

**BREAST
CANCER
INITIATIVE 2.5**

Making breast health a global priority



PLANNING

Developing Comprehensive Breast Cancer Programs: A Call to Action

Knowledge Summary



Developing Comprehensive Breast Cancer Programs: A Call to Action

INTRODUCTION

Breast cancer is the most prevalent cancer in women worldwide, affecting more than 1.5 million women each year. Low- and middle-income countries (LMICs) bear an increasing and disproportionate share of the disease burden. Women in low-resource settings commonly present to a health care facility with advanced stage breast cancer and have a poor prognosis (as low as 15% overall five-year survival in some regions) and poor quality of life. In high-income countries (HICs), effective breast cancer control programs have successfully improved early diagnosis and resulted in more patients diagnosed with breast cancer at an early stage (I and II). These women have a good prognosis, with overall five-year survival rates of 80–90%. Differences in outcomes between LMICs and HICs have been attributed to effective awareness and early diagnosis programs, timely access to appropriate treatment and reduced barriers to care. HICs also have effective supportive care services, such as breast cancer survivor support networks, palliative care and access to pain management.

The success of breast cancer control programs in HICs (and some LMICs) demonstrates that improvements are achievable. Breast cancer control is most successful when prevention,

early diagnosis, treatment and palliation are integrated and synchronously developed. Early detection does not benefit a woman unless she has timely access to accurate diagnosis and appropriate treatment. A patient-centered treatment plan requires an accurate pathologic diagnosis as well as identification and consideration of a patient's preferences and barriers to treatment adherence. Comprehensive breast cancer care requires an effective health system with trained community health care personnel, including physicians, nurses, psychologists, social workers and other specialized professionals. The challenge is to make breast cancer control planning and program implementation a health system priority.

In 2005, WHO passed a landmark resolution on cancer prevention and control, recognizing that cancers could be prevented or detected early in their development, treated and cured; and that all countries can design and implement effective cancer control plans that allow for a balanced, efficient and equitable use of resources (see Table 2). Resource-stratified guidelines, such as those developed by the Breast Health Global Initiative (BHGI) provide a framework to aid countries in prioritizing resource allocation across the cancer care continuum and developing pathways for incremental improvements in early detection, diagnosis and treatment of breast cancer.



KEY SUMMARY

Breast cancer control programs

- Effective cancer control programs require comprehensive, resource-appropriate cancer control plans.
- National breast cancer control programs can be developed and implemented at all resource levels.
- Successful breast cancer programs offer women with breast cancer the best possible outcomes while using available resources effectively.
- Effective breast cancer control demands integrating early detection programs with accurate diagnosis and timely, accessible and effective treatments.
- The breast health care system must have the capacity to effectively manage clinically detectable [palpable] breast cancer before any screening program is implemented. This is because only a health system that has the infrastructure and capacity to diagnose and manage symptomatic breast cancers will be able to manage the increase in number of asymptomatic cancers.

Policy planning

- A fundamental shift in cancer program planning is needed—from short-term, vertically funded programs, to long-term programs integrated into the overall health system.
- Data on existing health system capacity can be used to identify areas for program improvement.
- Comprehensive national cancer plans can provide the framework for breast cancer program development, but should be adapted to meet local needs and available resources and be integrated into existing services along the continuum of care.

- As a prerequisite to implementing a breast cancer program, guidelines for early detection, referral, diagnosis and treatment of breast cancer should be standardized and health care professionals educated in accordance with the guidelines.

Knowledge Summaries for Comprehensive Breast Cancer Control

- Knowledge Summaries for Comprehensive Breast Cancer Control [KSBC] can be used in developing or implementing national cancer control plans to inform stakeholders about key breast cancer policy issues.
- KSBC can ensure that key information needed to understand resource needs along the continuum of care [prevention through treatment and palliation] are communicated among stakeholders and decision-makers.
- KSBC provide resource-stratified pathways and can facilitate decision-making by policymakers, health care administrators and advocates engaged in implementing breast cancer control programs at various resource levels.

Resource-stratified pathways across the continuum of care

- Develop programs based on identified needs and barriers, outcome goals and available resources.
- Pursue a defined resource-stratified pathway appropriate for available resources to ensure coordinated investment and incremental program development across the continuum of care [see Table 1].
- A phased implementation strategy will help ensure that essential components for improving breast cancer outcomes are established in a stepwise and logical fashion [see Table 2].

POINTS FOR POLICYMAKERS:

OVERVIEW

Preplanning

- Assess if a new breast cancer program is needed [e.g., program is nonexistent, outdated, ineffective, not resource-appropriate or in need of new services integrated into existing system].
- Identify data sources for estimating disease burden.
- Identify who will lead the process and stakeholders to be engaged.

Planning Step 1: Where are we now?

Investigate and assess

- Assess the breast cancer disease burden.
- Conduct a baseline assessment of existing programs and the capacity of the health system to accurately, efficiently and effectively detect, diagnose and treat breast cancer cases [human resources, gaps in services, barriers, etc.].

Planning Step 2: Where do we want to be?

Set objectives and priorities

- Identify target population.
- Identify and engage stakeholders.
- Identify goals, priorities and strategies based on effective utilization of existing resources.
- Assess feasibility of interventions.

Planning Step 3: How do we get there?

Implement and evaluate

- Engage appropriate resources, decision-makers and staff.
- Pursue a resource-stratified pathway for prevention, early diagnosis, treatment and palliative care to ensure that improvements in breast cancer control take place in parallel along the continuum of care.
- Match investments to resource-appropriate interventions along the continuum of care.
- Monitor and evaluate program implementation [see Table 3].

WHAT WE KNOW

Burden of disease: Breast cancer is the second most common cancer in the world and the most frequent cancer among women with an estimated 1.67 million new cancer cases diagnosed in 2012 (25% of all cancers). Breast cancer is the leading cause of cancer death among women worldwide, accounting for 23% of all cancer cases and approximately 14% of cancer deaths. Between 1980 and 2010, the annual number of breast cancer cases worldwide increased more than 2.5 times, from 641,000 to 1.6 million. By 2030, the total number of breast cancer cases per year is expected to reach 2.4 million, with an increasing proportion occurring in LMICs. Currently, more than half of new breast cancer diagnoses and the majority of cancer deaths occur in LMICs where most breast cancers are diagnosed at late stage or advanced disease.

Financial burden and economic impact: Patients, families and societies all experience the financial burden and economic impact of breast cancer. In addition to the direct medical costs (which increase with late stage diagnosis), there are costs associated with transportation, childcare and housing as well as the hidden costs of lost productivity due to morbidity or premature death.

Cost-effectiveness analyses on breast cancer care interventions are available but vary widely, and the transferability of these evaluations across countries is difficult, as clinical practice patterns, health systems and cultural and social practices differ. Nevertheless, reviewing cost-effectiveness studies from other countries may help inform breast cancer control planning discussions and resource allocations.

Balancing principles and priorities: Health systems must balance four competing principles: scope of services, equity in access to services, quality of care and cost containment. Using a scope-of-service approach requires health systems to assess and coordinate available public and private services. Equity in access to services requires health systems to ensure that women in rural settings and of lower socioeconomic status have access to breast health care services.

Quality of care requires routine evaluations for safety, effectiveness, patient-centered care, timeliness, efficiency and equity. It also requires an ongoing evaluation of the burden of disease (e.g., changes in incidence or stage at diagnosis) and the potential for dramatic improvement in patient care through the introduction of new targeted therapies or psychosocial services.

Each country, and each region within a country, will have a different set of health priorities. Breast cancer programs should be implemented based on available resources and the projected benefit (e.g., reduction in late-stage disease presentation,

improved access to care), using a resource-stratified pathway that will allow programs to expand in a coordinated and stepwise fashion across the continuum of care. Process metrics should be built into all project plans to identify and measure program strengths and weaknesses. Framing programs using these four competing principles can help prioritize interventions.

Integration of breast cancer programs: Historically, policymakers and practitioners have pursued a “vertical” or “horizontal” approach to implementing breast cancer programs. In a vertical approach, programs are introduced and run separately from other existing health programs, whereas in a horizontal approach a new program is integrated into existing health programs. Though each approach has advantages and disadvantages, the emphasis on implementation should be on integration (e.g., adding prevention strategies to existing women’s health services but also establishing new cancer treatment services, utilizing vertical–horizontal synergies or a “diagonal approach”). Factors that affect the implementation of health programs include an appropriate and effective strategy, political will, leadership/ownership of the program, sustained financial resources and commitment, and engagement and support of health care professionals, advocates and policymakers. These factors should be considered as new programs are proposed.

Health care delivery at the local level is affected by national policies particularly for health care resource allocations and financing. National policies must balance cost containment and the financial burden of care to patients and health systems to ensure women of all socioeconomic statuses have equitable access to care. This requires health care policymakers and administrators to have a detailed understanding of disease management and the socioeconomic factors that contribute to disparities in access to care (see Planning: Improving Access to Breast Cancer Care). In addition, partnerships between researchers, health professionals, advocates and policymakers must be developed and maintained to ensure programs function effectively and policies are evidence-based rather than politically motivated.

Implementation science research: Effective translation of research into health care policy and practice requires analysis of the existing health system and an understanding of the barriers to implementation of evidenced-based practices. Qualitative research (focus groups and interviews) can help identify existing barriers (e.g., identifying why some women in the target population do not take advantage of breast health services), whereas implementation science provides a method by which researchers can assess an intervention and its impact. Implementation science is the study of methods to promote the effective integration of research findings and evidence into policy and practice, and seeks to understand

barriers to implementation as well as the behavior of health care professionals and other stakeholders as a key variable in the sustainable uptake, adoption and implementation of evidence-based interventions. This type of research is essential to understanding and effectively addressing potential problems such as poor referral rates, suboptimal participation in screening or high loss to follow up.

Human resources: Human resource limitations [volume and training] pose a significant challenge to accessing care, particularly in low resource settings. Health professionals often encounter unfavorable work environments, heavy workloads and low remuneration, among other concerns, which may be compounded by projected shortages of nurses and physicians at all resource levels. Gaps in and barriers to breast cancer care exist at all resource levels and income settings, and discrepancies in care may worsen as greater demand is placed on the health system.

WHAT WORKS

Stakeholder engagement: Collaboration among all health sectors and stakeholders is essential to advancing health care delivery. In many countries, the government shapes health care through legislative policies, budget allocation, training of health professionals, promoting research agendas and maintaining oversight. Achieving governmental support for health care issues requires collaboration between committed health experts, advocates and policymakers to generate the necessary political will to support change. Advocacy efforts by breast cancer patients and survivors, their families and friends, health professionals, health industry and the media have all affected the promotion of breast cancer care in HICs. Greater impact can be achieved when efforts are coordinated to guide policymakers toward effective and desirable change.

Private institutions and nongovernmental organizations (NGOs) in the field of cancer as well as reproductive and women's health should be considered potential partners and contributors to health care delivery in all resource settings. NGOs provide a variety of services, including research support, financing, communicating key messages and educating the public, providing fellowship training grants, sponsoring workshops and promoting government and policy action. Academic institutions can also serve as valuable partners, using a shared partner model known as "twinning", wherein two or more global institutions share experience, expertise and resources to achieve a common goal.

NGO participation in health programs should be coordinated with the governmental health agency and monitored for the effects on health system infrastructure and equitable delivery of care. Activities of the NGO and private sector may limit health system efficiencies and effective resource stratified planning if they are not synchronized with health policy efforts.

Survivor and advocate engagement: Breast cancer survivors and advocates help ensure that programs are locally relevant, inform key quality-of-care and patient-centered care issues and enhance the sustainability of programs. Patient-centered care [i.e., the use of individual patient values and preferences to guide cancer care decision-making] has been shown to be effective in HICs and LMICs and improves patient decision-making and satisfaction with care.

Coordination of health care services: Health systems must be designed to optimize services and coordinate care among primary care centers [the most frequent first contact for breast cancer patients]; specialist services [e.g., biopsy, cytology, pathology review]; treatment services [e.g., surgery, radiation therapy, systemic therapy] and palliative care services. The relationship between volume and outcome should be considered, particularly for invasive procedures or advanced modalities [i.e., higher volume often results in better outcomes]. However, centralization of breast cancer services may also increase barriers to care, particularly for women in rural communities who already have limited access to early detection and primary care. A comprehensive multidisciplinary approach requires integrating less specialized care at primary, district and regional levels so that women can better access services at lower levels, removing bottlenecks in care at higher levels. Standardization of protocols, a transparent system of referrals, multidisciplinary team approach, quality assurance measures [e.g., process metrics], patient navigation and a patient-centered approach to care are all critical features of an effective health system.

Cancer registries: Identifying the burden of breast cancer can be difficult in regions without cancer registries, precise demographic data or documented causes of death. In such situations, hospital-based records or registries can provide an estimate of the breast cancer incidence. Data on tumor stage at initial diagnosis and cancer deaths should be collected as part of cancer registries as these data can inform the program direction. For example, if most breast cancers are being diagnosed at an advanced stage, assessing and improving efforts to increase early detection would be warranted. Establishing and administering a cancer registry requires participation and coordination of governmental agencies, health facilities, health professionals and other stakeholders. Countries developing new registries can benefit from lessons learned by those with established registries and should consider contacting relevant countries.

Data: Data collection should be tailored to inform policy decisions. For example, an analysis of screening mammography capacity [in settings where appropriate] requires identification of the number of functioning imaging units, where they are located, whether and how they are being used, if the generated images are of adequate quality, false positive and false negative rates, whether involved personnel are utilizing best practices, as well as services for confirming diagnoses and providing treatment, assessment of patient tracking and follow up, quality control, and whether ongoing resources are available to sustain a screening program.

Research: Health ministries in LMICs often have limited data available for determining how breast cancer can best be managed in a country or region. Research collaborations and standardized data collection are required to advance breast cancer program planning. Clinical research in LMICs is expanding to include disease risk factors, treatment efficacy and patient outcomes, breast cancer program implementation and health care policy. Implementation science and qualitative research is being used to facilitate breast cancer care delivery by assessing the social, psychological and system barriers to care. Situational analyses can provide comprehensive contextual reviews of an existing health system or health program, and needs assessments can identify gaps between a current situation and a targeted outcome and identify areas needing intervention. Collaborations in basic science research generally require more intensive resources and expertise but can provide important information about pathophysiology [i.e., cellular markers] of breast cancer in specific populations.

Resource-stratified pathway: Countries vary in wealth, culture and societal preferences with regard to health care; within countries there can be vast differences in both capacity and in cancer burden, particularly between urban and rural areas. Evidence-based resource-neutral guidelines from HICs cannot always be easily translated into practice in limited-resource settings. Resource-stratification is a process whereby standard health care interventions are grouped by attributes that affect their feasibility in different settings, including costs, level of complexity and demands on the health care system. Resource stratification does not promote suboptimal care, but lays out the necessary components of building a cancer program in the most efficient, effective and logical manner, beginning with a strong foundation.

The Breast Health Global Initiative (BHGI) applied an evidence-based consensus panel process to build a framework defining resource prioritization pathways for early detection, diagnosis, treatment and delivery systems at four levels of available resources: basic, limited, enhanced and maximal. Resource stratified guidelines provide an alternative framework and allow ministries of health to identify deficits in resource allocations and facilitate breast cancer control planning. Resource-stratified breast cancer guidelines, such as those developed by the BHGI, have improved health system coordination and are now being applied to other cancer programs [see Table 1].

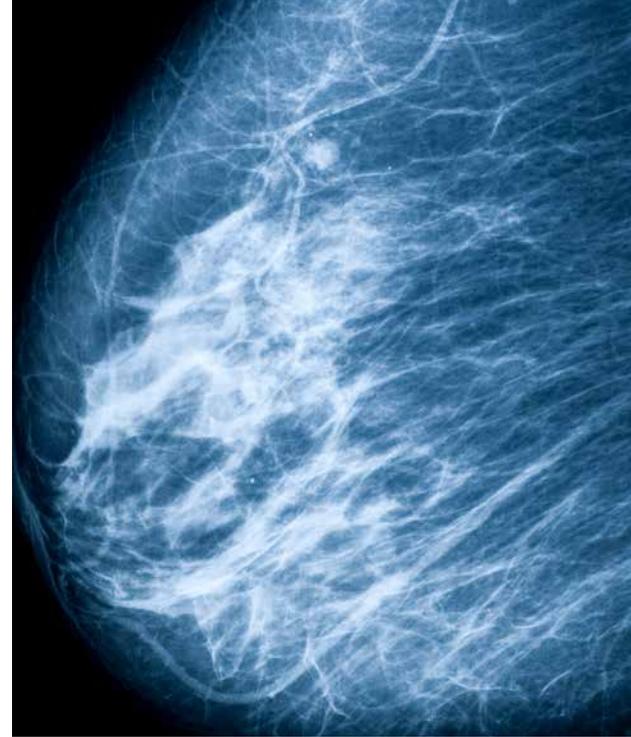
Phased implementation: Successful breast cancer control demands integrating early detection programs with accurate diagnosis and timely, accessible and effective treatments. Addressing any one of these components in isolation will not improve breast cancer outcomes. The phased implementation approach outlines a stepwise progression of interventions for improving breast health care, recognizing that there is an order to scaling up care and that early diagnosis only saves lives if it is effectively linked to appropriate treatment. As a prerequisite to implementing a breast cancer program, guidelines for early detection, referral, diagnosis and treatment of breast cancer should be standardized and health care professionals educated in accordance with the guidelines. Then, the health care system must first develop the capacity to effectively manage clinically detectable [palpable] breast cancer before any screening program is implemented. This is because only a health system that has the infrastructure and capacity to diagnose and manage symptomatic breast cancers will be able to effectively manage the increase in number of asymptomatic cancers detected with screening [see Table 2].

Knowledge Summaries for Comprehensive Breast Cancer

Control: The full series of KSBC address breast cancer control planning, prevention, early detection, diagnosis, treatment, palliative care and survivorship. Each summary contains the relevant clinical content, proven approaches to breast cancer control and policy considerations to aid in the development and implementation of strategies to inform advocacy, policy and implementation of programs. The KSBC provide resource-stratified pathways to facilitate decision-making by policymakers, health care administrators and advocates engaged in implementing breast cancer control programs at various resource levels. They emphasize coordinated, incremental program improvements across the continuum of care to achieve the best possible outcomes at each resource level.

Guideline development: Developing shared standards of clinical practice that consider available resources can help ensure that patients receive the best possible care. The Union for International Cancer Control (UICC) has developed the International Cancer Control Partnership (ICCP) portal (www.iccp-portal.org) to assist countries in implementation efforts by compiling resources, toolkits and frameworks in one location.

Quality assurance: Program monitoring can be conducted using assessment tools to capture outcome indicators or various metrics to measure quality, cost, access, patient experience and other variables. Quality assurance is an essential part of any health intervention; incorrect pathology assessments can result in inappropriate treatment and poor outcomes. False positive screening mammography results can lead to over-diagnosis and unnecessary biopsies, imaging studies or treatments. Similarly, improperly performed surgical procedures can increase the locoregional recurrence rate. Good quality care results in better outcomes, improved patient satisfaction and increased community trust which are all important factors in successful cancer control.



POINTS FOR POLICYMAKERS:

PLANNING STEP 1: WHERE ARE WE NOW?

Investigate and assess

Assess breast cancer burden

- Obtain cancer registry data on breast cancer incidence to determine the demographic groups at risk and capture disease stage at presentation.
- Seek out hospital-based records or registries to determine the local disease burden if population-based registry data are not available.
- Consider regional variations in the incidence of breast cancer.

Assess existing cancer control plan

- Review existing breast cancer control strategy.
- Assess relevant policies, protocols and guidelines [e.g., referral practices, diagnostic procedures, treatment guidelines] for early diagnosis and treatment of breast cancer.

Assess patient access and barriers to care

- Review existing information on health system barriers and patient barriers to care in the target population.
- Engage patients, survivors and advocates to understand the patient experience and barriers to accessing timely and appropriate care.
- Patient barriers may include a lack of knowledge or misconceptions about risk factors, signs and symptoms and treatment of breast cancer.
- Health system barriers may include insufficient numbers of

appropriately trained health care workers, limited access to screening/treatment facilities, inadequate supplies of necessary drugs and delays in treatment.

- Assess barriers to program implementation and utilization of services.

Assess health system capacity

- Perform a countrywide situation analysis of breast cancer care and establish a baseline reference for future program development and evaluations.
- Assess human resource capacity, breast cancer awareness and early detection programs, availability of diagnostic and treatment modalities and supportive care services.
- Determine what services are available, where they are available, how they are utilized and their quality and effectiveness.

Country self-assessment tools

- WHO tools to prevent and control noncommunicable diseases <http://www.who.int/nmh/ncd-tools/en/>
- WHO national cancer control programs www.who.int/cancer/nccp/en/
- WHO cancer control: knowledge into action www.who.int/cancer/modules/en/
- The National Cancer Institute: Human Resource Assessment http://rrp.cancer.gov/programsResources/human_resources_needed.htm
- The International Cancer Control Partnership portal www.iccp-portal.org

PLANNING STEP 2: WHERE DO WE WANT TO BE?

Set objectives and priorities

Define target population and approach

- Identify and engage stakeholders in breast cancer program planning, including identifying target populations for program outreach. Relevant stakeholders are policymakers, health professionals, administrators, donors, advocates (include patients and breast cancer survivors) and the general population.
- Identify high-risk groups, using breast cancer incidence and risk data.
- Identify underserved groups including the rural and urban poor and those with limited health literacy.

Identify community and health system partnerships

- Community leaders, health professionals, breast cancer specialists, survivors, advocates, health care management personnel and policymakers should contribute to program planning and provide feedback on policies and interventions.
- Consider public-private partnerships, regional collaborations or “twinning” options.

Identify gaps and barriers

- Identify gaps in training and expertise of health professionals including primary care providers and specialized services.
- Identify regulatory or policy gaps relevant to breast health care.
- Identify barriers to program implementation and utilization of services.

Set achievable objectives

- Use evidence-based strategies that are feasible, cost-effective and based on local needs, interests, strengths and resources.
- Breast cancer outcomes are affected by how effectively a health system provides early diagnosis, prompt and equitable access to optimum care and coordination of care across the continuum of care.

Set priorities and determine feasibility of interventions

- Pursue a resource-stratified pathway for program development that identifies available resources across the continuum of care.
- Phased implementation or demonstration projects may help ensure program feasibility prior to population-wide implementation.
- Consider long-term feasibility and affordability of programs.

PLANNING STEP 3: HOW DO WE GET THERE?

Implement and evaluate

Establish financial support and partnerships

- Consider government funding, resources generated by NGOs and advocacy efforts and donor support. Multi-sectored involvement should include public-private partnerships, twinning and research collaborations.
- Recognize that long-range planning can shift the care expenditures from advanced disease and palliation to early detection and prevention.

Launch, disseminate and implement

- Implementation should focus on proven methods of translating health care policies into clinical practice.
- Involve all stakeholders and consider local political and sociocultural factors in the development of communication strategies regarding new policies and programs.
- Disseminate program plans (goals, objectives and best practices) to health system stakeholders, professional societies and the public to ensure synchronized program implementation and messaging.

Monitor and evaluate

- Establish assessment, process and good quality metrics and outcome measures at the start of a program, with the understanding that it may take two to three years or more to obtain validated, evidence-based data on intervention outcomes.
- Collect and analyze data and feedback from program implementers and patients to assess the impact of policy interventions and identify additional barriers, bottlenecks and loss to follow up rates.

CONCLUSION

Successful national cancer control programs require thoughtful planning that 1) involves all stakeholders, 2) includes situational analysis and needs assessments, 3) utilizes population-based data on breast cancer incidence, tumor stage at presentation and cancer deaths and 4) considers existing health system capacity. An evidence-based resource stratified pathway can facilitate the process of breast cancer control program design and implementation. Comprehensive breast cancer control planning is a long-term process that requires acknowledgement that changes in population-based outcomes can take years to materialize. Pilot projects, research studies and quality-assurance programs that use short- and long-term process metrics can help inform future program direction. Clinicians and policymakers should remain optimistic that with effective, collaborative breast cancer control planning and the implementation of effective tools in early diagnosis and treatment, they can contribute to the improved health care of millions of women.

Table 1. Four-tier system of resource-stratification for breast cancer control

Level	Definition
Basic	Core resources or fundamental services that are absolutely necessary for any breast health care system to function; basic-level services typically are applied in a single clinical interaction.
Limited	Second-tier resources or services that are intended to produce major improvements in outcome such as increased survival and are attainable with limited financial means and modest infrastructure; limited-level services may involve single or multiple clinical interactions.
Enhanced	Third-tier resources or services that are optional but important; enhanced-level resources should produce further improvements in outcome and increase the number and quality of therapeutic options and patient choice.
Maximal	High-level resources or services that may be used in some high-resource countries and/or may be recommended by breast care guidelines that do not adapt to resource constraints but that nonetheless should be considered a lower priority than those resources or services listed in the basic, limited or enhanced categories on the basis of extreme cost and/or impracticality for broad use in a resource-limited environment; to be useful, maximal-level resources typically depend on the existence and functionality of all lower level resources.

Source: Anderson BO, Yip CH, Smith RA, et al. Guideline implementation for breast health care in low-income and middle-income countries: overview of the Breast Health Global Initiative Global Summit 2007. *Cancer*. 2008 Oct 15;113(8 Suppl):2221-43.

Table 2. Resource-stratified phased implementation

Phase	Intervention
Prerequisite	Standardized guidelines, protocols and trained health care workforce.
Phase 1	Systematic triage and diagnosis of palpable breast disease.
Phase 2	Resource-adapted stage-appropriate treatment planning.
Phase 3	Scaling up of targeted education interventions for public and health care staff and clinical breast examination (CBE) to promote early diagnosis of clinically detectable disease.
Phase 4	Systematic upgrading of image-based diagnostic systems [technology and training] for management of non-palpable disease as a prerequisite to image-based [mammographic] screening.

Source: Tanzania Breast Cancer Assessment 2017: An assessment of breast cancer early detection, diagnosis and treatment in Tanzania. Breast Cancer Initiative (BCI) 2.5; Seattle, WA, 2017.

Table 3. Process metrics for LMIC breast health care programs

	Basic	Limited	Enhanced	Maximal
Early detection	Ratio: No. of patients with recorded history & physical exam [within target group] / No. of patients clinically evaluated [within target group] in a program or center	% Patients with CBE-detected abnormalities who undergo breast imaging for workup	% Patients age 50-69 who had screening mammogram within past 24 months	Maximal category process metrics determined based upon standards of care in high-income countries
Diagnosis	Ratio: No. of patients with a tissue diagnosis (benign or malignant) / No. of patients with a "suspicious mass" warranting further evaluation	% Patients with biopsy-proven cancer diagnosis who have documented TNM stage	% Patients with biopsy-proven cancer diagnosis who have documented HER2 status	Maximal category process metrics determined based upon standards of care in high-income countries
Treatment	Ratio: No. of patients who receive cancer treatment (surgery beyond surgical biopsy, radiation Rx and/or systemic Rx) / the number of patients who had a tissue diagnosis of cancer	% Patients with cancer diagnosis who start treatment within 120 days of tissue diagnosis	% Patients treated by lumpectomy starting XRT within 120 days of last surgical procedure	Maximal category process metrics determined based upon standards of care in high-income countries
Programmatic	Median pathologic tumor size [within target group] for program or center	% Cancer patients who have TNM stage I or II disease at initial diagnosis	% Cancer patients who have TNM stage I or II disease who at 5 years have no evidence of disease recurrence	Maximal category process metrics determined based upon standards of care in high-income countries

Source: Anderson BO, Yip CH, Smith RA, et al. Guideline implementation for breast health care in low-income and middle-income countries: overview of the Breast Health Global Initiative Global Summit 2007. *Cancer*. 2008 Oct 15;113(8 Suppl):2221-43.

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