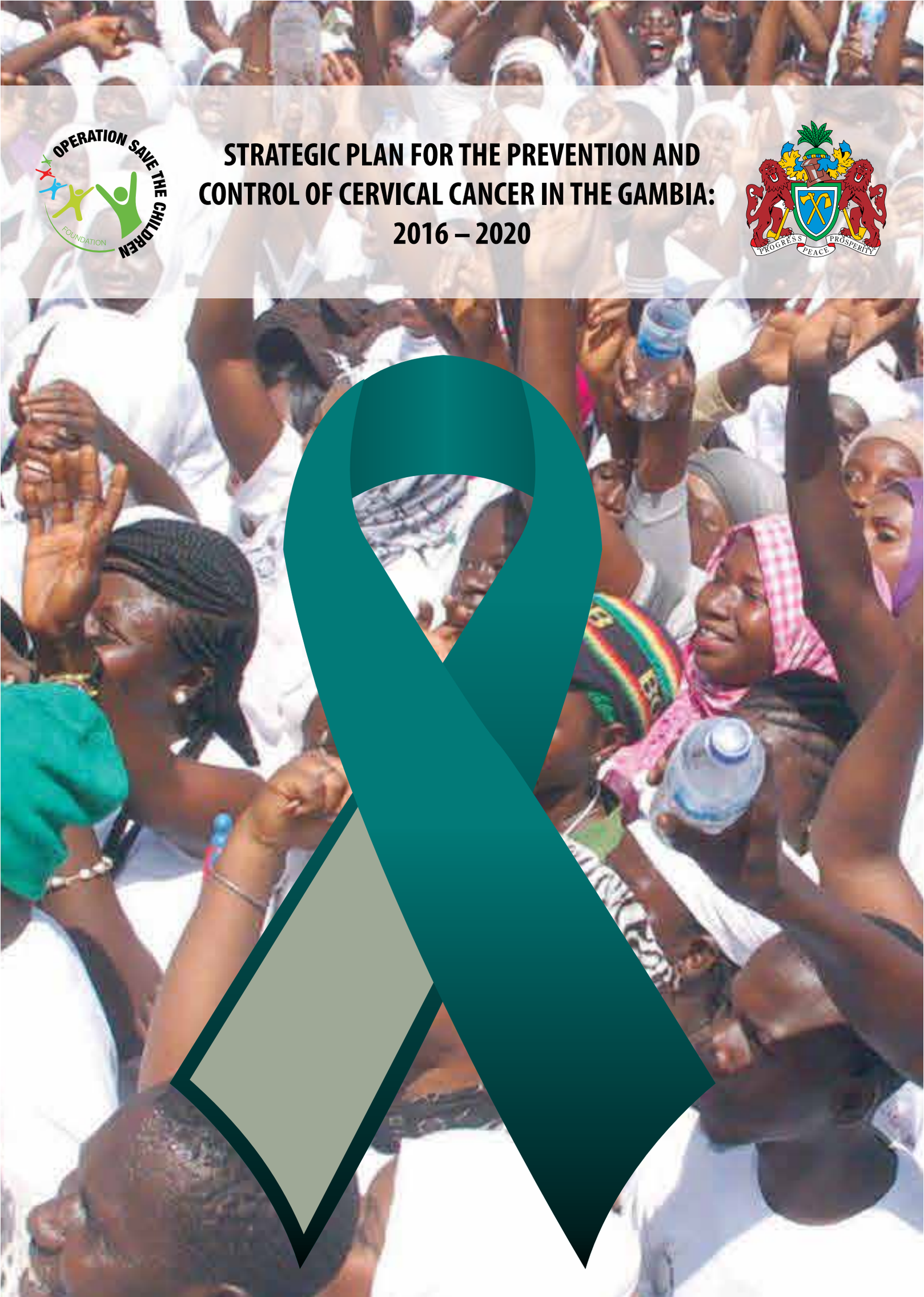
STRATEGIC PLAN FOR THE PREVENTION AND CONTROL OF CERVICAL CANCER IN THE GAMBIA: 2016 – 2020



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ABBREVIATION

AIDS	–	Acquired immunodeficiency syndrome
AFPRC	–	Armed Forces Provisional Ruling council Hospital
ASR	–	Age Standardized Rates
CDC	–	Centre for Disease Control
CIN	–	Cervical Intraepithelial Neoplasia
COMBI	–	Communication for Behavioural Impact
DHPE	–	Directorate of Health Promotion and Education
DNA	–	Deoxyribonucleic acid
EFSTH	–	Edward Francis Small Teaching Hospital
EPI	–	Expanded Program on Immunization
FDA	–	Food and Drug Administration
GAVI	–	Global Alliance for Vaccines and Immunization
HIV	–	Human immunodeficiency virus
HMIS	–	Health management information system
HPV	–	Human Papilloma Virus
IARC	–	International Agency for Research in Cancer
JFPH	–	Jammeh Foundation for Peace Hospital
LEEP	–	Loop Electrosurgical Excision Procedure
MOBSE	–	Ministry of Basic Education
MOHSW	–	Ministry of Health and Social Welfare
NCR	-	National Cancer Registry
NHSP	–	National Health Strategic Policy
OFL	–	Office of the First Lady
PBCR	–	Population-Based Cancer Registry
RCH	–	Reproductive and Child Health Unit
RHT	–	Regional Health Team
SCJ	–	squamocolumnar junction
SIL	–	squamous intraepithelial lesion
SOS	–	SOS Mother and Child Clinic Bakoteh
STI	–	sexually transmitted infection
TAG	–	Technical advisory group
UNFPA	–	United Nations Population Fund
VIA	–	visual inspection with acetic acid
VILI	–	visual inspection with Lugol's iodine
WHO	–	World health Organization

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FORWARD

The burden of cervical cancer is enormous in The Gambia. It is the most common cancer in Gambian women. Most Gambian women with cervical cancer report late to the hospital. This has led to a high morbidity and mortality. For a disease that is preventable and curative if diagnosed early, this is rather unfortunate.

The Gambian government and The Ministry of Health and Social welfare recognizes the emerging burden of non-communicable diseases (including cancers) in developing countries added to the recognized burden of infections and other communicable diseases. Thus, preventing non-communicable diseases featured prominently in the National Health Strategic policy 2014-2020.

In line with this commitment, the MOHSW is currently implementing a 2-year demonstration project to vaccinate adolescent girls against HPV infection – the main etiologic agent implicated in the causation of cervical cancer. The MOHSW through its Reproductive and Child Health Unit is also currently partnering with the SOS Mother and Child Clinic to introduce cervical cancer screening in public health facilities.

The production of this first strategic planning document on the prevention and control of cervical cancer in The Gambia is another step to demonstrate Government's commitment to eradicate the scourge of cervical cancer. The plan covers all aspects of cervical cancer prevention and control. Strategically, emphasis is placed on primary and secondary prevention activities like HPV vaccination and screening for pre-cancerous lesions. It also covers aspects of treatment for cervical cancer as well as palliative care. It is my sincere hope that all partners and stake holders will adhere to the recommendations in this document and buy into our vision of a cervical cancer free Gambia.

Her Excellency Madam Zineb Jammeh
First Lady of The Republic of The Gambia

EXECUTIVE SUMMARY

The Strategic plan for cervical cancer prevention and control in The Gambia describes the global and national burden of cervical cancer. It also includes a situational analysis of the current state of cervical cancer prevention and control program and activities. The proposed strategies to achieve set targets for cervical cancer prevention and control in The Gambia are evidence-based and align with the World Health Organization recommendations.

The main priority areas of the strategic plan are:

- Advocacy
- Health Promotion and education
- Vaccination against HPV
- Screening and treatment of cervical precancerous lesions
- Treatment of cervical cancer
- Palliative care for advanced cervical cancer
- Monitoring and evaluation activities

The interventions for the prevention and control of cervical cancer indicated in the strategic plan include efforts to prevent HPV infection through HPV vaccination of girls 9–13 years old for primary prevention and use of feasible cervical cancer screening and pre-cancer treatment modalities, such as visual inspection with acetic acid and cryotherapy, for secondary prevention of cervical cancer amongst women ages 25–49 years.

The strategic plan emphasises the need for more investment in preventive strategies like vaccination and screening and cautious investment in the treatment of full blown cervical cancer such as surgery, radiotherapy, chemotherapy and palliative care. This is because with extensive public education, HPV vaccination, screening and treatment of cervical precancerous lesions, the demand for treatment and palliative care services will be low.
The strategic plan also stipulates routine development of health service data collection tools, relevant research, and special surveys for collecting data for monitoring and evaluating cervical cancer prevention and control interventions. The strategic plan also stipulates integration of key programme performance output indicators into the existing health management information system (HMIS) namely the number of girls immunized, number of women screened, cervical pre-cancer test-positive cases, and the number of cases treated.

The goals by 2020 are:

- 90 percent of Gambians will be reached with information about cervical cancer.
- 90 percent of girls age 9–13 years in the Gambia will be vaccinated against HPV.
- 80 percent of eligible women age 25–49 years will be screened and treated for cervical precancerous lesions.
- 60 percent of eligible cervical cancer patients will be provided surgical treatment for invasive cervical cancer.
- 60 percent of eligible cervical cancer patients will be provided palliative care services for improved quality of life

To achieve these goals, the strategic plan stipulates the need for public investment in advocacy

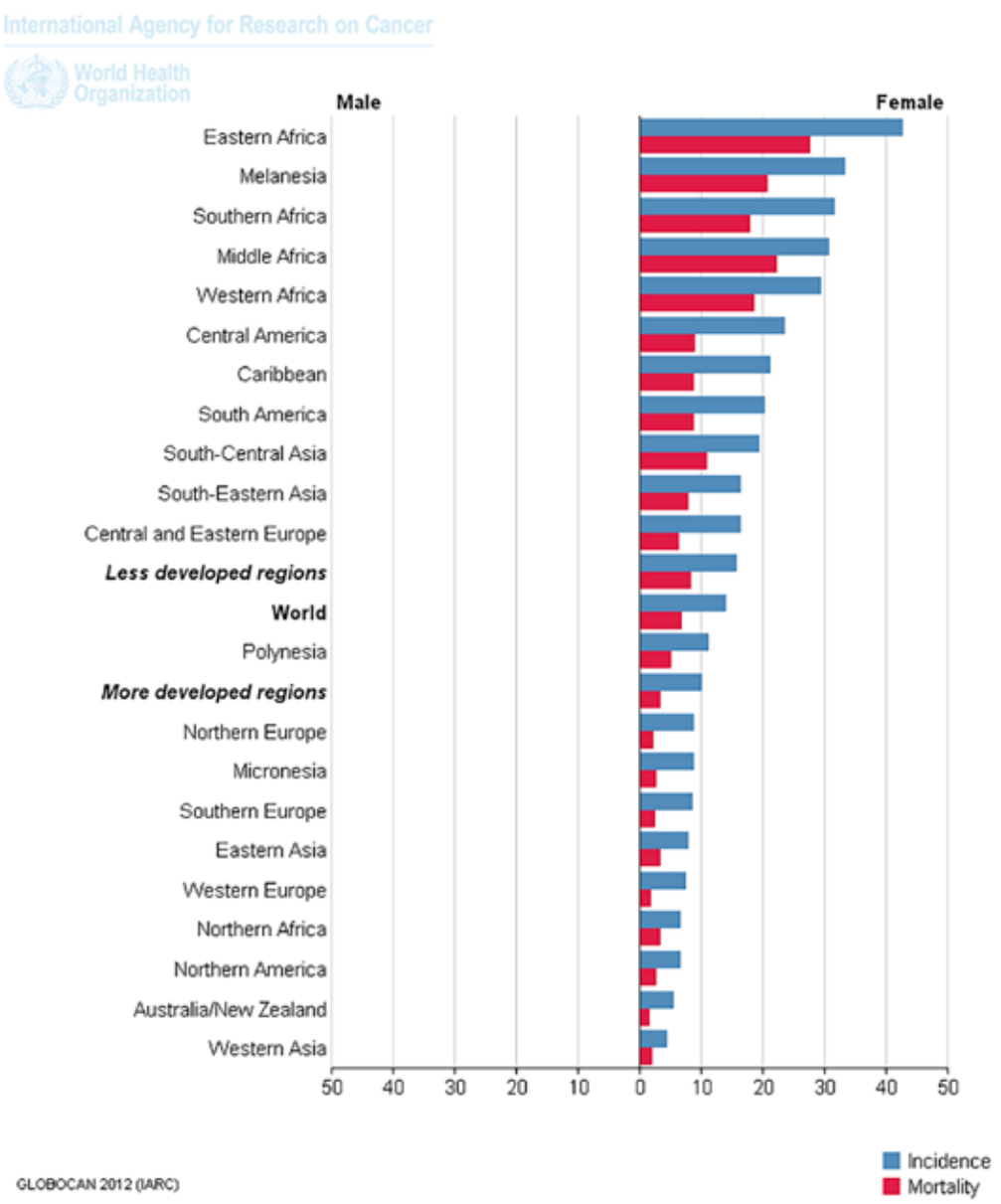
and communication; HPV vaccination, equipment for screening and treatment, training of health workers as well as strengthening of HMIS. The main health outcome indicators are: decreased incidence of abnormal cervical lesions and cervical cancer and improved quality of life and survival rates from cervical cancer.

CHAPTER 1: INTRODUCTION

Epidemiological research using routine data, mainly derived from Population-Based Cancer Registries (PBCR) from around the world have clearly depicted cervical cancer as a global public health problem for women. The World Health Organization's (WHO) International Agency for Research on Cancer (IARC) reported that worldwide cervical cancer is the fourth most common cancer in women, with an estimated 528,000 new cases and 266,000 deaths in 2012 (GLOBOCAN, 2012).

The burden of cervical cancer is highest in developing countries like sub-Saharan Africa that accounts for more than 80% of the global burden. In sub-Saharan Africa, cervical cancer forms almost 12% of all new cases of cancer in women. Almost nine out of ten (87%) cervical cancer deaths occur in the less developed regions of the world (GLOBOCAN 2012). Death from the disease varies 18-fold between the different regions of the world, with incidence rates (age-adjusted to the world standard population (ASR)) ranging from less than 2 per 100,000 in Western Asia, Western Europe and Australia/New Zealand to more than 20 per 100,000 in Melanesia, Middle and Eastern Africa (see Figure 1).

Figure1: Global burden of cervical cancer by region in 2012.



Analysis of the data of the National Cancer Registry of The Gambia (NCR), spanning over a period of two decades, 1990-2009, with a total registration of 7,991 malignant tumours (52% males and 48% females) among usual residents of The Gambia; revealed that the commonest cancer among female Gambians is cervical cancer. On average the disease accounts for 33% of all female cancers (see Table 1; adapted from Bah et al 2013); it is followed in similar order by liver cancer (24%), breast cancer (11%) and non-Hodgkin's Lymphoma (4%) in women.

Table 1: Number of cases, ASR per 100,000 person-years with 95% Confidence Intervals of Cervical Cancer by period: The Gambia, 1990-2009

Period	No. of cases*(%)	**ASR (95%CIs)
1990-1994	199 (31)	13.9 (11.8-16.0)
1995-1999	361 (34)	20.2 (17.9-22.4)
2000-2004	276 (30)	13.7 (11.9-15.4)
2005-2009	418 (34)	19.1 (17.2-21.1)
Total (1990-2009)	1,254 (33)	16.9 (15.9-17.9)

(%) = Percentage of total female cancer cases in period; **ASR = Age-standardized incidence rate per 100,000 person-years (Standardized to the World Standard Population)

Majority of the cases of cervical cancer in The Gambia are detected in advance or at terminal stages of the disease. This phenomenon is believed to account for the low 5-year relative survival rate of around 20% registered for such a preventable cancer in The Gambia and elsewhere in sub-Saharan Africa (Sankanarayanan et al 2010). Squamous cell carcinoma is the commonest histological type of cervical cancer seen in The Gambia. As of 2009, clinical diagnosis of cervical cancer is confirmed by histology in more than 20% of cases in the country. The proportion of histologically confirmed cases of cervical cancer has been improving overtime in the country. There is currently no indication of an increasing trend in cervical cancer incidence based on the most recent analysis of the country's PBCR data as displayed in Table 1. However, under ascertainment and registration of cervical cancer is possible if based on the premise that the incidence rates as reported for the country are much lower than expected for the sub-region. The age specific incidence curves of cervical cancer occurrence in The Gambia show a steep rise in the youngest age groups as expected for the sub-region, however, a characteristic sudden decline in the older ages, above 50, is more suggestive of an artificial than a natural phenomenon. Thus there is a need to further strengthen cancer registration including the development of registers to improve on the quality of epidemiological research and the monitoring and evaluation of cervical cancer control efforts.

Human papilloma virus (HPV) is believed to be central and the necessary cause of cervical cancer and also genital warts (Muñoz et al. 2003). Globally over 100 types of HPV have been identified with more than 40 of these known to infect the genital tract. About 15 HPV subtypes are known to cause cervical cancer, globally. These include subtypes 16 and 18 accounting for more than 70% of cervical cancers (Muñoz et al. 2004).

In The Gambia, the prevalence of cervical HPV infection was observed to be 13% in the only study conducted in the rural area of the country (Wall et al. 2005). The study further revealed that the prevalence of squamous intra-epithelial lesions (SIL), known precursors of cervical cancers was 7% in the study

participants. HPV 16 was the most prevalent and is strongly associated with SIL. Subjects aged 25 – 44 years had a higher prevalence of cervical pre-cancer (in other words SIL) than older and younger study participants.

Situational analysis of The Gambian cervical cancer prevention and control program

Development of an integrated cervical cancer prevention and control services is at its teething phase but slowly advancing albeit the resource constraints in The Gambia. A Technical Advisory Group (TAG) composed of medical doctors, laboratory scientists, researchers in health, health managers, immunization specialists and public health specialists, under the auspices of the Ministry of Health and Social Welfare (MOHSW), hosted by the Expanded Programme on Immunization (EPI) was recently established. This was as a result of the Global Alliance for Vaccine and immunization (GAVI) supported HPV demonstration project to introduce HPV vaccination for girls (9-13 years) in The Gambia. This two-dose schedule, school-based strategy is being implemented and will be completed in 2016.

In addition the agenda on cervical cancer control and prevention is being boosted in a significant way by the Office of the First Lady (OFL). Three Medical doctors were trained on breast and cervical cancer screening and treatment.

There is no policy for screening of cervical cancer as recommended by WHO in The Gambia. Organized population-based screening is not yet possible due to resource constraints. The SOS Mother and Child (SOS) Clinic has a screening program using visual inspection with acetic acid (VIA) and cytology based screening method (Pap smear) is being done at the Edward Francis Small Teaching Hospital (EFSTH). However, these efforts are largely opportunistic and low scale in comparison to the population that require screening. Partners such as WHO, United Nations Population Fund (UNFPA) and SOS Clinic in collaboration with the MOHSW are currently implementing a fresh impetus to further expand and provide VIA services to health facilities across the country.

Surgery for invasive cancer is currently at a very minimal level in The Gambia, and radical surgical procedures needed for some cases are not readily available. Even at the teaching hospital, where there are gynaecologists, only one gynaecologic oncologist is doing radical hysterectomy. Radical hysterectomy for early-stage disease is complex, with an average theatre time per patient of six to seven hours. Radiotherapy is currently not available in the country. Palliative care for advanced cervical cancer is also only minimally available.

More efforts are still required in the areas of advocacy, resource mobilization, capacity building research, treatment and palliative care, rehabilitation, and other important aspects necessary in mounting and ensuring an effective and comprehensive cervical cancer prevention and control programme.

CHAPTER 2: VISION, GOALS AND IMPLEMENTATION STRATEGY

Vision

Cervical cancer free Gambia

Goal

To reduce the burden of cervical cancer in the Gambia

General Objectives

- Raise awareness of cervical cancer in The Gambia.
- Advocate for the support of cervical cancer prevention and control program in the Gambia.
- Reduce the incidence and prevalence of HPV in The Gambia through vaccination.
- Reduce the incidence of cervical cancer by increasing access to screening and treatment of cervical pre-cancerous lesions.
- Improve early detection and diagnosis of cervical cancer.
- Improve the survival rates for cervical cancer patients by improving access to surgery for early stage disease.
- Improve the quality of life of patients with advance cervical cancer.
- Improve availability of quality data on cervical cancer.
- Build appropriate capacity on cervical cancer control at all levels of the healthcare delivery system.

Targets by 2020

- 90 percent of Gambians to be aware of cervical cancer control and prevention.
- 90 percent of girls ages 9–13 years in the Gambia to be vaccinated against HPV.
- 80 percent of eligible women ages 25–49 years to be screened for cervical precancerous lesions.
- 80 percent of screen positives to be treated for cervical pre-cancerous lesions.
- 70 percent of eligible cervical cancer patients to be provided surgical treatment for invasive cervical cancer.
- 60 percent of eligible cervical cancer patients to be provided palliative care.

Implementation strategy

The implementation strategy for scaling up cervical cancer prevention and control will be led by the MOHSW. The approach will focus on:

- The TAG, guided by clear terms of reference will coordinate all cervical cancer prevention and control activities on behalf of the MOHSW and all stakeholders. This group will guide implementation of the strategic plan, oversee training of health care service providers, and direct quality assurance functions. The TAG will guide MOHSW to develop a cervical cancer policy as well as screening guidelines. The TAG will hold regular meetings with stakeholders and policymakers to ensure that cervical cancer prevention and control fits within the MOHSW strategy for reproductive health. This should be effectively integrated at policy, programmatic and service delivery with adequate resources for sustainability.
- The MOHSW will conduct needs assessment to identify the gaps including:

I. Training needs for health care providers,

II. Infrastructure and equipment,
III. Monitoring and evaluation requirements,
IV. Level of awareness around cervical cancer and its prevention.

After the needs assessment, the identified gaps will be addressed as follows:

- Infrastructure improvements - This will focus on establishment of facilities for VIA, colposcopy (where appropriate), and treatment with cryotherapy and LEEP at appropriate health facility levels, and strengthen surgical and palliative care services at the hospitals.
- Training of health care service providers, which will begin with a training-of- trainers course for Senior midwives and all gynaecologists, who will then provide local training in VIA and cryotherapy. Gynaecologists will also be trained to provide colposcopy, LEEP, and other treatment services for cervical precancerous lesions. They will be provided with on-the-job training to perform difficult surgery for invasive cervical cancer. The goal will be to provide all these trainings in country using locally available experts. Where such experts are not readily available, efforts will be made to bring such experts into the country for training.
- Advocacy in support of cervical cancer prevention and control will be conducted targeting policymakers, religious and opinion leaders amongst others. Alongside the advocacy measures, there will be Communication for Behavioural Impact (COMBI) at all levels.

  Relevant program units will support policy formulation, programming, and updates whilst also advocate for resource re-allocation for prevention and control programme.
- Addressing barriers in the prevention and control of cervical cancer.
- Integration of cervical cancer prevention and control into existing Reproductive and Child Health Services as highlighted in the National Health Strategic Plan (NHSP) 2014 – 2020.
- Monitoring, evaluation, and quality assurance, which will be included in the training programme for all health workers, to ensure the prevention and control programme meets its objectives.
- The relevant programs will conduct Monitoring and evaluation. New sites will be supervised monthly for the first three months, then quarterly for up to one year and semi -annually thereafter. In the long run, monitoring and evaluation will be integrated into the existing supportive supervision strategy, and cervical cancer data will be integrated into the existing health management information system (HMIS).

Implementation phases

Implementation of these strategies will be as follows (see appendix 1):

First year: 2016

- Advocacy with policymakers and stakeholders on the prevention and control of cervical cancer program.
- Development and implementation of effective communication plan.
- Training of health workers and gynaecologists at service delivery points on VIA and cryotherapy.
- Training of gynaecologists/medical officers on colposcopy and Loop electrosurgical excision procedures (LEEP).
- Provision of palliative care for cervical cancer patients.
- Strengthen the capacity of health facilities that have started screening to continue the program.
- Roll out VIA in all major health centres and hospitals in The Country
- Commence infrastructural development for palliative care services at all hospitals in the country.
- Infrastructure development to improve access to surgery for cervical cancer at EFSTH.

- Train 6 laboratory scientists in cytology techniques

Second year: 2017

- Training of midwives/nurses in private hospitals and health centres on VIA.
- Roll out cervical cancer screening to all health facilities.
- Two Gambian doctors to be trained as pathologists.
- National roll out of HPV vaccination.
- Provision of colposcopy services in all hospitals.
- Palliative care to begin at 2 hospitals.

Third year: 2018

- Two Gambian doctors to be trained in radiotherapy.
- Strengthen the in-country services for cytology and histopathology in all hospitals.
- Provide palliative care in 2 other hospitals.

Fourth year: 2019

- All hospitals to be providing palliative care.

Fifth year: 2020

- Evaluation of the 2016-2020 strategic plan for cervical cancer prevention and control.

Expected Outcomes

- Decreased prevalence of HPV infection among women to 3%.
- Decreased incidence of abnormal cervical lesions among women with high risk HPV infection
- Decreased incidence of cervical cancer
- Increased survival rates from cervical cancer
- Improved quality of life for cervical cancer patients
- Mainstreaming of cervical cancer prevention and control program into the routine health care delivery system in The Gambia.

CHAPTER 3: STRATEGIES FOR ADVOCACY, HEALTH PROMOTION AND

HEALTH EDUCATION

Health promotion and education is an essential component for an effective cervical cancer prevention and control programme. This will enhance community empowerment resulting to high coverage in vaccination, screening and compliance to treatment. It will also reduce ignorance, fear, embarrassment and stigma related to cervical cancer.

Advocacy and health promotion and education activities will be in different format targeting the various categories of the population with particular attention on women, health care providers, religious/opinion leaders, frontline communicators, policymakers and media personnel. Communication messages about cervical cancer will be developed in line with the advocacy and health promotion interventions outlined in the strategic document. Health-care providers would be oriented on effective interpersonal communication to address issues related to cervical cancer and HPV. It is critical that educational messages emphasize that women with abnormal screening results must return for follow-up.

In general, health promotion and education intervention on cervical cancer prevention and control in The Gambia was being handled by BAFROW Medical centre and SOS clinic on a limited scale in collaboration with the MOHSW, and most of these interventions are centered in the Greater Banjul Area and the West Coast Region.

Goal

Reach 90% of all Gambians with information on cervical cancer by 2020.

Objectives

- Inform the community about cervical cancer, its causes and natural history.
- Raise awareness around cervical cancer prevention and control and the necessity of early diagnosis and treatment.
- Increase demand for HPV vaccination, cervical cancer screening, early diagnosis and treatment as well as utilization of palliative care services.

Strategies

- Sensitize women, men, adolescents, policymakers, health care workers, and opinion leaders about the causes of cervical cancer and effective methods of prevention.
- Sensitize communities about cervical cancer prevention services, including vaccination,screening, diagnostics, and available treatment options, and where to access them to increase service utilization.

Activities

- Design, develop, pre-test, and disseminate communication support materials to raise awareness around cervical cancer, methods of prevention, and control, including HPV vaccination, cervical cancer screening, diagnostics, and treatment. These will include leaflets and posters.
- Develop and implement mass media campaigns, including radio and television messages, radio advertisements, and billboard advertising to raise awareness around cervical cancer prevention and control.
- Hold talks and presentations with cervical cancer survivors to raise awareness around cervical cancer, and methods of prevention, control, and treatment.
- Hold meetings pioneered by peer educators specifically targeting men, to sensitize them to support their wives to attend cervical cancer screening and their daughters to receive HPV vaccinations.
- Partner with popular local artists to develop songs about cervical cancer prevention and control.

- Develop youth-focused communication support materials to raise awareness around cervical cancer, its prevention, and the benefits of HPV vaccination.
- Sensitize the public about cervical cancer prevention, including HPV vaccination, the ABC strategy (Abstain, Be faithful, use Condoms [condom offers only partial protection]), and screening.
- Sensitization of public and family members of cervical cancer patients in particular to demystify cervical cancer and reduce stigmatization
- Conduct trainings for health care workers on messaging and communication on cervical cancer prevention, control, diagnosis and treatment.
- Integrate cervical cancer prevention messages into the ABC strategy for HIV/AIDS and other STIs.
- Hold workshops to lobby policymakers and other key stakeholders at the national level to mobilise funds to ensure effective, affordable, and accessible cervical cancer prevention and control services for all who need them.
- Lobby the Ministry of Education to include cervical cancer prevention and control and HPV vaccination in the school curriculum.
- Support drama and folk-media groups to raise awareness around cervical cancer.
- Integrate cervical cancer prevention, early diagnosis, and control messages into existing programs in the health institutions in the country.

Targets

- Conduct one advocacy visit to policy makers every year for the next 5 years
- Conduct advocacy visit to faith based organization and opinion leaders in each region before roll out of screening services in the region
- Conduct orientation meetings for health workers in each region bi-annually on cervical cancer prevention and control strategies
- Ensure that cervical cancer prevention and control messages feature in TV and Radio programs every quarter over the next 5 years
- Develop and distribute communication support materials to every area before roll out of a new service in the area.
- Carry out sensitization visits to all schools within 2 months before roll out of HPV immunization
- Community dialogue (open field days) one week before roll out of new services in a community.
- Monthly interactive community film shows .
- Bi-annual orientation and engagement of front line communicators.
- Quarterly orientation meetings with traditional healers.
- Quarterly orientation of Traditional Birth Companions according based on the regions.

Indicators

- Proportion of school sensitization visits carried out before HPV immunization
- Number of health workers orientation meetings done
- Proportion of advocacy visits to FBO and opinion leaders before roll out of new services in an area
- Number of mass media programs on cervical cancer and prevention control conducted Inputs
- Communication support materials including posters, flyers, counseling flipcharts, information booklets and audiovisual materials for radio and television
- Personnel and champions for advocacy.
  - Transport and fuel and communication card.

CHAPTER 4: STRATEGIES FOR PRIMARY PREVENTION (VACCINATION)

Human papilloma virus (HPV) is the primary cause of 99.7% of all cervical cancers (Burd 2003). 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 (WHO 2015). With vaccines against these two types of HPV being available, there exists great potential to reduce the incidence of cervical and other anogenital cancers.

Three vaccines are approved by the Food and Drug Administration (FDA) to prevent HPV infection: Gardasil, Gardasil 9, and Cervarix. All three vaccines prevent infections with HPV types 16 and 18, two high-risk HPVs that cause about 70 percent of cervical cancers and an even higher percentage of some of the other HPV-associated cancers. The Gambia is currently using the quadrivalent vaccine but will not hesitate to switch to other cost effective vaccines if the need arises.

In addition to providing protection against the HPV types included in these vaccines, the vaccines have been found to provide partial protection against a few additional HPV types that can cause cancer, a phenomenon called cross-protection. The vaccines do not prevent other sexually transmitted diseases, nor do they treat existing HPV infections or HPV-caused disease.

Because currently available HPV vaccines do not protect against all HPV infections that cause cancer, it is important for vaccinated women to continue to undergo cervical cancer screening.The vaccines are prepared from virus-like particles produced by recombinant technology. They do not contain a live biological product or DNA, so they are non-infectious.

At Risk Target

Anyone who has ever been sexually active (that is, engaged in skin-to-skin sexual contact, including vaginal, anal or oral sex) can get HPV. HPV is easily passed between partners through sexual contact. HPV infections are more likely in those who have many sex partners or have sex with someone who has had many partners. Because the infection is so common, most people get HPV infections shortly after becoming sexually active for the first time. Some may be asymptomatic and can transmit the infection to others.

Prevention of HPV Infection

People who are not sexually active hardly develop genital HPV infections. In addition, HPV vaccination before sexual activity can reduce the risk of infection by the HPV types targeted by the vaccine.

Vaccine Efficacy and Safety

HPV vaccines are highly effective in preventing infection with the types of HPV they target when given before initial exposure to the virus. They provide nearly 100% protection against persistent cervical infections. World Health Organization has recommended two doses as the standard delivery for these vaccines.

So far, no serious side effects have been shown to be caused by the vaccines. The most common side effects have been mild soreness and other local symptoms at the injection site. These problems are similar to those commonly experienced with other vaccines. The vaccines have not been sufficiently tested during pregnancy and, therefore, should not be used by pregnant women.

Eligibility

The HPV vaccination demonstration project is targeting girls aged 9-13 years using the school base and community outreach strategy. It is envisaged that the same age cohort will be targeted in the national roll out.

HPV vaccine delivery mechanisms in The Gambia

The MOHSW in collaboration with Ministry of Basic and Secondary Education (MOBSE) is currently implementing a two-year HPV demonstration project (2014-2016) to assess the feasibility and acceptability of HPV vaccination using the school based and community outreach strategy. Pending a successful outcome of the demonstration, the Gambia will adopt this strategy.

The national roll out will be led by the EPI in collaboration with partners such as Reproductive and Child Health (RCH) unit and MOBSE

Goal

90 percent of eligible girls aged 9–13 years to be vaccinated against HPV.

Objectives

- Introduce routine HPV vaccination throughout The Gambia by 2017.
- Strengthen the health system to accommodate and deliver HPV vaccine within existing structures by 2017.
- Vaccinate at least 90 percent of eligible girls annually.

Strategy

The government and partners to support primary prevention of cervical cancer to ensure effective, available, affordable and accessible immunization services.

Activities

- Development of appropriate policy/guidelines to facilitate national introduction of HPV vaccination.
- Procurement of adequate quantities of HPV vaccine and supplies.
- Increase cold chain capacity at facility, regional and national levels.
- Improvement in the capacity (transportation, computers, laboratory equipment, supportive supervision, etc.) of health workers to forecast, order, store, effectively use, and monitor HPV vaccine.
- Training of health service providers on HPV vaccination at all levels.
- Update the existing HMIS to include HPV vaccination data.
- Develop, print and distribute data collection tools
- Conduct micro-plans for HPV scale-up and roll-out nationally.
- Monitoring and evaluation of HPV vaccine scale-up and implementation.
- Mobilisation of resources to facilitate the scale-up of HPV vaccination to all districts in The Gambia.
- Documentation and dissemination of best practices for HPV vaccination.

Indicators

- Percentage of health facilities reporting stock outs of HPV vaccine.
- HPV vaccination scaled up to all regions by 2017.
- 200 operational-level health workers trained annually.
- 90 percent of eligible girls have access to HPV vaccines annually by 2018.

Inputs

- HPV vaccine
- Refrigerators, cold boxes and vaccine carriers
- Ice packs
- Fridge-tags
- Injection supplies
- Data collection tools including tally sheets, registers, vaccination cards, summary sheets, supervision checklists, AEFI forms etc.
- IEC materials
- Transport (motorcycles, vehicles)
- Fuel
- Trained personnel

CHAPTER 5: STRATEGIES FOR SCREENING AND TREATMENT OF ABNORMAL CERVICAL LESION

Secondary cervical cancer prevention refers to screening of women at risk of cervical cancer, most of whom are without symptoms, with the aim of detecting and treating precancerous changes, which may, if not treated, lead to cancer (WHO 2014). A good screening test is one that is acceptable to women and providers, accurate, reproducible, safe, affordable and available. To screen effectively in the Gambia, we need an approach that will meet all these characteristic and ensure at least 80% coverage of the eligible population. With this coverage, we expect 84% reduction in incidence of cervical cancer in 5 years.

Screening methods

- HPV DNA testing.
- Cytology (conventional Pap smears, liquid-based cytology, automated cytology testing).
- Visual inspection (VIA, VILI).
- HPV DNA testing

Currently, screening by HPV DNA testing is recommended by WHO either alone or with VIA. This has been found to have a higher negative predictive value than pap smear or VIA. When negative, the minimum recall time is 5 years. It is usually combined with VIA to be able to detect the invasive stages of the disease to avoid undertreating (WHO 2013).

In resource-constrained settings, where screening with an HPV test is not feasible, the panel suggests a strategy of screen with VIA and treat.

What methods will be most suited for The Gambia?

Using the WHO guideline for 2013, the Gambia is most suited for VIA alone for all health facilities. The teaching hospital may continue screening with cytology, colposcopy, biopsy and LEEP, with plans to expand to other hospitals The Gambia may work towards introducing HPV testing combined with VIA. The recommended screening interval in the Gambia is every 5 years.

Treatment of pre-cancerous lesion:

There are 2 broad methods for Treatment of cervical pre-cancerous lesions:

- Ablative methods: destroying abnormal tissue by heating or freezing (e.g., cryotherapy, cold coagulation, cauterization).
- Excision methods: surgically removing abnormal tissue (e.g., LEEP, cold knife conization).

In the current strategy we retain cryotherapy, cold coagulation and LEEP.

Cryotherapy is a relatively simple and safe procedure that eliminates pre-cancerous lesions by freezing them using carbon dioxide or nitrous oxide gas. It involves applying a highly cooled metallic disc (cryoprobe) to the cervix and freezing its surface. This is the method of choice to be used at selected health facilities.

Cold coagulation involves treatment of abnormal cervical lesions using a metallic probe heated to 100-120 °C for about 20 seconds. It is indicated for all pre-cancerous lesions and is safe, quick and acceptable as an outpatient procedure. Cold coagulation may be of particular relevance for use in resource-limited settings, when access to cryotherapy gas is limited. This may be very important in The Gambia, as the supply of gas may not be continuous especially with the increasing demand. The cold coagulation would only require electricity, which is now available in most centres in The Gambia and where it is not available a generator maybe provided. Any health care provider who has been trained to use cryotherapy can use cold coagulation.

LEEP is the removal of abnormal areas from the cervix using a thin heated wire. It treats the lesion and at the same time produces specimen for pathological examination. LEEP is a relatively simple surgical procedure, but only a well-trained provider with demonstrated competence in the procedure, and in recognising and managing intra-operative and post-operative complications should perform it.. In most resource-poor countries, this will limit LEEP to second-level (district hospital) facilities.

Goal

- Screen 80% of eligible women age 25–49 years for cervical pre-cancerous lesions and 80% of positive people will access appropriate treatment.

Objectives

- 80% of eligible women age 25- 49 years will be provided with screening services.
- 80% of women who have precancerous lesions will be provided with treatment services

Strategy

- Scale up pre-cancer screening and treatment services by integrating them into existing reproductive health services.

Activities

- Procure equipment.
- Conduct training of trainers.

  Train health care providers particularly nurse/midwives in screening techniques such as VIA including how to obtain samples for Pap smear, biopsy and treatment of cervical pre-cancerous lesions using cryotherapy/ cold coagulation and doctors will be trained in additional techniques such as colposcopy and LEEP.
- Procure equipment and supplies for screening and treating precancerous lesions in screening centres.
- Screen all eligible women and treat precancerous lesions

Targets

- 80 % Women between the ages of 25 and 49 years will be screened by 2020
- 80% of women diagnosed with precancerous lesion receive treatment the same day.
- 50% of health facilities have at least 2 staff trained in screening and cryotherapy by 2020.
- All major health centres and hospitals are equipped for screening and cryotherapy.

Indicators

- Percentage of eligible women screened.
- Percentage of screened-positive cases.
- Percentage of women with screened-positive results treated.
- Percentage of health workers trained in screening and treatment of cervical precancerous lesions.
- Proportion of health facilities that have at least 2 trained staff for provision of screening and cryotherapy services
- Percentage of health facilities equipped for cervical cancer screening and cryotherapy
- Number and percentage of women cured one year after treatment with cryotherapy or **LEEP** for

cervical precancerous lesions.

- Number and percentage of women cured three-years after treatment with cryotherapy or LEEP for cervical precancerous lesions

CHAPTER 6: STRATEGIES FOR TREATMENT OF CERVICAL CANCER

Women diagnosed with early invasive cervical cancer can usually be cured with effective treatment. Due to late diagnosis, the current survival rate of women diagnosed with cervical cancer is 20%. Confirmation of the diagnosis is the first step in improving survival rates. For this, a functional histopathology laboratory is imperative. The following are recommended:

- Colposcopy and biopsy
- Staging and Biopsy

Treatment:
The treatment of choice depends on the stage of the cancer (see appendix II), the general health status of the woman and the availability of resources and expertise. Cervical cancer treatment options include:

- Surgery,
- Radiotherapy
- Chemotherapy.

It is envisaged that surgery could be done at all referral hospitals, while effort will be made to start radiotherapy and chemotherapy services at the tertiary level such as EFSTH .

The recommended treatment for cervical cancer in The Gambia is:

1 Micro invasive carcinoma to stage 1a: simple total hysterectomy.

Stage 1b to 2a: radical hysterectomy with or without radiotherapy

Stage 2b to 4: radiotherapy and palliative care with chemotherapy

Facilities for radiotherapy are very expensive to procure and maintain and require highly skilled expertise to run. Chemotherapy is not usually used alone in cervical cancer treatment. It may be used to shrink the cancer before radiotherapy or in palliative care.

Goal

5-year survival rate of women diagnosed with early cervical cancer to reach 70% by 2020.

Objectives

- 70% of women with early stage cervical cancer will be provided appropriate cervical cancer surgery.

Strategy

- Build a partnership of all stakeholders to secure resources
- Have functional pathology laboratory in at least 3 major referral hospitals - EFSTH, Armed Forces Provisional Ruling Council (AFPRC) Hospital, Farafeni and Bansang hospital).
- All suspected cases of cervical cancer are promptly referred to one of the 3 referral hospitals (EFSTH, AFPRC hospital and Bansang hospital)
- The 3 major referral hospitals are equipped for radical hysterectomy
- Develop a reliable database on the results of surgical management, patient follow-up, and survival.

Activities

- Provide on-the-job training in gynaecological oncology to all gynaecologists at the EFSTH

- Hire 12 peri-operative nurses to be trained locally and dedicated to the cervical cancer prevention and control program by 2020.
- Procure 7 complete sets of instruments for radical hysterectomy
- Hire 3 additional pathologists to be based in Bansang Hospital, AFPRC hospital and EFSTH
- Send 2 Gambian doctors for training in pathology
- Provide data recording tools in all hospitals to ensure that all cases of cervical cancer are captured in a national database.

Targets

- At least 3 Gambian gynaecologists in the country will be able to perform radical hysterectomy without supervision by 2020
- 5-year survival rate for cervical cancer patients is increased to 70% by 2020.
- 100% of women with cervical cancer are recorded in the national cancer registry.

Indicators

- Number of gynaecologists in the country doing radical hysterectomy
- Cervical cancer treatment rate.
- Number of hospitals with the ability to provide histological diagnosis of cervical cancer.
- 5-year survival rate.

CHAPTER 7: PALLIATIVE CARE STRATEGIES

Palliative care aims to improve the quality of life of patients and their families facing problems associated with life-threatening illnesses and conditions. Palliative care can be provided in the home and at health-care facilities or community-based institutions. Palliative care is a basic human right, recognized under international human rights law.

Currently, over 90% of cervical cancer cases in The Gambia are diagnosed in advanced stages of the disease where cure is unlikely. Thus, the role of palliative care cannot be over-emphasised. However, there are currently no organizations offering palliative care in the country. There is no hospice in the country and health workers have not been adequately trained to offer palliative care. More so, narcotic analgesics are not readily available and are tightly controlled when available.

Goal

60% of all patients diagnosed with advanced stage cervical cancer in The Gambia will be offered palliative care services to improve their quality of life.

Objectives

- Integrate palliative care services into the health service delivery system in all public hospitals in The Gambia in a sustainable way
- Improve the quality of life of cervical cancer patients and their families through adequate management of physical symptoms, psychosocial and spiritual support.

Strategy

- Capacity building of health care providers in palliative care at all hospitals and major Health centres in the country.
- Ensure availability of all drugs needed for palliative care
- Capacity strengthening for home based palliative care.

Activities

- Set up a central palliative care coordination centre under the MOHSW
- Identify a network of health care providers and social workers from each of the hospitals in the country who will be trained and appropriately deployed to provide palliative care
- Provide essential drugs for palliative care, including oral narcotic analgesics (morphine).
- Hire and train counselors and social workers that will be involved in palliative care.These workers will be deployed to facilities providing palliative care services.
- Orientation of all health care workers on palliative care
- Mass sensitization campaigns on palliative care to encourage cervical cancer patients to assess the services.

Indicators

- Number of hospitals offering palliative care services.
- Number of mass sensitization campaigns on palliative care carried out
- Proportion of patients diagnosed with advanced cervical cancer that are accessing palliative care services.
- Number of service providers trained in palliative care

CHAPTER 8: MONITORING AND EVALUATION STRATEGIES

In order to avoid unnecessary re-invention of the wheel and / or duplication of efforts the M & E framework of this strategy will be aligned within the NHSP 2014-2020. For the sake of ensuring an effective cancer prevention and control programme, the focus shall be a more research based M&E framework. This will call for further strengthening of the National Cancer Registry (NCR), which includes establishment and development of a population screening register, , and special registers for cervical, breast and prostate cancer; and further improvement of the in-country histopathology services.

In order to ascertain the quality of data collected on cancers, there will be a need to provide for auditing or quality assurance by partnering with other histology laboratories and to review data recorded in cancer registries, and there will be a need for standard operating procedures on data management.. it is recommended that a baseline survey is conducted as a starting point for monitoring and surveillance

Goal

Establish, develop and Integrate special registry of cervical cancer prevention and control into HMIS of the MOHSW by 2020.

Objective

- To improve the quality of data management system at all levels.
- To improve the standard and quality of service delivery at all levels

Strategies

- Build capacity for monitoring and evaluation at all levels
- Integrate cervical cancer prevention and control data into the existing HMIS.
- Conduct operational and epidemiological research projects.
- Provide facilities for mobile technology (ODT) .
- Establish population-based cancer registers in all hospitals.
- Conduct baseline, mid-term and end-term surveys

Output Indicators

- Number and percentage of service delivery points supervised.
- Number and percentage of eligible girls vaccinated with two doses of HPV vaccine.
- Number and percentage of eligible women screened for cervical cancer at least once.
- Number and percentage of screened-positive cases.
- Number and percentage of women with screened-positive cases treated.
- Number and percentage of sites providing cervical cancer screening services.
- Number and percentage of hospitals providing cervical cancer treatment services.
- Number and percentage of health facilities appropriately equipped for provision of cervical cancer screening and treatment services.
- Number and percentage of health workers trained in screening, treatment of pre-cancers, an invasive cancer management.
- Number and percentage of cancer patients receiving cancer treatment according to the established standards.
- Number of sensitization sessions conducted
- Number and percentage of women cured one year after treatment with cryotherapy or LEEP for cervical precancerous lesions.

Impact indicators

- Cervical cancer incidence rate.
- Cervical cancer survival rate.

Health Outcome indicators

- Prevalence of abnormal cervical lesions.
- Incidence and / or prevalence of cervical cancer.
- One-year survival rates amongst cervical cancer patients, stratified by type of treatment (e.g., surgery, radiotherapy, chemotherapy, and/or palliative care).
- Five-year survival rates amongst cervical cancer patients, stratified by type of treatment (e.g., surgery, radiotherapy, chemotherapy, and/or palliative care).

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APPENDICES

Appendix I: Implementation Timeline

ACTIVITY	2016	2017	2018	2019	2020
Advocacy, Health Promotion and Education					
Development of effective communication plan	X				
Design, develop, pre-test, and disseminate communication support materials to raise awareness on cervical cancer prevention, and control	X	X	X	X	X
Develop and implement mass media campaigns, including radio and television messages	X	X	X	X	X
Hold talks and presentations with cervical cancer patients and survivors	X	X	X	X	X
Peer educators led sensitization meetings with men	X	X	X	X	X
Develop songs and drama about cervical cancer prevention and control in partnership with local artists.	X	X			
Develop and distribute youth-focused communication support materials on cervical cancer prevention	X	X	X	X	X
Public sentization on all aspects of cervical cancer	X	X	X	X	X
prevention and control.					
Health care workers training on messaging and communication on cervical cancer prevention and control	X	X	X	X	X
Integrate cervical cancer prevention messages into the ABC strategy for HIV/AIDS and other STIs.			X	X	X
Integrate cervical cancer prevention, early diagnosis, and control messages into existing programs in the health institutions in the country			X	X	X
Advocacy with policymakers and stakeholders on the prevention and control of cervical cancer program	X	X	X	X	
Primary prevention (Vaccination)					
Development of appropriate policy/guidelines to facilitate national introduction of HPV vaccination.	X				
Procurement of adequate quantities of HPV vaccine and supplies.	X	X	X	X	X
Increase cold chain capacity at facility, regional and national levels.	X	X	X		
Conduct micro-plans for HPV scale-up and roll-out nationally.	X				
Training of health service providers on HPV vaccination at all levels.	X	X	X	X	X
Develop, print and distribute data collection tools	X	X	X	X	X

Monitoring and evaluation of HPV vaccine scale-up and implementation		X	X	X	X
Mobilisation of resources to facilitate the scale-up of HPV vaccination to all districts in The Gambia.	X	X	X	X	
Update the existing HMIS to include HPV vaccination data.		X	X	X	X
Documentation and dissemination of best practices for HPV vaccination		X	X	X	X
National roll out of HPV vaccination		X			
Screening and treatment for cervical pre-cancerous lesions					
Develop cervical cancer screening guidelines for The Gambia	X				
Develop training manual for cervicl cancer screenining and treatment	X				
Procure equipment.for screening, cryotherapy and LEEP	X	X			
Conduct training of trainers.	X				
Strengthen the capacity of health facilities that have started screening to continue the program	X	X	X	X	X
Training of health workers and gynaecologists at service delivery points on VIA and cryotherapy	X	X			
Training of gynaecologists/medical officers on colposcopy and LEEP procedures	X	X			
Provision of colposcopy services in all hospitals		X	X		
Train 6 laboratory scientists in cytology techniques	X	X			
Screen all eligible women and treat precancerous lesions					
Training of midwives/nurses in private hospitals and health centres on VIA		X	X		
Roll out cervical cancer screening to all health facilities		X	X		
Treatment for cervical cancers					
Infrastructure development to improve access to surgery for cervical cancer at EFSTH, Bansang Hospital and Farafenni Hospital	X	X	X		
Strengthen the in-country services for cytology and histopathology in all hospitals.		X	X	X	X
Provide on-the-job training in gynaecological oncology to all gynaecologists at the EFSTH	X	X	X		
Hire 12 peri-operative nurses to be trained locally and dedicated to the cervical cancer surgery (4 annually)	X	X	X		

Procure 3 complete sets of instruments for radical hysterectomy annually	X	X	X		
Hire 3 additional pathologists to be based in Bansang Hospital, AFPRC hospital and EFSTH	X	X	X	X	X
2 Gambian doctors to be trained in pathology			X	X	X
Provide data recording tools in all hospitals to ensure that all cases of cervical cancer are captured in a national data-base.	X	X	X	X	X
Two Gambian doctors to be trained in radiotherapy			X	X	X
Four oncology nurses to be trained				X	X
Training of Three Medical physicists			X	X	X
Training for 3 radotherapy maintenance technicians				X	X
Palliative care					
Set up a central palliative care coordination centre under the MOHSW	X				
Infrastructural development for palliative care services at all hospitals in the country	X	X	X		
Identify health care providers and social workers from each of the hospitals in the country who will be trained and appropriately deployed to provide palliative care	X	X			
Provide essential drugs for palliative care, including oral narcotic analgesics (morphine).	X	X	X	X	X
Hire and train counselors and social workers that will be involved in palliative care. These workers will be deployed to facilities providing palliative care services.	X	X	X		
Orientation of all health care workers on palliative care	X	X	X		
Mass sensitization campaigns on palliative care to encourage cervical cancer patients to assess the services	X	X	X	X	X
Gradual roll out of palliative care for cervical cancer patients.	X	X	X	X	X
All hospitals and major health centres providing palliative care services				X	X
Monitoring & Evaluation					
M&E of the 2016-2020 strategic plan for cervical cancer prevention and control.	X	X	X	X	X
Capacity building for monitoring and evaluation at all levels	X	X	X	X	X
Integrate cervical cancer prevention and control data into the existing HMIS.		X	X	X	X
Conduct operational and epidemiological research projects.		X	X	X	X

Provide facilities for mobile technology (ODT) .			X	X	
Establish population-based cancer registers in all hospitals.	X	X	X		
Conduct baseline, mid-term and end-term surveys	X		X		X

Appendix II: FIGO staging of Cervical Cancer

I	Cervical carcinoma confined to the cervix (disregard extension to the corpus)
IA	Invasive carcinoma diagnosed only by microscopy; stromal invasion with a maximum depth of 5.0 mm measured from the base of the epithelium and a horizontal spread of 7.0 mm or less; vascular space involvement, venous or lymphatic, does not affect classification
IA1	Measured stromal invasion ≤ 3.0 mm in depth and ≤ 7.0 mm in horizontal spread
IA2	Measured stromal invasion > 3.0 mm and ≤ 5.0 mm with a horizontal spread ≤ 7.0 mm
IB	Clinically visible lesion confined to the cervix or microscopic lesion greater than T1a/IA2
IB1	Clinically visible lesion ≤ 4.0 cm in greatest dimension
IB2	Clinically visible lesion > 4.0 cm in greatest dimension
II	Cervical carcinoma invades beyond uterus but not to pelvic wall or to lower third of vagina
IIA	Tumor without parametrial invasion
IIA1	Clinically visible lesion ≤ 4.0 cm in greatest dimension
IIA2	Clinically visible lesion > 4.0 cm in greatest dimension
IIB	Tumor with parametrial invasion
III	Tumor extends to pelvic wall and/or involves lower third of vagina and/or causes hydronephrosis or nonfunctional kidney
IIIA	Tumor involves lower third of vagina, no extension to pelvic wall
IIIB	Tumor extends to pelvic wall and/or causes hydronephrosis or nonfunctional kidney
IV	Tumor invades mucosa of bladder or rectum and/or extends beyond true pelvis (bullous edema is not sufficient to classify a tumor as)
IVA	Tumor invades mucosa of bladder or rectum (bullous edema is not sufficient to classify a tumor as)
IVB	Tumor extends beyond true pelvis Regional lymph nodes (N)

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IA1 Measured stromal invasion ≤ 3.0 mm in depth and ≤ 7.0 mm in horizontal spread
IA2 Measured stromal invasion > 3.0 mm and ≤ 5.0 mm with a horizontal spread ≤ 7.0 mm
IB Clinically visible lesion confined to the cervix or microscopic lesion greater than T1a/IA2
IB1 Clinically visible lesion ≤ 4.0 cm in greatest dimension
IB2 Clinically visible lesion > 4.0 cm in greatest dimension
II Cervical carcinoma invades beyond uterus but not to pelvic wall or to lower third of vagina
IIA Tumor without parametrial invasion
IIA1 Clinically visible lesion ≤ 4.0 cm in greatest dimension
IIA2 Clinically visible lesion > 4.0 cm in greatest dimension
IIB Tumor with parametrial invasion
III Tumor extends to pelvic wall and/or involves lower third of vagina and/or causes hydronephrosis or nonfunctional kidney
IIIA Tumor involves lower third of vagina, no extension to pelvic wall
IIIB Tumor extends to pelvic wall and/or causes hydronephrosis or nonfunctional kidney
IV Tumor invades mucosa of bladder or rectum and/or extends beyond true pelvis (bullous edema is not sufficient to classify a tumor as)
IVA Tumor invades mucosa of bladder or rectum (bullous edema is not sufficient to classify a tumor as)
IVB Tumor extends beyond true pelvis
Regional lymph nodes (N)