The Government of Malawi

Ministry of Health

NATIONAL CERVICAL CANCER CONTROL STRATEGY

2016-2020

October 2017

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Foreword

Cervical cancer is a public health problem in Malawi. It is the most common and the leading cause of cancer deaths among women in Malawi. **Cervical cancer represents 40% of all cancer among females and Malawi has the highest age standardized incidence rate at 75.9 per 100 000 in the world.**

Human papillomavirus (HPV) causes virtually all cases of cervical cancer. Cervical cancer is also closely linked with Human Immunodeficiency Virus (HIV). In HIV infected women, cervical cancer is an AIDS defining illness. Cervical cancer affects women who are still in the economically productive age group. Death of women from cancer causes disruption of families and negatively impacts the development of children. With HIV prevalence of 13% among adult women (15-49years) in Malawi and the continued rise in incidence of cervical cancer cases despite antiretroviral therapy roll out, cervical cancer continues to be a threat to our society's economic growth and development.

Fortunately, cervical cancer is preventable. There are now HPV vaccines that if given to adolescent girls have been shown to effectively prevent HPV infection and a large portion of cervical cancer. Organized cervical cancer screening and treatment of pre-cancerous lesions has also been shown to reduce deaths from cervical cancer by 70% in previously unscreened population in developed countries. This success has not been realized in developing countries due to numerous health systems challenges and community awareness.

The Malawi Ministry of Health has been implementing a Cervical Cancer Control Programme (CECAP) in collaboration with its stakeholders. The CECAP has largely focused on screening women with Visual Inspection with Acetic Acid and treatment of pre-cancerous lesions with cryotherapy. From 2013, Malawi started implementing an HPV vaccine pilot demonstration project in Rumphi and Zomba districts. The National Cervical Cancer Control Strategy 2016-2020 has been developed to incorporate emerging issues from existing efforts at cervical cancer prevention and control, and also to incorporate HPV vaccine and promote integration of cervical cancer screening into HIV care. The strategy outlines comprehensive interventions to be taken by government and other partners in mitigating the burden of cervical cancer.

Malawi Government is committed to implementing this strategic plan despite the financial and institutional challenges. We do recognize that effective cervical cancer prevention and control requires multi-sectoral and multidisciplinary approach. In this regard, I call upon other government departments, development partners, training institutions, private sector and the civil society to join us in the fight against this preventable but devastating disease, particularly in mobilizing the necessary resources and promoting utilization of the preventive services put in place.

MP Mwagwira, *PhD*
Secretary for Health

Acknowledgements

The Ministry of Health is grateful to the following individuals and organizations for their contribution to the development of this strategy.

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The Ministry is also grateful to the consultant, Dr Lameck Chinula, who led the development of the strategy in collaboration with stakeholders and individuals mentioned above. Finally, the Ministry of Health would like to express its gratitude to the United Nations Population Fund for the support rendered in the development, finalization and printing of this strategy.

Acronyms

AIDS	Acquired Immunodeficiency Syndrome
ASR	Age Standardized Rate
AMAMI	Association of Malawian Midwives
ART	Antiretroviral Therapy
BLM	Banja la Mtsogolo
CHAM	Christian Health Association of Malawi
CECAP	Cervical Cancer Control Programme in Malawi
CDC	US Centers for Disease Control and Prevention
CCTAG	Cervical Cancer Technical Advisory Group
CMED	Central Monitoring and Evaluation Division
DNA	Deoxyribonucleic Acid
EHP	Essential Health Package
EMIS	Education Management Information System
EPI	Expanded Programme on Immunization
FPAM	Family Planning Association of Malawi
HEU	Health Education Unit
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HPV	Human Papillomavirus
IARC	International Agency for Research on Cancer
IECs	Information, Education and Communication
KCH	Kamuzu Central Hospital
KAP	Knowledge Attitude and Practices
LEEP	Loop Electrosurgical Excisional Procedure
LLETZ	Loop Excision of Transformation Zone
LMICs	Low-and-middle income countries
MANET+	Malawi Network of People Living with HIV/AIDS
M&E	Monitoring and Evaluation
MoH	Malawi Ministry of Health
MDGs	Millennium Development Goals
NAPHAM	National Association for People Living with HIV and AIDS in Malawi
NGOs	Nongovernmental organizations

NHP	National Health Policy
NCDs	Non-communicable Diseases
NMOM	Nurses and Midwife Organization of Malawi
RHD	Reproductive Health Directorate
RH	Reproductive Health
STI	Sexually transmitted infections
SSA	sub-Saharan Africa
SDGs	Sustainable Development Goals
ToRs	Terms of Reference
TWG	Technical Working Group
UNICEF	United Nations Children's Fund
UNFPA	United Nations Populations Fund
UN	United Nations
UNC-CH	University of North Carolina at Chapel Hill
VDCs	Village Development Committee
VHCs	Village Health Committee
VIA	Visual Inspection with Acetic Acid
VILI	Visual Inspection with Lugol's Iodine
SWOT	Strengths, Weakness, Opportunities and Threats
WHO	World Health Organization
WILSA	Women in Law in Southern Africa
YONECO	Youth Net and Counselling

Introduction

1

Cervical cancer is a disease that results from failure of the mechanisms that regulate normal cell growth and cell death leading to uncontrollable proliferation of cervical cells. The cancerous cells have a tendency to proliferate uncontrollably, invading neighboring tissues and eventually, spreading to other parts of the body.

Human papillomavirus (HPV), the most common sexually transmitted infection (STI) is a prerequisite for the development of cervical cancer. Most genital HPV infections are transient and are not associated with persistent cervical disease. Almost all cases of cervical cancer are caused by the persistent HPV infection with one or more of the "high-risk" (or oncogenic) types of HPV which may lead to the development of pre-cancer which, if left untreated, can lead to invasive cancer. There are numerous risk factors for cervical cancer and these include early sexual debut (before age 16), high parity, lower socioeconomic status, behavioral and environmental factors such as multiple sexual partners and cigarette smoking [1].

Cervical cancer is unique. The natural history of the disease is well understood: from persistent HPV infection, there is a very slow progression of the disease, which can take 10-20 years, particularly in immunocompetent women, from normal (healthy) to pre-cancer, to invasive cancer [2]. This provides a window of opportunity for early screening, detection of pre-cancerous lesions and treatment. In addition, HPV vaccines are now available and if given to all adolescent girls before they are sexually active, can prevent a large portion of cervical cancer.

1.1 Human Immunodeficiency Virus and Cervical Cancer

Cervical cancer is an AIDS defining illness in Human Immunodeficiency Virus (HIV) infected women. HIV and HPV have a synergistic relationship. HIV infected women have higher prevalence of HPV infection, persistent infection with HPV, infection with multiple types of HPV, and cervical pre-cancer than HIV-uninfected women [3-5]. HIV also increases the risk of cervical cancer by 2-22 folds [6]. The increased susceptibility to HPV infection among HIV infected women leads to a greater risk of developing pre-cancer and cancer at younger ages, which increases with the degree of immunosuppression. HIV infected women also have an increased risk of pre-cancer progression to invasive disease [6].

1.2 Global and Regional Burden of Cervical Cancer

Cervical cancer is the fourth most common cancer among women worldwide. In 2012, there were 528 000 new cases of cervical cancer diagnosed worldwide with 85% of these occurring in less developed countries. There were also 266 000 deaths due to cervical cancer in the same year. Furthermore, almost 9 out of every 10 of these lived and died in low-to-middle income countries (LMICs). In contrast,1 out of every 10 of these women, lived and died in high-income countries [7].
In Sub-Saharan Africa (SSA), cervical cancer is the most common cancer in women and second to breast cancer in northern Africa. Cervical cancer accounts for 22.2% of all cancers in women and the leading cause of cancer death among women in SSA [8]. The overall age-standardized incidence rate (ASR) of cervical cancer 31 per 100,000 women and is the highest in the world [9]. Furthermore, about 60–75% of women in SSA who develop cervical cancer live in rural areas [10] and mortality is very high [11]. This causes substantial disruption to families and increasing burden of orphan and vulnerable children in developing countries.

Cervical cancer is preventable.

Universal access to cervical cancer screening and treatment of pre-cancerous lesions is a highly effective intervention that has led to a 70% reduction in mortality due to cervical cancer in developed countries [12]. Similar successes have yet to be replicated in LMICs. There are now HPV vaccines, bivalent Cervarix and quadrivalent Gardasil for adolescent girls, that protect against two high-risk types of HPV 16 and 18 that cause 70% of cervical cancer cases [2]. HPV vaccines require fewer resources than routine screening and treatment of cervical cancer cases. They therefore provide hope for the control of cervical cancer even in LMICs particularly if universally accessible to the target population.

The main reasons for the higher incidence and mortality in developing countries are [13-16]:

i. Lack of awareness about cervical cancer among the general public, health care providers and policy-makers
ii. Unavailable or non-existent high quality cervical cancer prevention and control services
iii. Fragmented or dysfunctional healthcare infrastructure
iv. Lack of effective referral systems
v. Lack of appropriate public health policies
vi. Other competing health priorities

1.3 Cervical cancer in Malawi

Cervical cancer is the most common and the leading cause of cancer deaths among women in Malawi. It accounts for 40% of all cancer cases among women. It is estimated that 3, 684 women develop cervical cancer and 2, 314 die from the disease annually (Fig1) [7, 17, 18]. Malawi has the highest rate of cervical cancer in the world with age standardized rate (ASR) of 75.9 per 100 000 (Fig 2) [7]. HPV prevalence is also high at 33.6% [18].

Figure 1: Cervical Cancer Incidence and mortality in Malawi

(Source: http://globocan.iarc.fr/Pages/fact_sheets_population.aspx)

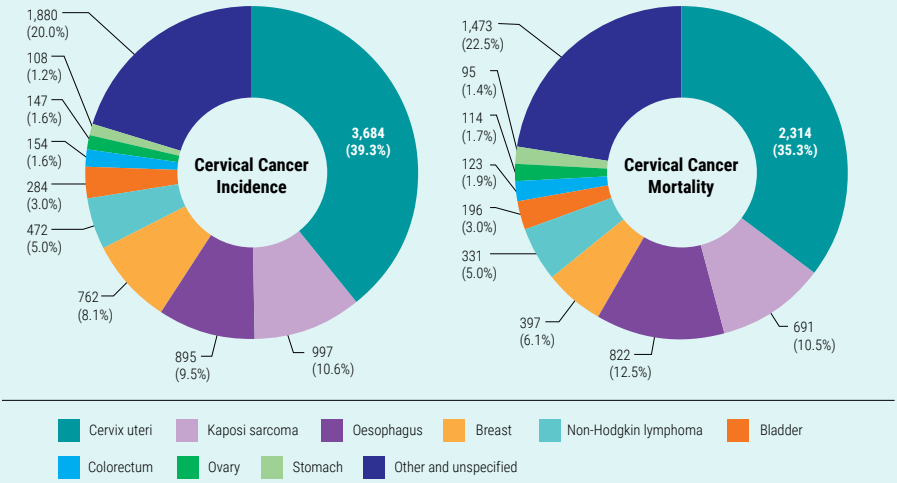


Figure 2: Cervical Cancer ASR (Incidence and Mortality)

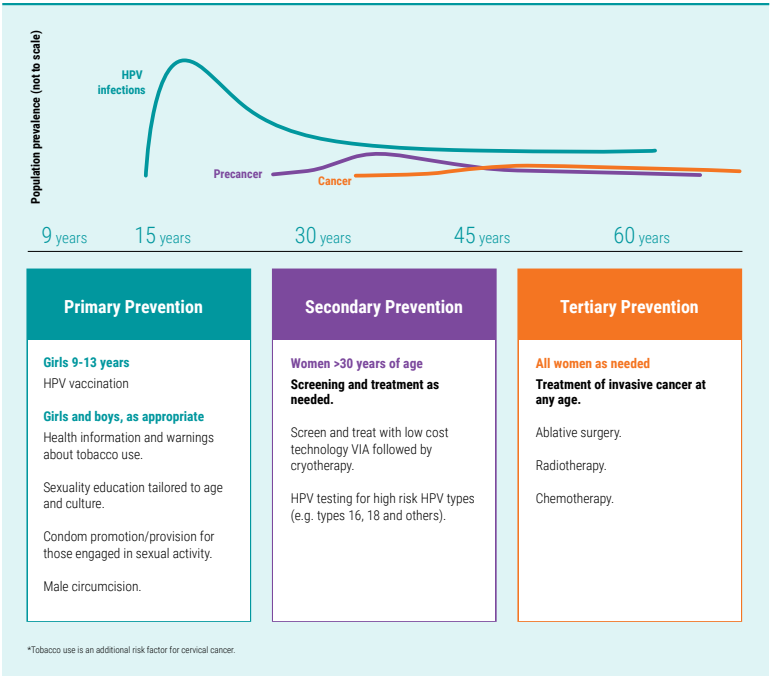
Malawi has an HIV prevalence rate of 13% among women aged 15-49 with HIV prevalence highest among women aged 35-39 (24%) [19]. High-grade pre-cancerous lesions and cervical cancer are also very common among Malawian women [20, 21]. Between 2007 and 2010, cervical cancer accounted for 25.4% of the three classical AIDS-defining cancers [22]. It is expected that the number of cervical cancer cases and deaths will continue to increase.

Principles of cervical cancer prevention and control

2

A comprehensive approach to cervical cancer prevention and control aims to identify opportunities for delivering effective interventions at various stages of the life cycle of the disease. It is multidisciplinary and comprises programmatic interventions in the following priority areas (Fig 3) [23]:

Figure 3: Overview of programmatic interventions over the life course to prevent HPV infection and cervical cancer



2.1 Primary prevention

Transmitted through sexual intercourse, HPV is the primary cause of cervical cancer. Other co-factors facilitate the development of cervical cancer. Primary prevention aims at preventing HPV infection and minimizing exposure to the co-factors for cervical cancer development.

Key interventions include:

1. HPV vaccination for girls aged 9–13 years, aiming for vaccination before sexual debut
2. Health information and warnings about tobacco use
3. Sexuality education tailored to age & culture (along with other sexually transmitted infections, including HIV) – essential messages should include delay of sexual initiation, and reduction of high-risk sexual behaviours
4. Condom promotion or provision for those who are sexually active
5. Male circumcision

2.2 Secondary prevention

This is aimed at early detection and treatment of precancerous lesions and cancer in women at risk, most of whom will be without symptoms. There are several methods for detection of cervical pre-cancerous lesions. These include Visual Inspection with Acetic Acid (VIA), Visual Inspection with Lugol's Iodine (VILI), cervical cytology (conventional pap smears or liquid based cytology) and HPV DNA testing. Pre-cancerous lesions can be treated with ablative procedures such as cryotherapy, thermo-coagulation or excisional procedures such as Loop electrosurgical excisional procedure (LEEP) also known as large loop excision of the transformation zone (LLETZ) or cone biopsy. In setting where resources are not available or are limited and where there are high rates of loss to follow up, screen-and-treat without diagnostic confirmation is recommended [2].

Key interventions include:

1. Counselling and information sharing about screening for cervical cancer
2. Screening and treatment of precancerous lesions with country appropriate or health facility appropriate methods: e.g. low cost technology such as VIA followed by cryotherapy, or HPV testing for high risk HPV types (e.g. types 16, 18 and others) where appropriate
3. At a minimum, screening for every woman 30–49 years of age at least once in a life time

2.3 Tertiary prevention: diagnosis and treatment of invasive cervical cancer

This involves timely diagnosis and treatment of invasive cervical cancer in order to decrease the number of deaths due to cervical cancer. This component of care requires specialised diagnostic equipment, access to histopathology laboratories and specially trained health personnel to provide the required care. Unlike the former two, this is usually offered at a higher level of care such as a tertiary health facility than primary or secondary health care facilities.

Key interventions include:

1. A functioning referral mechanism from primary and/or secondary care facilities to tertiary facilities that offer cancer diagnosis and treatment
2. Timely cancer diagnosis, exploring the extent of invasion and treatment appropriate to each stage, based on diagnosis
3. Treatment largely comprise of surgery and/or radiotherapy. Chemotherapy can complement the treatment regimen in late stages of the disease
4. Palliative care: for women with life-threatening cervical cancer is aimed at improving quality of life, control symptoms and minimize suffering

The strategic plan

3

3.1 Rationale for the Strategic Plan

Malawi government recognizes cancers as one of the leading causes of morbidity and mortality in Malawi.

The Malawi Ministry of Health (MoH) has therefore included management of cancers, such as cervical cancer in the Essential Health Package (EHP). The 2004 National Cervical Cancer Prevention Program Strategy was developed before this inclusion of cancers in the EHP. The Malawi National Cervical Cancer Control Programme (CECAP) was established to coordinate national efforts to mitigate the burden of cervical cancer.

Despite over 10 years of implementation of the CECAP, the MoH realized that the strategies set out in 2004 have been met with many challenges. Therefore, there was a need to develop a new strategy that will consolidate the lessons learnt so far and effectively galvanise national efforts to mitigate and address this scourge.

In addition, Malawi has implemented an HPV vaccination demonstration project in 2 districts, Zomba and Rumphi. The lessons learnt from the project require the country to re-think the cervical cancer prevention strategy by adopting wide scale HPV vaccination for adolescent girls into the CECAP.

The 2016-2020 strategic plan will therefore aim to incorporate several emerging issues from the current CECAP including the HPV vaccination demonstration project. This strategic plan will focus on the following key priority areas: community awareness and mobilization, policy and advocacy, primary prevention including HPV vaccination scale up, secondary prevention, tertiary care, and research, monitoring and evaluation.

3.2 The Development of the Strategy

The MoH Reproductive Health Directorate initiated the development of this strategy. This strategy was developed through a highly consultative process with relevant stakeholders and key informants with funding support from United Nations Population Fund (UNFPA). Terms of reference (ToRs) were developed by the MoH with technical support from the development partners. A consultant was then identified to lead the development of the strategic plan in collaboration with relevant stakeholders. The following components constituted the development process:

1. A stakeholders meeting was held to discuss the ToRs and the technical approach proposed by the consultant. A consensus on the ToRs, the technical approach and the expected deliverables were reached
2. Extensive literature review was conducted
3. Key informant interviews and consultative meetings were conducted by the consultant and his associates.

The findings from this strategic development process were used to develop a draft strategic plan which was reviewed by relevant stakeholders. The strategic plan also received input from the safe motherhood technical working group (TWG).

Cervical Cancer Control Programme in Malawi

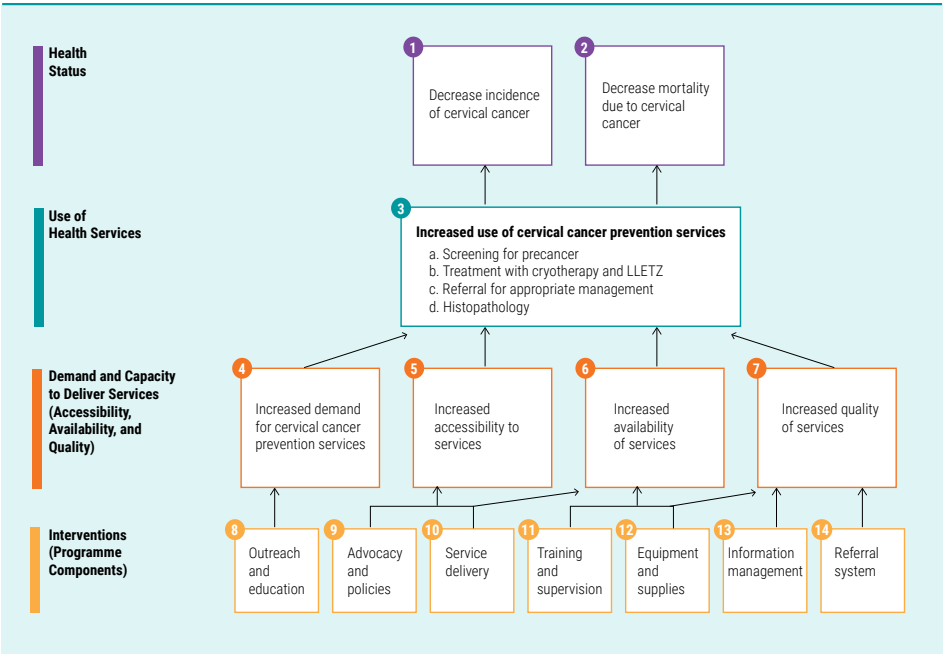
4

Cervical cancer control programme was initiated through a pilot project by Project HOPE from 1999 to 2002 in selected health facilities in Blantyre and Mulanje districts.

The CECAP was established in 2004. In August 2004, MoH produced the National Cervical Cancer Prevention Programme Strategy and later in May 2005, the National Service Delivery Guidelines for Cervical Cancer Prevention. These documents aimed at providing the up-to-date knowledge and direction on cervical cancer control and form a foundation for policy makers, programme managers and service providers at all health facilities in both the public and private sectors, as well as non-governmental organizations (NGOs) in planning, implementation and monitoring of cervical cancer control activities in the country.

The cervical cancer prevention and treatment strategy in Malawi is based on a single visit (screen-and-treat) approach with screening using VIA and treatment/ management with cryotherapy and/or referral for surgery and palliative care where applicable. Fig 4 provides the framework for the CECAP.

Figure 4: Framework for the CECAP



4.1 Policy environment

Malawi reaffirmed its commitment to primary health care as a strategy for delivering health services and as an approach to ensuring realization of the Millennium Development Goals (MDGs), and is a signatory to the Ouagadougou Declaration on Primary Health Care and Health Systems in Africa: Achieving Better Health for Africa in the New Millennium. The MDGs came to an end in 2015. The follow on global development agenda, the Sustainable Development Goals (SDGs), which sets out the global development goals to be achieved by 2030 mention health in Goal number 3 which reads 'ensure healthy lives and promote well-being for all at all ages'. Specifically goals 3.4 and 3.7 talk about 'reducing premature mortality from non-communicable diseases (NCDs)' and 'ensuring universal access to sexual and reproductive health care services' respectively [24]. These goals reinforce the need for United Nations (UN) member countries such as Malawi to take concrete steps to, among others, formulate policies and strategies that deal with cervical cancer as a NCD and in the broad context of reproductive health.

The National Health Policy (NHP) formulated by the Ministry of Health is in place and serves as an overarching policy document, anchoring all sector strategies and individual policies. Integration of the Essential Health Package (EHP) service delivery at all levels is emphasized and this prioritizes health promotion, disease prevention, and community participation in health service delivery; strengthens public–private partnerships and encourages efficient, cost-effective use of health resources.

The National Health Sector Strategic Plan 2011-2016 addressed the burden of disease by delivering an expanded EHP through public health interventions including, but not limited to, health promotion, disease prevention, and increasing community participation.

Comprehensive Reproductive Health (RH), as defined at the 1994 International Conference on Population and Development in Cairo, and subsequently endorsed at the 1995 Fourth World Conference on Women at Beijing states that comprehensive RH is "A state of complete physical, mental and social well-being and not merely the absence of disease and infirmity in all matters related to the reproductive system and its functions and processes." Malawi through the Ministry of Health also subscribe to this concept.
The National Reproductive Health Strategy 2006-2010 and later the National Sexual and Reproductive Health and Rights Strategy 2011-2016 were therefore developed to give direction and guidance to implementation of a comprehensive and integrated RH programme, so as to achieve the highest possible level of quality integrated RH for all Malawians particularly women. Although it was acknowledged that reproductive cancer services are a critical component of the national RH programme, only cervical cancer was addressed in the National RH Health Strategy.

The Malawi National Reproductive Health Service Delivery Guidelines 2014-2019, the 2005 National Service Delivery Guidelines for Cervical Cancer Prevention and the 2004 National Cervical Cancer Prevention Programme Strategy are evidence of the MoH commitment to ensuring that efforts aimed at mitigating the burden of cervical cancer control are guided by well thought-through strategies and programme activities. Furthermore, the recognition of the public health importance of cancer in general and cervical cancer in particular warranted

inclusion of cancer in the current list of Essential Health Package (EHP) conditions as enshrined in the Malawi Health Sector Strategic Plan 2011-2016.

4.2 Overview of the health care system in Malawi

Malawi government through the MoH provides leadership for effective consolidation and coordination of efforts in the prevention and control of cervical cancer. There are three levels of health care service delivery in Malawi:

Primary level: the services provided range from promotive and preventive services to some curative services provided by community based cadres such as health surveillance assistants, nurse technicians, medical assistants and clinical officers.

Secondary level: these are referral facilities for primary level and is largely comprised of district and mission hospitals where both inpatient and outpatient services are available. The services are provided by nurses, clinical officers and medical officers.

Tertiary level: these are referral facilities for secondary level facilities and are comprised of central hospitals. These facilities are housed by a range of health professionals from nurses, clinical officers, medical doctors to specialist medical practitioners. They also act as training institution and have a wide range of diagnostic and therapeutic services.

The public health facilities provide services for free to the population within their catchment area. There are also private not-for-profit health facilities which are church-affiliated facilities under the Christian Health Association of Malawi (CHAM). The CHAM facilities are free for some services such as Antiretroviral therapy (ART)/HIV care, under 5 children vaccination but charge user fees for other services.

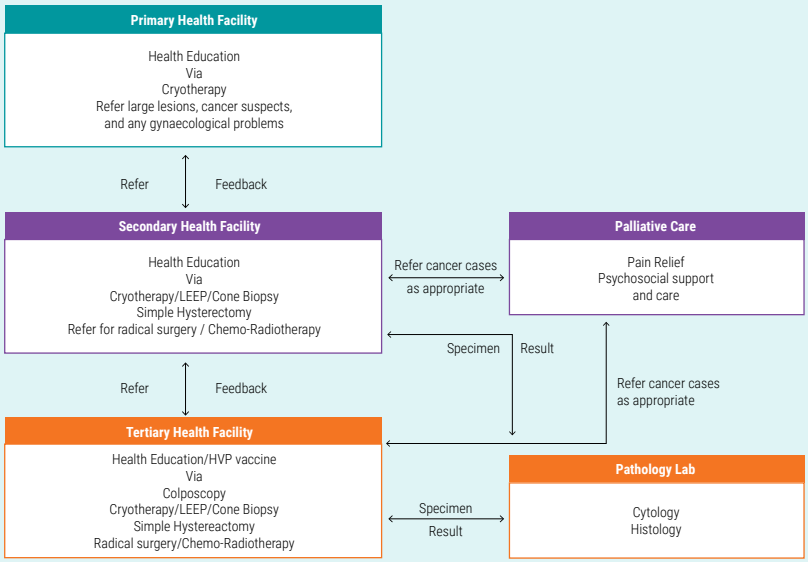
There are also NGOs that are providing specific health care services either for free or with user fees. These include SOS Children's Village International, Family Planning Association of Malawi (FPAM) and Banja La Mtsogolo (BLM) among others. The services provided at these facilities range from HIV/ART care, sexually transmitted infections (STI) management, post-abortal care, family planning to increasingly cervical cancer screening.

4.3 Performance of the CECAP: Achievements and Challenges

For cervical cancer prevention and control in Malawi, screening with VIA and treatment of appropriate precancerous lesions with cryotherapy is appropriate for all the three health care levels. At the primary level and secondary level of care, women with large acetowhite lesions or suspected of cancer are referred to the tertiary level of care. Currently there are four main central hospitals with Queen Elizabeth Central Hospital (QECH), Zomba Central Hospital and Kamuzu Central Hospital (KCH) offering dedicated diagnostic and curative cervical cancer services.

Most CHAM facilities are also providing cervical cancer screening and treatment of precancerous lesions for either free or at a subsidised fee. There is increasing coverage of cervical cancer screening by Nkhoma mission hospital that is currently using thermo-coagulation for treatment of cervical precancerous lesions. Some private hospitals also provide cervical cancer screening using Pap smear at a cost which is affordable to a few at risk women in the country. Fig 5 shows the referral algorithm for the CECAP.

Figure 5: Referral algorithm for the CECAP



By the end of December 2015, there were a total of 129 functional cervical cancer screening with VIA sites and 32 (25%) had functional cryotherapy. There were 391 providers of cervical cancer screening, of whom 272 (69.6%) were active.

In 2015, 48,064 women were screened with VIA, of whom 44, 044 (92%) were screened for the first time, 2,177 (4.5%) women were VIA positive and 1,625 (3.4%) had suspected cervical cancer. Of the 2,177 VIA positive women that were eligible for cryotherapy, only 896 (41.2%) received cryotherapy.

There has been an increase in cervical cancer screening coverage rate from 14% in 2012 to 27.3% between 2012-2015 (Fig 6 and Table 1) [25]. However, the screening coverage rate is still much lower than the targeted rate of 80% set at the onset of the CECAP. Furthermore, at least 80% of cervical cancer admissions are still presenting in inoperable stages when the only treatment option available to them is palliative care, which is generally inadequate in Malawi.

Figure 6: Trends in the number of women screened for cervical cancer: 2012-2015

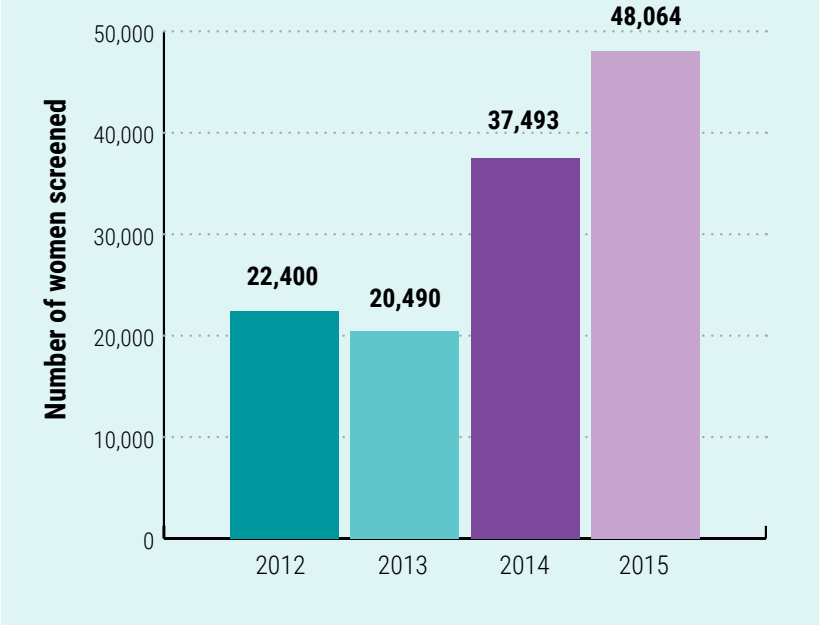


Table 1: Performance of CECAP 2011-2015

	Total number of women screened	% Coverage (Number of women screened/ Annual target population)	Number of women with VIA positive		Number of women with VIA positive treated		Number of women with advanced cancer	
Year	**n**		**n**	**%**	**n**	**%**	**n**	**%**
2012	22,400	14.0	1,069	4.8	400	37.4	1,098	4.9
2013	20,490	12.4	1,447	7.1	528	36.5	1,294	6.3
2014	37,493	22.0	1,628	4.3	655	40.2	1,434	3.8
2015	48,064	27.3	2,177	4.5	896	41.2	1,625	3.4
Total	**143,778**		**7,215**	**5.0**	**2,867**	**39.7**	**6,249**	**4.3**

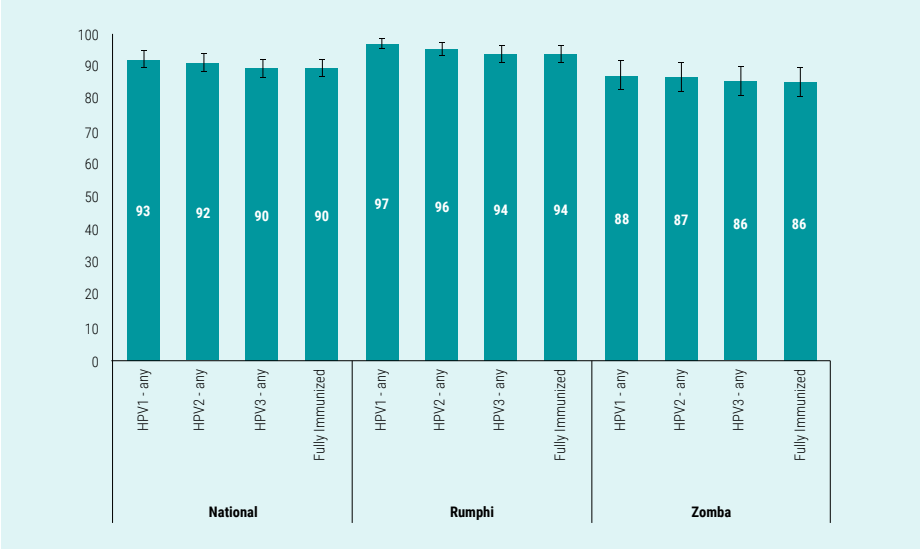
4.3.1 HPV vaccine pilot implementation project

Malawi started planning the HPV vaccine pilot demonstration project in March 2013 and in September 2013 in Rumphi and Zomba districts with the intention to introduce the vaccine nationally in September 2016. This pilot project was implemented by Malawi Government with support from Gavi, The Vaccine Alliance, World Health Organization (WHO), UNFPA and United Nations Children's Fund (UNICEF).

The target population for the HPV vaccine was adolescent girls aged 9-13years. A school based delivery approach was adopted and girls in standard 4 were targeted and reached for HPV vaccine. The choice of standard 4 was based on the Education Management Information System (EMIS) which revealed that 89% of girls in standard 4 were in the age range of 9-13years. It was therefore concluded that there was a greater probability of getting the target age group in standard 4 than any other class. The demonstration project also targeted out-of-school girls aged 10 years, for HPV vaccination.

The vaccine was given at months 0, 2 and 6 using the quadrivalent Gardasil. In the first year of the project, three doses were administered. Later this was changed to 2 doses given at 0 and 6 months on recommendation of the WHO Strategic Advisory Group of Experts in Immunisation. Figure 7 shows the coverage rate in the 2 districts covered in the pilot project [26].

Figure 7: Coverage rates for HPV vaccine in Zomba and Rumphi



There was 90% coverage rate for both Rumphi and Zomba with 94% coverage for full immunization in Rumphi and 86% coverage for full immunization for Zomba. Most importantly, the demonstration project showed that it is feasible to implement HPV vaccination in Malawi.

4.3.2 Key Challenges and the SWOT Analysis of the CECAP

The 2004 National Cervical Cancer Prevention Strategy had the following strategic objectives:

1. To raise awareness of the magnitude and gravity of the problem of cervical cancer and the availability of cervical cancer prevention services
2. To establish a sustainable system for providing cervical cancer prevention services
3. To increase accessibility and availability of cervical cancer prevention services in an integrated reproductive health programme
4. To provide quality cervical cancer prevention services.

A review of the 2004 strategic plan and the consultative process has identified the following key challenges:

1. **Inadequate funding**
   The CECAP is housed in the MoH RHD and is coordinated with the department of NCDs in the MoH. The funding to the MoH comes from the national budget. The funding to the CECAP activities has been insufficient to meet the needs of the programme. Developmental organizations also provide funding for specific CECAP activities such as monitoring and evaluation activities but this has also been inadequate.

2. **Inadequate trained providers**
   The CECAP requires that providers be certified to conduct cervical cancer screening and treatment activities. Despite the number of trained providers to date, which remains inadequate, there are also competing roles for the providers at their institutions due to the general shortage of health professionals in the country. This results in some providers being non-functional in as far as CECAP activities are concerned. This is worse in rural areas where there is generally greater shortage of health workers than urban areas.

3. **Failure to maintain an unbroken supply chain for consumables**
   Inadequate budgetary allocation to district hospitals has resulted in recurrent stock out of consumables, particularly cryo-gas, required for cervical cancer screening and treatment of precancerous lesions, and for infection prevention.

4. **Poorly coordinated referral systems between and within health facilities**
   There is untimely diagnosis of cervical cancer suspects due to poorly coordinated referral system and poor feedback to the referring facilities. Confirmed cervical cancer cases are many a time lost to follow up between clinicians and palliative care practitioners.

5. **Lack of community awareness and mobilization**
   There have been efforts by the MoH and NGOs to raise awareness of cervical cancer and create demand for cervical cancer services. However, this is dampened by lack of a communication strategy and educational materials.

6. **High operational costs for the HPV vaccine pilot demonstration project.**

Appendix 1 summarizes the strengths, weaknesses, threats and opportunities (SWOT) identified during the SWOT analysis for each key priority area of the CECAP.

Strategic framework

5

5.1 Vision

Malawian Women "free" from Cervical Cancer

5.2 Mission

To reduce incidence and mortality from cervical cancer by 2020 through universal access to comprehensive cervical cancer prevention and treatment services for all women in Malawi.

5.3 Strategic Goal

The overall goal of the strategy is to improve the quality of life of women and girls in Malawi through the reduction of the incidence, prevalence, morbidity and mortality from cervical cancer.

5.4 Guiding principles

The implementation of this strategic plan will be guided by the following principles:

1. **Multisectoral and partnership collaboration and ownership:** This strategic plan will promote partnership and multi-sectoral collaboration and ownership of the planning and implementation of the cervical cancer control activities. This will avoid duplication, allow leverage and maximise available resources.

2. **Respect for ethical principles of equity and Justice:** This will entail that cervical cancer control activities are universally accessible to the marginalized and at risk population regardless of ethnicity, religion, political affiliation, disability, socio-economic status, or geographical location.

3. **Evidence based interventions and appropriate technology:** emphasis will be put on implementation of the best available evidence based, and technologically appropriate interventions that reflects a clear understanding of the country's cervical cancer burden, health system and its challenges.

4. **Community participation:** this will strive to involve all levels of the community including local and community leadership involvement to male involvement particularly in raising awareness of cervical cancer and its preventive measures.

5. **Integration** – in an effort to scale up cervical cancer screening services: all proposed applicable priority interventions will be integrated at various levels of the health system in a coherent and effective manner that is responsive to the needs of women.

5.5 Impact Outcomes

The implementation of this strategic plan is aimed at realizing the following impact outcomes:

1. Decreased incidence of HPV infection in both vaccinated and unvaccinated girls
2. Decreased incidence of cervical pre-cancerous lesions in both HIV- infected and HIV- uninfected women
3. Decreased incidence and mortality of invasive cervical cancer

5.6 Process Indicators

The process indicators for the implementation of this strategic plan are outlined in Appendix 4: The Implementation plan with the timeframe. The following key programme indicators will also be closely monitored on an annual basis:

Table 2: Key indicators for the CECAP

Indicator	Target
1. HPV vaccine coverage rate: percentage of girls aged 9-13years who have received all the doses of the HPV vaccine in the previous 12-month period	**90%**
2. Screening coverage rate: percentage of women aged 25-49years who have been screened with VIA for the first time with in the previous 12-month period	**80%**
3. Treatment rate for VIA positive women: percentage of VIA-positive women receiving treatment in the previous 12-month period	**90%**
4. Treatment of cancers: a) Percentage of curable cervical cancer patients receiving adequate care b) Percentage of women receiving palliative care for advanced cervical cancer	**10% by 2020** **50% by 2020**

The implementation strategies

6

The implementation strategies will be focus on the following priority areas: policy and advocacy, primary prevention, secondary prevention, tertiary prevention and research, monitoring and evaluation.

6.1 Priority area 1: Policy and Advocacy

Objectives:

1. To sensitize stakeholders on the need to reposition cervical cancer as a priority in the health and development agenda
2. To ensure that adequate resources are mobilized and allocated for cervical cancer control activities

Strategies:

1. Strengthen the capacity and promote advocacy activities for CECAP
2. Revive the CECAP TWG to provide technical support and guidance to the CECAP

Key activities:

1. Training of members of CECAP TWG and advocacy groups in advocacy and policy review.
2. Develop, pretest advocacy packages and multi-media support materials that have emphasis on country specific cervical cancer burden, potential impact of HPV vaccination for adolescent girls and impact of well-functioning cervical cancer screening programme.
3. Collaborate with political leaders, religious leaders, women groups, patient groups and other stakeholders to champion the cause for cervical cancer prevention and control services.
4. Lobby various stakeholders such as policy makers, bilateral and multilateral organizations such as the US Centers for Disease Control and Prevention (CDC), WHO, UNFPA and private sector for resource mobilization for cervical cancer control.
5. Lobby for reduced costs of HPV vaccine and national vaccine scale up by working together with regional countries to ensure sustainability of HPV vaccination scale up in the region.
6. Advocate for capacity building through recruitment and training of health professionals including obstetricians and gynecologists, oncologists, radiologists and palliative care service providers.
7. Lobby for speeding up of the establishment of the National Cancer Centre of Excellence that has been already been approved by parliament.
8. Review and advocate for harmonization of policies that will facilitate universal access to cervical cancer prevention and control services.

Key stakeholders

Malawi Government, policy makers, parliamentarians, development partners and NGOs, patient groups such as National Cancer Association of Malawi, Cancer Care Foundation, Cancer Quest (cancer survivor group), NAPHAM, MANET+, women groups such as Women in Law in Southern Africa (WILSA) and Women Caucus of Parliament; professional associations such as Nurses and Midwife Association of Malawi, Association of Obstetricians and Gynaecologists of Malawi and the Media

Key Advocacy messages – see Appendix 2 adopted from UNFPA Guidance Document

6.2 Priority area 2: Community awareness and mobilization

Objective:

1. To build capacity for community awareness and mobilization in order to create demand for cervical cancer prevention and control services

Strategy:

1. Enhance awareness and behavior change interventions of the community, policy makers, and health workers for cervical cancer prevention and control

Key activities:

1. Carry out a knowledge, attitude and practices (KAP) baseline survey to inform the development of a communication strategy for cervical cancer
2. Develop a communication strategy that should be linked with the existing MoH communication strategy
3. Build media personal's capacity to enhance community awareness and mobilization through mass media
4. Develop, disseminate and distribute information, education and communication (IEC) materials for the target audience that will ensure that key messages are consistent regardless of who delivers them
5. Utilize existing structures and personnel e.g. community health workers, community leaders, village health committees, parliamentary health committee, professional bodies, social and religious gatherings such as funeral, church services etc. in promoting awareness of cervical cancer
6. Conduct annual cervical cancer campaigns that will include educational talks for HPV vaccine, cervical cancer screening and cervical cancer screening activities
7. Promote continued integrate of cervical cancer prevention into comprehensive sexuality education for both in and out of school youth

Key stakeholders and audience

Policy makers, political and religious leaders; women; men; schools (children, parents and teachers); health professionals; the youth; community leaders; traditional healers, media representatives; private organizations such as Malawi Business Coalition Against AIDS, mobile companies; education sector

Key messages

The messages adapted to the situation and target audience, perception and cultural beliefs of the community to include what cervical cancer is and the comprehensive strategies for its prevention and control (including HPV vaccinations) – see appendix 2 adopted from UNFPA Guidance document.

6.3 Priority area 3: Primary prevention with HPV vaccination scale up

Objective:

1. To reduce the risk of HPV infection and co-factors for the development of cervical cancer

Strategy:

1. Enhance knowledge and promote behavior change interventions for reduction of risk of HPV infection and co-factors for cervical cancer development among the youth and the community

Key activities:

1. Engage youth organizations e.g. YONECO and build capacity of their members to disseminate information about cervical cancer prevention including HPV vaccine
2. For girls and boys, enhance life skill school health programs aimed at giving information on the following:
    i. Health information and warnings about tobacco use
    ii. Sexuality education tailored to age & culture aimed at promoting abstinence and delayed sexual debut
    iii. Condom promotion and provision of condoms for those engaged in sexual activity (lessens risk of STIs including HIV infection, a co-factor for development of cervical cancer)
3. For boys, promote male circumcision in order to reduce risk of HIV infection
4. For girls 9-13years, national wide HPV vaccination using health facility based delivery strategy that will maximize the already existing human resource such as health surveillance assistants

5. Integrate HPV vaccine into existing youth friendly programs e.g. Baylor College of Medicine International Paediatric Center of Excellence (BIPAI) Malawi has at least 60 teen clubs in the country which can be used as a platform for HPV vaccine
6. Engage community leaders and community health liaisons such as health surveillance assistants and village health committee to help identify hard to reach and out of school target population for HPV vaccine
7. Promote HPV vaccine sensitization campaigns to parents to ensure uptake of the vaccine by the target youth
8. Build cold chain storage capacity to accommodate HPV vaccine.
9. Establish and scale up health facility- based HPV vaccination program to all districts, with annual school based vaccination campaigns

Target audience

Parents, teachers, adolescent girls and boys, policy makers, political leaders, community leaders, religious leaders, the general public.

6.4 Priority area 4: secondary prevention - screening and treatment of precancerous lesions

Objective:

1. To increase capacity and access to diagnosis of pre-cancerous lesions or cancer, appropriate management, and referral system for confirmed cancer cases.

Strategies:

1. Strengthen the capacity, systems and structures of health facilities for secondary prevention activities for cervical cancer
2. Promote supportive supervision to health facilities and cervical cancer service providers to ensure adherence to the Malawi MoH National Service Delivery Guidelines for Cervical Cancer Prevention

Key activities:

1. Training of service providers and national trainers of cervical cancer prevention and control
2. Scale up of diagnostic services into district hospitals through training and establishment of well-organized transport system for pathological specimens and histological results to and from the central pathology laboratories
3. Task shifting to nurses, clinical officers, medical officers of diagnostic procedures such as cervical biopsies, and excisional treatment procedures such as LLETZ
4. Integrate cervical cancer prevention services into HIV care and reproductive healthcare services such as family planning clinic, gynecologic clinics, sexually transmitted infections clinics
5. Leverage resources for ART/HIV care for cervical cancer screening activities through integration of screening into ART/HIV care and including cervical cancer activities in HIV/AIDS programming

6. Incorporate thermo-coagulation as an alternative treatment for pre-cancerous lesions
7. Revise Malawi National Service Delivery Guidelines for cervical cancer prevention to align with the activities in this strategic plan such as HPV vaccination scale up and incorporation of thermo-coagulation for treating pre-cancerous lesions
8. Lobby development partners such as UNFPA, WHO, JHPIEGO for financial and technical support, supportive supervision of service providers
9. Strengthen referral linkages and feedback mechanisms to referring facilities
10. Promote public private partnership with relevant stakeholders such as Partners in Hope, SOS, BLM, FPAM, DREAM, DIGNITAS, CHAM in scaling up cervical cancer screening services
11. Promote regular cervical cancer screening outreach clinics or campaigns in hard to reach areas by relevant stakeholders
12. Explore introduction of pre-service training in competency based cervical cancer screening and treatment intervention in nursing and medical training

6.5 Priority area 5: Tertiary prevention: diagnosis and management of cervical cancer cases

Objective:

1. To increase capacity for appropriate management of confirmed cervical cancer cases

Strategy:

1. Strengthen the capacity, systems and structures of all tertiary facilities to provide appropriate cervical cancer management

Key activities:

1. Promote training of oncological medical practitioners: obstetricians and gynecologists, gynaecological oncologists, medical oncologists, radiation oncologists, radiologists, oncology nurses and palliative care service providers
2. Promote in-service training of obstetricians and gynecologists in developing skills for gynecologic oncological procedures particularly radical hysterectomy and pelvic lymphadenectomy using local and regional gynecological oncologists
3. Lobby for resources for tertiary facilities to facilitate cervical cancer case management including external (out of country) referral of appropriate cervical cancer patients
4. Strengthen external referral linkages to ensure increased access to radiotherapy services
5. Strengthen referral system for palliative care services for advanced cancer cases
6. Promote multidisciplinary care for cervical cancer patients at central hospitals
7. Strengthen community and home-based palliative care services including establishment of nutritional support services for cancer patients

6.6 Priority area 6: Research, Monitoring and Evaluation

Objective:

1. To build capacity for monitoring and evaluation of CECAP and strengthen the health management information system (HMIS)

Strategies:

1. Promote training in management of data and usage of data among providers, M&E officers and policy makers
2. Formulate research priorities and promote research into cervical cancer
3. Enhance documentation of good practices and evidence based policy formulation and programming

Key activities:

1. Review and update the monitoring and evaluation plan of the CECAP
2. Training of M&E personnel and service providers in data management (including documentation), analysis and use of data
3. Conduct regular supportive supervision for CECAP activities
4. Enhance linkages between CECAP and Malawi Cancer Registry through joint planning and review meetings
5. Incorporate HPV vaccine data collection into the EPI
6. Advocate for financial support for cervical cancer research
7. Collaborate with training institutions to conduct cervical cancer research and dissemination to ensure evidence based policy formulation and programming

Key stakeholders

Malawi Cancer Registry, WHO, UNFPA, CMED, EPI, Training institutions

Appendix 4 is the implementation plan with the timeframe.

Institutional Framework for Implementation of the strategic plan

7

The institutional framework describes the roles of different partners:

7.1 Ministry of Health

The MoH shall lead the implementation of the strategy.
The MoH will be responsible for coordinating resource mobilization, implementation, monitoring and evaluating of the strategic plan with support from development partners and other relevant stakeholders.

The CECAP is in the department of Reproductive Health of the MoH. However, the implementation of this strategic plan will require collaboration with the Directorates of HIV/AIDS, Nursing, Clinical especially the NCDs, and Preventive Health Services in particular the EPI Program.

At the district level, district health management teams will be responsible for overseeing the implementation of the strategic plan with support from the programme coordinator of the CECAP.

7.2 Development partners, NGOs and private sector

The development partners including NGOs will play a significant role in providing technical guidance, training, resource mobilization, advocacy and capacity building in monitoring and evaluation. These partners include WHO, UNFPA, JHPIEGO and UNICEF among others.

7.3 Service delivery points

Health service delivery points will be comprised of public, CHAM and private sector facilities. These will be responsible for implementing the strategies outlined in the plan. They will ensure that they have adequate resources for provision of services, completion of data collection tools and submission of reports to the appropriate institutions, and also utilization of data collected for improving quality of care. Appendix 3 shows the roles played by various levels of health care system and the minimum requirements for each level.

7.4 Professional associations

The professional associations will contribute to policy, advocacy and community awareness and mobilization. Representatives from these associations will be part of the cervical cancer technical working and advocacy group.

7.5 Community

The implementation of this strategic plan will use community leaders and community health liaisons such as local leaders, village development committees (VDCs), village health committees (VHCs), village clinics and community based organizations.

They will be responsible for raising community awareness and community mobilization. They will also be critical to the development of culturally sensitive community education messages and also help in identifying ways to reach out to hard to reach populations.

7.6 Research and training institutions

The research and training institutions will be responsible for proposing and implementation of operational research in line with the priorities set in the strategy. They will also be responsible for ensuring that health professionals are equipped with necessary research and clinical knowledge, and skills for implementation of the strategic plan.

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List of Appendices

9.1 Appendix 1: SWOT Analysis of the CECAP

Policy and Advocacy

Strengths	Weaknesses
1. Cervical cancer is recognized as a public health priority within the EHP 2. Enabling policy environment 3. CECAP coordinator is available in the MoH RHD 4. There is strong commitment from the CECAP RHD and NCD leadership to ensure success of the CECAP under the limited budgetary constraints 5. Vibrant professional associations: Cancer Association of Malawi, Nurses and Midwife Organization of Malawi (NMOM), , Palliative Association of Malawi, Association of obstetricians and Gynaecologists of Malawi, Association of Malawian midwives (AMAMI)	1. There is no active Cervical Cancer TWG to provide technical support and oversight to the CECAP. 2. Lack of CECAP coordination with other programs such as HIV/AIDS unit despite the linkage between HIV and cervical cancer 3. Fragmented CECAP activities (MoH NCD and EPI lead HPV vaccine pilot demonstration project and MoH RHD follows 4. Lack of advocacy materials with fact sheets 5. No budget line for CECAP
Opportunities	**Threats**
1. There is interest from CECAP partners (NGOs, CHAM, development partners) to advance cervical cancer control activities 2. The Forum of African First Ladies and Spouses Against Breast, Cervical and Prostate Cancer to which the Malawi First lady is incumbent vice president is another opportunity lobbying for adequate human, technical and financial resources to ensure universal access to cervical cancer control activities	1. Politicizing the CECAP activities 2. Late development of National Cervical Cancer Control Strategy 2016-2020 might jeopardize Malawi's application for GAVI support for HPV vaccine 3. No clear path for sustainability of the CECAP activities

Community awareness and mobilization

Strengths	Weaknesses
1. The existence of the Health Education Unit (HEU) in the MoH 2. The HEU has trained personnel and production equipment to produce and disseminate messages for the print and electronic media 3. Education materials for HPV vaccine are available: HPV vaccine poster, HPV vaccine leaflet in 2 local languages (Chichewa and Tumbuka) 4. NGOs and development partners involved in demand creation for cervical cancer screening services including conducting open days and big walks e.g. Kuwala NGO in Mzuzu 5. Cervical cancer is covered in Youth Friendly Health Services Training Manual	1. Lack of communication strategy for cervical cancer control 2. Lack of IEC materials for public education in health facilities and in communities 3. Inadequate funding to MoH: HEU, RHD and NCD limits the capacity of these divisions 4. Dependence on partners is not sustainable as partners rely on funding which is for specified period of time
Opportunities	**Threats**
1. Strong stakeholder support and commitment in creating awareness 2. The increased number of media outlets in the country 3. The launch of STOP Breast cancer, Cervical cancer and Prostate Cancer campaign that was graced by the presence of the first lady in Ntcheu district in 2015 4. Private sector involvement: Airtel was able to send out text messages about cervical cancer for free in 2015	1. Failure to mobilize adequate funding

Primary prevention with HPV vaccination scale up

Strengths	Weaknesses
1. Youth Friendly Health Services Training Manual covers sexual education and cervical cancer prevention 2. IEC materials for HPV vaccine available 3. Strong leadership will to roll out HPV vaccine: MoH NCD, EPI, RHD 4. Strong partnership will to roll out HPV vaccine: WHO, UNICEF, UNFPA 5. Supportive local and community leaders during the HPV vaccine pilot implementation project 6. Coordination with Ministry of Education was key to identifying the target population in schools 7. Existence of a communication subcommittee and communication plan 8. No safety concerns so far with the pilot implementation project	1. Challenge in identifying hard to reach and out of school target population but using Health Surveillance Assistants (HSA) and Local Leaders it was possible to enumerate and deliver to those identified 2. School based delivery strategy requires that school activities are disturbed on some days during the campaign 3. Inadequate financial resources for operational activities including resources for intensive communication activities prior to administration of each dose 4. School based approach requires a campaign mode which is expensive to sustain 5. Lack of the country's experience with health facility based delivery strategy for the target age group as there is no current routine health programmes for the target population for HPV vaccine
Opportunities	**Threats**
1. GAVI commitment to support HPV vaccine roll out for countries with strategies to ensure long term sustainability of the roll out 2. MoH interest to see the HPV vaccine roll out 3. The Launch of STOP breast cancer, cervical cancer and prostate cancer 4. MoH and stakeholders' promotion for circumcision 5. Existent youth organizations such as YONECA	1. Poor community acceptance of the vaccine 2. Poor uptake of vaccine by the targeted population 3. Failure to expand cold chain storage space 4. Inadequate funding to MoH 5. Withdrawal of support from GAVI

Secondary prevention: screening and treatment of precancerous lesion

Strengths	Weaknesses
1. Malawi National Service Delivery Guidelines for cervical cancer prevention are available 2. Flip charts for counseling women prior to screening are available 3. Good stakeholders' relationship: MoH, NGOs, Development partners 4. There is yearly increase in number of women screened 5. At least 70% of providers of cervical cancer screening are still active 6. Presence of NGOs, CHAM hospitals also providing cervical cancer screening services in addition to government health facilities 7. Integration of cervical cancer screening into some HIV/ART clinics e.g. Dignitas, Lighthouse Trust 8. District hospitals starting to include cervical cancer screening into district implementation plans 9. Presence of development partners (WHO, UNFPA among others)that are helping with cervical cancer screening services equipment and supplies, and funding training of service providers	1. Low cervical cancer screening facilities with functional cryotherapy 2. Less than 50% of women screened and eligible for cryotherapy got treated 3. Health facilities experiencing stocks outs of vinegar, cryotherapy gas which compromises the single visit approach 4. No back up mechanisms for malfunctioning cryotherapy equipment at some facilities 5. Shortage of providers for the target population despite a good proportion of trained providers being active 6. Routine supervised mentorship visits to service providers not been done as planned
Opportunities	**Threats**
1. Development partners' commitment to support cervical cancer control activities in Malawi 2. Bill and Melinda Gates Foundation's program of supporting capacity building for high cervical cancer burden African countries has been able to provide cryotherapy equipment, colposcopy and LETTZ machines to health facilities through WHO country office 3. Use of thermo-coagulation as an alternative treatment for precancerous lesions 4. Integration of cervical cancer screening into ART clinics 5. Leveraging National HIV resources into cervical cancer prevention activities through integrating cervical cancer screening into HIV care as part of NCD integration 6. Introduction of Bachelor of Science in Obstetrics and Gynaecology at College of Medicine, University of Malawi	1. Inadequate funding to MoH 2. Dependence on development partners for funding of trainings for service providers, annual CECAP reviews and equipment and supplies for CECAP 3. Misconception that VIA services are primarily nurses' role by some clinicians 4. Some women not comfortable with male providers 5. Competing roles for the providers at the health facilities 6. Inequitable deployment of health professionals to rural areas

Tertiary prevention: diagnosis and management of cervical cancer cases

Strengths	Weaknesses
1. Malawi National Service Delivery Guidelines for Cervical Cancer Prevention Guidelines are available 2. The number of qualified Obstetricians and gynaecologists in Malawi has increased over the past 10 years 3. Specialist visits to district hospitals 4. Establishment of a diagnostic pathology laboratory at KCH Lilongwe in July 2011 as a collaboration between UNC Project-Malawi, UNC-CH, MOH, and KCH	1. Poor feedback to referring facility 2. Lack of diagnostic equipment for collecting cervical biopsy specimens for histopathological testing 3. Non-existent pathology services in district hospitals 4. Inadequate imaging facilities in central hospitals: CT scans, MRI 5. National Service Delivery Guidelines for cervical cancer prevention limits some therapeutic procedures like LLETZ, cervical biopsy procedures to gynecologists 6. Inadequate pathology laboratory capacity to process specimens in time 7. Limited chemotherapy is available at QECH and KCH cancer units 8. Lack of radiotherapy in the country: radiotherapy is only available through external referral system
Opportunities	**Threats**
1. MMED in Obstetrics and Gynecology training is now established at Malawi College of Medicine, started in 2013 with first graduates expected in 2017 2. Specialist visits to district hospitals provides an opportunity to increase district capacity for cancer diagnosis and management 3. Clinicians training in collecting cervical biopsy specimens is covered during internship program 4. Specimens for pathology can stay for days to weeks before analysis which provides an opportunity to transport specimen to pathology laboratory with emergency and non-emergency referral of patients from district hospitals 5. The plan to build a national cancer center that will have diagnostic services and equipment e.g. CT scans, MRI and chemo/radiotherapy facilities was approved by Malawi parliament, MOH after a national cancer plan was finalized by the International Atomic Energy Agency (IAEA)	1. Limited capacity to train and retain specialized health professionals: pathologists, oncologists, radiologists, gynaecologists, oncological nurses, in the country 2. Failure to open more pathology laboratories in the country 3. Continued inadequate funding to MoH

Research, Monitoring and Evaluation

Strengths	Weaknesses
1. MoH leadership commitment to CECAP activities including monitoring and evaluation (M&E) 2. Strong partner commitment and support to M&E activities: e.g. WHO has been funding the CECAP annual reviews	1. Inadequate capacity for data management and analysis at health facility levels 2. Poor quality data (incomplete data recording and inconsistent) 3. Inadequate funding 4. Cervical cancer is under-researched in the country 5. No linkage with the National Cancer Registry
Opportunities	**Threats**
1. Partners have technical capacity for M&E activities 2. MoH have M&E technical advisors at CMED 3. Existent research and training institutions with expertise and interest in cervical cancer	1. Continued inadequate funding for M&E activities 2. Overreliance on development partners in M&E activities

9.2 Appendix 2: Communication and Advocacy messages for different groups

Core messages for all target audiences	Message for high level decision makers
1. Basic information on cervical cancer and HPV infection 2. Universality of HPV infection 3. Disease burden in the country; prevention strategies and the effectiveness and safety of different interventions 4. Emphasis that both vaccination and screening are necessary 5. Information on other relevant adolescent health issues such as prevention of HIV and other STIs, prevention of pregnancy should be considered as appropriate	1. Country specific cervical cancer burden and comparison with the disease burden for other regional countries 2. Benefits of improved cervical cancer prevention programming, including public health benefits and financial benefits (savings in future cancer treatment costs and continuing productivity by adult women) 3. Impact of the HPV vaccine scale up on new health budgets, health systems
Messages for managers and health care providers	**Messages for clients**
1. Impact on existing services, and benefits of the programme 2. Opportunities for using cervical cancer prevention to promote other health services such as adolescent health, and sexual and reproductive health services 3. Necessary systems requirements 4. including procurement, reporting, call and recall, and quality control 5. Service provision and counseling 6. skills related to cervical cancer (training)	1. Raise awareness of cervical cancer 2. Enhance personalization of the risk of cervical cancer among women with cervices 3. Disseminate the benefits of cervical cancer screening 4. Enhance acceptability of Cervical cancer screening services using VIA 5. Provide information on facilities where these services are available and schedule for screening, target age and treatment options: cryotherapy, thermo-coagulation or LLETZ 6. Information regarding HPV vaccine dosage and schedules required, and target age 7. Respond to rumors, misinformation, client assumptions

9.3 Appendix 3: The roles played by various levels of health care system and the minimum requirements

HEALTH FACILITY LEVEL	SERVICES REQUIRED	EQUIPMENT/SUPPLIES REQUIRED
Community	• Community awareness and mobilization • HPV vaccination • Referrals for screening and treatment, and HPV vaccine • Palliative (supportive care	• IEC materials radio messages, pamphlets and other public information • Training and access to necessary supplies • Equipment for cold-chain maintenance
Primary Level (Primary Health Centres, Family Planning Clinics)	• Health education • HPV vaccination • Cervical screening using VIA • Treatment of pre-cancer with cryotherapy or thermo-coagulation • Referral for LEEP/Surgery/Chemo radiotherapy • Palliative Care	As Above, PLUS • Pelvic exam: speculums • Infection prevention • Basic equipment, CO2 cylinders, cryotherapy unit, thermocoagulators and supplies
Secondary level	• Health education • HPV vaccination • Cervical screening using VIA • Cryotherapy/thermo-coagulation • LLETZ/cone biopsy (where skilled professional is available) • Simple hysterectomy where applicable and skilled professional is available • Referral for radical surgery and chemo radiotherapy to tertiary level • Palliative care	As Above, PLUS • Biopsy forceps and ancillary equipment • Lab equipment for storage of pathological specimen before transportation to central pathology lab • Cryotherapy unit • Colposcope • Biopsy forceps and ancillary equipment • LLETZ/LEEP Equipment • Theatre facilities including infection prevention materials (e.g. sterilizers), appropriate hysterectomy sets and theatre lights • Adequate anaesthetic equipments and drugs • Radiological services
Tertiary Level (Central hospitals)	• Health education • HPV vaccination • Cervical screening using VIA, cytology, VIA • Colposcopy • Cryotherapy • LEEP/LLETZ/Cone biopsy • Surgery including radical surgery and pelvic lymphadenectomy • Radiotherapy and chemotherapy • Palliative care	As Above, PLUS • Pathology facilities • Radiological facilities • Intensive Care Unit Facilities • Radiotherapy and chemotherapy facilities

9.4 Appendix 4: Implementation plan with the timeframe

Objectives	Activities	Responsible Institutions	Indicators	2016	2017	2018	2019	2020
Priority area 1: Policy and Advocacy								
1. To sensitize stakeholders on the need to reposition cervical cancer as a priority in the health and development agenda 2. To ensure that adequate resources are mobilized for cervical cancer control activities	Training of TWG and advocacy group members	MoH, development partners, professional associations, NGOs, Media	Number of advocacy training workshops in advocacy conducted	x	x	x	x	x
	Develop, pretest advocacy packages and multi-media support materials		Number of advocacy packages developed	x	x	x	x	x
	Conduct advocacy and policy review meetings/workshops		Number of policy review meetings conducted	x	x	x	x	x
			Number of advocacy meetings conducted	x	x	x	x	x
			% of budget to MoH allocated to CECAP activities	x	x	x	x	x
Priority area 2: Community awareness and mobilization								
To build capacity for community awareness and mobilization in order to create demand for cervical cancer prevention and control services	Conduct a KAP survey to inform a communication strategy	MoH, HEU, development partners, professional associations, NGOs, Media, Private organizations e.g. Mobile companies, Malawi Business Coalition Against AIDS, Ministry of Education	KAP survey conducted		x			
	Develop a communication strategy for cervical cancer prevention and control		Communication strategy developed		x			

Objectives	Activities	Responsible Institutions	Indicators	2016	2017	2018	2019	2020
	Develop, disseminate and distribute IEC materials		IEC materials developed		x			
			IEC materials disseminated		x	x	x	x
			Cervical cancer campaigns conducted		x	x	x	x
	Training in local and political leaders, health workers, media in community awareness		Number of trainings conducted	x	x	x	x	x
Priority Area 3: Primary prevention with HPV vaccination scale up								
To reduce the risk of HPV infection and co-factors for development of cervical cancer	Enhance life skills education tailored to age & culture	MoH, development partners, NGOs, Media, Ministry of Education, Ministry of Gender, Children, Disability and Social Welfare	% of primary school teachers trained in life skills education	x	x	x	x	x
			% of secondary school teachers trained in life skills education	x	x	x	x	x
	Conduct HPV vaccine sensitization campaigns		Number of HPV vaccine sensitization talks conducted	x	x	x	x	x
	Establish and scale up health facility-based HPV vaccination program to all districts, with annual school based vaccination campaigns		Number of districts providing HPV vaccine	x	x	x	x	x
			HPV vaccination coverage rate per district	x	x	x	x	x
			National HPV vaccination coverage rate	x	x	x	x	x

Objectives	Activities	Responsible Institutions	Indicators	2016	2017	2018	2019	2020
Priority Area 4: Secondary prevention – screening and treatment of precancerous lesions								
To increase capacity and access to diagnosis of pre-cancerous lesions or cancer, appropriate management, and referral system for confirmed cancer cases.	Training of service providers and national trainers in cervical cancer screening and treatment	MoH, CHAM, NGOs, Development partners, Medical and nursing training institutions	Number of trained service providers in cervical cancer screening and treatment of pre-cancerous lesions	x	x	x	x	x
	Task shifting of diagnostic procedures and excisional treatment procedures		Number of trained nurses, clinical officers, medical officers	x	x	x	x	x
	Integrate cervical cancer screening into ART/HIV care		Number of ART/HIV centers providing cervical cancer screening services	x	x	x	x	x
	Promote cervical cancer screening outreach clinics		Number of outreach cervical clinics	x	x	x	x	x
	Introduce thermo-coagulation as alternative treatment method for precancerous lesions		Number of health facilities offering thermo-coagulation	x	x	x	x	x
	Promote introduction of pre-service training in competency based cervical cancer screening	MoH, CHAM, NGOs, Development partners, Medical and nursing training institutions	Number of medical and nursing training institutions with competency based cervical cancer screening incorporate in its curriculum	x	x	x	x	x
	Conduct supportive supervision to service providers		Number of supportive supervisions conducted	x	x	x	x	x
Priority Area 5: Tertiary prevention: diagnosis and management of cervical cancer cases								
To increase capacity for appropriate management of confirmed cervical cancer cases	Training of oncological medical practitioners and nurses	MoH, Development partners, NGOs	Number of trained oncological medical practitioners and nurses	x	x	x	x	x

Objectives	Activities	Responsible Institutions	Indicators	2016	2017	2018	2019	2020
	Promote multidisciplinary approach to care for cervical cancer cases		Number of tertiary facilities with multidisciplinary oncology clinics	x	x	x	x	x
	Promote establishment of comprehensive community and home-based palliative care facilities	MoH, development partners, NGOs	Number of established palliative care facilities	x	x	x	x	x
	Lobby for resources and infrastructure for cancer care		Establishment of National Cancer Centre of Excellence	x	x	x	x	x
Priority Area 6: Research, Monitoring and Evaluation								
To build capacity for monitoring and evaluation and strengthen the HMIS	Review and update the monitoring and evaluation plan of the CECAP	MoH, development partners	Review meetings conducted	x	x	x	x	x
	Training of M&E personnel and service providers		Number of trained M&E, service providers trained	x	x	x	x	x
	Incorporate HPV vaccine data collection into the EPI				x			
	Enhance linkage between CECAP and Malawi Cancer Registry		Number of joint meetings conducted	x	x	x	x	x
	Conduct cervical cancer research		Number of published paper	x	x	x	x	x

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October 2017