

Breast healthcare and cancer control in limited-resource countries: a framework for change

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Breast cancer is the most common cause of cancer-related death among women around the globe.¹ Each year, breast cancer is newly diagnosed in more than 1.1 million women, and these cases represent more than 10% of all new cancer cases. With more than 410,000 deaths each year, breast cancer accounts for over 1.6% of all female deaths worldwide.² Breast cancer is already an urgent public health problem in high-resource regions, and is becoming an increasingly urgent problem in low-resource regions, where incidence rates have been increasing by up to 5% per year.³

Low-resource countries have generally not identified cancer as a priority healthcare issue because infectious disease is the predominant public health threat in such settings; however, resources are inevitably spent on cancer treatment when patients seek medical care for what is typically advanced-stage disease. Furthermore, as life expectancy in these countries increases through the control of communicable disease, cancer becomes an increasing problem. Obstacles to improving cancer care arise from multiple sources, including deficits in public knowledge and awareness, social and cultural barriers, challenges in organizing healthcare, and insufficient resources.

In high-resource countries, evidence-based guidelines outlining optimal approaches to early detection, diagnosis, and treatment of breast cancer have been defined and disseminated.^{4,5} These guidelines from wealthy countries do not consider variable resource distributions and are likely to be unworkable in the face of the ubiquitous infrastructure and resource deficits in limited-resource countries. Moreover, these guidelines are not designed to consider implementation costs or to provide guidance as to how a suboptimal system can be improved incrementally toward an optimal system. As pointed out by the WHO, guidelines defining optimal cancer care and services have limited utility in resource-constrained countries.⁶ Thus, there has been a lack of resource-based guidance for developing strategies to reduce the burden of breast cancer in settings where ideal care is not feasible.

Co-sponsored by the Fred Hutchinson Cancer Research Center and the Susan G Komen Breast Cancer Foundation, the Breast Health Global Initiative (BHGI) is a program that strives to develop evidence-based, economically feasible, and culturally appropriate guidelines that can be used in low-resource nations to improve breast-health outcomes. In October 2002, the BHGI held the first Global Summit Consensus Conference on International Breast Healthcare in Seattle, Washington. Guidelines were developed using a panel consensus approach with analysis of evidence-based breast cancer research. Based on definitions created by the WHO for national cancer programs,⁶ panels of breast cancer experts representing 17 countries and 9 world regions created guidelines to address early detection, diagnosis, and treatment of breast cancer in countries with limited healthcare resources. The resulting guidelines were published in 2003 and have been made freely available on the Internet for worldwide access.⁷⁻¹⁰ To date, these have been the only comprehensive consensus guidelines to specifically address issues surrounding the implementation of breast care in limited-resource countries.

At the 2002 Global Summit, two axioms were adopted for guideline development. The first was that all women have the right to have access to healthcare (although considerable challenges exist in implementing breast healthcare programs when resources are limited). Second, all women have the right to education about breast cancer, but the information must be culturally appropriate, and must be targeted and tailored to the specific population. While some countries of the world might not fully accept these axioms, the panelists felt that adoption of these principles represented a key starting point in guideline development.

In countries with limited resources, most women have advanced or metastatic breast cancer at the time of diagnosis. Based upon evidence-based review and consensus discussion, four core observations were made in 2002:

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1. Because advanced breast cancer has the poorest survival and is the most resource-intensive stage to treat, efforts aimed at early detection can reduce the stage at diagnosis, potentially improving the odds of survival and cure, and enabling simpler and more cost-effective treatment.

2. There is a need to build programs that are specific to each country's unique situation.

3. The development of cancer centers can be a cost-effective way to deliver breast cancer care to some women when it is not yet possible to provide such care to women nationwide.

4. Collecting data on breast cancer is imperative for deciding how best to apply resources and to measure progress.

To update and expand on the BHGI guidelines published in 2003, the 2005 BHGI panels outlined a stepwise, systematic approach to breast health-care improvement in limited resource settings in the areas of early detection and access to care, diagnosis and pathology, treatment and resource allocation, and healthcare systems and public policy healthcare. A tiered system of resource allotment was defined using four levels—basic, limited, enhanced, and maximal—based on the contribution of each resource toward improving clinical outcomes. During this analysis, eight key points were identified and/or demonstrated:

1. Early breast cancer detection improves outcome in a cost-effective fashion assuming treatment is available.

2. The effectiveness of early-detection programs requires public education to foster active patient participation in diagnosis and treatment.

3. Clinical breast examination combined with diagnostic breast imaging (breast ultrasound with or without diagnostic mammography) can facilitate cost-effective tissue-sampling techniques for cytological or histological diagnosis.

4. Breast-conserving therapy with partial mastectomy and radiation requires more healthcare resources and a more advanced infrastructure than full mastectomy, but can be provided in a thoughtfully designed limited-resource setting.

5. The availability and administration of systemic therapy are critical to improving breast cancer survival.

6. Estrogen-receptor testing allows patient selection for hormonal treatments (tamoxifen, oophorectomy), improving patient care and allowing proper distribution of services.

7. Chemotherapy requires some allocation of resources and infrastructure and is needed to treat node-positive and locally-advanced breast

cancers, which represent the most common clinical presentation of disease in low-resource countries.

8. When chemotherapy is unavailable, patients presenting with locally advanced, hormone-receptor-negative cancers can only receive palliative therapy.

Tables that delineate cancer detection, diagnosis and treatment resources and services within an organized stratification schema were prepared and will be published early in 2006. These tables can be used to communicate programmatic needs to hospital administrations, government officials and/or healthcare ministries. It is the thesis of the BHGI that these guidelines create a framework for change, by defining practical pathways through which breast cancer care can be improved in an incremental and cost-effective fashion.

Guidelines do not in and of themselves improve outcome for women. Implementation is the critical step by which the value of the guidelines can be measured. The results of pilot research and demonstration projects need to be studied and reported, both to determine the effectiveness of the guidelines, and to gather evidence that will allow guideline implementation in other places. In this way, the BHGI endeavors to help women cope with and survive the ravages of what is the most common type of cancer and most common cause of cancer-related deaths among women.

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Competing interests

The author declared he has no competing interests.