

BREAST CANCER SCREENING, DIAGNOSTIC AND TREATMENT SERVICES AND INTEGRATION WITH HIV-RELATED CARE IN SUB-SAHARAN AFRICA: RESULTS FROM AN ELECTRONIC SURVEY**Background**

Breast cancer is the most commonly diagnosed cancer among women,¹ yet it represents only a small proportion of all breast disease, which includes many non-malignant conditions. The burden is particularly high in sub-Saharan Africa,² yet breast disease is not included in the World Health Organization's (WHO) priority list of sexual and reproductive health (SRH) interventions.³ Breast care is also absent from guidelines for the comprehensive management of HIV-positive women's SRH needs.⁴

There is global recognition of the need for integration of SRH and HIV services as an HIV prevention and management strategy.⁵ Excluding breast care services from SRH reduces opportunities both for increasing awareness and early detection of breast cancer³ and for counselling on HIV testing and treatment.⁶

There is very little data on the availability of breast care screening and treatment services in sub-Saharan Africa, and almost no information on integration of HIV and breast care services in this setting. In this study we assessed the availability of comprehensive breast care services and their integration (or not) with HIV care and treatment services in sub-Saharan Africa, with a special focus on South Africa which has placed an emphasis on integration of HIV and SRH care in its public facilities.

Methods

We conducted an online, self-administered survey using Survey Monkey (Survey Monkey Inc. San Mateo, California, USA) between July 2015 and February 2016. We used convenience sampling to identify potential respondents consisting of experts knowledgeable about breast care service availability in their respective countries. The secretariats of the following clinical societies circulated the survey web link to their members: the African Organisation for Research and Training in Cancer (AORTIC), the Pan-African Women's Association of Surgeons (PAWAS), the AIDS Clinical Trials Group (ACTG), the Southern African HIV Clinicians' Society, the South African Society of Obstetricians and Gynaecologists (SASOG), and the Democratic Nursing Organisation of South Africa (DENOSA). We also purposively sent the survey link to colleagues known to work in SRH-focused NGOs or clinical practices in sub-Saharan Africa.

Using Stata (version 14.0, StataCorp, College Station, Texas, USA), we calculated simple proportions for categorical variables, stratifying by region. Proportions represent non-missing responses. We analysed responses to open-ended questions using a thematic analysis approach in Excel (2010). This study was

approved by the Human Research Ethics Committee (Medical) of the University of Witwatersrand (protocol Wits HREC M130368).

Results**Respondents**

We estimate that the combined membership of the societies that participated in the survey was approximately 800 individuals at the time of surveying. The actual number of individuals is unknown due to confidentiality rules regarding the societies' membership lists. In total, 99 individuals, representing 23 sub-Saharan African countries responded to the survey. Nineteen (19.2%) respondents were located in South Africa; 78 (78.8%) were medical doctors. Overall, 88 (88.9%) had breast care services at their places of work, and an additional 8% could refer patients to other facilities for breast care services.

Staffing and service availability at health facilities

The 99 respondents listed 180 unique health care facilities where they worked or could refer patients; 20.6% (37/180) were located in South Africa. Most were public facilities (54.4%) or not-for-profit NGOs (3.7%); 36.0% were private facilities. The respondents noted that roughly one-third of the facilities had staff capable of performing advanced surgery, including cancer surgeons and reconstructive surgeons. There was also low availability of radiation and medical oncologists, psychologists, and counsellors capable of discussing breast disease.

Clinical breast exams were reportedly available at roughly 80% of the facilities (Table 1). More facilities had mammography than ultrasound services at 62.8% and 52.2% respectively. Advanced breast assessments, which included stereotactic biopsies were available at just over half of facilities. Surgery was available in roughly 60% of facilities, but advanced surgery was less common. Treatment services were available at 52.2% of all facilities, though in South Africa the proportion was lower at 40.5%.

Table 1. Service availability at facilities where survey respondents work or refer patients for care (N=180) (n (%))

	All facilities N=180
Services available	
Education on self-breast examination	123 (68.3)
<i>Exams</i>	
Physical (breast) examinations	145 (80.6)
<i>Imaging</i>	
Mammograms	94 (52.2)
Ultrasound/sonar	113 (62.8)
Any imaging service	122 (67.8)
<i>Basic pathological assessment</i>	
Core biopsy, routinely unguided	92 (51.1)

Core-biopsy, ultrasound guided	71 (39.4)
Fine Needle Aspiration	109 (60.6)
Hormone receptor analysis	82 (45.6)
Any basic pathological assessment service	131 (72.8)
<i>Advanced breast assessment</i>	
Stereotactic biopsies	33 (18.3)
HER2 determination	64 (35.6)
Sentinel lymph node biopsy	62 (34.4)
Any advance breast assessment service	94 (52.2)
<i>Surgery</i>	
Benign excision/surgical biopsy	109 (60.6)
Mastectomy	104 (57.8)
Any basic surgery service	110 (61.1)
<i>Advanced surgery</i>	
Breast reconstruction	69 (38.3)
Microdochestomy	41 (22.8)
Wide Local Excision/Lumpectomy	94 (52.2)
Any advanced breast surgery service	99 (55.0)
<i>Treatment</i>	
Chemotherapy	90 (50.0)
Radiation	61 (33.9)
Any treatment service	94 (52.2)

HIV integration

Two thirds of the respondents reported 'integrated' breast care and HIV services at their places of work, though the integration model differed. In some facilities HIV services were offered by the same staff who offered breast care services. In other facilities, HIV services were offered by different staff, but in the same ward/clinic/rooms as the breast care services.

Table 2. HIV and breast care service integration at places of work as reported by survey respondents (N=99) (n (%))

Do the facilities where you work offer HIV-related services to breast care patients? ^a	All respondents N=99
Yes, HIV services offered by same staff who offer breast care services	18 (22.2 %)
Yes, HIV services offered by different staff, but in same ward/clinic/rooms as breast care services	17 (21.0%)
Yes, HIV services offered in different location and by different staff in the facility	36 (44.4%)
No, no HIV services at the facility	9 (11.1%)
Not applicable, no breast care services	1 (1.2 %)

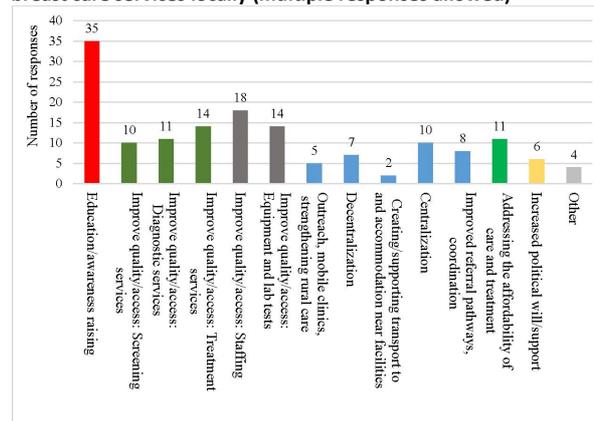
^a Missing 18

Recommendations for improving availability

Fifty-nine (59.6%) of the respondents provided 155 recommendations for improving breast care services in their country. One in five of the suggestions (22.6% (35/155)) focused on public education and awareness raising efforts as a way of improving breast care service outcomes (Figure 1). Another roughly one in five involved targeting specific diagnostic or treatment services to improve the quality and/or availability.

Some of the recommendations were conflicting when comparing across and within countries. For example, some respondents called for improved geographic access via outreach programs, including mobile clinics; whereas others recommended improved transportation to and affordable accommodation near existing services. Finally, the respondents noted that breast care must be affordable and that for any advances to be made in terms of patient survival, political will is required.

Figure 1. Respondents' (n=59) recommendations for improving breast care services locally (multiple responses allowed)



Policy Relevance

Our findings suggest that access to the full continuum of breast care diagnostic and treatment services is rare in the countries represented in the survey. Improved access to a range of breast care services could improve timely and efficient management of patients and their health outcomes. The survey respondents highlighted the importance of educating the population regarding breast health and ensuring that services are affordable and supported by political will.

Including breast care services as part of discussion and advocacy on SRH could create further opportunities to address awareness of breast health, including how and where to access care when needed. Improved integration with HIV services would acknowledge the comprehensive health care needs of HIV-positive individuals – men and women alike – and provide opportunities to educate and test more individuals as they interact with the health service.

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