

EDITORIAL VIEW

INTENSIVE CARE

Breast cancer screening gaps in Pakistan: consequences for late-stage disease and intensive care burden

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ABSTRACT

Breast cancer is one of the significant public health problems in Pakistan with no structured screening services resulting in late diagnosis and unfavorable clinical prognosis. Most women in Pakistan present with advanced-stage disease unlike other countries, which have established population-based screening, meaning that they have complicated treatment requirements and use a substantial amount of intensive care services. This gap is caused by several factors such as lack of access to screening facility, particularly in the rural setting, financial reasons, sociocultural stigma, ignorance, and insufficient health systems infrastructure. These impediments contribute to the lack of opportunities to diagnose and act in a timely manner, thus causing the rise of the cost of advanced disease, complications after the operation, and hospital stays in critical care. New strategies including mobile mammography unit, digital health, tele-radiology and risk-based screening models have the potential to ensure more access and early diagnosis. To decrease late-stage presentation, decrease the intensive care burden, and increase the outcomes of breast cancer in Pakistan, policies of national screening, growth of public-private partnerships, and sustained community education are necessary.

Keywords: Breast Cancer, Intensive care, Screening, Late Detection

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Breast cancer is a significant challenge in terms of public health in Pakistan, where death and incidence rates are on the increase.¹

Those countries where screening is organized have dramatically decreased the number of deaths caused by breast cancer; however, in Pakistan, the problem of late diagnosis and inaccessible early diagnosis services remains.² To counter this hurdle, the root cause of the barriers, which are socioeconomic, cultural, and systemic barriers to timely screening, must be understood and countered.³

The disparity in breast cancer screening in Pakistan is a socioeconomic and infrastructural problem that is caused by a combination of factors. The stereotyped social norms and the fear of discussing breast health, along with the modesty and wrong beliefs about cancer, impose psychological barriers to screening. The scarcity of trained female medical practitioners and privacy in the medical facilities also discourages women from undertaking clinical checkups of the breast or even mammography.⁴ The screening facilities are concentrated in the urban centers, and therefore, the rural populations are underserved. Inequality is further enhanced by the high cost of mammography, the non-

existence of referral systems, and the non-existence of coordinated national programs.⁵ A lot of the female population is not aware of the value of self-check and the advantage of early diagnosis. Misinformation and stigma support the beliefs in fatalism and do not encourage preventive health-seeking behavior.⁶

The existing breast screening system in Pakistan is in a disjointed state and does not have enough resources to cover the population demands. The provision of mobile mammography units and regional diagnostic centers would help in further accessibility, particularly by women in remote locations.⁷ Devising national screening guidelines to match the demographic and resource realities in Pakistan would regulate the practice. Follow-up and data-driven policymaking can also be achieved through the integration of electronic medical records with the national registries.⁸ The introduction of digital health tools and mobile platforms is a potential solution to the absence of awareness and accessibility gaps.⁹ Lasting education programs, not just during breast cancer awareness month, can induce behavioral changes and develop a culture of preventive care among women of any kind of socioeconomic background.¹⁰

There should be a strong policy of breast cancer screening to achieve sustainability. The national health policy should include screening programs, population-based registries should be created, and funding should be provided to diagnostic services as a way to organized screening.¹¹ The government and the business sector partnership can also play a significant role in the growth of such programs. The access can also be enhanced through incentive programs on the techniques of making the mammography accessible at subsidized or free rates in the private diagnostic centers. The quality checks and standard protocols of the policy frameworks should also be upheld and equity in delivery of services across the provinces.¹²

Pakistan should implement proactive data-based systems to attain good outcomes in mortality reduction. A new technology such as the application of portable mammography machines, AI assisted image recognition and tele-radiology applications can revolutionize the sphere of early detection of the poor. The future directions should involve the risk-based screening programs that would incorporate the genetic, lifestyle and environmental risk factors to demarcate the high-risk individuals.¹³

The disparity in screening of breast cancer in Pakistan needs a multifaceted approach to bridging the gap, based on such determinants as the lack of infrastructure, cultural resistance, and policy breakdowns. Pakistan can reshape its healthcare model by emphasizing on early-stage diagnosis or screening, investment in mobile and

digital screening processes, and empowering the community health workers to shift to the preventive healthcare model. It is extremely important to have inclusive, equitable, and sustainable screening programs development through the collaboration of government, the private sector, and the civil society. The differences between fear and awareness, inaccessibility and opportunity though lie in the ability of breast cancer to be detected at an early stage and that is the future of breast cancer control in Pakistan.

Conflict of interest

None declared by the author.

Authors contribution

All authors contributed equally in the preparation of this manuscript.

REFERENCES

1. Zaheer S, Yasmeen F. Historical trends in breast cancer presentation among women in Pakistan from join-point regression analysis. *Pak J Med Sci.* 2024;40(1):134-149. [PubMed](#)
DOI: [10.12669/pjms.40.1.7123](https://doi.org/10.12669/pjms.40.1.7123)
2. Siddiqui R, Mehmood MH, Khan NA. An overview of breast cancer in Pakistan. *Discov Med.* 2024;36(185):821-828. DOI: [10.1007/s44337-024-00089-5](https://doi.org/10.1007/s44337-024-00089-5)
3. Aslam A, Mustafa AG, Hussnain A, Saeed H, Nazar F, Amjad M, et al. Assessing awareness, attitude, and practices of breast cancer screening and prevention among general public and physicians in Pakistan: a nation with the highest breast cancer incidence in Asia. *Int J Breast Cancer.* 2024;2024:2128388. [PubMed](#)
DOI: [10.1155/2024/2128388](https://doi.org/10.1155/2024/2128388)
4. Saeed S, Asim M, Sohail MM. Fears and barriers: problems in breast cancer diagnosis and treatment in Pakistan. *BMC Womens Health.* 2021;21(1):151. [PubMed](#) DOI: [10.1186/s12905-021-01293-6](https://doi.org/10.1186/s12905-021-01293-6)
5. Chen WH, Brandford A, Bloom R, Han G, Horel S, Sanchez M, et al. Factors associated with abnormal mammogram results among low-income uninsured populations in medically underserved and rural Texas regions. *Womens Health Rep (New Rochelle).* 2024;5(1):613-624. [PubMed](#)
DOI: [10.1089/whr.2024.0048](https://doi.org/10.1089/whr.2024.0048)
6. Mahalakshmi S, Suresh S. Barriers to cancer screening uptake in women: a qualitative study from Tamil Nadu, India. *Asian Pac J Cancer Prev.*

- 2020;21(4):1081-1087. [PubMed](#)
DOI: [10.31557/APJCP.2020.21.4.1081](https://doi.org/10.31557/APJCP.2020.21.4.1081)
7. Majeed AI, Hafeez A, Khan SA. Strengthening breast cancer screening mammography services in Pakistan using Islamabad Capital Territory as a pilot public health intervention. *Healthcare (Basel)*. 2022;10(6):1106. [PubMed](#)
DOI: [10.3390/healthcare10061106](https://doi.org/10.3390/healthcare10061106)
 8. Feigin K. Quality assurance in mammography: an overview. *Eur J Radiol*. 2023;165:110935. [PubMed](#)
DOI: [10.1016/j.ejrad.2023.110935](https://doi.org/10.1016/j.ejrad.2023.110935)
 9. Maita KC, Maniaci MJ, Haider CR, Avila FR, Torres-Guzman RA, Borna S, et al. The impact of digital health solutions on bridging the health care gap in rural areas: a scoping review. *Perm J*. 2024;28(2):130-143. [PubMed](#)
DOI: [10.7812/TPP/23.134](https://doi.org/10.7812/TPP/23.134)
 10. Alkhasawneh E, Al-Farsi Y, Al-Simadi F, Leocadio M. Development and validation of a culturally-tailored breast cancer health education programme for Arab women. *Sultan Qaboos Univ Med J*. 2017;17(2):e181-e190. [PubMed](#)
DOI: [10.18295/squmj.2016.17.02.008](https://doi.org/10.18295/squmj.2016.17.02.008)
 11. Horton S, Rodriguez RC, Anderson BO, Aung S, Awuah B, Pebé LD, et al. Health system strengthening: integration of breast cancer care for improved outcomes. *Cancer*. 2020;126(Suppl 10):2353-2364. [PubMed](#) DOI: [10.1002/cncr.32871](https://doi.org/10.1002/cncr.32871)
 12. Ren W, Chen M, Qiao Y, Zhao F. Global guidelines for breast cancer screening: a systematic review. *Breast*. 2022;64:85-99. [PubMed](#)
DOI: [10.1016/j.breast.2022.04.003](https://doi.org/10.1016/j.breast.2022.04.003)
 13. Raja MHR, Hoodbhoy Z, Sheikh S, Nisar MI, Soofi SB, Siddiqi S, et al. A systems-change approach to addressing the mortality surveillance gap in Pakistan. *J Glob Health*. 2025;15:03027. [PubMed](#)
DOI: [10.7189/jogh.15.03027](https://doi.org/10.7189/jogh.15.03027)