian region inhabited mainly by Indigenous people.[23] Ethnic groups including Raizales and Palenqueros recognized as Afro-Colombian and the Romani gypsy population also predominantly live in rural regions.[24] The incidence and mortality rates for both breast and cervical cancer are lower in the eastern region of Colombia (excluding Bogotá D.C.) as compared to the national average, demonstrating differences in disease biology, awareness, and access to care between regions.[13]

Demographic factors

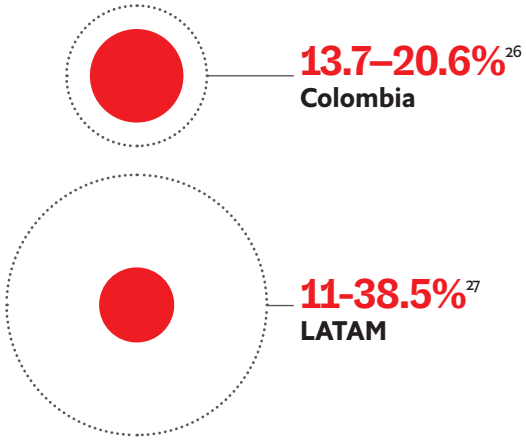
19%

of cancer deaths in Indigenous Colombians occur in individuals under 45 years old, as compared to 10% in Mestizos[25]

The geographic and economic divisions across Colombia influence not only healthcare infrastructure, but also the demographic composition of each region. These variations contribute to disparities in cancer incidence, progression, and survival rates, making demographic factors a key determinant in women's cancer care and outcomes. Among Colombians, nearly three-fifths identify as Mestizo, one-fifth as Afro-Colombians, one-fifth as European, and 1% as Indigenous.[23] Afro-Colombian and Indigenous women are at greater risk of being diagnosed with advanced cancers and dying as compared to other ethnicities due to more aggressive disease biology, lower levels of education and socioeconomic status (SES), higher likelihood of rural residence, and poorer access to treatment.[16]

Figure 3: Triple-Negative Breast Cancer in Colombia (2013) v. LATAM (2023)

Prevalence



"Access to cancer care for Indigenous women is especially difficult. In many cases, they have limited access to healthcare because of cultural practices and mistrust towards external healthcare providers."

Gustavo Campillo, President, Fundación RASA

Figure 4: Impact of Triple-Negative Breast Cancer

61% of TNBC cases are diagnosed at locally advanced stages (Stage IIIB being the most common at 35%)[27]

36.5% of TNBC patients experience disease progression[26]

38.9% of TNBC patients experience disease recurrence[28]

53.8% of TNBC patients in Colombia die from the disease[28]

Afro-Colombian women have a higher risk of developing aggressive subtypes of breast cancer, such as HER2-enriched basal-like and non-basal TNBC, demonstrating differences in disease biology that impact outcomes.[4] Indigenous women are more likely to be overweight and present with larger breast tumors, suggesting lower awareness and poorer access to care among this population.[29]

Geographic disparities

Beyond ethnicity and socioeconomic status, where a woman lives in Colombia significantly impacts her ability to access timely cancer screening and treatment. Despite the fact that 99% of the population has health insurance, the country's diverse geography presents structural challenges that lead to pronounced disparities in cancer care.[20] Women living in rural and remote areas of the country, such as the Amazon rainforest, experience particular difficulties in access to early detection, diagnosis, treatment, and palliative care, significantly worsening survival outcomes of breast and cervical cancer in these regions. Both Indigenous and Afro-Colombian women are more likely to live in rural areas, where the distance from healthcare facilities, need for transportation, lack of personal resources, and fragmentation of care can impact the timeliness of screening, diagnosis, and management of cancers.[30]

Regarding early detection, the central region performs best, with 54% of breast cancers diagnosed in the early stages, followed by Bogotá D.C. at 53%. The Amazon-Orinoquía region performs particularly poorly, with only 29% of breast cancers being diagnosed in the early stage.[12] Time-to-diagnosis and time-to-treatment of breast cancer also vary across regions. The national average is 36 days to diagnosis and 60 days to treatment. In Colombia, the typical wait time to receive a breast cancer diagnosis is 36 days, while starting treatment takes about 60 days. Some regions have faster access, like Bogotá D.C., where the wait is 32 days for diagnosis and 52 days for treatment, and the Central region, with 33 days for diagnosis and 58 days for treatment. However, delays are more prolonged in other areas. The Caribbean region has the most extended wait for diagnosis at 45 days, while the Oriental region faces the most prolonged delay for treatment, averaging 71 days.[31]

The Amazon-Orinoquía region performs particularly poorly, with only 29% of breast cancers being diagnosed in the early stage.

"Many women from Afro-descendant communities face more challenges in accessing healthcare, particularly because of cultural barriers."

Dr Wilson Cubides Martínez, MD, Executive Director, La Liga Colombiana Contra el Cáncer

In terms of access to treatment for women's cancers, Colombia had 69 linear accelerators, two pieces of radiosurgery equipment, 30 high-dose-rate brachytherapy pieces of equipment, 124 radiation therapy oncologists (113 working, nine not working, and information was unavailable on two), and 275 radiation therapy technologists as of June 2020. Colombia's south central and Llanos regions have a more significant deficit of radiotherapy equipment and staff than other regions. Chemotherapy services have grown faster than radiotherapy services in Colombia, given the high cost of establishing and maintaining radiotherapy facilities.[32] Geographic differences are also seen in access to palliative care, with services concentrated in Bogotá D.C., the Center, and the Caribbean, while the Amazon-Orinoquía region has poor access.[33] Afro-Colombian and Indigenous women who are more likely to live in rural and remote areas bear a disproportionate brunt of these inequalities in access. Furthermore, the healthcare system is not inclusive of the cultural preferences and practices of minority women, which breeds mistrust and impacts healthcare-seeking behaviors.

Socioeconomic barriers

Colombia provides near-universal health care through mandatory health insurance, with approximately 99% of the population formally enrolled in the system. However, coverage may not always translate into effective access due to administrative challenges, regional disparities, and socioeconomic barriers. Individuals in Colombia can become part of Colombia's national health system called the *Systema General de Seguridad Social en Salud* (SGSSS) through a contributory scheme for those in formal employment, a subsidized scheme for those who are unemployed, and a specific benefits scheme for teachers, armed forces, or employees of a state-owned petroleum company. About 6% of the population has additional private insurance.[34]

In theory, regardless of the type of contribution to health insurance, patients should have the same access to care. Yet, there are disparities in access to women's cancer care and outcomes based on SES and insurance schemes. Women of low SES and those with subsidized health insurance have

"In the more developed cities, the mortality rates for cervical cancer have decreased to about four per 100,000, almost reaching the goal set by the World Health Organization. But in the less developed regions, especially on the borders with Venezuela, Peru, in the Amazon area, and along the Atlantic Coast, the rates can be up to five times higher."

Dr Gloria Inés Sánchez, PhD, Professor, Faculty of Medicine, Universidad de Antioquia

a greater risk of death due to both cervical and breast cancer as compared to those with high SES or with contributory health insurance, regardless of the stage of diagnosis.[21,22] The highest risk of death due to cervical cancer is seen among women with low SES who are also members of the subsidized scheme.[21] Women with subsidized insurance saw a significant increase in cervical cancer mortality between 2013 and 2020, as compared to those with contributory insurance, who saw a decrease.[16] Indigenous and Afro-Colombian people are more likely to have subsidized insurance, increasing their risk of poor outcomes.[35]

37–45%

of women with subsidized insurance were less likely to get a Pap test as compared to those with contributory insurance[18]

Uninsured women were

63%

less likely to have had a Pap test compared to those with contributory insurance[18]

Disparities in access to care between those with subsidized and contributory insurance contribute to differences in women's cancer outcomes. Delays in diagnosis and treatment of women's cancers are more common in care obtained through subsidized insurance. A study of 331 women with breast cancer in Medellin identified that 80% of women had total treatment delay, with 76% having patient delay and 78% having provider delay. The most prolonged treatment delays were seen for those with subsidized health insurance.[36] Vulnerable women not only have difficulties in accessing care but also experience poorer quality of care. A qualitative study among 16 women with cancer (five with breast cancer and one with cervical cancer) belonging to low, middle, and high SES showed that women with private insurance experienced the best quality of care followed by those in the contributory scheme. Women with subsidized insurance had the poorest quality of care, experiencing substantial delays—in some cases, up to a year—in accessing treatment. These women also encountered frequent interruptions in their care due to insurance contract expirations or unpaid dues, highlighting systemic challenges in coverage continuity. Overall, those with lower SES and subsidized health insurance perceived their cancer care as dehumanized, cold, impersonal, and discontinuous.[37]

Bridging the equity gap

Closing these gaps requires a strategic approach that prioritizes accessibility and fairness in healthcare delivery. Achieving equity in women's cancer care will depend on stronger policies, smarter resource distribution, and targeted support for under-served populations. A deeper understanding of the root causes of the disparities in cancer care, combined with investments in healthcare infrastructure and workforce development, will be essential to creating lasting improvements in health outcomes.

"The government needs to improve the allocation of resources, invest in training healthcare professionals, and ensure that diagnostic and treatment services are available nationwide."

Gustavo Campillo, President, Fundación RASA

Leverage information systems in understanding inequities

Achieving equity in cancer care starts with understanding the full scope of disparities. Leveraging Colombia's National Cancer Information System (NCIS) can provide the data needed to effectively guide policy decisions and resource allocation. The NCIS, established in 2014, is administered by the High-Cost Diseases (Cuenta de Alto Costo) Fund, and collects administrative, demographic, and clinical information on people with cancer nationwide. Implementing mandatory cancer reporting for individuals insured by the National Health System—which covers almost the entire population—has significantly enhanced the robustness of cancer data in Colombia. Data on 132 variables are collected, including 16 sociodemographic variables such as ethnicity, municipality of residence, and health insurance type. Healthcare providers share information on the clinical management of patients, updating the information annually.[13] This database can be leveraged further to understand the disparities in the management of women's cancers based on demographics, socioeconomic factors, and geography.

Further research is also necessary to understand the differences in outcomes related to disease biology, particularly in aggressive breast cancer variants such as HER2-enriched basal-like and non-basal TNBC, and how these variants have greater impact on specific populations. The disproportionate burden of cervical cancer on Indigenous and Afro-Colombians also needs to be explored. While mandatory reporting improves data completeness, under-reporting of cancers, especially highly lethal, undiagnosed cancers, is still a possibility. Additionally, the potential for information bias during reporting must be carefully considered when interpreting these data.[38]

"A very important step is to ensure that data on cancer is properly disaggregated by region and socioeconomic status. This will help us understand the disparities in access to care."

Dr Gloria Inés Sánchez, PhD, Professor, Faculty of Medicine, Universidad de Antioquia

Promote accessible and culturally responsive healthcare services

Data collection alone is insufficient—healthcare services must act on the insights from the data to reach those facing the most significant barriers. Enhancing accessibility and ensuring culturally responsive care are essential to overcoming systemic obstacles. Concerted multisectoral efforts are necessary to improve access to care for "hard-to-reach" women. Colombia's *Plan Decenal para el Control del Cáncer en Colombia* [Ten-Year Plan for Cancer Control] (2012-2021) took a comprehensive approach to a comprehensive approach to cancer control, covering prevention, early diagnosis, treatment, and palliative care. A key focus in the Plan was decentralizing oncological services to reach underserved regions, mainly rural areas, through public awareness campaigns and healthcare infrastructure improvements. The *Plan Decenal de Salud Pública* (2022-2031) focuses on centralizing cancer care services, particularly for breast and cervical cancer, to ensure better coordination and quality of treatment. However, decentralization efforts—such as partnerships with the transportation sector—can complement this approach by improving access to cancer care for women in rural and underserved areas.[39,40] Yet, the plan scored low on equity and did not have a dedicated budget for implementing equitable cancer-related interventions.[41] The *Plan Decenal para el Control del Cáncer en Colombia* (2022-2031) builds on the previous plan by focusing more on developing inclusive health systems and empowering people and communities.[42] Special emphasis is given to improving screening and early diagnosis of breast and cervical cancer. The *Plan Decenal de Salud Pública* (2022-2031) emphasizes the integration of cancer care services within the broader health system, with a special focus on breast and cervical cancer, to improve coordination, efficiency, and accessibility.[43]

Collaboration between the healthcare sector and other ministries, such as transportation, can support access to centralized cancer care while also enhancing complementary decentralization efforts to improve women's access to cancer treatment in underserved areas. For instance, recent research has used population distribution heatmaps and data on travel times from the Google Distance Matrix to

provide strategic recommendations for optimally locating additional radiotherapy units to improve accessibility.[44] To reduce socioeconomic barriers to care, challenges in the subsidized health insurance scheme, such as the expiry of health service provider contracts and the need for excessive administrative procedures like authorization management, need to be addressed.[37]

Government partnerships with NGOs and the private sector can help facilitate equitable care across geographic and socioeconomic barriers. Various NGOs have been active in supporting the implementation of the national cancer plan in rural areas. Partners for Cancer Care and Prevention (PFCCAP) and its sister organization, *Fundación para la Prevención y Tratamiento del Cáncer* [Foundation for Cancer Prevention and Treatment], for instance, have developed successful programs to improve access to breast and cervical cancer care for the vulnerable. Through community outreach meetings with medical personnel and government officials, these NGOs identified the most relevant barriers to care, including lack of trained personnel, inadequate screening equipment, a fragmented health system, administrative barriers, and lack of care continuity to improve access and outcomes for under-served women.

To overcome these barriers, PFCCAP took a multipronged approach in partnership with hospitals caring for under-served populations in the city of Cali. A patient navigation program with trained administrators was set up, which decreased the mean wait times from consult to biopsy to 20 days (from 65 days), from biopsy to diagnosis to four days (from 33 days), and from first medical appointment to surgery to 84 days (from 219 days). PFCCAP has also developed a mobile app called *Ámate-Cuida tu Salud* [Love Yourself – Care for Your Health], which provides health education and increases outreach for breast and cervical cancer screening. PFCCAP established both community- and healthcare provider-led education programs to raise awareness of breast and cervical cancer. The program is now gradually expanding into other regions of Colombia.[45] Another program called the City Cancer Challenge (C/Can) has been established by the Union for International Cancer Control to promote the equitable provision of cancer care through strategic alliances between national, departmental, and municipal governments. The city of Cali has joined this program.[46]

Cancer care should be provided with a cultural lens to improve access and outcomes among Afro-Colombian and Indigenous women. Clinical practice guidelines for women's cancer management should be drafted taking into account the health and cultural views of minorities, including Indigenous and Afro-Colombian women.[47] Factors that enhance screening acceptance among Indigenous women, such as the convenience of appointment scheduling, access to female healthcare providers, and the engagement of individuals fluent in Indigenous languages should be considered while developing screening programs.[17] Pilot studies on self-testing for HPV in Colombia have shown some promise and may address the cultural sensitivities of minority women. However, there are challenges in implementation that need to be addressed, such as access to the self-testing kits and timely follow-up with diagnostic procedures.[48] Empowering communities and their leaders to raise awareness and actively participate in their care can improve outcomes.[49]

Strengthen the healthcare workforce

Expanding access to care also requires a well-trained healthcare workforce. Addressing shortages in oncology specialists and strengthening training programs for primary care providers will be critical in improving outcomes for women's cancers. Expanding and enhancing the skills of the healthcare workforce are steps toward ensuring more equitable and decentralized care in Colombia. The number of oncologists in Colombia falls short of international benchmarks, which vary across countries but often range from one full-time specialist per 200 (Royal College of Physicians in the UK) to 270 (Australia) new cancer cases. In 2016, Colombia had 177 graduates in clinical

Colombia falls short of international benchmarks, estimated deficit of

179 specialists

oncology and 153 in hemato-oncology, yet there was still an estimated deficit of 179 specialists based on workforce needs. To address this gap, increasing the number of trained oncologists is essential to improve access to cancer care.[50]

Beyond training specialists, primary care professionals should also be better educated in screening and diagnosis of breast and cervical cancer as they are likely to be the main care providers in rural and remote areas.[51] Expanding training opportunities and offering financial benefits for primary care physicians to provide simple chemotherapy regimens in remote areas can improve access to care. Doctor-to-doctor telemedicine support from specialists can further empower primary care providers to offer such therapies. Community healthcare workers are another valuable resource who can be engaged for more equitable cancer care.

The future of women's cancer care in Colombia greatly depends on sustained investments in prevention, early detection, and equitable treatment. As the country moves forward, strategic reforms will be necessary to ensure that every woman has access to high-quality cancer care, regardless of geography or socioeconomic status.

Looking forward

Colombia has an opportunity to reshape the future of women's cancer care by addressing systemic disparities and implementing targeted interventions. Addressing inequities in care requires a strategic approach that expands access and ensures healthcare delivery for all. Bridging the equity gap will demand stronger policies, better allocation of resources, and targeted interventions for underserved populations. Achieving meaningful progress will require a comprehensive understanding of the structural barriers that limit access to timely diagnosis and treatment. Three key areas will be essential to drive progress:

1. **Expanding Prevention and Early Detection:** Increasing HPV vaccination rates and improving breast cancer screening coverage is critical. Addressing cultural resistance to vaccination and removing logistical barriers to screening programs can help prevent late-stage diagnoses.
2. **Strengthening Healthcare Infrastructure and Accessibility:** Women in rural and low-income areas struggle to access timely diagnosis and treatment. Expanding mobile health units, integrating telemedicine services, and ensuring adequate healthcare staffing in under-served regions can bridge the gap in cancer care.
3. **Enhancing Policy and Multisectoral Collaboration:** Long-term improvements in women's cancer care require coordinated efforts between government, NGOs, and private sector partners. Investing in data-driven policies, equitable healthcare funding, and culturally tailored programs will assist in reducing disparities and improving survival rates.

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