



Ministry of Public Health and Sanitation
and
Ministry of Medical Services

National Cervical Cancer Prevention Program

Strategic Plan 2012 -2015

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FOREWORD

Cervical cancer is a major public health concern in Kenya. It is the second most common cancer in women but the most common cause of cancer deaths. Although this cancer is easily prevented and controlled through behaviour change, vaccination, screening, early detection and treatment of pre-cancerous lesions, most of the eligible women of reproductive health in Kenya have never been screened. Consequently, many cases present late when treatment is more difficult and more expensive to obtain.

The Kenyan health sector through the National Reproductive Health Policy (2007) and the National Reproductive Health Strategy 2009-2015 provide the policy framework, with cancers of the reproductive organs being priority components.

In an effort to reduce the incidence, morbidity and mortality associated with cervical cancer, the Kenya government is placing greater emphasis on the need for system strengthening to facilitate provision of primary prevention, screening, early detection, diagnosis and appropriate management of pre cancer and cancers. (With this in mind, the government has shown its commitment by including a budget line for equipment for cervical cancer treatment in the FY 2011/2012 budget). The relevant divisions in the Ministry of Health have also prioritized HPV vaccine as a primary prevention strategy. Several development and implementing partners are also showing renewed interest in cervical cancer prevention and control

The National Cervical Cancer Prevention Strategic Plan (2012 -2015) is intended to provide the strategic framework and priority actions which if implemented within the proposed time frame and at all KEPH levels will result in significant reduction in the incidence of Cervical cancer in Kenya. The National Cervical cancer prevention Strategic Plan will provide programs that focus on cervical cancer prevention and control with a practical reference source on the country's strategy.

We therefore urge all program managers, all health care providers at all levels of health care to embrace and consistently use this plan so as to ensure coordinated roll out of the national cervical cancer prevention and control program, and thereby reduce the incidence, morbidity, mortality and high costs associated with this preventable cancer.

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Finally the DRH/ MOPHS wishes to recognize and acknowledge the late Dr John Sellors a renowned world expert in cervical cancer. He was instrumental in developing the initial NCCPP, training materials and tools which have served as a template for the current revision process. Dr Sellors also trained and mentored many doctors and nurses in Kenya on cervical cancer screening, and treatment using cryotherapy and LEEP
His influence played a major role in repositioning cervical cancer prevention and control within the health agenda in Kenya.

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With the institutionalization of the National Cervical cancer screening program, we hope that this strategic plan will clarify the national strategic direction and hence facilitate the roll out of the cervical cancer program.

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1. Introduction

Cancer of the cervix is the second most common cancer among women worldwide. It is the leading cause of cancer deaths in developing countries. In 2008, it is estimated that 529,409 new cases occurred globally, with 274,883 of the women (52% of cases) dying. Of the total new cases each year, about 86% occur in developing countries, where unfortunately 80-90% of cervical cancer related deaths occur. With the peak age of cervical cancer being 35-45 years of age, it claims the lives of women in the prime of their life when they may be raising children, caring for the family, and contributing to the social and economic life of their community. It has been estimated that the average life years lost due to cancer of the cervix is 25.3 years (SEER).

Cancer of the cervix is easily detectable and curable in its early stages. Unfortunately, only 5% of women in developing countries undergo screening for cervical cancer compared to over 40% in developed countries, and 70% or higher in countries that have shown marked reduction in incidence and prevalence of cervical cancer. It is therefore not surprising that in Africa—where screening rates are very low—the majority of women present at late stages with invasive and advanced disease. In Kenya, it is estimated that only 3.2% of women in Kenya aged 18-69 years have been screened.

2. The Kenya Situation

Cervical cancer is the second most frequent cancer among women in Kenya and the leading cause of cancer deaths in women of reproductive age (WRA). Currently, the estimated annual number of cervical cancer cases is **2454** while the annual number of deaths due to cervical cancer is **1676** in Kenya. It is projected that by the year 2025, the number of new cervical cancer cases annually in Kenya will reach **4261**. Data from hospital-based registries in Kenya indicated that cancer of the cervix accounted for 70-80% of all cancers of the genital tract and 8-20% of all cancer cases for the 10-year period of 1981 to 1990. It has been reported that there are 10 to 15 new cases of cervical cancer in Nairobi each week. (*Kenya Cancer Registry*)

Despite the magnitude of the problem in Kenya and the fact that it is easily preventable, the cervical cancer screening coverage in Kenya for all women 18 to 69 years of age is only **3.2%**.

Cervical cancer is recognized as an AIDS-defining illness in HIV infection. However with HIV positive women receiving ART and living longer, cervical cancer becomes not only a life defining event but a disease that affects their quality of life. The prevalence of HIV in invasive cervical cancer patients in Kenya is 15%. This is double the national average of 7%. According to one study conducted among HIV-positive women attending HIV care clinics in Kenya, 43% of the women had abnormal cervical cytological results. The presence of abnormal cervical cytological results in HIV-positive women is also much higher than what is found in the general population (3.6%). With the recognition that cervical cancer is a major cause of morbidity and mortality among HIV-positive women, the HIV programme in Kenya is making significant efforts in integrating cervical cancer screening as part of the minimum comprehensive care package.



However, it is also recognized that about 80% of HIV-positive clients in Kenya are not aware of their HIV status. This means that the majority of the at-risk population, an estimated 10-plus million WRA, do not benefit from the cervical cancer screening program when the comprehensive care centers (CCCs) are used as the only entry point for screenings. To reach these other women as well, it is important that cervical cancer screening is integrated into the routine services that the majority of women are exposed to, regardless of their knowledge of HIV status. These routine services are offered at MCH clinics.

Recognizing the devastating effects of Reproductive Tract cancers including Cancer of the cervix on the health and development of women in Kenya, the National RH strategy (2009 -2015) has outlined 2 key objectives to address RT cancers. These are: “To reduce morbidity and mortality associated with common cancers of the reproductive tract..... and to improve access to services for prevention and management of cancers of the reproductive organs.”

Challenges

Despite the existence of a previous National Cervical Cancer Prevention Strategic Plan –NCCPSP- (2002 -2006), implementation of the national screening program is still low and haphazard. Cervical cancer screening occurs, but only in a few selected sites and in disjointed projects rather than a fully fledged national-level program. This explains why screening coverage is still negligible. Furthermore there is lack of additional diagnostic and treatment options at the secondary levels of care. Additionally, the link between screening and treatment has been dysfunctional. This augurs poorly especially for HIV positive women who tend to have larger lesions and more aggressive disease.

The main challenges to increasing access to and improving the quality of cervical cancer screening services include: lack of updated National guidelines on cervical cancer prevention and control, low level of community awareness on the importance of screening coupled with low knowledge of common symptoms of cervical cancer, inadequate skills among service providers; inadequate equipment and supplies (despite the fact that these are inexpensive for visual screening methods); lack of treatment facilities when there is pre-cancer or cancer diagnosis; inadequate monitoring and evaluation – especially data collection and management- of existing programs and low prioritization of cervical cancer among policy makers and opinion leaders; the HPV vaccine that could be used in primary prevention is also not provided as part of the national vaccine and immunization program.

2.1. Available services

The policy environment in Kenya is conducive to the roll out of the National Cervical Cancer program. This has been highlighted in the major RH policy documents including the National RH policy, the National RH Strategy, The National RH/HIV integration strategy and the National cancer control strategy. Cervical cancer prevention and control is also expressed in the following global and national policy documents: the Global Sexual and Reproductive Health Strategy; the Global Cancer Control Strategy; Kenya Vision 2030; the National Health Sector Strategic Plan II and the Cancer Control Bill.



Ideally the cervical prevention and control programme falls under the mandate of the Division of Reproductive Health / MOPHS, under the RT cancer programme. Management of overt cancer however falls under the Ministry of Medical services which oversees the hospitals. However due to the reasons stated above, there is reduced availability of cervical cancer screening services at the primary health care level where the majority (80%) live. Visual screening is however available in all provincial hospitals. Some district hospitals, a few health centres and some faith based facilities also provide the services

Traditionally visual screening in Kenya has been provided using a 2 step approach where VIA is performed followed by VILI. Treatment is provided to screen positive patients for either test. However the single visit approach is hardly used due to decreased availability of cryotherapy equipment.

Pap smear is the most commonly used method for cervical cancer screening, but its availability is limited to the urban areas. The long waiting time between screening and obtaining results leads to many clients getting lost to follow up. However several projects in RH and HIV have been offering cervical cancer screening using visual methods.

Although about 300 sites provide screening services, only about 30 (10%) have outpatient treatment services. Plans are underway to procure and distribute more cryotherapy equipment across the country in order to avail both screening and treatment at lower levels of care that are more accessible to the majority of clients.

Loop Electrosurgical Excision Procedure (LEEP) is available at very few sites namely: Kenyatta National Hospital, Nakuru PGH, Moi Teaching and referral Hospital, Siaya DH, Coast PGH and Embu PGH. Some private practitioners also have LEEP equipment.

For a long time, cervical cancer staging and biopsy, a prerequisite to cancer treatment was only offered at the Kenyatta National Hospital. However, the MOH is increasingly deploying Gynecologists to various district hospitals in the country. This has resulted in decentralization of this process. More pathologists have also been deployed to the provincial hospitals to provide histopathological diagnosis of specimens sent. The result has been that cancer patients present to the hospital with all the basic results needed for initiation of definitive treatment.

For treatment of overt cervical cancer, extended hysterectomy (effective only for micro invasive disease) is available at district, provincial and referral level hospitals. Curative radiotherapy is only available in Nairobi. Since most cervical cancer cases are diagnosed late, the scope for successful treatment is limited and very expensive; consequently the mortality rate is high among the affected patients. Currently in Kenya radiotherapy services are only available in KNH, The Nairobi Hospital, the Aga Khan University Hospital Oncology Centre and the MP Shah Hospital Cancer Centre. The waiting list is long as the majority of patients cannot afford private care and KNH is the only public facility with a radiotherapy unit.

There are several hospices in Kenya now providing support for cancer patients and their families. Many patients who need palliative care services or drugs for pain management seldom have



access to them in local health facilities, and community/ home -based care for cervical cancer is uncommon.

The National Cervical Cancer Prevention Strategic Plan (NCCPSP) therefore seeks to ensure that Women of Reproductive Age (WRA) have access to cervical cancer prevention and control services thereby reducing the incidence of overt cancer with its impact on health and development. The revised strategy incorporates several emerging issues e.g. Primary prevention and especially HPV vaccine that were not there at the time of the initial strategic planning. The revised NCCPSP also places emphasis on management of data generated during the program. This has been very weak and requisite systems therefore need to be put in place to facilitate data capturing, reporting and utilisation.

The National Cervical Cancer Prevention Strategic Plan 2011-2015 is presented below.

Vision

Kenyan women free from Cervical Cancer.

Goal

The goal of the program is to Reduce the incidence, prevalence, morbidity and mortality from cervical cancer and the improve quality of life of cervical cancer patients in accordance with the Kenya Health policy framework, National RH policy and the National RH strategy 2007.

Specific Objectives and Strategies

1. Create an enabling environment for expansion of the National Cervical Cancer Program (CECAP). This will include:
 - Strengthen National leadership and coordination of the CECAP program
 - Establish a quality assurance mechanism for the cervical cancer program
 - Establish an Monitoring & Evaluation framework for the CECAP program
 - Capacity building for CECAP program
 - Resource mobilization for CECAP program
 - Strengthen partnerships for CECAP program

2. Create demand for CECAP services. This includes:
 - Increase access to accurate and timely information on cervical cancer
 - Prevention, screening, diagnosis and treatment
 - Community mobilization for CECAP
 - Advocacy for CECAP at all levels

3. To provide high quality cervical cancer prevention and treatment services. This will include:
 - Reduce incidence and prevalence of cervical cancer through primary prevention -strategies
 - Provide cervical cancer screening services at all levels of the health care system
 - Provide treatment for both pre-cancer and cancer patients as close as possible to the screening time and place;
 - Provide palliative care for patients with invasive cancer



4. Strengthen referral system for cervical cancer program (linkages)

- Improve facility and community Health information system (general records and referral forms)
- Improve/strengthen communication system between the different levels
- Establish a referral directory
- Increase access to blood transfusion from level 4 and above

Program Outputs:

To accomplish these objectives, the following outputs must be achieved in the initial years of this period.

***Improved infrastructure** (facilities, equipment, and supplies) at rural, district and provincial health facilities to enable them to carry out screening and treatment services, including repair and maintenance of the equipment on which the success of the program depends.

***Available Trained health personnel** at all KEPH levels to provide cervical cancer screening and treatment services. Provide facilitative supervision, refresher training and on job certification by the Reproductive Health Training and Supervisory Teams to enable them to maintain or enhance their skills. Retain and schedule trained staff to ensure service availability.

***Targeted management of most at risk group:** Women with dysplasia treated as soon as possible after screening preferably in a single visit, those with invasive disease referred and palliative care provide for women with advanced disease

***A behavior Change communication strategy developed** to increase awareness of cervical cancer prevention so that health personnel, other relevant government staff, community leaders and eligible women and their male partners understand the need for cervical cancer prevention services and support utilization of available services.

***Necessary policies and practice guidelines established** for the Ministry of Health cervical cancer prevention services.

***An advocacy strategy developed** to mobilize necessary financial resources, including national, provincial, district and facility budgetary allocations and additional donor support.

***Capacity and systems build for monitoring** progress and evaluating program outcomes. This will include: rolling out a package of data strengthening tools, supporting establishment a database at the DRH and advocating for inclusion of cervical cancer data elements in the National HMIS reporting tools.



3. Strategy

The Kenya National Cervical Cancer Prevention Program- a Ministry of Health initiative- will focus on achieving at least 70% coverage of women in the age group with the highest risk-benefit ratio; involving communities to build awareness and support; using low cost screening and treatment approaches for pre-cancer; and assuring appropriate management for overt cervical cancer patients within available resources.

Implementation Strategies

The cervical cancer prevention program will utilize four main strategies during its implementation. These are: Community mobilization; Primary prevention; screening and treatment; advocacy and resource mobilization.

3.1. Building community awareness and support

Raising awareness about the toll taken by cervical cancer and the feasibility and cost-effectiveness of prevention will be a critical element in creating a successful program. The aim of health education will be to:

- Inform the community about cervical cancer, its causes and natural history,
- Promote screening especially for HIV positive women, and women ages 25-50 years,
- Increase awareness on signs and symptoms of overt cervical cancer,
- Reduce ignorance, fear, embarrassment and stigma related to cervical cancer,
- Inform the public of available services and where to get them.
- Empower communities with information to enhance decision making and promote positive health seeking behavior

Involvement of community leaders will be critical to provide valuable support for outreach efforts and in adequate allocation of local resources for essential screening and treatment services.

Male partners and other community members must support women's decisions to seek screening and to go for treatment when it is needed.

Multi-sectoral involvement by governmental and nongovernmental agencies will be imperative for the success of this strategy.

3.1.1 Strategies to be used for community mobilization include:

1. Use of existing structures to enhance public awareness and support e.g. Community Health Units, Community Health Workers, Community midwives, youth groups, women groups, council of elders, school health programs, Parliamentary health committees, professional bodies, training institutions, work place programs, county healthy committees etc
2. Raising awareness among men on cervical cancer prevention and control through media, workplace programs, religious and other social activities



3. Use Media and ICT to improve awareness
4. Development and dissemination of IEC/BCC materials
5. Provision of health talks in facilities and communities
6. Use of community role models/ champions
7. Integrate cancer prevention and control into the CHW training and roles

3.1.2. Target groups to be approached include:

Policy makers, Political and Religious Leaders; Women; Men; Schools (children, parents and teachers); Health workers; Youth; Community leaders; Traditional healers; Champions; persons with Disabilities, Most at risk populations (MARPs) as well as the Elderly,

3.2 Primary Prevention

Human papilloma virus (HPV) is the primary cause of 99.7% of all cervical cancers. Infection with one or more of the 15 high-risk oncogenic types leads to invasive cervical cancer after 10-20 years. Globally, about 70% of all cases of cervical cancer are caused by HPV types 16 and 18. With vaccines against these two types of HPV, being now available, there exists great potential to reduce the incidence of cervical and other anogenital cancers.

The main aim of primary prevention therefore is to prevent infection with HPV and with cofactors that increase the risk of HPV acquisition and expression. This includes education and awareness to reduce high risk sexual behavior, and discouragement of tobacco use/ cigarette smoking – a known risk factor for cervical cancer.

The following strategies are recommended for primary prevention in Kenya:

- a. Promote Abstinence or delayed sexual debut for adolescents **(A)**
- b. Promote faithfulness to one partner for those in relationships, **(B)**
- c. Promote Condom use - **C** (This allows faster HPV clearance, increases regression of cervical lesions, reduces the risk of genital warts as well as pre-cancer and cancer, protects against other STIs that are cofactors for cervical cancer, and protects against HIV which facilitates high risk HPV infection and progression into high grade SIL)
- d. Promote HPV Vaccination
- e. Promote male circumcision

3.2.1 HPV Vaccination

At present, two types of HPV vaccines are available: a quadrivalent type - ‘*Gardasil*’ (manufactured by Merck) that protects against the high risk HPV types 16 and 18 as well as low risk types 6 and 11 that are responsible for genital warts and a bivalent type, ‘*Cervarix*’ (manufactured by



GlaxoSmithKline) which protects against HPV types 16 and 18. Both vaccines have shown more than 90% efficacy to prevent precancerous lesions in females naïve to vaccine-specific HPV types and who have completed all three doses. Both vaccines are licensed for use in Kenya.

Recommendations for HPV vaccination in Kenya are as follows

- i) The target for vaccination will be Pre and young adolescent girls before first coitus. The recommended age group is **9-13 years**. Antibody response is high in this age group and vaccine efficacy is highest in those who are naïve to vaccine-specific oncogenic HPV types. Hence the greatest impact of HPV vaccination on cervical cancer is through broad participation of young adolescent girls rather than older girls or women. In line with the country vision of universal free primary education, the best approach would be a school based program targeting upper primary classes 4 to 8.
- ii) Either bivalent or quadrivalent type of vaccine may be used
- iii) Out of school population will be targeted through facility or outreach approach
- iv) Catch up vaccination will be provided for non-sexually active older girls; however, modeling studies suggest diminishing protection when age of vaccination is increased
- v) No boosters will be given

The focus of the program is females. This is because there are presently no studies indicating that HPV vaccination of males will result in less sexual transmission of vaccine-specific HPV infection from males to females thereby reducing cervical cancer.

The roll out of this programme will be led by the Division of Vaccine and immunization whose systems for the national vaccine programmes are already in place, through the school health program. Other collaborating divisions include the Division of Reproductive Health and the Division of Child and Adolescent Health. With the main entry point being the schools, the Ministry of Education is a key stakeholder in ensuring smooth implementation in primary schools.

3.3 Prevention through screening and treatment

Based on the current knowledge of the natural history of cervical cancer and its epidemiology in Kenya, the program will focus on saving the clients' and providers' time, reducing revisits and reducing loss to follow up. As such, targeted screening will be offered to women in the most at risk age group as detailed below. However, those who request for screening or those for whom it is advised -who are outside of this target age group- will still be screened. The program will ensure that those who are screen positive receive appropriate treatment preferably during a single visit.

Initially, cervical cancer prevention will be integrated into existing MCH/FP services, Comprehensive care clinics, and routine gynecology services. This is because cervical cancer prevention services use personnel and other resources, such as materials, space, equipment, supplies, and reporting systems, similar to those in these service areas. The result will be a more cost-effective, more efficient to manage, more convenient and acceptable service for clients. However to increase the chances of reaching the 70% coverage, organized mass screening activities will be also be undertaken. To further augment this, a single visit see and treat (SVA) approach is recommended.



Where SVA is not possible due to unavailability of supplies, equipment or trained personnel, or in cases where other screening methods e.g. cytology are used, the recommended service model will be a screen- re-evaluate/ diagnose -and-treat approach for pre-cancerous lesions (sometimes referred to as “see, see, and treat”). This involves screening routinely at the primary level followed by referral of screen-positive clients to the secondary level where specially trained providers can reevaluate or perform diagnosis and offer pre-cancer treatment or further referral as needed. In areas where visual screening is practiced, this will only be a stop gap measure while the health system procures additional cryotherapy equipment for distribution to all levels of care and especially levels 2-3 where the majority of clients present. Fortunately as part of the FY2011/ 2012 national budget, funds have been allocated for procurement of cryotherapy equipment. This move will ensure that there is cryotherapy in all model health centers in the country hence ensuring access to treatment services across the country.

Specialist care will be provided at regional referral facilities for the management of overt cancer patients and others with special needs.

This model is designed to give women complete care in one visit, and to minimize the number of visits for screen-positive women within a safe and efficient treatment strategy. Cervical cancer screening will also be integrated into other RH outreach activities e.g. during integrated RH/FP camps, and campaigns during the cancer awareness month in order to reach more women especially in hard to reach areas.

3.3.1: Screening

A good screening test is one that is acceptable to women and providers, accurate, reproducible, safe, practical, affordable and available. To screen effectively in the Kenyan rural setting, we need an approach that will meet the stated characteristics and ensure at least 70% coverage of the eligible population.

3.3.1.1 Screening Methods:

The following screening methods are recommended for the Kenya program as they meet the criteria for a good screening test:

1. Visual Inspection with Acetic Acid (VIA)
2. Visual Inspection with Lugol's iodine
3. Cytology using Conventional Pap smear
4. HPV testing

Other methods may be used in research or training activities

3.3.1.2 Target group

The focus of the program will be women aged **25-49** yrs

However women outside this age group who request or for whom screening is recommended will not be denied services



3.3.1.3 Screening Cycle

The recommended screening cycle for the Kenya program is every 5 years, except for HIV women, who will follow the recommended cycle below in section 4.3.1.5

3.3.1.4 Entry points:

Cervical cancer screening will be integrated into routine service provision in both public and private sector.

These are the recommended initial service entry points:

- MCH/FP clinics
- Comprehensive Care clinics (CCCs)
- Obstetrics and gynecology wards/ clinics
- Outreach/In reach – (for mass screening campaigns)

Information on cervical cancer screening will be provided at all service areas where women present.

These include:

- The Outpatient Department
- The Female wards
- The TB clinics
- The Maternity Units

3.3.1.5 Screening in HIV positive women:

All HIV positive women with history of sexual activity 18-65 years old will be screened for cervical cancer as part of comprehensive HIV care

The screening cycle for HIV will be as follows:

- At diagnosis
- 6 monthly in the 1st year
- Then yearly if normal

3.3.1.6. Screening during pregnancy

To avoid missed opportunities for the Kenya population who generally demonstrate high first ANC attendance, high HIV prevalence, and high cervical cancer prevalence, screening will be offered to women in pregnancy until 20 weeks gestation.

No treatment will be offered in pregnancy unless there is evidence of a malignant lesion.

If cervical dysplasia is noticed, the woman will be advised to return at 6 -12 weeks post partum for treatment.



Since most women also bring their children for immunisation at 6 weeks post partum, eligible women will be offered screening at that time and managed accordingly.

4. Pre-cancer treatment methods

Ideally, cervical cancer screening should be offered in tandem with adequate treatment facilities for screen positive results. However, in many developing countries treatment options are limited and pre-invasive cervical lesions are often treated using aggressive approaches such as cone biopsy or hysterectomy rather than appropriate safer and cost effective outpatient approaches. These in-patient methods are expensive and often result in over-treatment of women.

For the Kenya cervical cancer prevention program, simple outpatient procedures which work by excision or ablation will be used to destroy or remove pre-cancerous tissue. To minimize loss to follow up the Single Visit Approach (SVA) is recommended. The specific treatment choice will depend on predefined criteria that will be outlined in the national guidelines. The following are the recommended treatment strategies for precancerous lesions for the Kenya program:

- Cryotherapy
- Loop Electrosurgical Excision Procedure (LEEP)
- Cold knife conization

4.1 Cryotherapy:

This method involves freezing abnormal tissues with a probe cooled by liquid nitrous oxide or carbon dioxide. It has an overall effectiveness rate of 80-90% in women with suitable lesions. It is simple, safe, and major complications are uncommon. It is also inexpensive; does not require electricity, and is practical for low-resource settings. It has been safely performed by nurses and other non-physicians in low level facilities and even primary care level in Kenya and elsewhere. Cryotherapy is not suitable for lesions that are larger than the cryoprobe tip or for lesions that extend into the cervical canal.

4.2 LEEP /LLETZ:

A common outpatient method used is the Loop Electrosurgical Excision Procedure (LEEP). The main advantages are that it can be used to treat large lesions not amenable to cryotherapy and ones that extend into the cervical canal. It also can provide tissue specimens for histology. It is 90-95% effective in treating high-grade cervical dysplasia.

However it requires more expensive equipment than cryotherapy and necessitates a highly skilled provider. It also requires electricity, local anesthesia and has a higher risk of serious complications as therefore emergency backup facilities to deal with complications must be available. The Kenya cervical cancer prevention program recommends that LEEP be made available at the county hospitals and national referral sites, while cryotherapy should be made more widely available at the lower KEPH levels



4.3 Cold Knife Conization

In situations where cryotherapy and LEEP are not available, and there is a doctor competent in this procedure, cold knife conization (preferably a shallow conization) may be offered to clients with high grade cervical lesions. Cold knife conization generally has similar requirements to LEEP and additionally has to be performed in theatre usually by a gynecologist. It carries risk of short and long term complications similar to those of LEEP.

However, since it an excision method, the specimen obtained can be taken to the laboratory for histological analysis. Indications and criteria for cold knife conization are detailed in the RT cancer guidelines.

5. Management of overt cervical cancer

Inevitably some women with invasive cervical cancer will be identified as a result of the screening program, and they must receive appropriate care and treatment. The National Cervical Cancer Prevention Strategic Plan recommends that basic diagnosis and treatment services be available at level 5 and 6 facilities

5.1 Diagnosis:

Confirmation of the diagnosis is an essential first steps. For this to be successful, the presence of a functional histopathological laboratory is imperative. The following approaches are recommended:

- Colposcopy and Biopsy
- Staging and Biopsy

Details of the procedures are in the National Reproductive Tract Cancer Guidelines.

5.2 Treatment

Treatment options will depend on the stage of disease. Currently radiotherapy is only available at level 6 facilities (referral hospitals). Primary level facilities will utilize existing structures to refer patients to these tertiary sites where treatment is available. It is envisaged that as the program advances, regional radiotherapy centers will be set up.

The National Cervical Cancer Prevention Plan recommends the following treatment modalities for the various stages of overt cervical cancer

1. Micro invasive carcinoma to stage 1a:
Extended abdominal hysterectomy
2. Stage 1 to 2a
Wertheim's hysterectomy or Radiotherapy,
Adjuvant chemotherapy
3. Stage 2b to 4 –
Radiotherapy and Palliative care
Adjuvant chemotherapy



5.3 Palliative Care:

The overall goal is to achieve the best quality of life for patients and their families. Palliative care appropriate for each level of health care will be strengthened building on tools already developed for use in Kenya.

Strategies to enhance palliative care include the following:

- Establish /strengthen hospices in every County
- Capacity building for palliative care at all KEPH levels
- Availability of Drugs and supplies for palliative care at all KEPH levels
- Strengthened capacity for home based care for cervical cancer patients

6.0 Health services

To attain the requisite 70% coverage, efforts will be made to have the cervical cancer prevention services at all KEPH levels. Linkages between private and public sector facilities will be enhanced in order to expand the referral networks; provide comprehensive prevention and treatment services; implement quality assurance and facilitate monitoring and evaluation of the program.

6.1 Start-up of services

Several critical steps are needed to start up the service component of the Kenya Cervical Cancer Prevention Program. Each facility offering cervical cancer screening services will be subjected to a site assessment to determine the facility readiness to offer the CECAP services. The results will inform mobilization of resources to facilitate smooth programme implementation

The minimum clinical services to be offered at each KEPH level are defined below. In addition, standard management activities (supervision, record-keeping, reporting) will occur at each level.

Competency-based training for personnel at each level will be carried out using a variety of methods, including regional and district workshops, on-site training, on the job experience-based learning and mentorship. Among the selection criteria for the health providers to be trained will be a commitment for their supervisors to retain them in the respective units for at least 2 years after training. Certificate of competency will be given by the DRH/ MOPHS.

A standard set of M&E tools will be introduced to facilitate data capturing, reporting and utilisation. Cervical screening and pre-cancer treatment indicators will be integrated into the health management information system (HMIS) to enhance proper program monitoring. The national RT Cancer technical working group will support the DRH in guiding program roll-out and expansion.

It is envisaged that apart from basic reporting to the DHIS, the DRH will maintain a data base to capture details of program roll out and implementation to facilitate planning, scale up and reporting on global indicators. All health facilities and practitioners providing cervical cancer



screening services will be required to submit their reports to the DRH. This information will also be linked to the national cancer registry in line with the National Cancer Control Strategy.

7.0 Community partnerships

The Kenya Cervical Cancer Prevention Program will strive to establish community based programs intent on mobilizing communities to seek cervical cancer screening services, supporting screen positive patients to access treatment, and encouraging community participation in providing palliative care to patients with end stage disease.

These programs will take into consideration the critical role played by individuals, families, community organizations, including civil authorities and will target both men and women for success. The focus will be on general public education and awareness of cervical cancer prevention, along with specific outreach to eligible women especially in hard to reach areas.

In addition, satisfied clients who have been successfully treated will be identified as champions and advocates for cervical cancer prevention and control.

Community Health Workers will be trained so as to assist in community mobilization, tracking / follow up of screen positive clients and providing home based care.

Table1. Service provision by levels of health care

Health Institution	Personnel	Services offered
Community /Level one	CHWs CHEWs Trained health personnel	IEC/BCC /community mobilisation Screening and treatment during outreach Cryotherapy during outreach Home based and palliative care Community Health Information Systems Contact tracing Referral and linkages
Dispensaries /Level 2	-Nurses	IEC/BCC Screening using VIA Treatment with cryotherapy (where available) Referral of screen positive clients (where cryotherapy is not available) Base for In and Outreach screening services Palliative care
Health Centre /Level 3	Nurses Clinical officers Public health officers / Public Health Technicians CHEWs	IEC/BCC Screening using VIA Treatment with cryotherapy (where available) Referral of screen-positives where treatment is unavailable Palliative care Base for In and Outreach screening services Follow-up care
District Hospital / Level 4	Nurses Clinical officer Medical Officer Public health officer Health education officer CHEWs Gynaecologist	IEC /BCC Screening with VIA/VILI or Cytology using Pap smear Diagnosis using Colposcopy if available Staging and biopsy of overt cancer Treatment with: Cryotherapy, Cold knife conisation or Simple hysterectomy Referral of advanced cases Palliative care



		Coordination/M&E Research Cancer Registry
Provincial Hospitals Level 5	Nurse Clinical officer Medical Officer Gynecologist Pathologist	Same as District Hospital PLUS Treatment with LEEP, Extended hysterectomy Referral of advanced cases ?? Radiotherapy / chemotherapy
Tertiary levels / Referral hospitals: Level 6	Nurse, Clinical officer Medical officer, Gynecologist Oncologist, Radiotherapist	Same as provincial plus: Radiotherapy / chemotherapy Complex surgery e.g. Wertheim's hysterectomy Pre-service Training

8.0 Advocacy with key stakeholders

The Advocacy programs will aim at sensitizing stakeholders on the need for repositioning cervical cancer prevention and control in the health and development agenda. The advocacy programs will target policy makers, development partners, women's groups, professional associations, teaching institutions, the media and the community. Professional and academic groups must be persuaded to lend their expertise and support to the program, particularly the building of provider capacity. Advocacy champions will be identified, trained and utilized

Critical areas for advocacy include: the removal of policy barriers; allocation of sufficient financial and human resources for the programme; investment in HPV vaccine; and systems strengthening for implementation of the CECAP program. Lobbying for establishment of a budget line for the cervical cancer program will be undertaken

To facilitate the advocacy process, tools will be developed to demonstrate the cost benefit analysis and the deaths averted if the CECAP program is successfully implemented. These will be shared in forums with the policy makers.

Working with other government sectors and nongovernmental agencies, the Ministry of Health will organize activities and develop materials to increase public awareness of cervical cancer and its prevention, to mobilize eligible women to utilize cervical cancer prevention services, and to encourage communities to assist women with cervical cancer.

9.0 Resource mobilization

Mobilization of significant financial, human, material and technical resources is required if the objectives of this program are to be met. The Ministry of Health will provide leadership and coordination in resource mobilization.

Financial resources will be needed for start-up costs associated with training and equipment. External funds will be sought to supplement internal budget allocations. Recurrent costs associated with personnel and supplies will come from existing budgets at various levels and from cost recovery funds.



Human resources, in the form of service providers, supervisors and managers, are critical. The needs will be assessed by each district, and plans will be developed to assure adequate numbers of staff with appropriate training and geographic distribution are in place.

Key Resources Mobilization Strategies include:

1. Finances
 - Costing of the program will be done; this will be used for advocacy purposes
2. Human resources
 - Capacity building of service providers and managers
 - Strengthening of pre-service training
 - Lobbying for appropriate deployment, recognition and retention
 - Establishing of an oversight/regulatory mechanism
3. Infrastructure
 - Lobby for enhanced infrastructure to support cervical cancer programme. (This includes infrastructure for both screening and treatment of dysplasia and overt cancers)
4. Equipment
 - Lobby for procurement of key equipment and supplies necessary for provision of cervical cancer services as appropriate for each level

10.0 Research

Research to build the evidence base for the programme and to determine best practice will be encouraged. Collaboration with university researchers and other research institutions like KEMRI will be pursued to answer critical clinical and community questions and refine our strategy as we go along.

Key focus areas for research include the following:

- Promote operational research at all levels
- Conduct a baseline survey on cervical cancer
- Link with national surveys to gather cervical cancer data

11.0 Program monitoring and evaluation

Monitoring is important in determining whether the program is meeting its objectives effectively and efficiently.

A basic set of data strengthening tools will be introduced to enhance data capturing, reporting and utilization; both at facility and at regional/ national level. The following tools are proposed for use at the facility level:

- A cervical cancer screening form** - to capture information graphically of the appearance of the cervix after screening
- A daily log book or register** to capture a summary of the results of all clients seen that day
- A monthly summary tool** to capture key indicators; this will be used for reporting to the district level.



A Data Use Poster to enable sites to plot on a graph and use their own data for decision making;

A support Supervision tool for use during facilitative supervision

Key indicators will be also incorporated into the routine HIS data capturing tools. This has already been done with the **Mother Child booklet and the ANC Longitudinal registers**. Accurate and timely collection of routine data (e.g., service statistics, facilitative supervisory visits) will be supplemented by occasional special data collection exercises (e.g. surveys, observational visits, client interviews), to determine the coverage and quality of services. Data will be required from all facilities providing CECAP services be they government or privately owned.

As part of the efforts to strengthen the HMIS, the MOH will augment the expansion of hospital and regional cancer registries and encouraged accurate, timely and complete data management.

Regular support supervision to assess program activities (staff performance, supplies, quality of care, coverage, client satisfaction, etc) will be done to guide strategic or operational decisions during the course of program implementation.

At the national level the strategy will focus on establishing a database for capturing national indicators to inform program planning, resource allocation and training. Key indicators will be included in the Annual operational plans and National HIS system. This data will inform monitoring achievement of the intermediate outputs and progress towards the eventual program outcomes. A list of the key indicators for programme monitoring is annexed.

Evaluation of the program involves assessment at the end of a defined period (e.g. midterm or end term) as to whether the planned outcomes have been achieved and how effectively resources have been used.

Periodic evaluation will be done for Kenya cervical cancer program as outlined in the log frame. An interim evaluation 2 years after initiation is envisaged to inform continued program implementation.

Both outcome and impact indicators such as a reduction in cervical cancer incidence or mortality will be evaluated. Additional factors for evaluation that might require special studies (rather than routine data collection) include: client satisfaction with services, community support for screening, and cost-effectiveness of service delivery.

12.0 Institutional Framework

The national Kenya Cervical Cancer Prevention Program is a Ministry of Health initiative but requires collaboration with many sectors and partners to be successful.



12.1 Role of the Ministry of Health

The Ministry of Health will provide the overall policy formulation, strategy development and revision, development and review of guidelines and standard operating procedures, program management and coordination, quality assurance, monitoring and evaluation as well as ensuring institutionalization of the program into routine service delivery.

The program secretariat is at the Division of Reproductive Health (DRH). The secretariat is in charge of co-ordination of all the national activities and all stakeholders with an interest in cervical cancer prevention activities and ensuring linkages with other government sectors and nongovernmental organizations.

The Head of the Division of Reproductive Health will chair co-ordination meetings and will be responsible for presenting program issues to the Reproductive Health Interagency Coordinating Committee and the Health Sector Coordinating Committee, convening quarterly and annual reviews as well as the mid-term and end of program evaluation.

At the provincial and district level, co-ordination will be through the provincial and district health management teams with technical guidance from the Reproductive health coordinator.

12.2 Roles of NGOs, CBOs and the private sector

A variety of non-governmental organizations, community-based organizations, and Faith-based organisations and the private sector health care agencies and businesses have interests in cervical cancer prevention.

The Division of Reproductive Health will coordinate with partners at the national level, while PMOs and DMOs will designate people on their management teams to coordinate with groups at provincial and district levels.

The MOH will establish a database indicating what kind of activities the partners are involved in and their area of operation within the country.

Professional Associations will play a critical role in advocacy and dissemination of new policies and technical information to their membership.

The MOH will also work closely with potential partners in the area of resource mobilization and service provision.

They NGOs, CBOs and private sector will be critical in the promotion of community involvement and in community mobilization for utilization of services



12.3 Role of training Institutions

Medical training institutions including the universities will ensure that health workers on completion of training have the necessary knowledge and skills to implement and integrate screening and treatment service wherever they are deployed according to national guidelines and standards.

12.4 Role of Research Institutions

Research institutions will regularly conduct research to inform practice in the area of cervical cancer prevention and control in line with the MOH research agenda. They will disseminate research findings to relevant stakeholders and support capacity development of interested partners in operations research

12.5 Role of Service delivery points

Health service delivery points both in public and private sector will endeavor to implement screening and treatment services according to the set guidelines and standards; integrating cervical cancer screening into relevant service areas in line with the KEPH level. They will ensure the following:

1. Availability of commodities, supplies and equipment to facilitate cervical cancer screening in their specific sites; and ensure that equipment are always in good condition (servicing and repairs as necessary)
2. Follow up of clients (especially screen positive clients) to ensure that they complete treatment and adhere to management protocols
3. Completion of the requisite data tools /registers and submission reports in a timely, accurate and consistent manner
4. Community mobilization activities in their areas of operation and availability of IEC / BCC materials and technical support
5. Outreach and in reach cervical cancer screening and treatment activities

12.6 Role of the community

Communities will use their existing systems to enhance awareness on the risk factors for cervical cancer including promoting safer sex practices and male circumcision

When available they will ensure that young girls obtain the HPV vaccine

They will educate their members on availability of screening services and where to obtain them, and especially men to support/ facilitate accessing of these services as well as adherence to treatment protocols

They will also develop and maintain systems that facilitate timely referral and transfer of patients that need hospital care and in addition

They will provide home based care and support for patients with overt cervical cancer



13.0 Conclusions

Reproductive health services have previously not addressed the problem of Kenya's high rates of cervical cancer, either with preventive measures or with adequate treatment for cancer.

This strategy is appropriate for the resources and infrastructure available. It has been carefully designed to build on existing experience and capacity and to gradually phase in expansion of services.

The goals and objectives are achievable if efforts are properly coordinated, if multi-sectoral collaboration can be obtained, if resources are allocated judiciously, and if political commitment is firm.

Implementation of this program will ultimately save the government money, as the number of women with cancer needing care in our gynaecology wards and clinics diminishes. Communities will benefit from the contributions made by healthy women to our economy and our society.



Appendix 1: COMPARISON OF CERVICAL CANCER SCREENING METHODS

Characteristics	Conventional Cytology	HPV DNA tests	Visual inspection with acetic acid VIA
Sensitivity	47-62%	66-100%	67-79%
Specificity*	60-95%	62-96%	49-86%
No. visits required for screening and treatment	2 or more	2 or more	1 or 2
Health systems requirements	Requires highly trained cytology technicians and cytopathologists; microscope, stains, slides; transport system for specimens and results and a system for informing and tracking positive cases	Requires trained lab worker, electricity, kits, reader; transport system for specimens and results	Requires training and regular supervision; no equipment, few supplies
Comments	Assessed over the last 50 years in a wide range of settings in developed and developing countries. Test must be repeated every few years due to low sensitivity	Assessed over the last decade in many developed country settings; just beginning in developing countries. Due to high sensitivity screening may be done with less frequency	Assessed over the last decade in many settings in developing countries with good results



Appendix 11: STANDARD EQUIPMENT/SUPPLIES-FOR CERVICAL CANCER SCREENING AND TREATMENT

VIA/VILI/ CRYOTHERAPY	
EQUIPMENT	COLPOSCOPY
Gas-Nitrous oxide tank 16560L <ul style="list-style-type: none"> Nitrous medical trolley Nitrous pressure hose Nitrous regulator Metal O clip 	Colposcopy unit
Gas-Carbon dioxide tank <ul style="list-style-type: none"> CO2 connector Cylinder cart 	Punch Biopsy forceps
Cryotherapy unit (Gun and probes) <ul style="list-style-type: none"> Three tip special case includes Ll100 Gyn tips- T1905, T2014, T0500 Bag of 100 disposable plastic shields Carrying case 	Endocervical sperculum
Adjustable wrench	Monsels' paste/ silver nitrate stick /pencil
Autoclave or other sterilization equipment	
INSTRUMENTS	
Speculum (Cusco's or graves)	
Instrument tray-,	
Kidney dish	
Galipots	
Sponge holding forceps	
Instrument trolley / table	
FURNISHINGS	LEEP
Benches/chairs for waiting area,	Supply of loop electrodes-loop and ball)
Gynaecology examination couch	LEEP unit with smoke evacuator
Light source (white light)	Local anaesthesia
Stool/chair	Absorbable suture
cabinet	Dental / spinal needles G 23-26
Storage cupboard supplies/drugs	Suture pack
Trash bin with plastic bag for non-contaminated materials	Syringes
Trash bin with plastic bag for contaminated materials	Insulated speculum
Table/desk	Insulated Vaginal retractor
3 IP buckets	Monsels' paste
Autoclave or other sterilization equipment	
SUPPLIES	Sterile drapes
Latex exam gloves	Sterile gloves
Utility gloves for handling decontaminated instruments	Formalin
Plastic apron	Specimen containers
TOOLS	Electricity supply
Client's card	Socket in the room
Screening map form	
Daily activity register	
Monthly summary forms	
Post-cryotherapy instructions form	
Referral forms	
SUPPLIES STORAGE	



VIA/VILI/ CRYOTHERAPY	
EQUIPMENT	COLPOSCOPY
<i>The storage location should be</i>	
Out of direct sunlight	
Cool, dry, and well ventilated	Colposcope
Locked/lockable	Punch Biopsy forceps
MEDICATION	
Analgesics	
Antibiotics	
SOLUTIONS	
Chlorine solution 0.5%	Formalin solution
Alcohol-based hand sanitizer or soap	VIA/VILI supplies and equipment
Isopropyl alcohol 60–90%	
Acetic acid (3–5%)	
Lugol's Iodine	
Antiseptic solution e.g. hibitane in water	
OTHERS	
Disposable hand towels	Leak proof Specimen container
Sanitary towels	
cotton swabs /gauze	
Orange sticks or equivalent	
Drapes/sheets	
Mackintosh	
PAP SMEAR	
Fixative 95% alcohol	
Microscope slide	
Cytology brush/ Ayres spatula	



Appendix 111: **ADVOCACY AND COMMUNICATION MESSAGES FOR DIFFERENT TARGET AUDIENCES**

<p>Core messages for all target audiences</p> <ul style="list-style-type: none">➤ Basic information on cervical cancer and HPV infection➤ Universality of HPV infection➤ Disease burden in the country; prevention strategies and the effectiveness and safety of different interventions➤ Emphasis that both vaccination and screening are necessary➤ Information on other relevant adolescent health issues such as prevention of HIV and other STIs, prevention of pregnancy should be considered as appropriate
<p>Messages for high-level decision-makers</p> <ul style="list-style-type: none">➤ Disease burden and comparison with other key national health issues➤ 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)➤ Impact of new programs on budgets, health systems, and Millennium Development Goals and other national or global indicators
<p>Messages for managers and health care providers</p> <ul style="list-style-type: none">➤ Impact on existing services, and benefits of the programme➤ Opportunities for using cervical cancer prevention to promote other health services such as adolescent health, and sexual and reproductive health services➤ Necessary systems requirements including procurement, reporting, call and recall, and quality control➤ Service provision and counselling skills related to cervical cancer (training)
<p>Messages for clients</p> <ul style="list-style-type: none">➤ Specifics of what services are provided and how they are performed➤ Information regarding vaccine dosage and schedules required, and target age➤ Schedule for screening, target age and treatment options➤ Specifics on where and when services will be offered➤ Costs of different services➤ Respond to rumours, misinformation, client assumptions

Appendix IV –KEY CECAP performance Indicators

Table 1: Monitoring and Evaluation Framework for CECAP Programs

(Indicators in yellow are considered Key Performance Indicators and should be tracked at the facility-level)

INDICATORS	DEFINITION / CLARIFICATION	DATA SOURCE / COLLECTION METHOD	FREQUENCY OF DATA COLLECTION	TARGET
Goal: Increased access to quality cervical cancer prevention and treatment services for women				
Objective 1: Stakeholders collaborate to maintain an enabling environment for the expansion of cervical cancer prevention and treatment services				
1. Number of plans (referral and data) developed or revised and approved by MOH	Indicator used to track knowledge transfer, standardization of practices, and data used for decision-making for sustainability and handover.	Referral Plan Data Management Plan, spreadsheets or database	Annually	
2. Percentage of HIV+ women receiving cervical cancer services at project-supported sites.	Used to track the coverage and integration between CECAP services and care and treatment sites. <u>Numerator:</u> # of new HIV+ women screened with VIA. <u>Denominator:</u> # of women registered with the Care and Treatment unit at the same site (both pre-ART and ART).	Monthly Summary Form Tabular report of # of women in C & T	Semi-Annually	
3. Percentage of providers trained still performing VIA after 1 year.	Used to evaluate provider retention, capacity building, transfer of knowledge, and maintenance of skills.	Program Reports	Annually	80% - 100%
Objective 2: Health facilities provide high-quality cervical cancer prevention and treatment services to HIV positive women and the general population.				
1. Total number of service outlets providing VIA screening during the last quarter	If the site provided VIA screenings at least 2 out of the last 3 months, they will be included in the total number.	Monthly Summary Forms	Quarterly	
2. Number of health care workers who successfully completed an in-service training program	PEPFAR Next Generation Indicator# H2.3.D. Provider must be at least “qualified” during the training program to be counted (still need supervision).	Training Reports	Immediately following training	
3. Total number of new ¹ women screened with VIA	Indicator can be disaggregated by HIV status (HIV+ and HIV-/unknown). Definition: Total number of initial VIA visits.	Screening Map Form Logbook Monthly Summary Form	Monthly	

¹ “New women screened” is defined as all women screened at a program service site by a provider that received training since project start or after. Women who have had a cervical cancer screening (either VIA or Pap) at the site prior to project start and come for another screening should be included in this indicator.

4. Percentage of women screened with a VIA positive result	Percentage expected to be between 5 – 10% for general population programs. May be higher for HIV+ focused projects. If over, may have issue of over diagnosis, if under, under diagnosis. Disaggregated by HIV status, visit type (initial visit, routine visit, year follow-up visit), site and provider (if possible). <u>Numerator</u> : # of screening with a VIA positive result. <u>Denominator</u> : # of VIA screenings.	Calculated from Monthly Summary Form	Monthly	5 – 10% for general population programs, higher for HIV+ focused programs
5. Percentage of women who are referred for large lesions	Disaggregated by HIV status and visit type. <u>Numerator</u> : Clients referred for large lesion. <u>Denominator</u> : Number of VIA positive women.	Calculated from Monthly Summary Form	Monthly	
6. Number of women who are referred for suspect cancer	Disaggregated by HIV status and visit type. Also calculated per 100,000 women to compare against incidence and mortality rates globally for cervical cancer.	Screening Map Form Logbook Monthly Summary Form	Monthly	
7. Percentage of eligible women with VIA positive results receiving immediate cryotherapy	Single Visit Approach Rate. Disaggregated by HIV status and visit type. “Eligible women” is defined as VIA+ women who have small lesions, those women with large lesions or suspect cancer are not included in the denominator. Immediate cryotherapy is defined as cryotherapy performed on the same day. <u>Numerator</u> : VIA positive women that receive immediate cryotherapy. <u>Denominator</u> : VIA positive women who receive immediate cryotherapy + VIA positive women who choose to postpone cryotherapy.	Calculated from Monthly Summary Form	Monthly	At least 80%
8. Percentage of VIA+ eligible women that ever receive cryotherapy	Includes both women that are screened and treated on the same day and women that return for cryotherapy after postponing.	Calculated from Monthly Summary Form	Monthly	
9. Percentage of VIA+ eligible women that previously postponed cryotherapy that never return	Lost to Treatment Rate. Disaggregated by HIV status. <u>Numerator</u> : VIA+ eligible women that postponed cryo – VIA+ eligible women that postponed and returned for cryotherapy. <u>Denominator</u> : VIA+ eligible women that postponed cryo.	Calculated from Monthly Summary Form		
10. Percentage of post treatment complications due to cryotherapy or LEEP	<u>Numerator</u> : Number of post treatment complications due to cryotherapy or LEEP. <u>Denominator</u> : Number of cryotherapy treatments performed (same day + returned) + LEEPs	Calculated from Monthly Summary Form	Annually	

11. Percentage of large lesion referrals that actually get LEEP	Disaggregated by HIV status, not project site. <u>Numerator:</u> # of LEEPs performed. <u>Denominator:</u> # of large lesion referrals.	Calculated from data in spreadsheet and taken from the Monthly Summary Forms.	Annually	
12. Number of facilities recognized for achieving a certain level of performance using the SBMR approach	Level of performance from baseline to be determined.	SBMR Assessment tools	Annually	
Objective 3: Target communities have access to accurate and timely information regarding cervical cancer prevention and treatment services.				
1. Number of community campaigns including mass screening campaigns carried out.		Mass screening campaign data, newspaper clippings, fliers, etc.	Annually	

Outcome/ Impact indicators

- % of women in the target group (25-50yrs) screened per year.
- Reduction in new cases of cervical cancer
- Reduction in prevalence of Cervical cancer
- Reduction in the cervical cancer case fatality rate.

Appendix V: Log framework for the National Cervical Cancer Screening Program. (2004-2008)

Objective	Strategy	Priority Actions	Output	Responsible persons
1.Create an enabling environment for expansion of the national CECAP program	Strengthen leadership and coordination of the national CECAP program	<ul style="list-style-type: none"> -Disseminate National guidelines and SOPs for CECAP -Convene quarterly RT Cancer TWG -Procure and distribute key basic equipment for CECAP - Build capacity of RH managers in CECAP programming 	<ul style="list-style-type: none"> -National guidelines and SOPs disseminated to all facilities -Four RT Cancer TWGs convened /yr -All model health centres and county hospitals have functional cryotherapy -National and regional managers trained in CECAP programming 	DRH/MOPHS and partners
	Establish quality assurance mechanism for the CECAP programme	<ul style="list-style-type: none"> -Develop /Adapt National CECAP standards -Conduct national support supervision for CECAP 	<ul style="list-style-type: none"> National CECAP standards available -Biannual support supervision for CECAP conducted 	DRH/ MOPHS and partners
	Establish an M&E framework for the CECAP programme	<ul style="list-style-type: none"> -Develop /adapt a package of CECAP M&E tools -Capacity building in M&E for CECAP -Integrate CECAP indicators in national HIS -Establish national CECAP database and reporting mechanisms -Lobby for inclusion of CECAP in national surveys -Strengthen National cancer registry 	<ul style="list-style-type: none"> -CECAP M&E tools disseminated and in use -National and regional TOTs for M&E conducted -CECAP indicators reflected in national HIS database and tools -National CECAP database in DRH -CECAP included in next DHS and KSPA surveys -National Cancer registry expanded capturing CECAP data from all regions 	DRH/MOPHS and partners
	Mobilise resources for the CECAP program	<ul style="list-style-type: none"> -Lobby for prioritisation of HPV vaccine -Lobby for CSR for procurement of radiotherapy equipment -Lobby with other stakeholders / bilateral organisations for greater investment in CECAP 	<ul style="list-style-type: none"> -HPV vaccine prioritised by Kenya vaccine group after ROTA -Radiotherapy equipment available in all level 6 facilities -Financial and other resources available for CECAP 	DRH/ MOPHS and partners
	Enhance capacity building for	-Review national Orientation Package for	National OP for CECAP standardised	DRH/MOPHS and

	the CECAP program	<p>CECAP</p> <ul style="list-style-type: none"> -Upscale in-service training in CECAP (SVA) -Incorporate CECAP in pre-service curricula -Advocate for retention of staff trained in CECAP in service area for at least 2 yrs- 	<ul style="list-style-type: none"> -Service providers in target sites oriented in SVA -CECAP reflected in all pre-service syllabus/ curricula - Staff trained in CECAP in service areas for 2 years 	partners
	Strengthen partnerships for CECAP	<ul style="list-style-type: none"> -Enhance private sector /FBO participation in CECAP -Promote multisectoral involvement in CECAP 	<ul style="list-style-type: none"> - Private hospitals /clinics/FBOs offering CECAP services - Other sectors e.g. communication, education, etc involved in CECAP campaigns 	DRH /MOPHS and partners
2.Create demand for CECAP services	Increase access to accurate and timely information on CECAP	<ul style="list-style-type: none"> -Develop/adapt CECAP IEC /BCC materials -Disseminate CECAP IEC/BCC materials -Use of mass media for disseminating CECAP messages 	<ul style="list-style-type: none"> -CECAP IEC /BCC materials available and in use -CECAP IEC materials disseminated in various platforms - print and electronic media used to disseminate CECAP messages and for community mobilisation 	DRH /MOPHS and partners
	Community Mobilisation for CECAP services	<ul style="list-style-type: none"> -Use community structures to mobilise women for screening -Use integrated outreach camps for provision of CECAP services -Enhance male involvement in CECAP 	<ul style="list-style-type: none"> -CHWs, CHEWS, Baraza's, Womens groups etc used for mobilisation -CECAP services in RH/HIV integrated camps - Use of male dominated platforms e.g. Football matches etc to pass CECAP messages 	DRH/ MOPHS and partners
	Advocacy for CECAP at all levels	Develop an advocacy strategy for CECAP	CECAP advocacy strategy available and in use	
3.Provide high quality cervical cancer prevention and treatment services	Promote Primary prevention strategies	<ul style="list-style-type: none"> - Promote AB as appropriate -Promote increased condom use -Promote HPV vaccine according to national guidelines 	<ul style="list-style-type: none"> Appropriate platforms e.g. churches utilised to promote AB - HIV /FP platforms leverage to enhance condom utilisation - Existing HPV vaccine mechanisms scaled up e.g. use of GAP -Lobby for prioritisation of HPV Vaccine in national program 	DRH /MOPHS and partners

	Provide screening services	Screen eligible women at all levels according to national guidelines	-Basic commodities and equipment for CECAP available in all sites as appropriate -Screening services provided at all KEPH levels in key entry points	All Health facilities
	Provide treatment for both pre-cancer and cancer	-Provide outpatient treatment for Pre-cancer patients as per guidelines -Provide treatment for overt cancer patients according to guidelines	-Basic commodities and supplies for treatment available -Cryotherapy available for SVA in all model HC and county hospitals -Colposcopy and LEEP available in all level 5 & 6 facilities -4 regional cancer treatment centres set up and running	Health facilities DRH and partners
	Strengthen palliative care	-Enhance capacity of providers at all levels to provide palliative care -Ensure availability at all levels of basic commodities and drugs for palliative care	Service providers oriented in palliative care -Basic commodities and drugs available according to national guidelines	DRH and partners Health facilities
4. Establish referral systems for CECAP programme	Improve HIS at both community and facility	- Strengthen communication systems between different levels - Establish a referral directory - Increase Access to blood transfusion from level 4 and above	- Develop referral slips for CECAP -Strengthen ICT between facilities -Referral directory for CECAP available at all levels -Lobby with NBTS for blood banks in all level 4 and above facilities	

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References:

1. World Health Organization (WHO) Comprehensive cervical cancer control: A guide to essential practice. 2006.
2. FIGO Global Guidance for Cervical Cancer Prevention and Control October 2009
3. Recent evidence on cervical cancer screening in Low Resource Settings – ACCP May 2011
4. Comprehensive Cervical cancer Prevention and Control: Programme guidance for countries –UNFPA Feb 2011
5. Bishop A, Sherris J, Tsu V. Cervical dysplasia treatment in developing countries. A situation analysis. Seattle: PATH, July 1995.
6. WHO/ICO Information Centre on HPV and Cervical Cancer (HPV Information Centre). Human Papillomavirus and Related cancers in Kenya - Summary Report - 2010).
7. Ferlay J, Bray F, Pisani P, Parkin DM. Globocan 2000: Cancer incidence, mortality and prevalence worldwide, Version 1.0. Lyon: IARC Press, 2001.
8. World Health Organisation. (1986). Control of cancer of the cervix uteri. Bulletin of the WHO 64: 607-618.
9. Goldie SJ, Kuhn L, Denny L, Pollack A, Wright TC. Policy analysis of cervical cancer screening strategies in low-resource settings: clinical benefits and cost-effectiveness. JAMA. 2001; 285: 3107-15.
10. Jamison DT, et al, *Disease Control Priorities in Developing Countries*. Oxford University Press, World Bank, 1993.
11. National Reproductive Health Strategy. 1997 –2010. Nairobi: Government of Kenya, Ministry of Health,
12. Rogo KO, Omay J, Onyango JN, Ojwang SB, Stendah U: Carcinoma of the cervix in an African setting. *International Journal of Obstetrics and Gynaecology* 1990, 33: 249-255.
13. Were E.O, Buziba N.G. Presentation and health care seeking behaviour of patients with cervical cancer seen at Moi Teaching and Referral Hospital, Eldoret, Kenya. *East Afr. Med J* 2001; 78(2):55-59.
14. Godia PM. Patient Response to Cancer Diagnosis. MPH Thesis 2002.
15. Folkers G. Increased risk of cervical abnormalities among HIV-infected African women. *NIAID AIDS Agenda*.1996 June:9, 11.
16. La Ruche G, Ramon R, Mensah-Ado I, Bergeron C, Diomande M, Sylla-Koko F et al. Squamous intraepithelial lesions of the cervix, invasive cervical carcinoma, and immunosuppression induced by human immunodeficiency virus in Africa. *Cancer* 1998; 82(12):2401-8.
17. Leroy V, Ladner J, De Clercq A, Meheus A, Nyiraziraje M, Karita E, Dabis F. Cervical dysplasia and HIV type 1 infection in African pregnant women: a cross-sectional study, Kigali, Rwanda. The Pregnancy and HIV Study Group (EGE). *Sex Transm. Infect.* 1999; 75(2):103-6.
18. Hawes SE, Critchlow CW, Faye Niang MA, Diouf MB, Diop A, Toure P et al. Increased risk of high-grade cervical squamous intraepithelial lesions and invasive cervical cancer among African women with human immunodeficiency virus type 1 and 2 infections. *J Infect Dis.* 2003; 188(4):555-63.
19. Ferenczy A, Coutlee F, Franco E, Hankins C. Human papillomavirus and HIV co-infection and the risk of neoplasia of the lower genital tract: a review of recent developments. *CMAJ.* 2003; 169 (5):431-4.
20. University of Zimbabwe, JHPIEGO Cervical Cancer Project. Visual inspection with acetic acid for cervical cancer screening: Test qualities in a primary-care setting. *Lancet* 1999; 353:869-873.
21. Belinson JL, Pretorius RG, Zhang WH, Wu LY, Qiao YL, Elson P. Cervical cancer screening by simple visual inspection after acetic acid. *Obstet Gynecol* 2001; 98:441-444.
22. Sankaranarayanan R, Basu P, Rami S, Wesley R, Mahe C, Keita N et al. Accuracy of visual screening for cervical neoplasia: Results from an IARC multicentre study in India and Africa. *Int. J Cancer* 2004

- 23 Bishop A, Sherris J, Tsu V. Cervical dysplasia treatment in developing countries. A situation analysis. Seattle: PATH, July 1995.
- 24 ACCP. Effectiveness, safety and acceptability of cryotherapy. A systematic review. Seattle: PATH, January 2003.
- 25 WHO. Cancer pain relief and palliative care: Report of a WHO expert committee. Technical report series 804. Geneva: WHO, 1990.
- 26 PATH. Palliative care for women with cervical cancer: A Kenya field manual. Seattle: PATH, 2004.



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