

Exploring barriers to the delivery of cervical cancer screening and early treatment services in Malawi: some views from service providers

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Background: Cervical cancer is the most common reproductive health cancer in Malawi. In most cases, women report to health facilities when the disease is in its advanced stage. In this study, we investigate service providers' perceptions about barriers for women to access cervical cancer screening and early treatment services in Malawi.

Methods: We conducted in-depth interviews with 13 district coordinators and 40 service providers of cervical cancer screening and early treatment services in 13 districts in Malawi. The study was conducted in 2012. The district coordinators helped the research team identify the health facilities which were providing cervical cancer screening and early treatment services.

Results: Almost all informants reported that cervical cancer was a major public health problem in their districts and that prevention efforts for this disease were being implemented. They were aware of the test and treat approach using visual inspection with acetic acid (VIA). They, however, said that the delivery of cervical cancer screening and early treatment services was compromised because of factors such as gross shortage of staff, lack of equipment and supplies, the lack of supportive supervision, and the use of male service providers. Informants added that the lack of awareness about the disease among community members, long distances to health facilities, the lack of involvement of husbands, and prevailing misperceptions about the disease (eg, that it is caused by the exposure to the VIA process) affect the uptake of these services.

Conclusion: While progress has been made in the provision of cervical cancer screening and early treatment services in Malawi, a number of factors affect service delivery and uptake. There is a need to continue creating awareness among community members including husbands and also addressing identified barriers such as shortage of staff and supplies in order to improve uptake of services.

Keywords: cervical cancer screening, HPV, Malawi, VIA, early treatment programs

Introduction

Cervical cancer is a major public health problem worldwide. In 2012, there were 528,000 new cases of cervical cancer and 266,000 deaths due to this condition globally.¹ In 2008, there were an estimated 529,800 new cases worldwide and more than 85% of these were in developing countries.² In 2008, there were an estimated 80,400 new cases of cervical cancer in Africa. This type of cancer is also responsible for 10.4% of all cancer deaths in Africa.³ In sub-Saharan Africa, 34.8 new cases of cervical cancer are diagnosed per 100,000 women annually, and 22.5 per 100,000 women die from the disease.¹ These statistics demonstrate that cervical cancer is quite common in developing countries, and this is exacerbated by the high prevalence of HIV among women. Studies have generally shown that HIV increases the risk for cervical cancer.⁴⁻⁶

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Cervical cancer is one of the few cancers that can be prevented through the use of the prophylactic HPV vaccine and also through early diagnosis and treatment of cervical cancer precursors. In developed countries, cervical cancer is a rare disease because of the availability of extensive cervical cancer screening programs among women.⁷ Such programs are, however, not widely available in most developing countries.⁸ Cervical cancer is a disease of poor women demonstrating inequities of access to health care resources.⁷ The exact burden of cervical cancer in developing countries remains undetermined. This is largely due to the lack of epidemiological data, human and financial resources, political will, and cancer service policies. Although cervical cancer related mortality can be reduced through screening and early treatment programs, ensuring high levels of coverage of these services continues to be a serious challenge in resource-constrained settings.

As is the case with most resource-poor countries, there is paucity of epidemiological data on cervical cancer in Malawi. The Malawi National Cancer Registry reports that cervical cancer is the most common reproductive health cancer in Malawi accounting for about 33% of all female cancers and 21% of all cancers. The cancer register is, however, only restricted to hospitals and does not cover patients who do not report to hospitals.⁹ In Malawi, the mortality rate among women due to cervical cancer has been estimated at 80%.¹⁰ These data suggest that cervical cancer is responsible for significant morbidity and mortality in Malawi.

About the study

In Malawi, there have been a number of attempts to expand cervical cancer screening, early treatment, and prevention at all levels of health care. Malawi embarked on a nationwide cervical cancer screening program in the late 1980s but the program experienced deterioration because of lack of financial resources and trained professionals and the absence of infrastructure.⁹ The cervical cancer screening and early treatment program was again launched as a pilot project in eight health facilities in the southern region of Malawi in 1999. The ultimate goal of this initiative was to stimulate interest in cervical cancer at policy and service provision levels. The strategic intervention implemented through this program was the single-visit approach as recommended by the World Health Organization. In this “test and treat” approach the uterine cervix is examined through visual inspection after application of acetic acid (VIA) followed by treatment of pre-cancerous lesions with cryotherapy. All these are accomplished at one visit to a health facility. Malawi endorsed the

use of VIA and cryotherapy for controlling cervical cancer in 2002¹¹ and included this in the National Reproductive Health and Rights Policy. The program targets women aged 30–50 years and was funded by the UK’s Department for International Development and the Bill and Melinda Gates Foundation.

The Ministry of Health and other stakeholders are implementing cervical cancer prevention interventions. As of the end of June 2011, 81 health facilities were providing cervical cancer screening and early treatment services, and since the program started, 59,217 women had been screened and 9.7% were found VIA+. This generally demonstrates that the cervical cancer screening and early treatment program has expanded over the years after the initial mainly donor-funded program was phased out. In 2011, the Government of Malawi introduced the HPV vaccine which targets girls aged 9–14 years. This paper evaluates, through a qualitative study, the status of the cervical cancer screening and early treatment and prevention program and the challenges being experienced by health facilities to deliver these services. The paper further looks at the acceptability of the “screen and treat” strategy (single-visit approach) to recipients of the service from the health providers’ perspective.

Methodology

Malawi is divided into three administrative regions and these are the northern, central, and southern regions. This study was conducted in 13 districts in Malawi namely Chitipa, Karonga, Mzimba, and Rumphi in northern region; Dowa, Lilongwe, Ntcheu, and Dedza in the central region; and Mulanje, Mangochi, Nsanje, Zomba, and Blantyre in the southern region. Each district has a coordinator for the delivery of cervical cancer screening and early treatment programs and there are also providers of these services. Our point of contact in each district was the district coordinator for these services who was asked to provide names of three health facilities which were providing cervical cancer screening and early treatment services.

In each district three health facilities providing these services were identified with the help of the district coordinators. At each health facility two providers of cervical cancer screening and early treatment services were supposed to be interviewed. In some cases there was only one such provider. A total of 13 coordinators and 40 service providers were interviewed. These interviews focused on whether cervical cancer was a problem in their respective districts, the cancer prevention efforts they were involved in, the advantages of the test and treat approach, and the

challenges they were experiencing in the delivery of these services. While district coordinators and service providers were asked questions on their experiences of providing cervical cancer screening and early treatment services, they were also asked about the challenges that their clients experienced in accessing services.

Ethical consideration

The proposal to conduct this study was submitted to the College of Medicine Research and Ethics Committee (COMREC) of the University of Malawi which is an approved institutional review board in Malawi. The research team started implementing this study after obtaining approval from COMREC. Informed consent was obtained from all the participants in this study. These participants were further assured of confidentiality and that the results would never be linked to them. No participant was coerced to take part in this study.

Data analysis

All the interviews were written and transcribed verbatim. All these interviews were read and reread in order to determine the major issues that were emerging. Content analysis was used to analyze this data. The data analysis for this article focused on health workers' perceptions about the barriers to accessing cervical cancer screening and early treatment services among women. All the authors participated in the analysis of the data for this article.

Results

Cervical cancer as a public health problem

Almost all the coordinators and providers of cervical cancer screening and early treatment services considered cervical cancer as a major public health problem in their districts. This was because most of their clients were being found VIA positive. For example, some informants in Ntcheu, Mangochi, and Mulanje said that out of all the women they screened per day, two to three of them would be found VIA positive. Informants considered cervical cancer a major public health problem as they were seeing many women with this condition. A few informants, however, said that while they acknowledged that cervical cancer was a problem they did not have the data to substantiate this. One informant at one of the referral hospitals said that she did not know whether cervical cancer was a problem in her district because the majority of the cases her facility handled were from other districts. Very few informants reported that cervical cancer was not a major

public health problem because the communities around the facility were aware of this condition through health education in churches, funerals, and community meetings, and, as a result, there were more women going to the health facilities for screening.

Cervical cancer prevention efforts at district level

Coordinators and providers of cervical cancer screening and early treatment services mentioned a wide range of cervical cancer prevention efforts being implemented in their districts. These services included health education, screening through VIA, and treatment of those found VIA positive with cryotherapy. Almost all informants in this study said that health education on cervical cancer was being conducted in the outpatient departments, in STI (sexually transmitted infections), family planning, and ART (antiretroviral therapy) clinics, as well as during outreach clinics conducted where cervical cancer screening and treatment services are offered. Drama groups formed by the Ministry of Health in some districts, both at district and lower levels, were helpful in conducting health education sessions especially at community level. While cervical cancer screening and other prevention efforts are being offered at district level a wide range of challenges to delivery of these services exist.

Advantages of the test and treat approach

All the coordinators and providers of cervical cancer screening and early treatment services were aware of the test and treat approach and they differentiated it from test and refer and test again and treat. Informants said that the test and treat approach is better than the test and refer approach because with the latter, due to various reasons, women do not go to the referral hospital; hence they do not get the assistance they require. For example in Ntcheu one informant said that they refer their clients to Kamuzu Central Hospital in Lilongwe and some of the women do not go after being referred for various reasons including lack of transport. Ntcheu District is located some 150 km away from Lilongwe; hence transport can be a major barrier. Lilongwe is the capital city of Malawi and has one of the major referral hospitals.

In districts where cryotherapy is not offered, either because the machines broke down or are not available, providers conduct the tests but they refer the cases. A provider in Nsanje District added that the test and treat approach is also good because some of the clients are found with STIs. These clients are referred to the STI clinic immediately where

they are treated without necessarily going home first. Most informants, therefore, reported that this approach is cheap for both the client and the provider. The test and treat approach ensures that no client is missed. The test and refer approach is also not good because VIA positive clients may progress to advanced cancer while waiting for referral, especially with HIV positive women, and that transport may not be available to go back to the clinic. Lastly, a few coordinators said that the test and treat approach also helps to prevent seeing most of the women with cervical cancer in advanced stages.

While the test and treat approach is good, some informants said that in some cases married women refuse to be helped on the same day preferring instead to tell their husbands or members of the family about this before they get any treatment. Service providers said that women need to inform their husbands before they undergo cryotherapy because after this they are supposed to abstain from sexual intercourse or use condoms if they cannot abstain for a period of 4 weeks. In some cases, however, informants said that some women do not care consulting their husbands before accessing cryotherapy, arguing that “it is their life and not that of their husbands.”

Sometimes the providers of these services do not treat people referred to them from other districts well: for example one provider in Mulanje said that they refer their clients to Queen Elizabeth Central Hospital in Blantyre which is one of the largest referral hospital in Malawi catering for southern Malawi. The distance between Blantyre and Mulanje is about 66 km. In some cases such patients are told to go back to Mulanje and this provider gave an example of one clinician at this referral hospital who said “What are our colleagues in Mulanje doing? We also have our own clients that we need to help.” It is also good to do test and treat if there is working equipment. The test and treat approach, according to informants, is acceptable to most women, especially within the context of good counseling, in which women do not resist VIA and cryotherapy, more women visit the health facilities, and health workers fail to meet the demands.

Challenges in the provision of cervical cancer screening and treatment services

Lack of equipment and supplies

In a number of health facilities which were visited during the study, cryotherapy was not being provided at the time of data collection because equipment had broken down and could not be repaired because of lack of funds. In such facilities cases requiring cryotherapy were referred to either district or central hospitals. In some cases these hospitals were located

very far making it difficult for clients to go and receive services. Some of the providers said that they were not confident in the provision of cryotherapy services because after being trained when they went back to their duty stations they found that machines had broken down. As a result they were referring cases to other health facilities. Another concern, as mentioned by the coordinators and service providers, is that the speculums and tenaculums are in short supply making service delivery very difficult.

Most informants also mentioned that they experience general shortage of supplies such as registers, gas, morphine, and acetic acid. There were some providers who said that in some cases nurses used their own money to buy acetic acid. They did this in order to ensure that services were not disrupted. Most districts reported that they ran out of supplies and that this was quite common especially after the phasing out of the donor-supported cervical cancer screening and early treatment program.

Lack of knowledge about cervical cancer

Most informants generally felt that the provision of cancer screening and early treatment services was a good approach. Their major concern was that many of their clients reported when the cervical cancer was already in advanced stages. These informants attributed this to lack of awareness about cervical cancer among the general population. While health facilities provide outreach services with the aim of reaching rural and hard to reach communities, informants said that the shortage of transport for scheduled outreach clinics hampers the delivery of cervical cancer screening and early treatment services. Service providers did acknowledge that while health education sessions are continuing, a large population of rural Malawians are yet to be reached with messages on cervical cancer screening and early treatment programs. At some health facilities in Nsanje most of the people who frequent the health facilities were from neighboring Mozambique; hence informants said that there was a need to reach the Mozambique border with awareness campaigns.

There also exist misperceptions about VIA which make some women not to go for the service. For example some service providers reported that there were misperceptions such as 1) women being unable to reproduce after undergoing VIA; 2) the use of the speculum would enlarge the vagina; and 3) fears among some women that their uterus would be removed during VIA after which their marriages would end because marriage is based on the understanding that women have to bear children. Other misconceptions as narrated by providers included that some women fail to access services

because they think that some contraceptives, especially pills, cause cervical cancer. The existence of such misperceptions acts as a barrier for women to access services.

The other challenge in accessing cervical cancer screening and early treatment services, according to some informants, is that services are offered to women who are generally healthy and hence they do not need any health interventions. This is why some informants said that some women do not see the reason for going to health facilities for screening when they are healthy, that is, they do not have any symptoms. An informant in Lilongwe said that some women believe that one can go to the hospital only when sick and added “tili ndi pakati ativute tili bwino atiganyulitsenso?” meaning, when (we) women are pregnant health workers will give us problems and when we are healthy they would also like to see our genitalia. This shows that prevention is not a priority as far as cervical cancer is concerned.

Long distances to health facilities

In almost all the districts, informants mentioned that long distances to health facilities also tend to deter most women from accessing cervical cancer screening and early treatment services. This is, especially, the case because these services are offered mostly at the hospital level and not at lower level facilities. Some health facilities will refer cases to central hospitals which are situated very far. In 2012, when data collection for this study was being done there was a shortage of fuel nationwide which made it difficult for clients to go to central hospitals to receive treatment. Distance is, therefore, a major barrier to accessing cervical cancer screening and early treatment services in Malawi.

The use of male providers and age as barriers

The use of male providers can be a barrier for women to access cervical cancer screening and early treatment services. This was mentioned by coordinators and service providers in several districts. For example, one informant in Mangochi said that people from the area do not like their private parts exposed. She gave an example of a couple who visited the hospital and the woman was complaining of irregular menses. One male clinical officer wanted to do vaginal examination, but was denied because he was a male provider. The woman was then helped by a female clinician. One provider in Mulanje said that some women are also shy which makes it difficult for them to access care. The use of male providers may therefore be a barrier for women requiring these services. With regard to client related factors, a number of providers mentioned that age constitutes an important barrier

to accessing services by women. They explained that if a provider is much younger than the client some women may not be willing to seek assistance from such providers preferring, instead, older providers.

Lack of involvement of husbands

While the aim of offering cervical cancer screening and early treatment services is to test and treat, some women opt to go home first before getting the treatment and consult their husbands and relatives. It is easy, as mentioned by informants, for those who visit the health facilities with their husbands to be tested and treated. It is difficult, however, for women to adhere because in most cases their husbands do not go with their wives for counseling. Soon after undergoing cryotherapy women are supposed to abstain from sexual intercourse or use condoms for a period of 4 weeks. Informants, however, said that some men do not like to use condoms, especially in an environment where men “control” sexual activity. Some providers said that they were not sure if their clients adhered and added that some women reported that they had problems especially with their husbands. In order to address problems they have with their husbands, some health workers said that they advised their clients to go to the health facilities with their husbands so that health workers could also explain to the husbands about home care requirements posttreatment. The information on things that are supposed to be followed post treatment is supposed to be given to both the husband and the wife. However, in most cases men do not go with their wives to facilities that offer cervical cancer screening and early treatment services. A few providers, however, said that there are some women who will adhere to posttreatment requirements because they want to be cured and that they are the ones who are poor. The success of this program depends on the willingness of the husbands to accompany their wives.

Shortage of staff

Most informants said that one of the major weaknesses is that there are a few members of staff who are involved in the delivery of cervical cancer screening and early treatment services. In some facilities only one provider provided these services and he or she was also required to provide antenatal and family planning services among others; hence they were overloaded with work. In some districts such as Mulanje some informants said that they were offering cryotherapy services but these services were not available in neighboring districts hence they received quite a lot of clients from there as well. This has greatly increased their workload. At one health

facility cervical cancer screening and treatment services were even suspended because of shortage of staff.

Over the years a number of cervical cancer screening and treatment providers have been trained by various organizations including the Ministry of Health. The general feeling among informants was that the number of providers who have been trained is inadequate to meet the needs of the people. In some districts even though more service providers were trained, the problem was that not all were providing these services. For example a respondent in Ntcheu said that at the time of the study there were only two providers who were providing services but a total of 13 health workers had attended the training in 2008. In almost all the districts informants mentioned that there were more providers who were trained but others were not providing cervical cancer and early treatment services because they were not interested or had been assigned to other duties. The shortage of staff, therefore, affects service delivery.

Services are not offered on an everyday basis

One of the major concerns raised by some service providers was that they wished their health facilities provided cervical cancer screening and early treatment services every day just like the way supermarkets operate. In some of the health facilities, services were only provided once a week. If clients visited the health facility, they are not attended to unless it is a day when the services are being offered. This implies that they have to visit the hospital again the following week on a day when these services are offered. This can be costly for clients and this is why some do not go to the hospital again.

Lack of space

In some health facilities informants mentioned that they have inadequate space where cervical cancer and early treatment services are delivered. Some of these rooms were also being used for provision of other services such as antenatal and family planning services. At one of the health facilities in Lilongwe service providers said that they do not have their own space where they can provide these services instead they borrow from family planning. When the room is being used for family planning they have to wait until they finish for them to start providing these services.

Lack of supervision of services

Supervision of health workers is a necessary monitoring and evaluation tool for the health system. Providers of cervical cancer screening and early treatment services were asked if

they were satisfied with the supervision and guidance that they received in their work. In general most providers were not satisfied with the level of supervision because their superiors did not visit them for supervision. Supervisors are supposed to visit the facilities providing these services in order to identify if there are any problems affecting service delivery and advise providers accordingly. Most of the providers claimed that either they have never been supervised since they finished their training and started providing services or they have only been supervised once, for example, a provider in Karonga said that since she was trained she has never been supervised and it is now close to 1 year. Supervision of providers of cervical cancer screening and early treatment services is generally weak. Most informants said that this was not the case during the time these services were being supported by donors: providers said that at the time the program was being supported by donors supervision was on a quarterly basis and this ensured that providers were following procedures. One provider in Lilongwe even said that as at the time of data collection they had a lot of unanswered questions but there was no one they could ask because the supervisors were not visiting the health facility.

Discussion

In order to attain a highly successful cervical cancer screening program, there is a need for having a high coverage of women at risk of getting this condition. In order to achieve this, people should be aware of this disease and the availability of early detection and treatment services at health facilities.⁵ In Malawi, although service providers reported that a lot of women suffered from this disease, they, however, acknowledged that a substantial proportion of the population is still unaware of the condition. Another study has reported that most women are unaware of the condition till the time of diagnosis.¹¹ A study conducted in Mulanje in southern Malawi also found that many women in this district never went for screening for cervical cancer.¹⁰ Poor knowledge about cervical cancer screening is a major barrier and that in the absence of adequate knowledge women are not likely to present for screening.^{7,9,10,12} Since most women are often uninformed about interventions such as cervical cancer screening there is no demand for such services by these women.⁴ Women, therefore, present themselves to professionals only for curative rather than preventive health care and only the presence of illness justifies access to health care.¹²

This study has also found that there were some logistical problems, such as lack of transport, which prevented service providers from reaching the community. Conducting health

education sessions especially in remote rural areas where the majority of advanced cases of cervical cancer come from would help to address the problem. Since Health Surveillance Assistants (HSAs) are resident at the community level, it might be necessary to explore how they can be more involved in terms of creating awareness and hence creating demand for cervical cancer and early treatment services at community level. These HSAs are the lowest cadre employed by the Ministry of Health and are based at community level mainly implementing promotive and preventive health services. Even if demand is created through health education, access to services will still be a problem because health facilities offering these services are located far from the community. Widespread poverty is one of the barriers to cervical cancer screening in developing countries.⁷ As was mentioned by the informants in this study, women fail to report to the health facility for screening and treatment because of transport, among other poverty related factors. The introduction of cervical cancer screening and early treatment services at the health center level, according to informants in this study, is feasible and would help address existing problems such as distance and cost and help in decongesting hospitals. The challenge, however, is that cervical cancer screening and early treatment program is experiencing huge problems after the donor supported program phased out.

The delivery of cervical cancer screening and early treatment services in Malawi is also hampered by inadequate equipment and supplies. The phasing out of the donor supported provision of cervical cancer screening and treatment services has contributed greatly toward the current status of equipment and supplies. A 2002 evaluation of the Project Hope support to cervical cancer screening and early treatment services in Mulanje and Blantyre revealed that in general there was adequate and functional equipment and supplies for the program.¹³ The current study found that in most health facilities visited cryotherapy machines were not working and some of the machines had not been working for extended periods of up to 3 years. Hence, women who are found VIA+ were being referred to central and other hospitals which had functional equipment. While the Ministry of Health tries to ensure availability of adequate supplies for running an effective cervical cancer screening and early treatment program, in most health facilities providers complained about gross shortage of supplies (eg, acetic acid) which made provision of cervical cancer screening and early treatment services quite challenging unlike the time when the program was being supported by donors. A study conducted between April and June 2008 at the Family Planning Clinic

at Kamuzu Central Hospital in Lilongwe found that about 12% of the respondents reported that inadequate equipment and supplies affected the delivery of cervical cancer prevention activities.⁹

These results also demonstrate that human resource is a major issue in the delivery of cervical cancer screening and early treatment services. There were a few providers of these services who were also expected to provide other services such as family planning and prevention of mother to child transmission of HIV services. The shortage of staff was also exacerbated by the fact that even though more providers were trained, only a few provided services for various reasons. About two-thirds of respondents in a study conducted at Kamuzu Central Hospital reported that shortage of staff constrained service delivery.⁹

The 2002 evaluation of cervical cancer screening and early treatment services provided by Project Hope also found that the delivery of these services was compromised by existing misperceptions about the program such as women failing to reproduce after undergoing VIA and cryotherapy, or that utilization of family planning methods causes cervical cancer.¹³ It was also found that some women do not like being examined vaginally especially by members of the opposite sex. In South Africa, Wood et al¹⁴ also found that nurses reported that women in general are afraid of exposing their private parts. They also found that among the Xhosa there is a belief that it is an aberration for older women to be exposed vaginally to nurses much younger than themselves, perhaps a generation. The sex of the practitioner performing the smear emerged as a barrier as women prefer fellow women to do the smear.¹⁴

The current study also found a number of misperceptions which affect the uptake of cervical cancer screening and early treatment services. In a South African study, it was also reported that some unscreened informants had heard from others that the procedure was sore and it caused women to walk with open legs for a while.¹⁴ There is therefore a need to address these prevailing misperceptions and beliefs through effective health education programs at the community level which can actually be conducted by HSAs once they are properly oriented.

As far as informants were concerned, the test and treat approach to cervical cancer control is acceptable to women even though in some cases women would still want to get permission from their husbands before undergoing cryotherapy; hence the delay in seeking care. Men generally have an important role in decision making in the family and if knowledgeable about cervical cancer they can actually motivate

their partners.⁸ However, studies have shown that men do not have knowledge about cervical cancer.¹⁵ Promoting partner participation in cervical cancer screening and early treatment services would increase the uptake of these services.

Conclusion

Some significant progress has been made in the delivery of cervical cancer screening and early treatment services. The number of health facilities has increased since the phasing out of donor-funded pilot cervical cancer screening and early treatment services. This has been accompanied by a corresponding increase in the number of providers who have been trained. The quality of services being delivered has, however, been compromised by the general lack of supervision of providers and coordinators at district level, the lack of appropriate equipment and adequate supplies, and the general shortage of human resources to effectively deliver cervical cancer screening and early treatment services. There is a need to continue creating awareness among community members, including husbands, about cervical cancer available services. Investments also need to be made in order to address other barriers. There is an opportunity to adequately respond to the problems of cervical cancer, as unlike in the past the disease is now included in Malawi's Essential Health Package as defined in Malawi Health Sector Strategic Plan 2011–2016.

Disclosure

The authors report no conflicts of interest in this work.

References

1. International Agency for Research on Cancer. Latest world cancer statistics [press release]. Geneva, Switzerland: IARC; [December 12, 2013]. Available from: http://www.iarc.fr/en/media-centre/pr/2013/pdfs/pr223_E.pdf. Accessed December 26, 2014.
2. American Cancer Society. *Global Cancer Facts and Figures*. 2nd ed. Atlanta, GA: American Cancer Society; 2011.

3. Sylla BS, Wild CP. A million Africans a year dying from cancer by 2030: what can cancer research and control offer to the continent. *Int J Cancer*. 2012;130:245–250.
4. Palefsky JM. Cervical human papillomavirus infection and cervical intraepithelial neoplasia in women positive for human immunodeficiency virus in the era of highly active antiretroviral therapy. *Curr Opin Oncol*. 2003;15:382–388.
5. Sahasrabudde C, Makhija S. Double jeopardy: HIV and cervical cancer in Indian women. *Int J Gynecol Cancer*. 2005;15(1):1–3. doi:10.1111/j.1048–891X.2005.15001.x.
6. Ononogbu U, Almuftaba M, Modibbo P, et al. Cervical cancer risk factors among HIV-infected Nigerian women. *BMC Public Health*. 2013;13:582.
7. Denny L. The prevention of cervical cancer in developing countries. *Int J Obstet Gynaecol*. 2005;112:1204–1212.
8. Claeys P, Gonzalez C, Gonzalez M, Page H, Bello RE, Temmerman M. Determinants of cervical cancer screening in a poor area: results of a population-based survey in Rivas, Nicaragua. *Trop Med Int Health*. 2002;7(11):935–941.
9. Nkhoma G. *Abnormal Cervical Lesions among HIV+ Women Attending to Cervical Cancer Screening at Kamuzu Central Hospital in Lilongwe, Malawi* [MPH Dissertation]. Blantyre: College of Medicine, University of Malawi; 2008.
10. Fort VK, Markin MS, Siegler AJ, Ault K, Rochat R. Barriers to cervical cancer screening in Mulanje, Malawi: a qualitative study. *Patient Prefer Adherence*. 2011;5:125–131.
11. Kayange P. Fighting against cervical cancer: the case of Malawi. *Malawi Med J*. 2005;17(2):43–44.
12. Markovic M, Kesic V, Topic L, Matejic B. Barriers to cervical cancer screening: a qualitative study with women in Serbia. *Social Sci Med*. 2005;61:2528–2535.
13. Salvador-Davila GI. *Cervical cancer screening and early treatment (CCSET) program in Mulanje and Blantyre, Malawi; April 1999–March 2002*. Blantyre, Malawi: Project Hope; 2002.
14. Wood K, Jewkes R, Abrahams N. Cleaning the womb: constructions of cervical screening and womb cancer among rural black women in South Africa. *social Sci Med*. 1997;45(2):283–294.
15. Maree JE, Wright SCD, Makua TP. Men's lack of knowledge adds to the cervical cancer burden in South Africa. *Eur J Cancer Care*. 2011;20:662–668.

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