



Breast and cervical cancer screening in the Philippines: Challenges and steps forward

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ABSTRACT

In 2020, breast and cervical cancer were the top 2 cancers among Filipino women in terms of incidence. In the Philippines, a lower-middle income country in Southeast Asia with more than 50 million women, majority of breast and cervical cancer patients are diagnosed at advanced stages, as high out-of-pocket healthcare costs, the centralization of health human resources and infrastructure in the capital, and the absence of organized national screening programs preclude access to breast and cervical cancer screening. Low health literacy and gendered sociocultural pressures among Filipino women compound these systemic challenges. The recent passage of the Universal Health Care Law and the National Integrated Cancer Control Act in the Philippines is an opportunity to reduce disparities in access to cancer screening, with implications for other low- and middle-income countries that may face parallel challenges.

Access to cancer screening remains a challenge for many women in low- and middle-income countries (LMICs). In the Philippines, a large lower-middle income country in Southeast Asia with over 50 million women (World Bank, 2022), multiple barriers preclude access to cancer screening, including low health literacy, high out-of-pocket (OOP) healthcare costs, and the centralization of healthcare infrastructure and providers in the island of Luzon, where the capital is located (Dayrit et al., 2018).

In 2020, breast and cervical cancer were the top 2 cancers in terms of incidence among Filipino women (International Agency for Research on Cancer, 2021). We draw attention to the challenges of screening for these cancers, which may find parallels in other LMICs in Southeast Asia

and elsewhere, as well as steps moving forward. With 6.5 billion people living in LMICs (World Bank, 2022), it is our hope that presenting a perspective from the Philippines would galvanize international dialogue and collaboration in an effort to improve access to cancer care for all.

1. The state of population-based screening programs

With a rate of 27 deaths per 100,000 people (McDonald et al., 2008), the Philippines is the frontrunner in Asia for breast cancer mortality. Because timely treatment is critical for breast cancer survival, late-stage diagnosis contributes to poor outcomes (Bleicher et al., 2016). However, because mammography remains inaccessible and unaffordable, 53% of

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breast cancer patients in the Philippines are diagnosed with stage 3 or 4 disease (Wu and Lee, 2019). Resource limitations preclude the implementation of an organized population-based mammography screening program in the Philippines. Geographic disparities persist, as primary care facilities outside urban cities lack the funding, infrastructure, and manpower to operate diagnostic services. Established by the Philippine Department of Health, the Breast Cancer Control Program (BCCP) serves as the nationwide anti-breast cancer scheme, integrating public information, health education, and case finding and treatment into the community health structure (Ngelangel and Wang, 2002), although its implementation has been suboptimal (Wu and Lee, 2019). With only 5.6 mammography machines available per 10,000 cancer patients (World Health Organization, 2020), screening efforts through the BCCP instead emphasize monthly breast self-examination (SBE) and annual clinical breast examination (CBE) from healthcare workers (Ngelangel and Wang, 2002).

Cervical cancer is the second most common malignancy among Filipino women (Arbyn et al., 2020). With a mortality-to-incidence ratio of 0.51 (World Health Organization, 2021), cervical cancer survival in the Philippines remains poor, as 75% of Filipino cervical cancer patients are diagnosed at advanced stages (Domingo and Dy Echo, 2009). Although cytology-based screening programs have successfully reduced cervical cancer incidence in high-income countries, complex infrastructure and human resource requirements hamper their implementation in the Philippines. Cervical cancer screening therefore remains opportunistic. Rural areas lack cytologic screening facilities and cytopathologists, majority of whom practice in the National Capital Region (Arcellana-Nuqui et al., 2016). Consequently, the existing national cervical cancer screening program has utilized visual inspection with acetic acid (VIA) as its primary screening test, targeting women aged 25–55 every 5–7 years (World Health Organization, 2021). Despite this, fewer than one in ten Filipino women have been screened in the past five years (World Health Organization, 2021), suggesting that other factors, such as lack of access, lack of awareness, and lack of trained VIA providers, may complicate screening uptake.

2. High out-of-pocket costs for screening

Financial constraints pose a significant obstacle to mammography and Pap smear uptake among Filipino women. National health insurance program coverage is limited for preventive consults and screening, instead subsidizing treatment modalities such as chemotherapy, surgery, and radiotherapy through its Z package (Philippine Health Insurance Corporation, 2015). This package is geared toward economically and medically catastrophic disease conditions that when diagnosed early and managed effectively, lead to higher survival rates (Dayrit et al., 2018). The average costs of a mammography and a Pap smear in the country are 1,200 pesos (~23 USD) and 500 pesos (~9.6 USD) respectively (Medical Pinas, 2022; Medical Pinas, 2021), a steep price for Filipinos whose minimum daily wage ranges from 282 pesos (~5.4 USD) to 527 (~10.1 USD) pesos (National Wages and Productivity Commission, 2022). Women living in geographically isolated regions are further burdened by the costs of travel to tertiary care facilities, where diagnostic services are available.

3. Low health literacy, health beliefs, stigma, and embarrassment as barriers to screening

Poor knowledge on cancer screening, fatalistic attitudes towards cancer, and stigma associated with a cancer diagnosis further contribute to low screening uptake (Abalos and Luna, 2019). Perception of breast cancer risk is tied to existing sociocultural beliefs, as “*kaloob ng Diyos*” (God’s will) and lay models of genetic inheritance—for example, only one family member per generation will get breast cancer—influence decision-making on cancer prevention (Lagarde et al., 2019). There is also a perception that mammography is a painful experience (Lagarde

et al., 2019). Clinical breast exams are rarely requested because of the discomfort of many Filipino women in exposing their bodies and being touched by strangers, especially male physicians (Lagarde et al., 2019).

Similar factors, including fear of pain or discomfort, embarrassment during the procedure, and limited awareness, may affect cervical cancer screening utilization (Imoto et al., 2020). In a tertiary outpatient clinic study of 383 Filipino women in 2019, only 56% of respondents had heard of cervical cancer, and only 79% of those women had heard of cervical cancer screening (Abalos and Luna, 2019). With over 25% of women in the study unaware that cervical cancer is preventable, similar obstacles may affect preventive strategies as well. In 2016, the Philippines introduced a school-based HPV vaccination program for schoolgirls aged 9–14. However, with less than 60% of Philippine provinces covered and with fewer than one in ten girls in the primary target cohort in 2020 receiving their final dose, its reach is currently subnational (Haruyama et al., 2021; World Health Organization, 2021), likely further impeded by the COVID-19 pandemic-related shift to online schooling.

4. The current patient pathway to cancer care

Despite the lack of population-based screening measures in the Philippines (Zhao et al., 2022), little data exist that formally quantify national delays in cancer care. Most outpatients present to public facilities (i.e., rural health units or government hospital outpatient departments) for initial evaluation, although some opt to seek care from private clinics or traditional healers (Dayrit et al., 2018). Patients suspected to have cancer are then referred to medical, surgical, or radiation oncologists for further workup and management. Beyond large hospital systems in major cities, which are accessible only to a minority of patients, much of the burden of coordination of care, accessing diagnostics, and seeking treatments falls on the patient’s shoulders (Alberto et al., 2022; Puyat et al., 2022).

5. Steps forward for breast and cervical cancer

The passage of the Universal Health Care (UHC) Law and the National Integrated Cancer Control Act (NICCA) in the Philippines is an opportunity to foreground breast and cervical cancer screening, beginning with increasing insurance coverage for screening and integrating it into existing women’s health services. Public-private partnerships can address resource limitations and potentially extend to training primary care practitioners to perform CBE and VIA, provide community-based education sessions on women’s cancer screening, and refer appropriately. Although the effectiveness of CBE and SBE remains mixed and the accuracy of VIA remains lower than that of other cervical cancer screening modalities (Bhattacharyya et al., 2015; Wu and Lee, 2019), both can promote awareness on women’s cancers and should be considered in low-resource regions of the archipelago. Literature on VIA has shown its effectiveness in reducing cervical cancer incidence and mortality by at least 25% in the Philippines (Guerrero et al., 2015). In resource-limited settings (Guerrero et al., 2015; Shastri et al., 2014), the single-visit approach and lower cost of VIA increases screening uptake and encourages the sustained commitment of policy makers to a high-coverage national cancer screening program.

With the high prevalence of low socioeconomic status, high parity, early coitarche, and risky sexual behaviors among Filipino women (Domingo and Dy Echo, 2009), cervical cancer screening and prevention campaigns should also include education on sexual health, contraception, and sexually-transmitted diseases. A multi-sectoral educational campaign utilizing culturally sensitive approaches and involving schools, community-based health workers, medical practitioners, and the media may potentially dispel misconceptions and stigma around cervical cancer.

In the long term, however, investing in population-based mammography and primary HPV screening programs maximizes early

detection, reducing not only cancer treatment-related financial toxicity among patients but also the larger socioeconomic burdens wrought by women's cancers and their complications. Furthermore, establishing and maintaining a cancer registry and monitoring system is critical to accurately estimate national breast and cervical cancer burden and justify capacity-building for cancer control programs. The NICCA contains provisions for such a registry; however, this is yet to be implemented.

6. Conclusion

The absence of organized cancer screening programs, the centralization of healthcare resources in urban areas, and high OOP costs of screening all hamper early diagnosis of women's cancers in the Philippines. However, Filipino women face unique socioeconomic and cultural barriers that may further contribute to delayed cancer presentation. Many Filipino women value family greatly and tend to prioritize their household responsibilities as wage earners, wives, and mothers. Fear of imposing immediate and future financial burdens on the family—due to direct and indirect treatment costs and potential loss of income—represents a major hindrance to health-seeking behavior (Hu et al., 2012). Cultural expectations to shoulder most reproductive responsibilities compound this, leading some to take informal, low-income work arrangements that limit organization for collective bargaining and leave them inadequately covered by social protection in times of illness (Philippine Commission on Women, 2020). As a result, many Filipino women delay or ignore preventive healthcare measures, seeking medical attention only when the disease becomes evident.

Signed into law in 2019, both the UHC law and the NICCA represent a key opportunity to reduce these existing disparities in access to cancer screening and promote healthcare for disadvantaged populations, especially women, across the cancer care continuum (Department of Health, 2019). This begins with investing in organized cancer screening programs, collaborating with multiple stakeholders on community-based educational campaigns, and addressing the social determinants that underlie women's cancers.

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Declaration of Competing Interest

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Data availability

No data was used for the research described in the article.

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