



Centers of Excellence in Cancer

A RESOURCE-STRATIFIED APPROACH TO IMPROVING BREAST CANCER OUTCOMES

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RESOURCE-STRATIFICATION

- Adapting to Existing Resources
- Resource-Stratified Guidelines
- In-Country Situation Analyses
- Guideline Implementation



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U.N. HUMAN RIGHTS LAW (1966)

INTERNATIONAL COVENANT ON ECONOMIC, SOCIAL AND CULTURAL RIGHTS (ICESCR), ARTICLE 12(1)

“The States Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health.”

WORLD BANK COUNTRY GROUPS

WORLD BANK CLASSIFICATION (ATLAS METHOD)

World Bank Country Groups <i>(GNI per capita)</i>	Low Income <i>(\$995 or less)</i>	Lower Middle Income <i>(\$996 - \$3,945)</i>	Upper Middle Income <i>(\$3,946 - \$12,195)</i>	High Income <i>(\$12,196 or more)</i>
Average female life expectancy at birth	57.8 yrs	69.3 yrs	74.4 yrs	82.4 yrs
Average GNI per capita (2009 US dollars)	\$403	\$1,723	\$6,314	\$36,953
Total national health expenditure per capita	\$22	\$76	\$458	\$4,266
Fraction of GDP spent on health care	5.1%	4.3%	6.4%	11.2%

Health expenditure figures 2010 for calendar year 2007; GNI = gross national income
<http://data.worldbank.org/data-catalog/health-nutrition-and-population-statistics>.

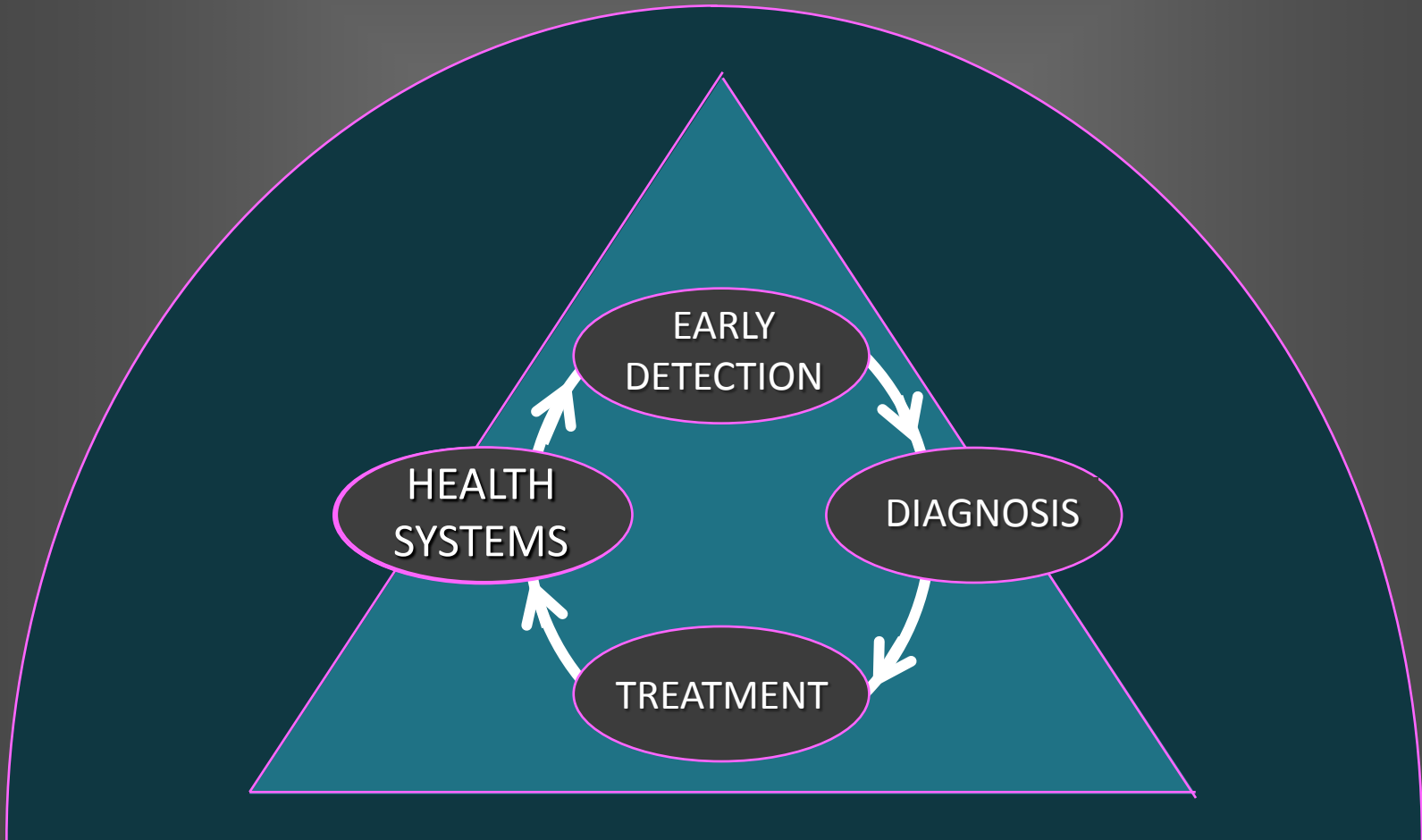


MISSION STATEMENT

The *Breast Health Global Initiative (BHGI)* strives to develop, implement and study evidence-based, economically feasible, and culturally appropriate guidelines for international breast health and cancer control for low and middle income countries to improve breast health outcomes.



CANCER CONTROL STRATEGIES COMPREHENSIVE APPROACH





BHGI GUIDELINE DEVELOPMENT

- Comprehensive guidelines by selected expert panels
- Consensus opinions based on evidence review
- Publication of a) consensus and b) individual manuscripts

GUIDELINE DEVELOPMENT SUMMITS:

Global Summit 2002: Health Care Disparities

Global Summit 2005: Resource Stratification

GUIDELINE VALIDATION SUMMITS:

Global Summit 2007: Guideline Implementation

Global Summit 2010: Healthcare Delivery

Global Summit 2012: Supportive Care and QOL



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GLOBAL SUMMIT 2005 – BETHESDA

RESOURCE STRATIFICATION

- **Basic level:** Core resources or fundamental services necessary for any breast health care system to function.
- **Limited level:** Second-tier resources or services that produce major improvements in outcome such as survival.
- **Enhanced level:** Third-tier resources or services that are optional but important, because they increase the number and quality of therapeutic options and patient choice.
- **Maximal level:** Highest-level resources or services used in some high resource countries that have *lower priority* on the basis of extreme cost and/or impracticality.



BHGI GUIDELINE TABLES

HEALTH CARE SYSTEMS

Level of resources	Patient and Family Education	Human Resource Capacity Building	Patient Navigation	Cancer Care Facility	Breast Care Center
Basic	General education regarding primary prevention of cancer, early detection and self examination Development of culturally adapted patient and family education services	Primary care provider education re breast cancer detection, diagnosis and treatment Nursing education re cancer patient management and emotional support Pathology technician education re tissue handling and specimen preparation Trained community worker	Paired nurse, midwife or healthcare provider triages patients to central facility for diagnosis and treatment	Health facility Operating facility Outpatient care facility Pharmacy Home hospice support External consultation pathology laboratory	Breast healthcare access integrated into existing healthcare infrastructure
Limited	Group or one-on-one counseling involving family and peer support Education regarding nutrition and complementary therapies	Nursing education re breast cancer diagnosis, treatment and st management Imaging technician education re imaging technique and quality control Volunteer recruitment corp to support care	On site patient navigator (staff member or nurse) facilitates patient triage through diagnosis and treatment	Clinical information systems Health system network Imaging facility Internal pathology laboratory Radiation therapy	"Breast Center" with clinician, staff and breast imaging access Breast prostheses for mastectomy pts
Enhanced	Education regarding survivorship Lymphedema education Education regarding home care	Organization of national volunteer network Specialized nursing oncology training Home care nursing Physiotherapist & lymphedema therapist On-site cytopathologist	Patient navigation team from each discipline supports patient "handoff" during key transitions from specialist to specialist to ensure completion of therapy	Centralized referral cancer center(s) Radiation therapy: low energy linear accelerator, electrons, brachytherapy, treatment planning system	Multidisciplinary breast programs Oncology nurse specialists Physician assistants
Maximal		Organization of national medical breast health groups		Satellite (non-centralized or regional) cancer centers	

EARLY DETECTION

Level of resources	Public Education and Awareness	Detection Methods
Basic	Development of culturally sensitive, linguistically appropriate local education programs for target populations to teach value of early detection, breast cancer risk factors and breast health awareness (education + self-examination)	Clinical history and CBE
Limited	Culturally and linguistically appropriate targeted outreach/education encouraging CBE for age groups at higher risk administered at district/provincial level using healthcare providers in the field	Diagnostic breast US +/- diagnostic mammography in women with positive CBE Mammographic screening of target group*
Enhanced	Regional awareness programs regarding breast health linked to general health and women's health programs	Mammographic screening every 2 years in women ages 50-59 [†] Consider mammographic screening every 12-18 months in women ages 40-49 [†]
Maximal	National awareness campaigns regarding breast health using media	Consider annual mammographic screening in high-risk groups [†] Other imaging technologies as appropriate for high-risk groups [†]

DIAGNOSIS

Level of resources	Clinical	Imaging and Lab Tests	Pathology
Basic	History Physical examination Clinical breast examination (CBE) Tissue sampling for cancer diagnosis (cytologic or histologic) prior to initiation of treatment	+	Pathology diagnosis obtained by every breast lesion by any available sampling procedure Pathology report containing appropriate diagnostic and prognostic predictive information to include tumor site, lymph node status, histologic type and tumor grade Process to establish hormone receptor status possibly including estrogen assessment of response to therapy Determination and reporting of TNM stage
Limited	US-guided FNAB of sonographically suspicious axillary nodes Sentinel lymph node (SLN) biopsy with blue dye [‡]	Diagnostic breast ultrasound (US) Plan chest and skeletal radiography Liver US Blood chemistry profile [§] Complete blood count (CBC) [§]	Determination of ER status by IHC Determination of margin status, DCIS content, presence of LVN Frozen section or touch prep SLN analysis [§]
Enhanced	Image guided breast sampling Proper needle localization under mammographic and/or US guidance SLN biopsy using radioisotope [‡]	Diagnostic mammography Spectrom radiography Bone scan, CT scan Cardiac function monitoring	Measurement of HER2/neu overexpression or gene amplification [§] Determination of PR status by IHC
Maximal		PET scan, MRI scan, breast MRI, BCI/12 testing Mammographic double reading	IHC staining of sentinel nodes for cytokeratin to detect micrometastases Pathology double reading Gene profiling tests

STAGE I

Level of resources	Local/Regional Treatment		Systemic Treatment (Adjuvant)		
	surgery	radiation therapy	Chemotherapy	endocrine therapy	biological therapy
Basic	Modified radical mastectomy			Oophorectomy in premenopausal women Tamoxifen [†]	
Limited	Breast conserving surgery [§] Sentinel lymph node (SLN) biopsy with blue dye [‡]		Classical CMF [§] AC, EC, or FAC [§]		†
Enhanced	SLN biopsy using radioisotope [‡] Breast reconstruction surgery	Breast-conserving whole-breast irradiation as part of breast-conserving therapy [§]	Taxanes	Aromatase inhibitors LHRH agonists	Trastuzumab for treating HER-2/ neu positive disease [§]
Maximal			Growth factors Dose-dense chemotherapy		

STAGE II

Level of resources	Local/Regional Treatment		Systemic Treatment (Adjuvant)		
	Surgery	Radiation Therapy	Chemotherapy	Endocrine Therapy	Biological Therapy
Basic	Modified radical mastectomy		Classical CMF [†] AC, EC, or FAC [†]	Oophorectomy in premenopausal women Tamoxifen [†]	
Limited	Breast conserving surgery [§] Sentinel lymph node (SLN) biopsy with blue dye [‡]	Postmastectomy irradiation of chest wall and regional nodes for high-risk cases [†]			†
Enhanced	SLN biopsy using radioisotope [‡] Breast reconstruction surgery	Breast-conserving whole-breast irradiation as part of breast-conserving therapy [§]	Taxanes	Aromatase inhibitors LH-RH agonists	Trastuzumab for treating HER-2/ neu positive disease [§]
Maximal			Growth factors Dose-dense chemotherapy		

LOCALLY ADVANCED

Level of resources	Local/Regional Treatment		Systemic Treatment (Adjuvant or Neoadjuvant)		
	Surgery	Radiation Therapy	Chemotherapy	Endocrine Therapy	Biological Therapy
Basic	Modified radical mastectomy		Preoperative chemotherapy with AC, EC, FAC or CMF†	Oophorectomy in premenopausal women Tamoxifen‡	
Limited		Postmastectomy irradiation of chest wall and regional nodes†			§
Enhanced	Breast-conserving surgery Breast reconstruction surgery	Breast-conserving whole-breast irradiation as part of breast-conserving therapy§	Taxanes	Aromatase inhibitors LH-RH agonists	Trastuzumab for treating HER2-neu positive disease§
Maximal			Growth factors Dose-dense chemotherapy		

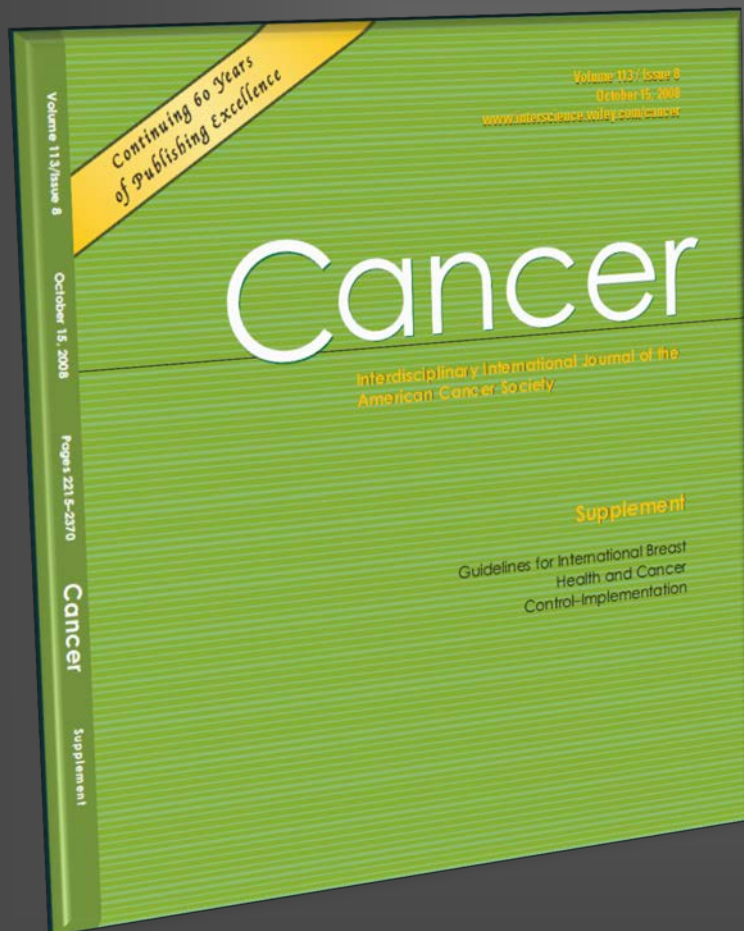
METASTATIC

Level of resources	Local/Regional Treatment		Systemic Treatment (Palliative)		
	Surgery	Radiation Therapy	Chemotherapy	Endocrine Therapy	Supportive Therapy
Basic	Total mastectomy for ipsilateral breast tumor recurrence after breast conserving surgery ^a			Oophorectomy in premenopausal women Tamoxifen ^b	Nonopioid and opioid analgesics and symptom management
Limited		Palliative radiation therapy	Classical CMF ^c Anthracycline monotherapy or in combination ^d		
Enhanced			Sequential single agent or combination chemotherapy Trastuzumab Lapatinib	Aromatase inhibitors	Bisphosphonates
Maximal			Bevacizumab Fulvestrant		Growth factors



GLOBAL SUMMIT 2007 – BUDAPEST

GUIDELINE IMPLEMENTATION



CONSENSUS STATEMENTS

Early Detection

Diagnosis

Treatment

Health Care Systems

8 Stratified Tables

10 Individual Manuscripts

Cancer: 113 (8 suppl), 2008



BASIC LEVEL CARE (BHGI) EARLY DETECTION / DIAGNOSIS

- Clinical down-staging (education):
 - Breast health awareness education
 - Clinical breast examination (CBE) training
- Diagnosis (with quality control):
 - Tissue sampling (needle preferred)
 - Surgical pathology services (+/- cytology)
 - Hormone receptor assessment



BASIC LEVEL CARE (BHGI) TREATMENT (ALL STAGES)

- Surgical services:
 - Modified radical mastectomy
 - Breast conservation (radiation required)
- Systemic therapy (on WHO essential drug list 2011):
 - Tamoxifen (vs oophorectomy)
 - Cytotoxic therapy (CMF, AC, EC, FAC)
 - Pain management



GLOBAL SUMMIT 2010 – CHICAGO

OPTIMIZING DELIVERY

- Cancer registries for prevalence , stage, and outcome
- National cancer plans define cancer care networks
- Multidisciplinary care to avoid fragmentation
- Training linked to equipment acquisition / quality care
- Public awareness programs linked to early detection
- Clinical breast examination (CBE) promotion
- Coordination of diagnosis and treatment
- Address pathology, drug acquisition, workforce issues

Methods

1 Core Documents: 15 BHGI guidelines



2 Search Strategy

Google
scholar
(n = 1,132)

PubMed
(n = 46)

Scopus
(n = 662)

WEB OF KNOWLEDGESM
(n = 250)

Total
2,090

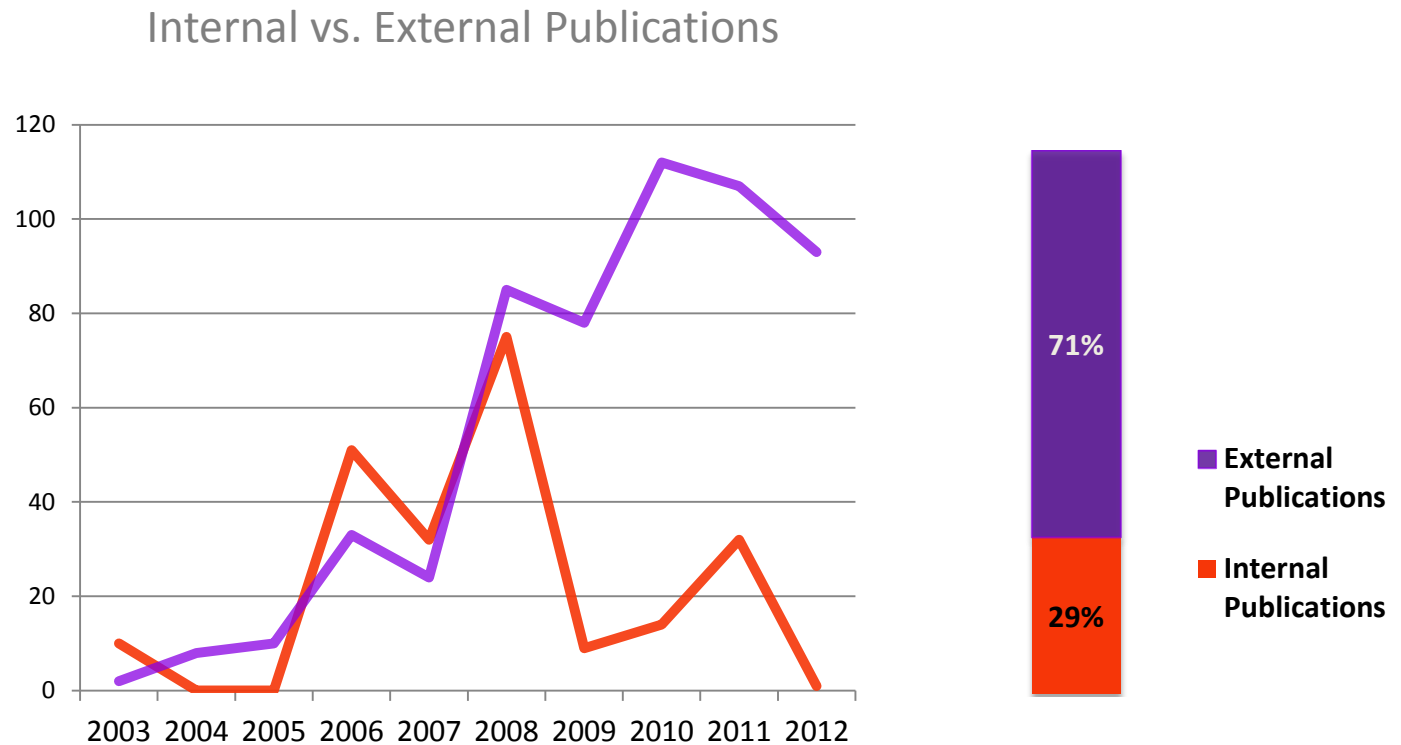
3 Inclusion and Exclusion Criteria

- ✓ Published between 2003 -2012
- ✓ Complete documents available online
- ✓ English – Spanish – Portuguese

Full-text articles assessed for eligibility → n= **776**

Findings

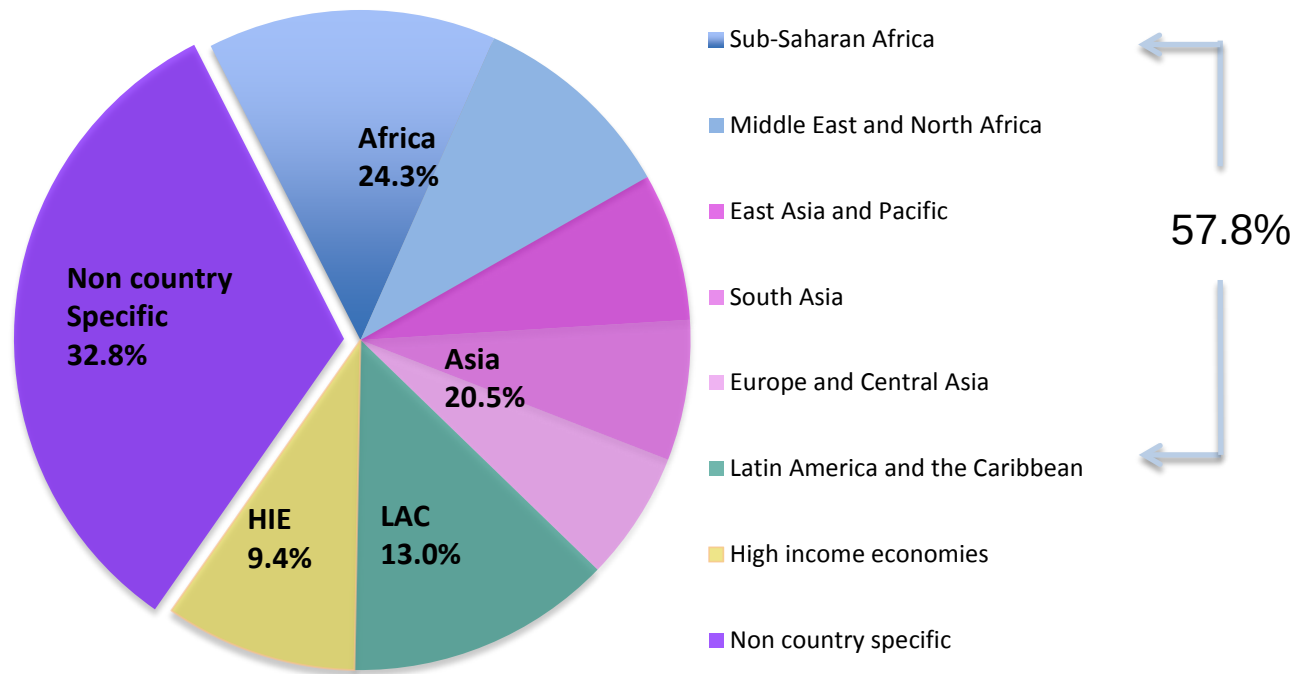
1. Extent of citations over time



Findings

3. Uptake of the BHGI guidelines by region

Articles referencing BHGI guidelines by region
external publications only (n= 552)





GLOBAL SUMMIT 2012 – VIENNA SUPPORTIVE & PALLIATIVE CARE



➤ During Treatment

➤ After Treatment (survivorship)



➤ Metastatic Disease

Executive Summary: Lancet Oncology, 16(3):e137-e147, 2015

Consensus Statements: The Breast, 22(5):593-627, 2013



GLOBAL SUMMIT 2012 – VIENNA

DURING TREATMENT

	Basic	Limited	Enhanced
Musculoskeletal Toxicities	Basic physical activity (e.g., aerobic, ROM) Pain management, including morphine ^a	PT focused on early lymphedema, shoulder mobility, and pain management Other drug therapy for pain ^a	Other non-morphine opioids ^a BMD assessment for at-risk patients Bone modifying agents
Gastrointestinal Toxicities	Oral/IV hydration and electrolyte replacement Drug therapy: antiemetics, antidiarrheal medications, stool softeners, laxatives Mucositis support, e.g., ice chips Anxiety symptom management Consideration of parasitic and/or bacterial infection	Drug therapy: 5HT3 blockers, H2 antagonists, anti-acids, stimulant laxatives Mucositis support: topical agents Antianxiety drugs Consultation with certified dietitian	Drug therapy: NK-1 antagonists, PPIs Mucositis support: opioid analgesics for severe mucositis Individualized education by certified dietitian
Skin Toxicities, Chemotherapy Extravasation	Patient and family education ^b	Topical agents (e.g., steroid- or zinc-containing skin creams) DMSO Debridement surgery Coordinated patient care	Consultation with dermatology specialist Central line access/management
Nervous System Toxicities	Pain management, including morphine ^a Topical agents Patient and family education ^b	PT: functional limitations Drug therapy for pain ^a	Anesthetics for nerve blockage Consultation with neurology specialist for pain management and cognitive problems

Consensus Supplement: The Breast, 22(5):593-605, 2013



GLOBAL SUMMIT 2012 – VIENNA

AFTER TREATMENT (SURVIVORSHIP)

	Basic	Limited	Enhanced
Health professional education^a	BCr recurrence, second primary cancer Long-term TX complications Women's health Psychosocial (survivorship) consideration ^c Lifestyle modifications	Psychosocial risk assessments Psychosocial complications of survivorship Sexual health	Psychosocial screening methods
Patient and family education^b	BCr recurrence or new cancers; symptoms to report Long-term TX complications Appropriate use of CAM Women's health issues Psychosocial issues (survivorship) Lifestyle modifications	Follow-up schedules Adherence to endocrine therapy Sexual health	
Community awareness	Community awareness of BCr survivorship issues		

Consensus Supplement: The Breast, 22(5):606-615, 2013



GLOBAL SUMMIT 2012 – VIENNA

WITH METASTATIC DISEASE

	Basic	Limited	Enhanced	Maximal
Bone Metastases	Drug therapy: steroids, NSAIDs, opioids (eg, oral and parenteral morphine), co-analgesics Consider spinal cord compression and fractures	Radiotherapy Surgery Routine evaluation for spinal cord compression and fractures	Radioisotopes Bone-modifying agents	Radiofrequency ablation/ cryoablation
Bowel Obstruction	Drug therapy: morphine (oral or parenteral), steroids, laxatives, antiemetics, anticholinergics NG-tube	Non-morphine opioids	Venting G-tube	Somatostatin analogues
Brain Metastases	Drug therapy: analgesics, steroids, anti-emetics, anticonvulsants	Whole brain radiotherapy	Stereotactic radiotherapy Surgery	
Liver Metastases	Drug therapy: analgesics, steroids, anti-emetics, antihistamines		Biliary stents Percutaneous drainage Embolization	Liver resection
Lung Metastases	Drug therapy for breathlessness: opioids, anxiolytics and antipsychotics, steroids Thoracocentesis Oxygen therapy for hypoxemic patients	Pleurodesis: Thoracotomy, VATS Radiotherapy		
Skin Metastases/ Complications	Wound and skin assessment Drug therapy: Analgesics; Broad spectrum antibiotics Simple dressings and skin barriers Activated charcoal; metronidazole Teaching wound dressing to patients and family	Silver nitrate Radiotherapy Debridement surgery	More sophisticated dressing material Calcium alginate for hemostasis Stoma/wound therapy Air mattress, egg crate mattress	Plastic surgery Vacuum (negative pressure) wound therapy Mechanical bed

Consensus Supplement: The Breast, 22(5):616-627, 2013



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CORE ISSUE

SITUATION ANALYSIS

GHANA, WEST AFRICA

OCTOBER 2004



Ghana Situation Analysis 2004

Main hospital entrance
Komfo Anokye Teaching Hospital (KATH)



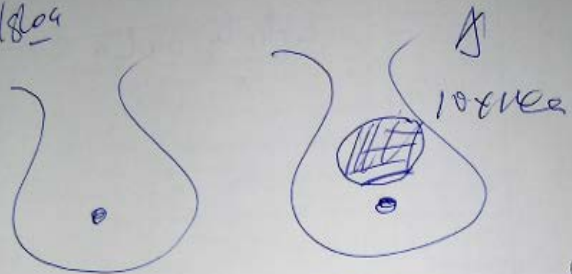
Ghana Situation Analysis 2004

Breast Health Clinic
Komfo Anokye Teaching Hospital (KATH)



HISTORY

11/8/04



For excision biopsy

Hb 12.5

Sm A5

For anaesthetic assessment pl

Chenelene

Medical History form 3



Ghana Situation Analysis 2004

Patient with breast cancer
(Note visible tethering of patient's left nipple)

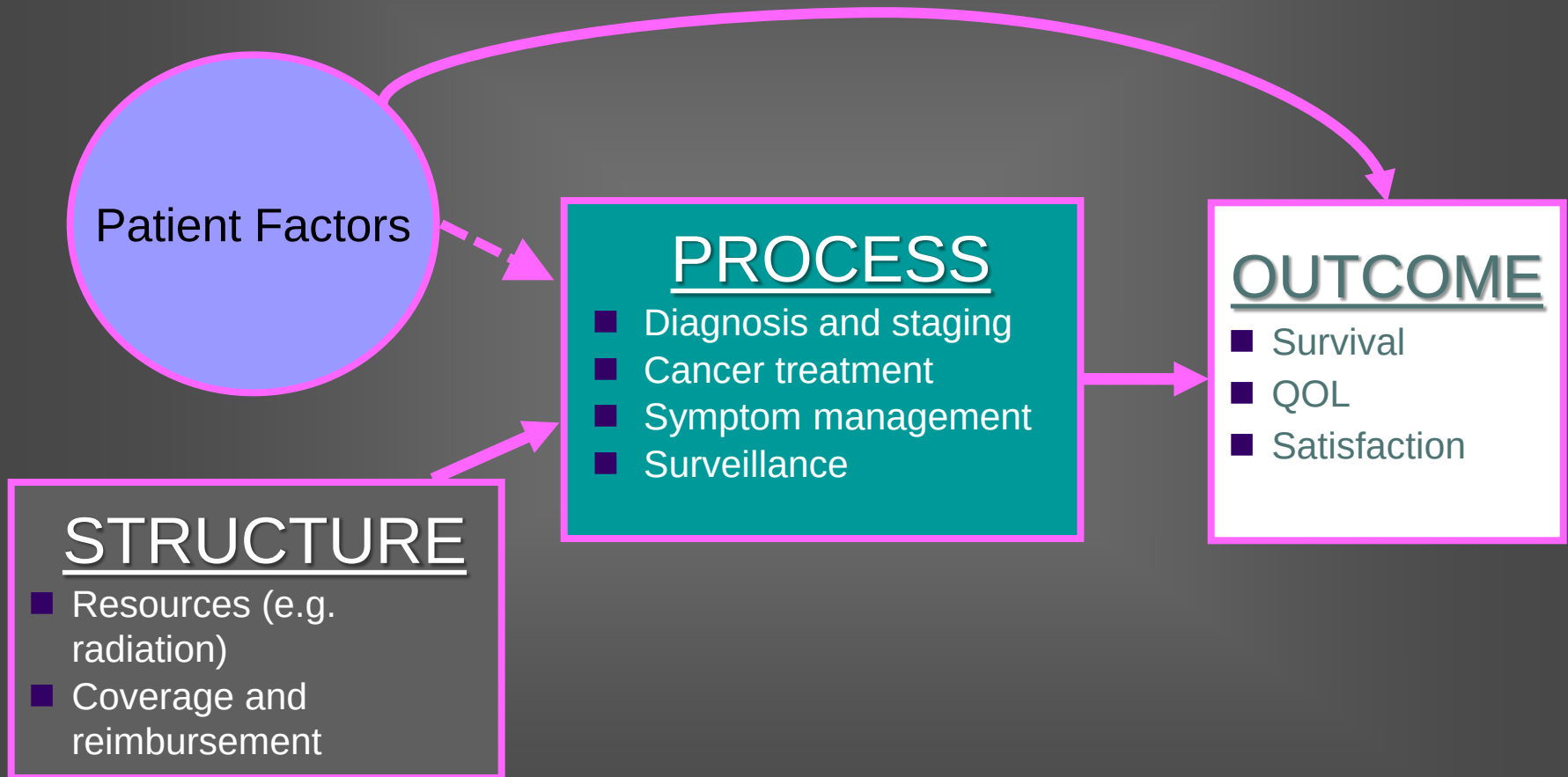


Ghana Situation Analysis 2004

Peace and Love Hospital (Kumasi Private Hospital)
T4N1Mx – Stage IIIB -- locally advanced presentation



METRICS & QUALITY IMPROVEMENT





Ghana Situation Analysis 2004

Komfo Anokye Teaching Hospital (KATH)
Medical Record Room



Ghana Situation Analysis 2004

Komfo Anokye Teaching Hospital (KATH)
Breast Clinic Charts



Ghana Situation Analysis 2004

Komfo Anokye Teaching Hospital (KATH)
Multispecialty breast cancer team



OBSTACLES TO CARE

- Advanced cancer stage at diagnosis
- Mastectomy without adjuvant treatment
 - No post-surgical radiation therapy
 - Inadequate adjuvant systemic therapy
- One pathologist for a 1,000 bed hospital
- Pathology report takes 4 – 6 months

PATHOLOGY PARTNERSHIP:

KUMASI – NORWAY TRAINING PROGRAM

BHGI GLOBAL SUMMIT, January 2005

April 2006



Dr. Helge Stalsberg
Pathologist, Norway



Dr. Baffour Awuah
Radiation Oncologist, Ghana



KATH Histopath Lab
Kumasi, Ghana

**Prompt pathology services to facilitate proper care,
and to provide accurate data for a cancer registry.**



A.H.M THREE BROTHERS HERBAL CLINIC



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- NUFOO YADEE (BREAST CANCER)
- ASIKYIRE YADEE
- MOGYA BROSOO (STROKE)
- BABASO
- DWONSO MOGYA ANAA OBI A
- ONTUMI NNDWONSO
- OBEREMA A WAYE MMERE
- KOOKO
- AWOO (ANIDANE)
- AKOMA YADEE
- NTABUNU
- ABO (ASOFITIE)
- ETWARE (ASRAM)
- ETE (ANIYADEE)
- NTEHYEEWA
- NKWEE
- SISIYADEE ETC.

MOTTO:
WITH ALLAH EVERYTHING IS AGREEABLE

Photo credit: Anna Kirby

Ghana Situation Analysis 2004

Street billboard advertising local herbal medicine clinic in Kumasi claiming breast cancer treatment is provided



Ghana Situation Analysis 2004

Peace and Love Hospital (Kumasi Private Hospital)
Recurrent breast cancer in axillary lymph node bed



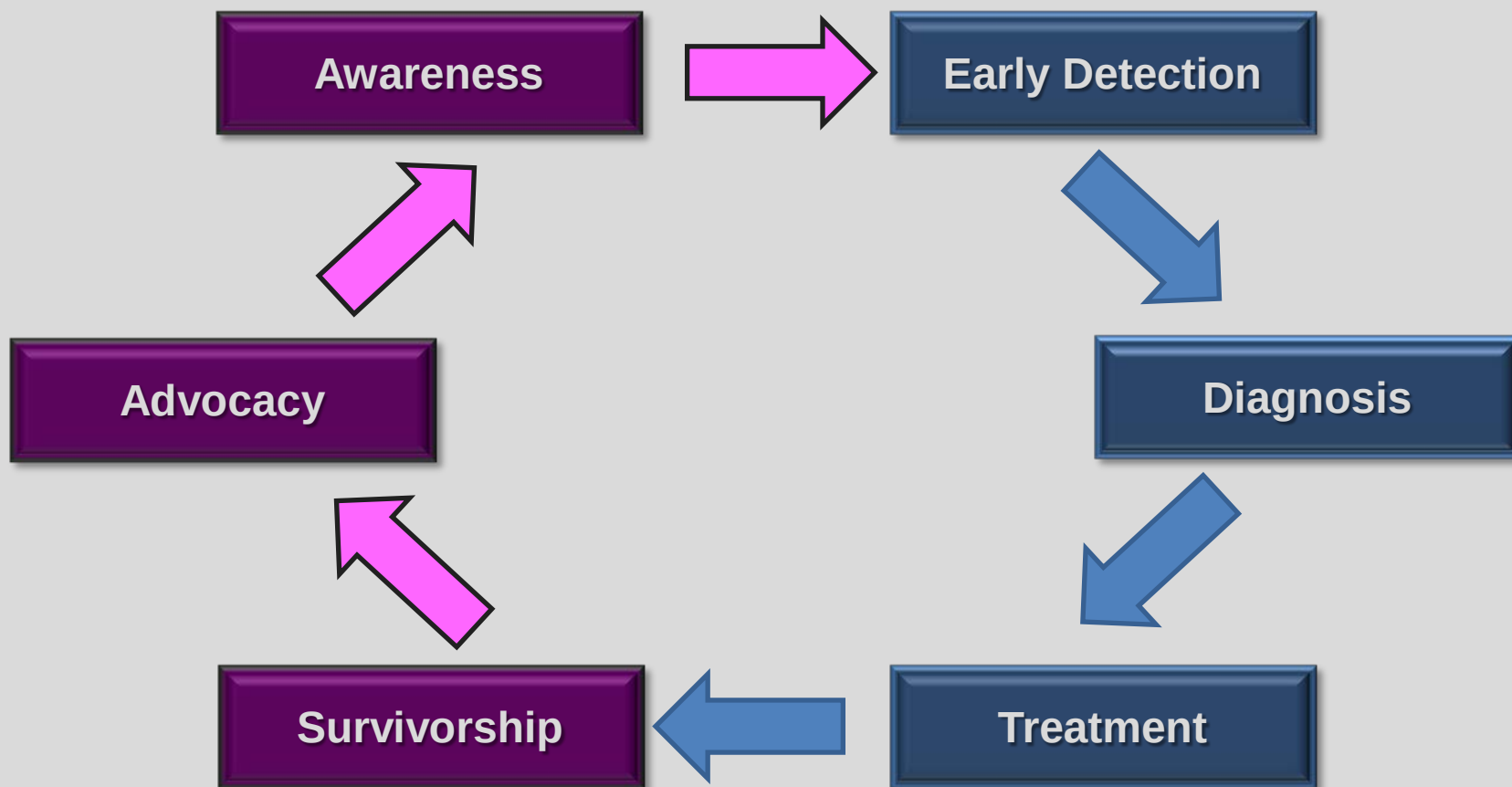
PUBLIC MISCONCEPTIONS

- Breast cancer invariably fatal
- Cancer caused by social misbehavior
 - Oral / nipple contact
 - Dirty clothing
 - Wearing money in bra
- Mastectomy leads to death within few years



Public Participation

Health Care Delivery





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BCI 2.5

Making breast cancer a global priority

BCI 2.5 is a global campaign to reduce disparities in breast cancer outcomes for 2.5 million women by 2025.

Breast Cancer Initiative 2.5



Inviting Partners

American Cancer Society

Susan G. Komen for the Cure

Breast Health Global Initiative

Harvard Global Equity Initiative

National Cancer Institute Center for Global Health

Norwegian Cancer Society

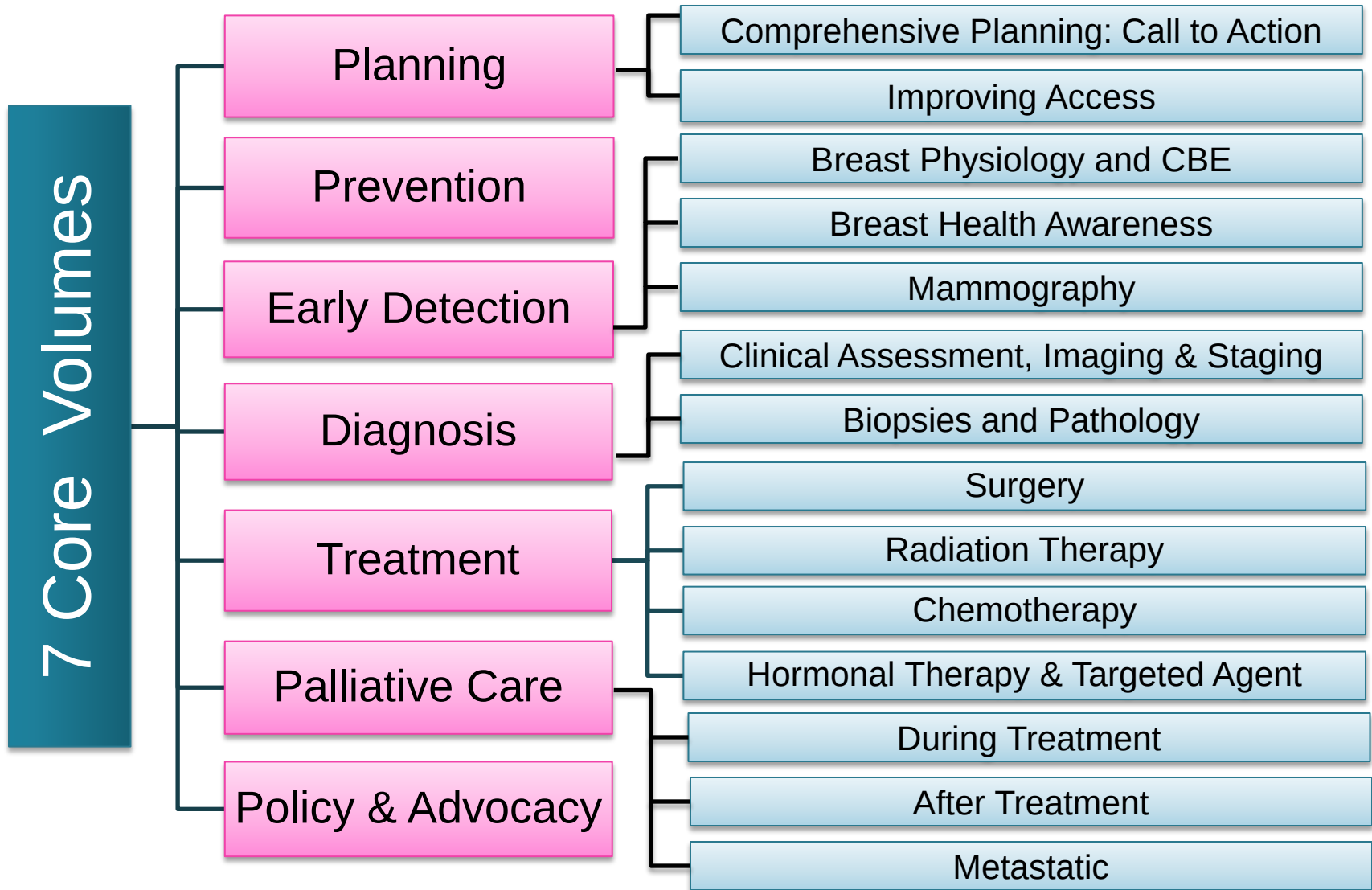
Pan American Health Organization (PAHO)

Union for International Cancer Control (UICC)

STRATEGY

1. Outreach to raise awareness and build relationships;
2. Collaboration with regional alliances;
3. Development of analysis and implementation tools;
4. Situation analysis of breast health care systems;
5. Country framework forums and pathway plans; and
6. Technical assistance and implementation science research to improve breast health care delivery at all points in the cancer care continuum.

DECISION-MAKING TOOLS



KNOWLEDGE SUMMARIES

KNOWLEDGE SUMMARY

PLANNING: PLANNING COMPREHENSIVE BREAST CANCER PROGRAMS: CALL TO ACTION



KNOWLEDGE SUMMARY

PLANNING: IMPROVING ACCESS TO BREAST CANCER CARE

Breast Health Global Initiative

About this Knowledge Summary (KS):

This summary covers planning for breast cancer programs, including important concepts, knowledge summaries and evidence.

KNOWLEDGE SUMMARY

PREVENTION: BREAST CANCER RISK FACTORS AND PREVENTION



About this Knowledge Summary (KS):

This summary covers the preventive approach to breast cancer, including surgery and lifestyle modifications for breast cancer and counseling are also discussed.

KNOWLEDGE SUMMARY

EARLY DETECTION: BREAST PHYSIOLOGY AND THE CLINICAL BREAST EXAM (CBE)



About this Knowledge Summary (KS):

This summary focuses on the clinical aspects of the early detection of breast cancer. The topics addressed include signs and symptoms of breast abnormalities, the importance of performing an accurate clinical breast exam (CBE) as part of breast awareness and early diagnosis, the need for appropriate and timely follow-up, diagnostic imaging, and pathology workup for a suspicious finding. Details about breast health awareness and imaging programs are covered in the two companion modules Early Detection: Breast Health Awareness and Early Detection Strategies and Early Detection: Diagnosis and Screening with Mammography.

KNOWLEDGE SUMMARY

EARLY DETECTION: BREAST HEALTH AWARENESS AND EARLY DETECTION STRATEGIES



About this Knowledge Summary (KS):

This summary covers the major breast cancer early detection strategies including breast cancer education and awareness (patient, community and health professional education), breast health awareness and breast self-detection and clinical breast exams (CBE). A description of how to perform a CBE is included in the Early Detection: Signs and Symptoms summary. A discussion of breast cancer mammographic screening is provided in the Early Detection: Screening Programs for Breast Cancer summary.

KNOWLEDGE SUMMARIES

KNOWLEDGE SUMMARY

EARLY DETECTION (2 OF 3): BREAST PHYSIOLOGY AND THE CLINICAL BREAST EXAM (CBE)



POINTS FOR POLICYMAKERS

PLANNING STEP 2: WHERE DO WE WANT TO BE?

IDENTIFY OBJECTIVES AND PRIORITIES

Identify community and health system partnerships

- Identify partners (non-government organizations, advocates, trusted public figures, medical associations) who can help develop and disseminate breast health awareness messaging.
- Identify key decision makers who can help develop and implement a curriculum for medical training and continuing medical education.

Define the target population and approach

- Educational efforts should include health professionals, women and the general public.
- Training primary care health professionals may be a priority if previous breast health training was not provided in medical schools.
- Health professionals may require continuing medical education or “refresher” training in breast cancer prevention, risk factors, signs and symptoms and clinical breast examination (CBE).
- Women can be routinely educated during clinic visits about breast health, including any available breast cancer screening opportunities.

Identify gaps and barriers

- Identify prevailing myths or misconceptions regarding the signs and symptoms of breast cancer. Consider conducting focus groups with the target population to better understand prevailing beliefs.
- Identify gaps in knowledge and misconceptions among primary care providers regarding their beliefs about breast cancer. Consider conducting interviews and focus groups with primary care providers.
- Identify structural, sociocultural, personal and financial barriers to patient participation in CBE.

- Identify barriers to provider participation in breast health awareness and CBE, with a focus on non-attendees within the target population.
- Identify barriers to implementing CBE curriculum in medical training and continuing medical education.

Set achievable objectives

- Objectives should promote a common goal for early detection, downstaging breast cancer diagnoses to improve cancer outcomes.
- Identify and classify objectives according to the healthcare sector that will manage them (e.g., health system standardization of CBE efforts should be led by clinician/examiner training of CBE could be led by healthcare organizations; increasing the number of qualified practitioners could be led by sponsoring institutions, academia, and the public sector).
- Develop and disseminate patient and public education messages that are relevant and appropriate to the target community.
- Integrate health professional education and training and standardized CBE protocols with widespread dissemination and demonstration of expert clinical breast healthcare skills.
- Address gaps in referral networks to ensure diagnostic follow-up for all breast health complaints (WHO Package of Essential Noncommunicable (PEN) disease interventions for primary care in low-resource settings referral model).
- Report and document clinical findings (contribute data to cancer registry).
- Consider minimizing costs by adapting or supplementing existing programs (e.g., adding breast health education to medical school curriculum and continuing education programs).

Set priorities and determine feasibility of interventions

- Implement demonstration or pilot projects with measurable outcomes to assess feasibility.
- Follow a resource-stratified pathway for program development that identifies available resources across the continuum of care.

KNOWLEDGE SUMMARY

EARLY DETECTION (2 OF 3): BREAST PHYSIOLOGY AND THE CLINICAL BREAST EXAM (CBE)

HOW DO WE GET THERE?

Ensure clinical competency in breast health: Health systems are responsible for the clinical competency of health care staff. Health systems should partner with medical education institutions to ensure that breast health is part of the standard medical curriculum, and that the curriculum for health professionals assigned to work with women at risk for breast cancer includes training in CBE and breast counseling (see Table 1).

Improve patient and community knowledge of and confidence in breast healthcare: Breast awareness efforts can improve patient knowledge of breast cancer and the importance of seeking care immediately for a breast complaint. However, if patients do not have confidence that the healthcare system can provide them with timely and affordable care, they may delay presenting for evaluation. In some low-resource settings, there is a lack of trust in the health system and a lack of confidence in the possibility of being cured of cancer, which discourages patients from presenting for evaluation of a breast complaint. NGOs have been proven as effective partners to address these issues and help navigate women to such services or provide services directly.

Strengthen referral networks: Health systems are responsible for establishing and monitoring referral networks to ensure the best care available is provided equitably to all patients in need. The high volume of women with breast health complaints requires a coordinated referral system to ensure optimal use of resources and efficient care. Referral systems should document the nature and urgency of the referral. The capacity of different health systems to care for women with breast complaints varies; scaling up expertise and establishing minimal standards of care are two possible approaches to improving care.

Implement quality assurance programs: Improving standards for CBE through training and tracking outcomes may improve the practice of CBE – an approach that has been used successfully with mammography. Increasing CBE volume and establishing trained teams or centers can improve the sensitivity and reduce the false-positive rates of CBE. Effective communications between providers can improve the care within an interdisciplinary system. Communications must be thorough and bidirectional to help coordinate care. For example, regional guidelines regarding the timing, type and location of imaging studies for women with breast complaints should be established to avoid duplication of studies. Similarly, breast mass biopsy findings should be communicated back to the primary care physician to coordinate appropriate follow-up and surveillance.

POINTS FOR POLICYMAKERS

PLANNING STEP 3: HOW DO WE GET THERE?

IMPLEMENT AND EVALUATE

Establish financial support and partnerships

- Consider partnering with local, regional and national breast health stakeholders.
- Advocacy groups are key stakeholders in advancing breast health awareness and are often supported by community members and volunteers.
- Partner with medical institutions to integrate training into existing programs.
- Scaling up existing programs can optimize investments and efforts.

Launch, disseminate and implement

- Consider current educational programs that could be expanded or adapted to include breast health (e.g., training in clinical breast examination [CBE] should be part of the medical school core curriculum, offered as part of continuing education and available to all appropriate frontline health professionals).
- Expand the practice of CBE at the primary care level.
- Clarify the system for referrals and follow-up care to all health professionals and patients to avoid duplication of studies or omissions in care (e.g., suspicious lesions must be referred to a surgical team for biopsy, followed by a pathology evaluation of the biopsied specimen).
- Consider using a standardized patient care plan that provides details of a patient's diagnosis and treatment that can be shared by all members of the healthcare team.

Monitor and evaluate

- Process metrics should address program components targeted for improvement or implementation (e.g., process metrics identified in Step 2 can be routinely evaluated and updated).
- Evaluate health professional competency in CBE, breast health counseling and timely referrals (e.g., health professional self-assessment tools can be used to assess the sensitivity and specificity of CBE and inform program planning).
- Quality control measures should be in place (e.g., data that capture false-negative findings and delays in time to definitive care can inform future program improvements).

UPCOMING SCHEDULE

- 2/4/16: BCI 2.5 website launch (www.BCI25.org)
- 3/8/16: GloBAM launch (<http://globam.fredhutch.org>)
- 3/16/16: 4-country breast cancer course (**Ghana**)
- 5/11/16: Caribbean assessment (**Miami**)
- Aug 2016: Central America assessment (**Guatamala**)
- Sept 2016: South America assessment (**Peru**)
- Nov 2016: UICC global report and update (**Paris**)



RESEARCH STRATIFICATION

SUMMARY

- Cancer management requires a comprehensive approach to early detection, diagnosis and treatment using existing resources.
- Resource-stratified guidelines provide a framework for evidence-based management and helps identify systematic gaps.
- Country-specific situation analysis is needed to prioritize programmatic improvement in cancer care delivery.
- Guideline implementation requires collaboration among the clinical, public health and political communities.



The Breast Health Global Initiative

www.bhgi.info



BCI 2.5

Making breast cancer a global priority

www.BCI25.org



DWIGHT D. EISENHOWER



U.S. President 1953-1961

“In preparing for battle,
I have always found
that plans are useless,
but planning is
indispensable.”