



MALAWI: DISTRICT HEALTH SYSTEM STRENGTHENING AND QUALITY IMPROVEMENT FOR SERVICE DELIVERY

TECHNICAL BRIEF
JANUARY 2018

INTEGRATING COMPREHENSIVE HIV AND CERVICAL CANCER SERVICES SAVES LIVES

Photo by Henry Nyaka

Background

Cervical cancer affects an estimated 527,624 women worldwide each year, killing more than half of them.¹ About 85% of the global disease burden occurs in developing countries, and Southern Africa is one of the highest-risk regions in the world.² In Malawi, nearly 4.8 million women over the age of 15 are at risk for developing cervical cancer, a number which will continue to increase as the country's significant youth population ages.

Cervical cancer, largely caused by the human papillomavirus (HPV), is the most prevalent form of cancer among women in Malawi, with nearly 3,700 new cases reported per year and a mortality rate of about 80%. Cervical cancer is an AIDS-defining condition, and as Malawi has one of the highest HIV prevalence rates in the world, with 10.6% of the adult population aged 15–64 years having HIV (12.8% in women vs 8.2% in men), it remains an important risk factor.³ Moreover, studies from Queen Elizabeth Central Hospital in Malawi have shown that patients presenting with cervical cancer

were young, with a high prevalence of HIV, and late-stage disease. Most of these patients were unaware of preventive initiatives such as HPV vaccination, cervical cancer screening, and education programs. Treatment and prevention programs that have been tailored to the local system and context have been shown to be associated with an overall reduction in cervical cancer mortality.⁴

Malawi's health system challenges regarding cancer screening include an insufficient number of service providers, poor supervision, lack of basic equipment, stock-outs of essential supplies, lack of policy awareness, inadequate funding, and lack of standards and guidelines for screening and treatment.⁵ These challenges threaten the ability of Malawi to implement a nationwide cervical cancer screening and treatment program.^{5,6} Based on findings in six African countries, including Malawi, the World Health Organization recommended visual inspection with acetic acid (VIA) as the most effective method to reduce the burden of cervical cancer among women in resource-poor settings.^{4,7,8} The benefits of VIA

THE DISTRICT HEALTH SYSTEM STRENGTHENING AND QUALITY IMPROVEMENT FOR SERVICE DELIVERY (DHSS) PROJECT (2012-2018)

supported the Government of Malawi in implementing the National Strategic Plan for HIV and AIDS in line with the Country Operational Plan and supported implementation of the Health Sector Strategic Plan through the project's work in seven districts of Malawi: Nkhata Bay, Likoma, Blantyre, Chiradzulu, Thyolo, Mwanza, and Neno.

Funded by the President's Emergency Plan for AIDS Relief (PEPFAR) through the US Centers for Disease Control and Prevention (CDC) and implemented by Management Sciences for Health (MSH), DHSS contributed to Malawi's goal to become a healthy and prosperous nation free from HIV and AIDS. The project focused on district strengthening and key populations, using targeted evaluation, and providing technical support to the Ministry of Health. The main objective of DHSS was to improve quality, access, and coverage of priority HIV-related health services at priority sites in the seven districts by: identifying 90% of people living with HIV (PLHIV); initiating and retaining on antiretroviral therapy (ART) 90% of PLHIV identified; and achieving 90% viral suppression for ART patients.

include a single-visit approach and quick results provided to the patient.

A recent Malawi Ministry of Health policy brief echoed similar recommendations to improve cervical cancer screening by scaling up the "screen and treat" approach to primary health facilities, strengthening monitoring and evaluation of services, and raising community awareness. Based on these recommendations and national policy, the District Health System Strengthening and Quality Improvement for Service Delivery (DHSS) Project provided support to strengthen cervical cancer screening at five health facilities in five districts: Ndirande Health Center and Chiradzulu, Thyolo, Neno, and Mwanza district hospitals from April 2015 – December 2017. DHSS was already supporting these facilities to improve access to and quality of priority HIV-related services, such as HIV testing services and antiretroviral therapy (ART).

Interventions

To increase the availability of cervical cancer screening services and improve the capacity of health workers in ART and antenatal clinics to provide such services, the DHSS Project developed and supported the following interventions:

- **Training and mentorship of staff on cervical cancer screening and treatment of uncomplicated lesions.** DHSS supported the training of 32 staff in five facilities on the VIA method. The staff trained included clinicians

and nurses from the ART and antenatal clinics. Once training was completed, participants were able to properly conduct screening with VIA, as well as perform treatment on uncomplicated lesions using cryotherapy machines (freezing of precancerous cells). Patients who met the following criteria were subsequently treated within the same facility in which they were diagnosed:

1. Entire lesion is located on the ectocervix without extension to vagina or endocervix
2. Lesion is visible in its entirety
3. Lesion does not cover >75% of cervix
4. Lesion is adequately covered by the largest available cryotip, preferably the 19mm
5. Endocervical canal is normal
6. Woman is not pregnant
7. There is no evidence of pelvic inflammatory disease

An important follow-up to training was monthly mentorship, which DHSS provided to all 32 trained staff. It included direct observation and hands-on advising.

- **Procurement of supplies and cryotherapy machines.** The DHSS Project supported the procurement of crucial supplies and equipment to address facility infrastructure shortages. Supplies procured to support cervical cancer screening included 3–5% acetic acid, cotton swabs, and examination gloves. Additionally, the project procured and distributed vaginal speculums, instrument trays, and six cryotherapy machines and gas to five facilities in five districts. DHSS oriented and mentored staff on the proper maintenance and upkeep of the equipment.
- **Mentoring on documentation.** The project provided mentoring on documentation of cervical cancer screening and treatment of uncomplicated lesions. Data were collected using standard Ministry of Health registers, and in each facility staff were trained on completing the registers. DHSS and Ministry of Health mentors conducted monthly mentorship visits to ensure proper documentation in the registers.
- **Establishing referral and linkages with tertiary hospitals.** Patients with complicated lesions or overt cancers were referred for specialized services at tertiary institutions such as Mzuzu and Queen Elizabeth central hospitals. Gynecologists and obstetricians reviewed the patients and provided specialized services such as loop electrosurgical excision procedure, cold knife conization, chemotherapy, and radiotherapy. The physicians also made referrals for palliative care.

Results

From January 2015 – December 2017, a total of 5,027 women received cervical cancer screening (Figure 1). The number of women screened per quarter increased from 149 (April – June 2015) to 1,038 (July – September 2017), reflecting massive demand for the services. Of the screened

women, 824 (16%) were aged below 25 years, 3,776 (75%) were between 25 and 49 years, and 427 (9%) were above 49 years. Most women were screened at Thyolo District Hospital (1,537) and Chiradzulu District Hospital (1,475), compared to Ndirande Health Center (996), and Mwanza (553) and Neno (466) district hospitals. A total of 4,933 women's HIV status was documented; 1,061 (22%) were HIV infected and on ART, 137 (3%) were HIV infected and not on ART, 3,421 (69%) were not HIV infected, and 314 (6%) had unknown HIV status. Data was collected for the implementation period only. It is likely that no screening was done before the cryotherapy equipment or mentorship was provided.

Figure 2 shows the number of women screened, those diagnosed VIA positive, and those who received cryotherapy. A large proportion of the visits were initial VIA screening (86%). The proportion of women with a VIA-positive result who received cryotherapy improved steadily from 11% in 2015 to 56% in 2017. While cryotherapy service improved over time, the proportion completed on the same day remained low (19%). A total of 159 women screened VIA positive over the three years of implementation (Figure 2). The management of these women were as follows: 80 (50.4%) received cryotherapy, 31 (19.5%) had cryotherapy postponed, 28 (17.6%) were referred to another health facility, 8 (5%) had other management, and 12 (7.5%) were not accounted for.

There were 218 women that had documented reasons for referral (Figure 3). The majority (80%) of referrals were for other gynecological reasons, while suspected cancer contributed to 13%, and larger lesions 6%. It is of great importance that the cryotherapy was available most of the time as only one case was referred to another facility due to unavailability of cryotherapy.

Lessons Learned

- By integrating cervical cancer screening into antenatal care and ART services, health facilities can reach a large number of women and identify those with suspected cancer early enough for treatment. In addition, cryotherapy can be made readily available and thereby reduce the need for referring women to other facilities for follow-up and treatment.
- In most instances, clients did not access cervical cancer screening services due to lack of awareness in the five facilities that DHSS supported. This underscores the importance of health education and raising awareness at the personal and community levels about cervical cancer screening programs. Awareness campaigns could include peer educators who can offer health education, conduct community mobilization, and track clients who need care.
- The project's experience showed that most providers lacked adequate knowledge and practical skills regarding this low-cost intervention. It is important to increase provider knowledge and skills to be able to conduct screening using VIA and manage uncomplicated cases using cryotherapy.

Figure 1: Cancer screening trends (April 2015 – December 2017)

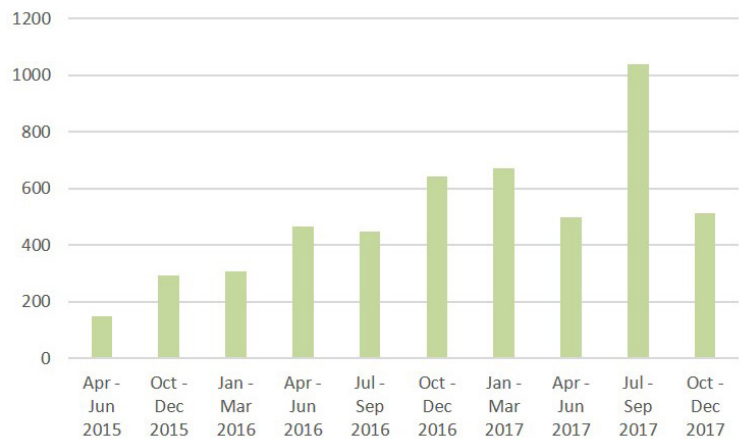


Figure 2: Cervical cancer screening and management

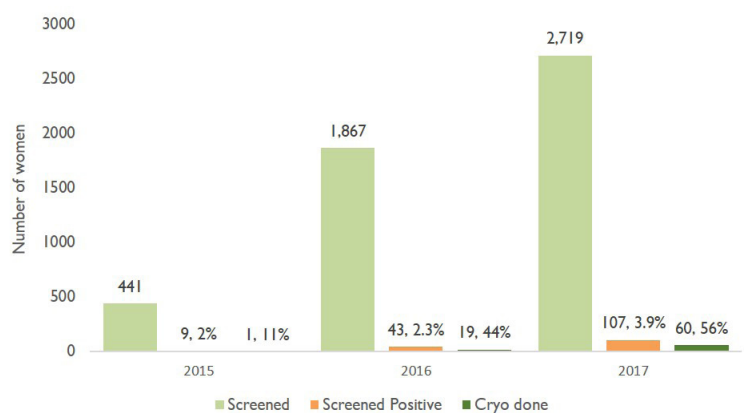
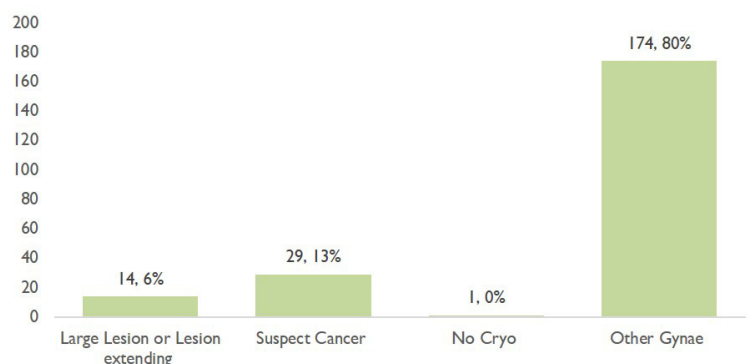


Figure 3: Reasons for referral to another facility



- There is a need to ensure availability of supplies and reagents such as acetic acid, speculums, gloves, normal saline, and gas for the cryotherapy equipment. Most Ministry of Health facilities lack funding to maintain sufficient supplies and have frequent stock-outs.
- Continuous mentorship and supervision by experienced providers from district and tertiary hospitals plays a great role in building the confidence of providers in primary health care facilities. This ensures the availability of competent staff to provide cervical cancer screening and treatment services.



Photo by Henry Nyaka

Cryotherapy machine (left of examination bed) used to freeze precancerous cells

Conclusions

Cervical cancer is the second leading cause of cancer deaths among women in the developing world. If caught early, it is treatable. This can be done through cervical cancer screening programs using VIA, which has been proven to be safe, effective, and resource efficient. Our experience shows that such an intervention can be easily implemented in primary health care facilities, with linkages and referrals established

with tertiary institutions for complicated cases. Particular focus should be given to people living with HIV, who are at increased risk of cervical cancer. Other key elements required for a successful program include availability of trained staff, supplies and reagents, and awareness among clients and the community.

This summary brief was prepared by Aziz Abdallah, Sarah Birse, and Elke Konings.

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Additional information can be obtained from:
Management Sciences for Health
Aziz Abdallah, Project Director, abdallah@msh.org
Lilongwe, Malawi