

**GENDER ISSUES INFLUENCING UPTAKE OF PREVENTIVE SERVICES OF  
CERVICAL CANCER IN NIGERIA WITH SPECIAL ATTENTION FOR MALE  
INVOLVEMENT.**

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**GENDER ISSUES INFLUENCING UPTAKE OF PREVENTIVE SERVICES OF CERVICAL CANCER IN NIGERIA WITH SPECIAL ATTENTION FOR MALE INVOLVEMENT**

A thesis submitted in partial fulfilment of the requirement for the degree of Master of Science in Public Health

By

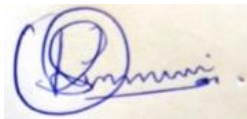
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The thesis **GENDER ISSUES INFLUENCING UPTAKE OF PREVENTIVE SERVICES OF CERVICAL CANCER IN NIGERIA WITH SPECIAL ATTENTION FOR MALE INVOLVEMENT** is my work.

Signature:



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## Glossary

**Access:** An opportunity to have health care needs fulfilled. The ability of an individual or community to make use of appropriate services or facility based on their need(1).

**Adolescents:** Children between the age of 10 to 19 years while young people cover the ages 15 to 24 years(2).

**Autonomy:** The quality or state of being self-governing. The right of self-government (3).

**Cervix:** Lowest part of a woman's uterus (womb) that connects the uterus with the vagina (4).

**Cervical Cancer:** This is abnormal growth of the cells of the cervix that it can invade other tissues and organs of the body. It is a slow growing cancer (4).

**CIN (Cervical Intra-epithelia Neoplasia):** This is a precancerous lesion that is diagnosed by histology as CIN 1, CIN 2 or CIN 3. If left untreated, it may progress to cervical cancer (5).

**Cryotherapy:** This is applying a highly cooled metal disc (cryoprobe) to the cervix and freezing the abnormal areas.(6)

**Empowerment:** Increasing a person's capacity to take decisions affecting all areas of life including health related issues (7).

**Gender:** refers to the socially constructed relationships between women and men in terms of their roles, behaviours, activities, attributes and opportunities, which are based on different levels of power. Gender though different the binary category of sex, it interacts with it (8).

**Gender Norms:** These are informal rules and shared social expectations that guide behaviour on the basis of gender (9).

**Gender equality:** This involves working with men and women as well as boys and girls, to cause changes in attitudes, behaviour, roles and responsibilities in the community that can improve quality of life for all people (10).

**Male Involvement:** This is men being expected to carry out certain roles to achieve particular outcome. It helps to gain wider consensus and support on certain issues (11).

**Sex:** This is the binary classification of people into male or female. Classification is based on physical characters, chromosomes, hormones, internal reproductive organs and genitalia (10).

## List of Abbreviations

CC	Cervical Cancer
CCS&PT	Cervical Cancer Screening & Preventive Therapy
CIN	Cervical Intraepithelial Neoplasia
DALY	Disability Adjusted Life Year
DHS	Demographic Health Survey
GAVI	Global Alliance for Vaccine and Immunization
GGE	General Government Expenditure
GGHE	General Government Health Expenditure
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
HPV	Human Papilloma Virus
IARC	International Agency for Research on Cancer
IPPF	International Planned Parenthood Federation
LBC	Liquid Based Cytology
LMIC	Low Middle Income Country
FLHE	Family Life and HIV Education
FMoH	Federal Ministry of Health
MSI	Marie Stopes International
NAIIS	National HIV/AIDS Indicator and Impact Survey
NBS	National Bureau of Statistics
NHIS	National Health Insurance Scheme
NPHCDA	National Primary Health Care Development Agency
OOPs	Out of Pocket spending
Pap smear	Papanicolaou smear
PHC	Primary Health Care
SDGs	Sustainable Development Goals
SFH	Society for Family Health
SOGON	Society of obstetrics and gynaecology of Nigeria
SSA	Sub-Saharan Africa
STI	Sexually Transmitted Infection
THE	Total Health Expenditure

UNDP	United Nations Development Program
VIA	Visual Inspection with Acetic Acid
VILI	Visual Inspection with Lugol's Iodine
WHO	World Health Organization



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## Abstract

**Background:** Cervical cancer is the 2<sup>nd</sup> leading cause of female cancer among Nigerian women. Despite being preventable, most Cervical cancer cases present late at health facilities leading to premature deaths. While much is known about factors influencing access to preventive services, demand-side factors, especially gender aspects have received less attention.

**Objective:** To explore the role gender plays in accessing cervical cancer prevention services and identify interventions that can reduce related barriers, in order to make recommendation to stakeholders to increase uptake of cervical cancer preventive services.

**Methodology:** This study is a literature review that made use of peer reviewed articles and grey literature. Applying a gender lens on the demand side of the Levesque et al. patient-centred access framework was used to guide literature search and organize findings.

**Results:** The results showed low level of knowledge about Cervical cancer and its prevention strategies among men, women and adolescents. Important gender related issues include autonomy, women empowerment, feminization of Cervical Cancer and male involvement. These gender related issues are not in separate silos but are interlinked through cross cutting issues such as level of education, access to information and income.

**Conclusion and Recommendation:** To improve knowledge of disease, effective communication strategies have to be deployed in communities while implementing existing policies that create enabling environment for uptake of preventive measures. Such measures include national screening services, national HPV vaccination program with coordinated effort among stakeholders with reduction of financial constraints.

**Keywords:** Cervical cancer, Prevention, Gender, Male involvement, Nigeria

Word Count: 12,751 words

## **Introduction and thesis organization**

Cervical cancer remains a public health issue though it is a preventable cancer. Its progression can be halted if detected early. However, it is the 3<sup>rd</sup> most common cancer in the global population (12). It caused over 300,000 deaths globally in 2018 and this figure is expected to increase by over 45% by year 2040 (12). In 2012, 85% of cervical cancer mortality occurred in low and middle income countries (13). Cervical cancer ranks 2<sup>nd</sup> among the most common cancers affecting women in Nigeria, after breast cancer (12,14). The implication is that it contributes to premature death in women and also reduces average life expectancy.

Cervical cancer can be partially prevented by vaccination of adolescent girls and boys between 9 to 13 years of age against human papilloma virus (HPV) (13) which is the most important risk factor in development of cervical cancer disease (15). Vaccination can enable disease prevention over the course of life. Screening for cervical cancer should begin by 30 years of age which enables identification of pre-cancerous lesions so adequate treatment can be provided (13). However, vaccination alone should not be the only prevention tool as cervical cancer can be caused by other HPV types that are not covered by the vaccines (13).

Sustainable development goal (SDG) goal 3 is to promote good health and well-being(16). This also includes reducing cancer-related deaths. Preventing cervical cancer is a low hanging fruit that can be leveraged to improve health outcomes and promote good health and vitality.

Over the course of my career as a clinician and public health practitioner, I have seen patients struggle with acceptance of diagnosis and adherence to treatment. This also occurs when patients present at health facility in late stages of cervical cancer. It made me think of reasons why these women present late, despite the fact that cervical cancer is preventable. Some issues became apparent to me while working on public health programs in Nigeria, which include delay in seeking treatment, inability to afford health services, a nonchalant attitude to preventive health services in general and lack of knowledge on health issues among the general populace. However, I became aware that in Nigeria, there is no organised screening program for cervical cancer; most screening occur in an opportunistic context, commonly during a hospital visit by patient or during outreach programs (17). As a result, screening services are not sustained and only women that have the opportunity at that time have access. The World Health Organization (WHO) recommends that screening be organized as there is a greater probability of reaching more women (13). Screening can be done making use of conventional Pap smear or Liquid based cytology (LBC). However Visual Inspection with Acetic acid (VIA) is being advocated for low and middle income countries (13).

I worked as the Program Manager on the "Get Life, Get healthy program" before coming to KIT, which I combined with clinical practice. We organized health checks for target population and referred to clinics for treatment. The health checks involved screening for both communicable and non-communicable diseases. Women were invited to the health facility for screening services after health talks, where the Liquid based cytology (LBC) method was used for screening. Patients had to come to the health facility for a subsequent visit to obtain results and be reviewed. Most patients came to visit when they had support with costs, such as health insurance or payment of health bills by a benefactor. Few patients with some knowledge about cervical cancer came voluntarily into preventive medicine clinics to access screening services. Some clients were also lost to follow up between field checks and scheduled health facility visits, when further treatment was required. Even among colleagues, male health care providers were not aware that the

Human Papilloma Virus (HPV) vaccine can be given to boys as well, where affordable. Not only to prevent transmission to women, but also since men are not excluded from developing other cancers caused by the HPV virus (18).

These above are some of the challenges noticed with regards to cervical cancer prevention strategies in the context where I was practicing, in south west Nigeria. This study is a literature review and aims to explore and discuss gender issues affecting the uptake of cervical cancer preventive measures in Nigeria, male involvement and current cancer preventive policy measures, in order to make recommendation to stake holders on areas of improvement.

Chapter 1 presents information on Nigeria; Chapter 2 presents the problem statement, study objectives, methodology, conceptual framework and study limitation; Chapter 3 discusses the role gender plays in influencing access to cervical cancer preventive services; Chapter 4 presents the policy and program responses in country in comparison to international standards from a gender perspective; Chapter 5 discusses relevant interventions that leverage on gender and male involvement in cervical cancer prevention or reproductive health programs in Nigeria and similar context, that can be adopted; Chapter 6 discusses the findings of this study; chapter 7 makes conclusions and gives recommendations on gender transformative approaches to improve cervical cancer preventive services uptake.

## CHAPTER One

### 1.1 Information About Nigeria

Nigeria is a lower middle-income country (LMIC) located on the western coast of Africa with 36 states and a federal capital territory, Abuja. It is further divided into six geopolitical zones<sup>1</sup> (19). It is bordered by Niger in the north, the Atlantic ocean in the south, Cameroun in the east and republic of Benin in the west (19). See map in figure 1. The country is further divided into 774 local government areas.

Figure 1: Map of Nigeria



Source: Nigeria Demographic and Health Survey 2013 (19).

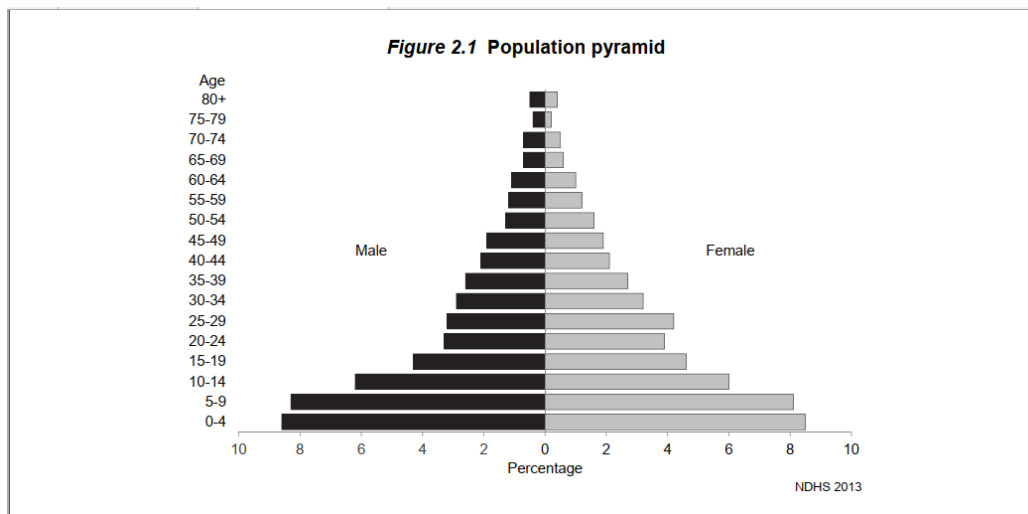
### 1.2 Demographic profile

The current estimated population is about 197 million (20) and the country accounts for 47% of West Africa's population (21). It is the most populous country on the continent and the 7<sup>th</sup> most populous in the world (19). The annual population growth rate is 2.59% and the dependency ratio is about 88% (22). The most populous states are Kano in North West and Lagos in South West and about 42% of the population is under 14 years of age (22), see figure 2. The mean age of the population is 17.9 years (20). The country is divided along ethnic lines into northern and southern Nigeria (19). The north has a predominant Muslim population while the south is majority Christian (23). About 49.6% of the population resides in rural areas (24). Literacy levels differ significantly between north and south. Literacy level among young men is lowest in the NE at 53.1% and young

<sup>1</sup> The 6 geopolitical zones are South West (SW), South East (SE), South South (SS), North West (NW), North East (NE) and North Central (NC)

for young women in the NW at 38%. In the south, lowest literacy level is found in SW at 93.7% for young men and 92.6% for young women (25).

Figure 2: Population Pyramid Nigeria, 2013



Source: Nigeria Demographic and Health Survey 2013 (19).

### 1.3 Socio-economic context

The Nigerian economy was previously agrarian up till the oil boom in 1953. Agriculture was still the main stay of earnings till independence from the British in 1960. Dependence on agriculture gradually dwindled as foreign exchange earnings from crude oil and natural gas sales increased(19). The life expectancy in the country for males is 52.6 years and females 53.8 year (19) and Nigeria is ranked 157 out of 189 countries in the human development index (26). The country has experienced several conflicts over years causing displacement of populations. The most recent is the Boko haram crisis in the NE part of country that has disrupted community life, local economies and caused displacement of over 2 million people across the 6 states of the geo-political zone (22). Although poverty has been on the decline across the country, it is highest in the NE and NW geopolitical zones. The NE is the only zone that recorded rising levels of poverty from 45.56% to 47.56% (22). Average years of schooling 6.2 years (26). However, this varies across socio-economic strata with wealthy people residing in urban areas having 10 average school years while rural poor Hausa girls may have as few as 6 months (27). These differences have a huge impact on socio-economic development.

### 1.4 Gender

Gender relates to social relationships between males and females and how it affects roles and behaviour depending on the power relations between men and women and this can vary between cultures over time (8). Promoting gender equity is important to achieving the sustainable development goal agenda of "leaving no one behind"(8). Conceptually, gender has been perceived to influence health across three main areas: (i) through interactions with social, economic and commercial determinants of health; (ii) through health behaviours that improve or are detrimental to health outcomes; and (iii) How the health system responds to gender including financing and access to quality health care(8). These three domains interact with each other in such a way it affects intersectoral drivers of inequalities, exclusion and discrimination(8). For instance, a woman's level of education affects the health outcomes of her children(8).

Nigeria's National Gender Policy Strategic Framework 2008 to 2013<sup>2</sup> focuses on promoting the status of women, closing the gender inequality gap, giving women a voice and chance at leadership as well as advocating for changes in attitude, values and culture with regards to respect for all human beings (28). Increasing the participation of women in politics and economic decisions as well as addressing gender inequality also helps improve quality of governance (29).

Gender inequality can manifest itself in society as unequal power relations, disempowerment, poverty or lack of access to political and socio-economic opportunities between men and women (29). In relation to health, it can lead to adverse outcomes for the health of individual women.

There are certain roles played by men which are socio-culturally acceptable and seen to express masculinity (8). Expression of masculinity can manifest as risky sexual behaviour and greater use of harmful substances particularly in younger men which can result in violence against women, unintended pregnancies and transmission of STIs (8,30). These expressions of masculinity with reference to risky sexual behaviour affect girls and women the most (8). In some context women seek health care more than men especially during their reproductive years (30). Examining data shows that men lose more Disability Adjusted Life Years (DALY's) than women and men have a shorter lifespan (30). An average life expectancy gap of 4.6 years has been observed between men and women (8). It is then important to pay attention to how men and women, are affected if not, it may be difficult to achieve universal health coverage (8).

### 1.5 Health system context

The health system is operated on 3 different levels which are the Primary, Secondary and Tertiary level in the public sector. Primary health care is under the purview of the local government, the secondary is operated by the state government and the tertiary by the federal government (31). This also affects how the public health facilities are funded. Each ward in each local government is expected to have at least a primary health centre or a health post (31). In line with the pillars of universal health coverage, community participation is encouraged with ward development committees supporting the primary health centres (PHC) in their wards. Health services are being provided by the public and private sector. The private sector provides 60% of the health services (31).

The public sector is funded by the government and donor support which can be local or international. Out of pocket spending (OOP) as a percentage of total health expenditure (THE) is still high at 75% which often results in catastrophic health spending for households (32). The general government health expenditure (GGHE) as a percentage of general government expenditure (GGE) was 5.59% in 2018 and this is below the Abuja declaration bench mark of 15% (33). For trends in health spending in Nigeria see Annex 1. On human resources for health, there are about 27 accredited medical schools and 76 accredited midwifery and nursing schools of which 78% are in the southern part of country (31,34). The distribution of workforce is skewed toward the urban areas and southern part of the country while the north has higher disease burden (31,34). See Annex 2 and 3 for distribution of health force. Government has been promoting task shifting policy to aim devolution of service to lower cadre of health force to cope with shortfall in human resource (31,34).

Though the health sector experiences several challenges such as incessant medical personnel strikes, brain drain and inadequate infrastructure, the system has recorded

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<sup>2</sup> Updated copy of National Gender Policy Strategic framework is not available.

successes in the eradication of Guinea worm and curtailing the Ebola crises while the last wild polio strain was reported in September 2016 (34). See table 1 for more indices.

Table 1: Nigeria Sociodemographic and Health Indices at a glance.

Indicator	Year	Male	Female	Total
Population in thousands <sup>a</sup>	2019	99238	96637	195875
Population Mean Age (years) <sup>b</sup>	2013	-	-	17.8
#Total Fertility Rate(children per woman) <sup>c</sup>	2018	-	-	5.3
Population Growth rate (%) <sup>a</sup>	2019	-	-	2.59
Population living in urban areas (%) <sup>d</sup>	2018	-	-	50.4
*MMR (per 100,000 live births) <sup>b</sup>	2013	-	-	576
Births attended by a skilled birth attendant births (%) <sup>e</sup>	2017	-	-	43
Life expectancy at birth in years <sup>b</sup>	2013	52.6	53.8	-
#Under 5 mortality rate per 1000 <sup>c</sup>	2018	-	-	132
Adolescent birth rate per 1000 <sup>e</sup>	2017	-	-	125
Modern Contraceptive Prevalence Rate (CPR) (% among married women) <sup>c</sup>	2018	-	-	17
Mean age at sexual debut <sup>b</sup>	2013	21.1	17.6	-
Density of Physicians (ratio per 100000 population) <sup>f</sup>	2013	-	-	38.9
Gross national income per capita (PPP current international US\$) for 2018	2018	-	-	1960
Literacy rate among young people (%) (aged 15 to 24 years) <sup>e</sup>	2017	70.9	59.3	-
Adult Literacy levels (%) <sup>b</sup>	2013	75.2	53.1	-
Primary School Enrolment <sup>d</sup>	2018	-	-	84.7%
Labour Force Participation (>15yrs in %) <sup>g</sup>	2018	59.8	50.4	-
Female share of seats in parliament (%) <sup>g</sup>	2018	-	5.8	-

\* Maternal Mortality Rate (MMR) WHO estimates are much higher than the NDHS averages. The WHO Global health Observatory country views estimates MMR at 814 per 100,000 for 2015. (35)

#Figures from the NDHS 2018. This is the preliminary report of key indicators. Full report to be published later in the year.

<sup>a</sup> UNITED NATIONS DESA POPULATION DIVISION. World Population Prospects 2019. (20)

<sup>b</sup> Nigeria Demographic and Health Survey 2013 (19)

<sup>c</sup> Nigeria Demographic and Health Survey 2018 Key Indicators Report. (36)

<sup>d</sup> United Nations Desa/Population division. World Urbanization prospects 2018. (37)

<sup>e</sup> National Bureau of Statistics (NBS) and United Nations Children's Fund (UNICEF). 2017 Multiple Indicator Cluster Survey (25)

<sup>f</sup> National Health Policy 2016 (34)

<sup>g</sup> UNITED NATIONS DEVELOPMENT PROGRAMME. Human Development Reports. Gender Inequality Index. 2018 (38)



## 1.6 Sexual and reproductive health and rights context

In Nigeria, age of sexual debut for males and females is noted in table above but the percentage of females who have had sex before 15 years is at 15% while for men is 4.1% (25). Maternal mortality is one of the highest in the world with WHO estimates of 2015 at 814 per 100,000 live births. Skilled birth attendant delivery is still low at 43% (25). The contraceptive prevalence rate is 17% among married women with unmet need among married women at 19% of contraception according to the 2018 Demographic Health Survey (DHS) (36). A national survey in 2013 indicated that 23% of women 15 to 19 years had started childbearing and one third of women 20 to 49 years had children by 18 years (19). The national prevalence for HIV is now at 1.5% according to Nigeria HIV/AIDS Indicator and Impact Survey (NAIIS) of 2018 (39) which is reduction from 2011 estimates which was 3.4% (40). Among young adults, HIV prevalence in females 20 to 24 years is 1.3% while males of same age group is 0.4% (39). This group has the largest HIV prevalence gender disparity (39). Some harmful social practices like child marriage and female genital mutilation is still being carried out by some ethnic groups (41). A national study in 2012 showed that there are 33 abortions per 1000 women in women aged 15 to 49 years (42). Induced abortion is only permitted when it is done to save woman's life (42). Nigeria has introduced comprehensive sexuality education into secondary schools as Family, Life and HIV Education (FLHE) since 2003 (43,44). However, implementation was not uniform in country with context specific content being taught. It was also poorly implemented especially in the northern parts of the country (44).

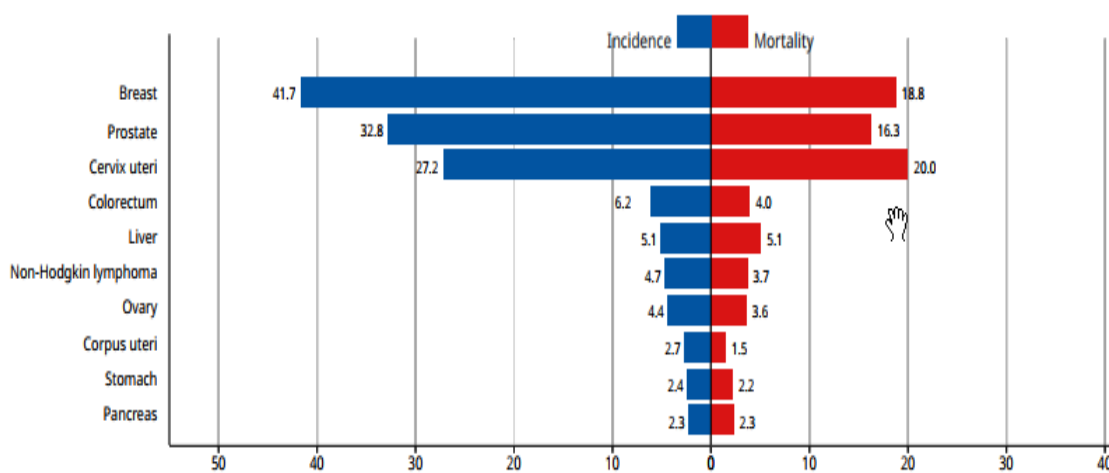
Sex is not openly discussed in Nigeria and discussion among young people can be seen to be improper (44). Sexual and reproductive health (SRH) services are provided at all three levels of care (primary, secondary and tertiary). There have been attempts to incorporate adolescent SRH services into PHC levels but it is still occurring on a limited scale (31). However, cervical cancer screening services are available at secondary and tertiary facilities but not at primary care level (45). Other reproductive health services not available at primary level includes HPV vaccination as it is not included in the national immunization schedule (46); mammography for breast cancer screening and screening for prostate cancer (45).

## Chapter Two: Problem Statement and Justification

### 2.1 Problem statement and justification:

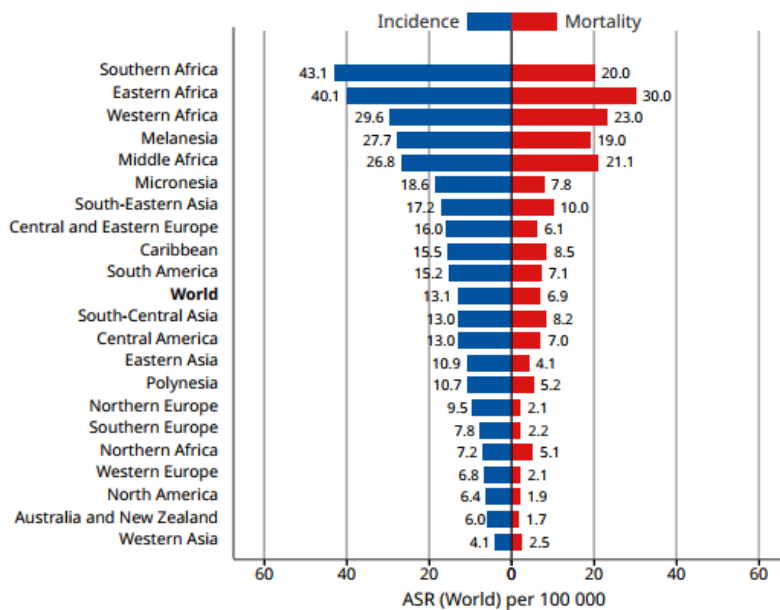
Despite cervical cancer (CC) being a preventable cancer, almost 570,000 new cases and about 311,000 deaths occurred in 2018 globally (47). This is higher than 2012 global figures of 528,000 cases and 266,000 deaths (48). There were over 30,000 new cases of cervical cancer in West Africa in 2018 (14) and same year there were almost 15,000 new cases in Nigeria (12). It is the second leading cause of female cancer in Nigeria (14). The Age-standardized incidence rate for West Africa is 29.6 cases per 100,000 while Nigeria is 27.2 cases per 100,000 compared with global figure of 13.1 per 100,000 for 2018 (47). Likewise, the Age-standardized mortality rate in Nigeria is almost three times higher than global estimate(12,47). See figure 3 and Figure 4 below.

Figure 3: Cervical Cancer Age standardized incidence rate and mortality rates per 100,000 compared with other cancers in Nigeria (2018 Estimates).



Source: International Agency for Research on Cancer (12)

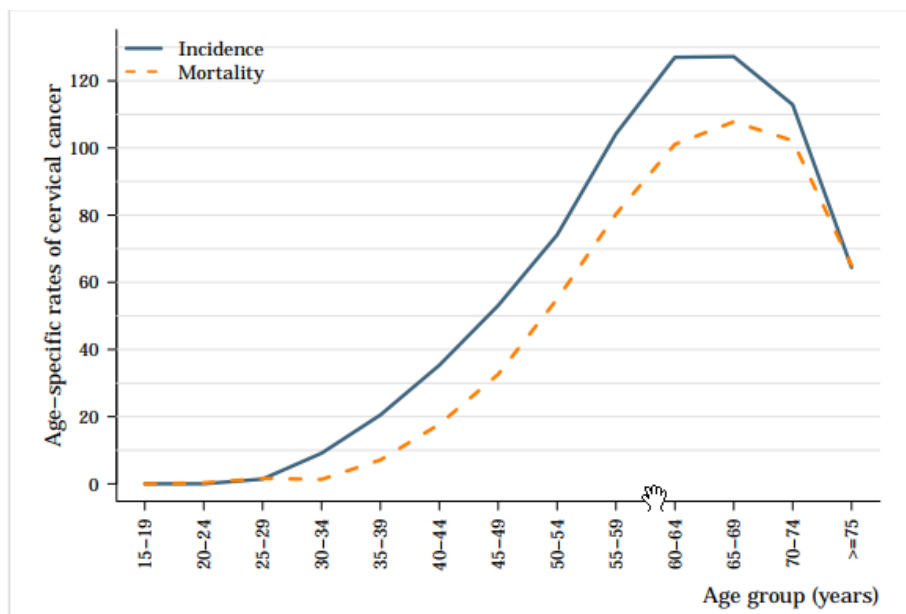
Figure 4: Cervical cancer Age standardized global incidence and mortality rates across the world (2018 Estimates).



Source: WHO Age standardized mortality rates (47)

Lower middle-income countries (LMIC) like Nigeria have higher CC incidence rates than high income countries (49). LMIC also record higher mortality rates as well even as mortality rates are reducing in higher income countries (49). Of the 20 countries with high mortality for CC, Nigeria is among the top seven (50). The incidence of CC occurs around 30 years and peaks between the ages between 59 to 69 years. See figure 5 below (14).

Figure 5: 2018 estimates of comparison between age-specific cervical cancer incidence and mortality rates in Nigeria.



Source: Human Papillomavirus and related diseases report in Nigeria. Summary report 10<sup>th</sup> December 2018 (14)

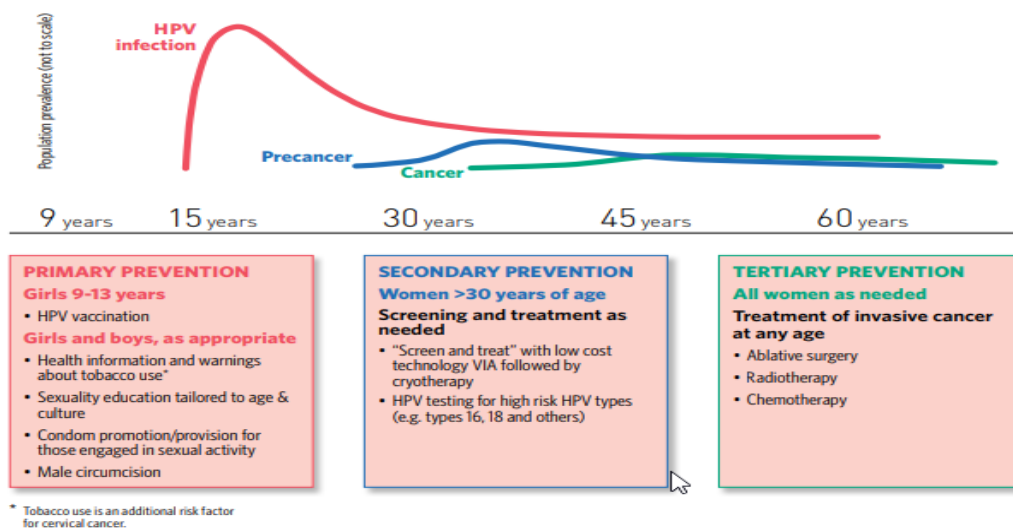
The most significant risk factor associated with acquiring cancer of the cervix is the HPV (15). About 30 to 80 percent of people will get HPV infection at least once in their life time and it commonly affects teen and adults (13,51). However, infection is self-limiting and asymptomatic with some cases progressing to cervical cancer especially in the presence of persistent oncogenic HPV infections (e.g. HPV types 16 and 18) (51). There is a strong association between HPV infection and cervical cancer to the extent that in almost 100% of CC cases, HPV is the causative agent (14,17,52,53). See Annex 4 for chart on global HPV prevalence among HPV related diseases. HPV is transmitted by intimate skin contact and is a common sexually transmitted infection (51). Some other risk factors associated with occurrence of cervical cancer include smoking, being overweight, a weakened immune system due to HIV, having more than three multiple full term pregnancies and long term use of oral contraceptives (14,15,17).

Another important risk factor to consider is the age of sexual debut which, when early, increases the risk of contacting the Human Papilloma Virus (HPV) (14,54) as well as high number of sexual partners over one's lifetime (55).

There are vaccines available to prevent HPV infections of different strains. The WHO recommends that vaccination for girls against HPV virus should occur between 9 to 13 years of age, before sexual debut (13,56). The new nonavalent vaccine (Gardasil 9) is able to prevent HPV positive CC by up to 90% due to the strains being covered (57). CC screening is also important because of the progression of disease from cervical intraepithelial neoplasia (CIN) to cervical cancer (17). See Annex 5 for chart on the progression of disease. This gives an opportunity for early detection of pre-cancerous lesions (17) and monitoring along the natural course of disease (13). See figure 6 below. Cervical cancer is the only HPV associated cancer for which screening has been approved (51).

The strategy for control of Cervical cancer as recommended by WHO can be primary, secondary or tertiary prevention (13). Primary prevention strategies include HPV vaccination, health information warning on tobacco use, age specific sexuality education, condom use promotion as well as male circumcision (13). Secondary screening involves using visual inspection with acetic acid in low resource settings, conventional Pap smear, liquid-based cytology and HPV testing for high-risk HPV types (13,52). (13)Tertiary prevention is treatment of established cervical cancer cases with Chemotherapy, Radiotherapy and Ablative surgery (13). The WHO recommendation for primary prevention tends to exclude young adult women and men, yet this group is important for the control of HPV infections. This study will address this aspect as well. However, in Nigeria, screening coverage by age groups remains low at 1.8% for 25 to 34 years, 6.6% at 35 to 44 years, 12.7% at 45 to 54 years and 2.8% at 55 to 64 years(58). Screening coverage by location shows that only 0.4% to 14% of women living in rural areas get screened compared to 20% of their urban counterparts (50). Annex 6 attempts to show the continuum of care for cervical cancer and the failures that may occur along the way (59). Details will be discussed in later chapters.

Figure 6: Overview of lifetime programmatic interventions over course of life to prevent HPV infection and cervical cancer.



SOURCED FROM: WHO Comprehensive cervical cancer prevention and control: A healthier future for girls and women (13).

## 2.2 Why involve men?

Involvement of men in cervical cancer prevention is important because of the benefits to the health of society. Equity stands for creating equal opportunity for both men and women in the society. Men are also seen as strong, bread winners and not expected to be ill, so they may not utilize health facilities (60).

However, both men and women are infected by the HPV virus and over a period of time, it can manifest as genital warts which are benign, anal cancer, penile cancer and oropharyngeal cancer in men (52). Men need to understand the risk they are exposed to and support those around them to achieve optimal level of health. Hence involving men is a more comprehensive and appropriate way to bridge health equity gaps (61).

## 2.3 Justification

In resource limited settings as in Nigeria, there are challenges with access to preventive, screening and treatment services. There are also limited facilities offering preventive services for CC (62) and preventive services are not organized (17,63). The cost of HPV vaccines remains high and is only accessible at individual request at a cost. Nigeria is also yet to introduce vaccine into the immunization schedule of country (46). The Global Alliance for Vaccination and Immunization (GAVI) have been instrumental to reducing the cost of these vaccines and making them available in developing countries (64). Screening in turn comes at a cost to the individual and is not readily available at primary level (65). Countries that introduced screening as part of public health services were able to reduce their CC burden significantly (62,66,67) and Nigeria could learn from this. The common method used in Nigeria is Pap smear and cytology (17) while WHO recommends that VIA which requires a single hospital visit should be promoted and is more cost effective (13).

However, information on CC and its prevention is low in the populace (68) which also affects how society takes up preventive measures (66). The Nigerian society is mostly patriarchal giving rise to gender norms that give men more authority and leadership roles, which often makes them gatekeepers, among others, of women's access to health services (69,70). This obviously has implications for women's health. These power imbalances in the society, gender issues and dynamics need to be explored to examine influences on

uptake of preventive health services related to cervical cancer. Very few studies have examined HPV infection and cervical cancer with a gender focus. A study in south western Nigeria on community perception and preventive practices for cervical cancer, it was noted that 85% of participants wanted to know more about cervical cancer prevention. About 40% of these participants were men (68). Another study showed that more research needs to be done with regards to both men and couples to help understand barriers to male support for screening and treatment and how best to include men in cervical cancer screening activities (71). Hence the rationale for this literature review.

Research has shown that effective preventive measures against cervical cancer such as vaccination and screening will have an impact on reduction of incidence of Cervical cancer (72–74) hence the focus of this study on primary and secondary prevention. This is also in line with WHO best buys document (56).

Through this research, innovative ways of leveraging on male involvement and transformative gender approaches can be discovered in order to improve the uptake of preventive measures thereby reducing the burden of cervical cancer.

#### 2.4 General Objective:

To explore the role gender plays in accessing cervical cancer prevention services and identify interventions that can reduce related barriers capitalizing on any opportunities to make recommendation to Federal Ministry of Health (FMoH) and other relevant stakeholders in order to increase uptake of cervical cancer preventive services.

##### 2.3.1 Specific Objectives:

- 1.) To identify and discuss the role gender plays in influencing access to cervical cancer preventive services.
- 2.) To analyse and discuss the current policy and programs on cervical cancer in comparison to international standards, from a gender perspective.
- 3.) To identify and discuss relevant interventions that leverage on gender and male involvement in cervical cancer prevention or reproductive health programs in Nigeria and similar context, that can be adopted.
- 4.) To make recommendation to the Federal Ministry of Health (FMoH) and other stakeholders on improving uptake of preventive services through gender transformative approaches.

#### 2.4 Methodology:

A review of literature was carried out making use of data bases such as PubMed and Cochrane library. Other search engines used were Google scholar and Google. The VU online library was also searched. Websites searched included WHO, World Bank, CDC, IARC, UNFPA, FMoH web site and Nigeria Bureau of statistics (NBS). Key words<sup>3</sup> from the conceptual framework and terms related to topic informed the search strategy in the databases. These keywords were combined with the bulleon terms "AND" and "OR" to narrow down on relevant literature. See annex 7 for literature search strategy.

Articles screened were full text articles and selected after reviewing abstract, findings and discussions. Literature screened consisted of peer reviewed articles and grey literature. Snowballing was also be used to retrieve more articles based on inclusion criteria from already selected articles and from previously written thesis. Book chapters were also

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<sup>3</sup> Key words searched include Cervical cancer, Prevention, Gender, Male involvement and Nigeria.

reviewed to complement search. This was also done for the introduction and problem statement sections.

### 2.5 Inclusion and Exclusion Criteria:

This study reviewed literature related to primary and secondary cervical cancer prevention. Literature related to tertiary level prevention was excluded from study due to the fact it involves hospice and palliative care after the diagnosis of cervical cancer which is beyond the scope of study. Literature in English were selected excluding literature in other languages. Literature from the period of 2009 to 2019 were reviewed with a few exceptions due to paucity of literature. Where access to literature was barred due to payment, such articles were excluded. Related policy documents in Nigeria were also searched for. All these criteria were to keep study achievable given the time frame and within resources available for study. Focus of this study is what is applicable at the primary care level.

### 2.6 Conceptual Framework:

The Levesque framework of 2013 which discusses access to health services was applied to organize search strategy and discuss findings. A gender lens was applied on this framework. This frame work discusses factors that influence access to health services. The framework also describes access from both the demand and supply perspectives and how they interact to achieve access to health care services. Previous perception of access indicate that it is attributable to utilization of service and is determined by factors such as price, availability and quality of goods and services(1). In simple terms it is "the opportunity to have health care needs fulfilled"(1). See figure 7 for the image of framework and table 2 for definition of key terms of the demand side of framework.

Table 2: Definition of terms from demand side of the Levesque, Jean Frederic framework.

<b>Demand side Abilities</b>	<b>Definition</b>
Ability to perceive	Ability to perceive need for care is to be informed about health-related issues and have a desire for better health outcomes.
Ability to seek	Ability to seek health care relates to the achieving a state self-governance which enables individual to attain knowledge and make informed choices about their health.
Ability to reach	Ability to reach health care the factors that enables and individual physically reach service providers such as flexible work hours, access to transportation.
Ability to pay	Ability to pay is the capacity to generate revenue through income, savings, borrowing or loans in order to pay for health care services without jeopardizing resources for basic necessities.
Ability to engage	Ability to engage involves participation and involvement of the client in decision-making and treatment decisions as regards their health which is influenced by motivation and capacity of individual.

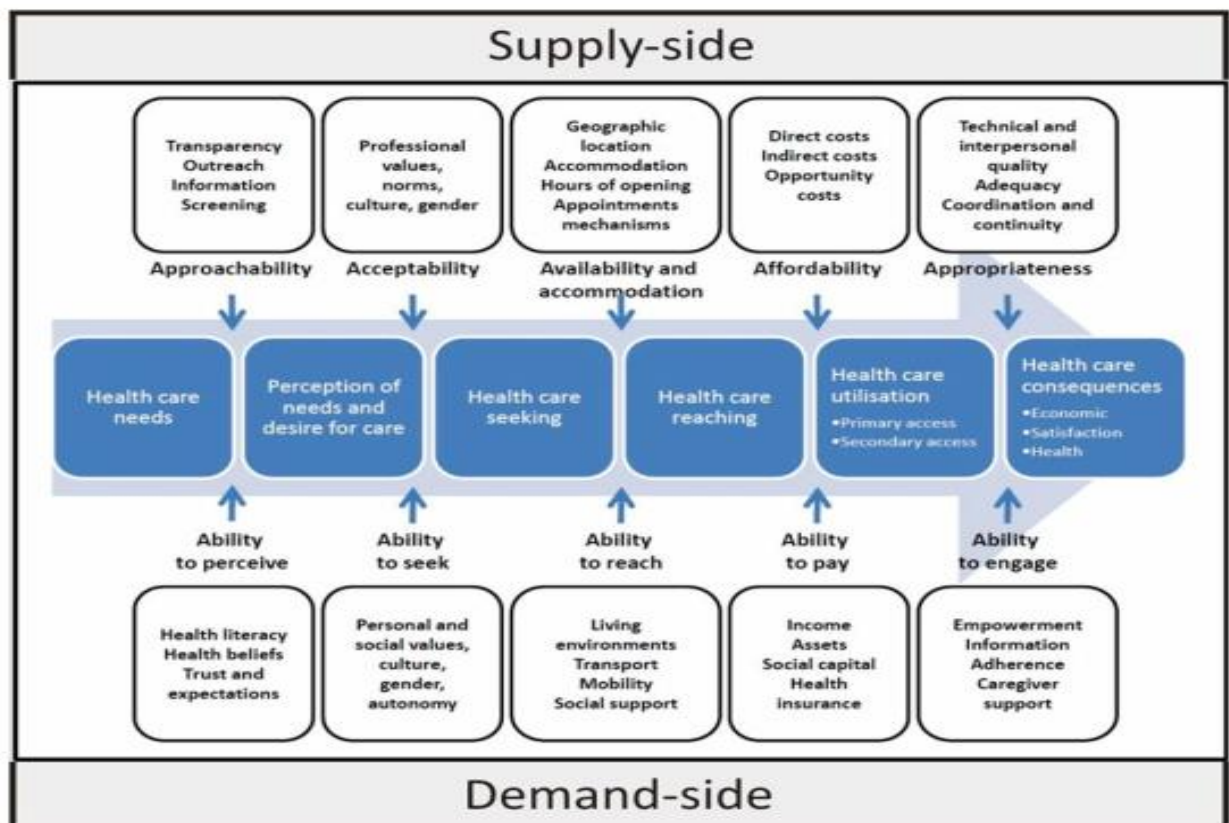
Source:(1)

The demand side of the framework will be focused on due to the fact it focuses on the process of access from the perception of the client to the point of engagement with health system. A gender lens will be also be applied here.

This is because there are several documented literatures on the supply perspectives of the framework especially in relation to the health system and gender(75,76). The supply perspective examines the approachability, acceptability, availability and accommodation, affordability and appropriateness(1). In reference to cervical cancer screening, several barriers have emanated in studies while exploring these dimensions and have been addressed extensively. This includes providing the public with information that can enable them approach the health facility for screening services. It has been documented that there was low knowledge of primary and secondary preventive services for cervical cancer among health workers in Nigeria (77–79). This low knowledge among health workers serves as a barrier to uptake of preventive measures as they cannot provide services they are not aware of(77). Accepting health services depends on the sex of the health professional depending on how conservative the society is as well as cultural norms(76).



Figure 7: Conceptual Framework on access to health care services.



**Adapted from:** Levesque Jean Federic Patient-centred access to health care framework (1).

Other frameworks considered for this thesis included the health belief model which is a psychosocial model associated with behaviour change communication proposed by Rosenstock in 1974 (80). This framework examines the demand side and tries to discuss factors affecting uptake of health services. It also excludes determinants of access and the process patients goes through to in order to take up services. This is important when applying a gender lens as the dynamics of societal norms are not easily changed.

Another framework considered was the Information engagement framework for gynaecological cancer patient framework (81). This framework appears to focus on the woman alone and her acceptance of diagnosis thereby moving towards tertiary prevention which exceeds the scope of this study.

## 2.7 Study limitations.

This study had several limitations. Estimates of cervical cancer cases are not trustworthy as cancer registries are not functioning optimally, therefore cases several cases do get reported to health facilities. Also, articles considered were those in English language; hence this excludes relevant literature available in other languages. The articles used were peer reviewed articles address subtopics or have limited geographical cover in Nigeria, so as much as possible, I included other sources of same subtopic or sub-geographical area using different study designs (triangulation) so as to reduce bias. Due to the fact published literature on gender, male involvement and cervical cancer are limited, I extended my search to Sub-Saharan Africa.

## **CHAPTER Three: Gender norms and its influence on health seeking behaviour**

This chapter explores gender norms that influence health seeking behaviour with regards to cervical cancer preventive methods while applying the Levesque framework from the demand perspectives. I analysed access to primary and secondary preventive services through a gender lens. See table 2 above for definition of key terms of demand side of framework.

### **Ability to perceive:**

Both adolescents' and adults' ability to perceive the need to access cervical cancer screening services depends on health beliefs, access to information on health problem as well as trust and expectations in the health care system (1). In accessing information, individuals are able to determine what they need and desire the required health service based on their perception of risk (1). Women tend to lag behind men in level of formal education received. The DHS survey in Nigeria showed that 38% of women age 15-49 received no formal education compared to 21% of men of same age bracket (82).

Women of higher SES, with higher levels of education are more likely to have access to information and also come in for cervical cancer screening than women of lower SES and lower levels of education (83). For service use to occur, there should be availability of information about the need for screening and where to access it. Several studies across Nigeria have shown that access to information through mass media<sup>4</sup> or health worker have been associated with increased knowledge and uptake of cervical screening services (84–87). A qualitative study in Nigeria in two hospitals, one located in North Central (NC) and the other in South West (SW) showed that among female participants most women had heard about cervical cancer screening through mass media but there was limited knowledge on efficacy of screening in preventing cervical cancer. Most women had not heard about the HPV virus. In the same study, more Christian women believed CC to be caused by witchcraft than Muslim women. Other beliefs around the causes of CC includes insertion of herbs into vagina and use of clothes or toilet roll during menstruation (76). In a quasi-experimental study in SW Nigeria, a health education movie provided health literacy information on cervical cancer to women. The intervention raised awareness and knowledge from 2% to 70.5% ( $\chi^2=503.7$ ,  $p<0.0001$ ), while screening rose from 4.3% to 8.3% ( $p=0.05$ )(84). Targeting the adult population through the internet are good sources of information but it may not be as effective due to cost of accessing the internet and power outages experienced in the country (88). A before and after intervention study in South East (SE) Nigeria showed the impact of peer education on uptake cervical cancer screening among women. Peer health education was provided monthly for 3 consecutive months to about 300 women. At end line, 77% of participants viewed CC as serious as other cancers, an increase from 46% ( $p<0.001$ ). With reference to CC screening uptake, there was an increase from 27% to 45% ( $p<0.02$ ) (89). Another study in South West (SW) showed that women believed that if they were healthy, there was no need to visit the health facility(90).

Findings from a study in Malawi revealed that most men heard about CC from radio health program while in Kenya, most men heard through radio, church and health workers (71,91). A study in Ghana among men showed that most participants had not heard of CC but some of those with college degrees had heard about the disease. Only one participant was able to link HPV with cervical cancer and most participants thought the disease was

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<sup>4</sup> Mass media includes television, radio and hand bills (printed leaflets)

caused by having sex frequently. Other beliefs on causes of CC included insertion of herbs into vagina to induce abortions, bleaching of skin, having multiple sex partners, repeated abortions and poor hygiene (92). This study though relevant had a small sample size and was not generalizable. Another study in NC Nigeria showed that participants had also heard about cervical cancer through mass media, 67% were aware of screening methods and its benefits (93). A study showed that participants expressed lack of trust in health system and felt they may be exposed to other diseases through screening (76). This is in line with the patients perception that quality of care available at the health facilities is low (76).

In a study where female and male adolescents and adults were part of several focus group discussions in SW Nigeria, the level of awareness on CC was high but women were more aware compared to men. During discussion with older participants which included traditional and religious leaders, associated CC with western civilization, a curse, promiscuity and condom use. Among adolescent boys and girls, most participants including adolescents believed CC to be due to a curse, the result of promiscuity, the use of cloth as sanitary pads during menstruation (94). Another study in northern Nigeria among university students indicated risk factors to include promiscuity on the woman's part and smoking but 18% were aware of HPV infections being linked to CC and 25% knew that condom use prevents infection (95).

Study in SW Nigeria showed traditional leaders were against vaccine and some religious leaders as well but Christian religious leaders believed that with good moral upbringing, promiscuity will be reduced. These religious leaders influenced the decision of fathers regarding uptake of vaccine (94). This is important because of previous rejection of vaccines in northern Nigeria which involved religious leaders and was also politically driven (96). Adolescents were willing to receive the vaccine but were worried about the pain, the cost of vaccine, possible side effects and vaccine potency (94). The authors have concluded that adolescents and young adults should not be left out in preventive programs of cervical cancer.

#### **Ability to seek:**

This portion of the framework deals with the role of personal and social values, culture, gender in relation to seeking desired care and autonomy (1).

A study in Ghana revealed that if a young unmarried woman accesses CC screening services, then it shows she is sexually active, which is disapproved of by many in the society (97). In SW Nigeria study involving men and women resident in a rural area, showed that women were afraid of positive results, fear of revealing positive result to spouse, fear of stigmatization of having an STI and fear of being assumed to be unfaithful. Male participant indicated that women could be sent away from the home and be accused of infidelity due to a positive CC screening result (90). Fear of obtaining positive results by the spouse was also evident in men who took part in a study in Kenya. Some of the other emotions described included pain, stress, disappointment and shock (71).

Findings also showed that lack of partner support can inhibit women from accessing CC screening (97). Studies in Nigeria showed that some women will require their partner's permission before they can get screened (76,90). Women are also expected to be subservient and seek permission from their spouses before coming in for preventive services (69,98). This is because they are perceived to have a lower social power compared to their husbands (99).

Another cultural belief among male Hausa's, a tribe in Nigeria was that previous generation of women did not visit the hospital, so why should their wives visit the hospital (90). Also, power dynamics is challenging for young women involved in child marriages, in which early sexual debut occurs, relationship often involves a much older partner who has been sexually active for a while and can probably infect her with an STI (100). Occurrence of child marriage is high in Nigeria with 44% of girls married before 18 years and it is as high as 68% in NW Nigeria (25,101). In this type of power imbalance relationships, autonomy for woman is low (102). Autonomy is related to power dynamic in relationships and it is the ability to take decisions independently within the household (103). Findings from a study in Kenya also showed that gender norms influence a woman's decision making power to access health services and low autonomy can have an influence on CC screening through cultural beliefs and practices (104). The study also showed there was a positive association with having high decision making power at home and having a Pap smear than when compared with those with low decision making power at home (104).

Another cultural belief was that traditional roots herbs, charms that can prevent CC with no regard for modern medicine (90,94). Personal beliefs also affect uptake of cervical cancer services. In Ghana, a study showed that men believed that their wives should not be exposed to another man and cervical cancer screening involves a pelvic examination (92). Another study in Nigeria found among Muslim women concerns about being exposed during screening (76). It's been documented that women find CC screening pelvic examination embarrassing (105). Studies in Nigeria and Ethiopia showed that majority of women were comfortable with HPV self-testing instead of presenting at the health facility for hospital for pelvic examination (106,107). A randomized control trial also showed that more women (93%) completed the HPV – DNA self-testing than hospital- based screening (56%) and p value was <0.0001.

Over the years there has been a 'feminization of HPV infection' that is, the social association of an issue with women, which for example also often applies to contraception (108). CC is portrayed as an STI that is a woman's problem and as such, women are seen as the group responsible for the problem (108). Vaccines have been approved to be given to adolescent girls in Nigeria since 2011(109) but only recently approved for boys (13,108) which may reinforce HPV being viewed as a woman's problem. In fact research has shown the association of HPV in anal and penile cancers with higher risks for men who have sex with men (MSM) (108).

Another study in SW Nigeria showed there was insufficient knowledge about HPV vaccines, reasons for rejection by care givers of adolescents was that the children were too young to receive vaccine, the adolescents were not sexually active so vaccine is not necessary and it can promote promiscuity (110).

### **Ability to reach:**

This portion of the framework deals with living and environmental conditions, mobility, occupational flexibility, social support systems that enable patient seek care and reach the appropriate health facilities(1). About 60% to 75% of women who develop cervical cancer reside in the rural areas (111) and in Nigeria CC screening services is not available at PHC level which is often the health facility closest to them (46,50). A study in SW Nigeria showed that reason for default in follow-up care after initial screening were long distance travel to health facility, transportation and lack of time to travel as facility was located in urban area (98). A higher proportion of defaulters were resident in the rural areas and lived more that 10km away from health facility (98). Also documented were similar issues in men wanting to support their partners but having challenges with getting time of work

for clinic visit, inability to provide transportation and offer emotional support if positive result is obtained (71). A study in Uganda on gender dynamics affecting access to maternal health services which is a reproductive health service, indicated that women expected men to be sole providers for the home. Often due to poverty, these men cannot meet the demands of their wives as a result they sometimes cannot provide the support she needs to access services (112).

Having a good social support system however has a positive impact on health. It has been documented that most women who had cervical cancer screening done relied on support systems which included peers, friends or spouses (83). This is a positive impact of being surrounded by family and friends. A study in 3 rural communities in two SE Nigerian states, revealed motivating factors for seeking cervical screening using VIA included support from spouse, children, other family members and community leaders (85).

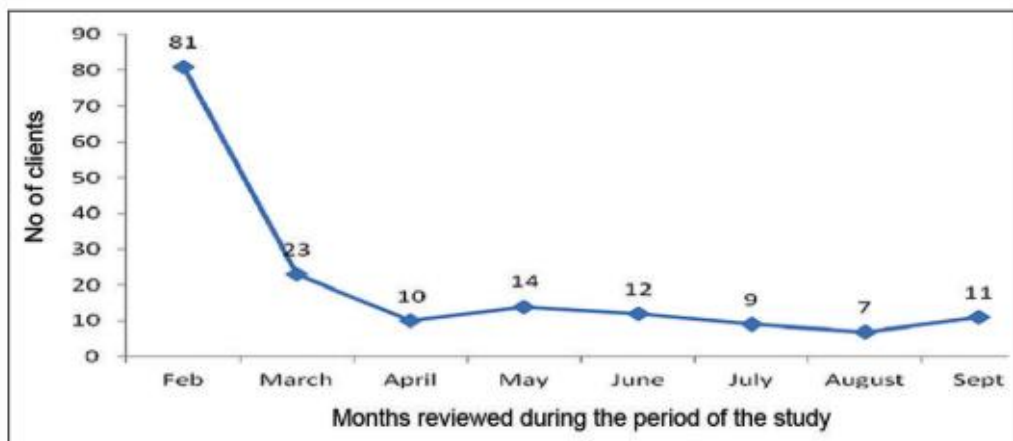
On vaccination, study in Kenya on acceptance of vaccination among adolescent girls, reasons noted why mothers did not present their daughters for vaccination included disapproval of someone within their community, no approval from partner, daughter's refusal to get vaccinated and fear of side effects (113).

#### **Ability to pay:**

This area of the frame work examines factors around income, assets, social capital as well as health insurance(1). It shows the capability to generate income, have access to savings, borrowings or loans to pay for health services without resulting in catastrophic spending (1). Nigerian communities are mostly patriarchal which may sometimes exclude women from economically productive activities based on the societal assigned roles(69). Not being involved in income generating activities can affect ability to acquire assets. Access to economic activities not only benefits the woman but also the children and household (82). In a survey report for Nigeria showed that seven in ten women are employed and earn cash compared to almost all men. Only 4% of women earn more cash than their husbands and this was likely in urban areas if they had more than secondary education (19). About 18% of women own a house jointly or alone while 15% are land owners. Men are twice likely (40%) to own a home alone or jointly and twice likely (34%) to own land alone or jointly as well (82). All these factors affect access to disposable income by the women and ability to pay for needed health services.

Studies have shown that a reduction in the cost of cervical cancer prevention services will help reduce this barrier in accessing services (77,114,115). A study in SE Nigeria showed a sharp decline in the utilization of cervical cancer screening services immediately after the introduction of user fees (99). The precision of this study can be questioned due to the sample size, duration of study as it was not a population-based study. See figure 8 below.

Figure 8: Decline of utilization of cervical cancer screening services after introduction of user fees at University of Port-Harcourt teaching Hospital, Rivers state, Nigeria. 2014.



Source:(99) By TK Nyengidiki, N Inimgba, G Bassey, RN Ogu. Does Introduction of User Fees Affect the Utilization of Cervical Cancer Screening Services in Nigeria?

Availability of health insurance also improves uptake of preventive services and mitigates against the risk of catastrophic health spending. A study in Kenya showed that women who had access to health insurance were more knowledgeable about cervical cancer (OR=1.97, 95% CI [1.83–2.13]) and likelihood of getting screened increased (OR=2.60, 95% CI [2.35–2.88]) when compared to their uninsured counterparts (86).

Invariably, where costs apply to access preventive services as in the case of HPV vaccine cost in Nigeria, adolescents are also affected as care givers may not be able to pay for vaccine (88). Some women are completely reliant on husband for income due to lack of employment or economic activity, if the husband does not have funds, then she may not be able to access health screening services when user fees are charged (90). Other costs may be in terms of opportunity costs and time are important. Cost of travelling long distances to health facility, obtaining alternatives to child care which come at a cost, missing work or trade days are part of costs borne by a client and not just the user fees (116).

**Ability to engage:**

Ability to engage has to do with empowerment, information, adherence and care giver support(1). It refers to participation and involvement of the individual seeking care in decision making, related to 'screen and treat' services rendered which in turn can promote adherence.

Women empowerment is the right to determine choices and have access to opportunities and resources (117). When a woman has control over what she earns, it aids empowerment. A survey in Nigeria that used control over earnings as one indicator for empowerment showed that one in five married working women made joint decisions with husbands on spending of cash earnings while 10% report their husbands takes the decision alone (82). About 73% of the men are in control of what they earn. However, the more educated the man, the more likely he is to take joint decisions about income with his partner (19). For a woman to be empowered, she needs to have control over income and resources. She should be able to engage meaningfully in the health process and thereby

promoting adherence. See findings below in table 3 on some barriers that if overcome can promote adherence during a cervical screening study in rural SE Nigeria:

Table 3: Depicting reasons clients want single hospital visits during cervical screening program in Enugu and Imo state, Nigeria between March 2011 to March 2012.

Reasons for preferring immediate “see and treat” management.<sup>a</sup>

Reason	Number (percentage) of women <sup>b</sup>
Lack of time	1624 (80.8)
Belief second visit for treatment will cost more money	1117 (55.5)
Uncertainty about second confirmatory tests	570 (28.3)
Anxiety related to waiting for confirmatory tests	309 (15.4)
No reasons	13 (0.6)

<sup>a</sup> Among 2011 southeastern Nigerian women who would prefer immediate treatment.

<sup>b</sup> Participants were allowed multiple responses.

Source: (85) Motivations and preferences of rural Nigerian women undergoing cervical cancer screening via visual inspection with acetic acid in South Eastern Nigeria. Chigbu, Chibuike O, Onyebuchi, Azubuike K. Ajah, Leonard O, Onwudiwe, Elijah N.

It is worthy to note that this study was carried out in primary health centres in community hence barrier of transportation was overcome.

In the case of adolescents, a study in SW Nigeria showed that access to information on HPV vaccine, increased support of mothers to present adolescent daughters for vaccinations. Likelihood of this occurred with higher level of education of mother (109). The mothers were also willing to recommend to others (109).

Next chapter will present the policy environment and programs in Nigeria in relation to international standards

## **Chapter Four: Policy environment in Nigeria and programs on cervical cancer in comparison to international standards from gender perspective.**

This chapter aims to analyse and discuss from a gender perspective, the policy environment in Nigeria and programs on cervical cancer in comparison to international standards.

The first National Strategic Health Development Plan 2009 to 2015 framework does not refer to specific strategies for cervical cancer control (118). This has been updated and new framework operates from 2017 to 2021. This is a more elaborate plan and has cervical cancer screening as one of the components of maternal health services, providing a continuum of care from community, PHC and then to referral point (31). The Reproductive health policy of 2017 has reproductive cancer as one of its objective areas as well with reference to cervical cancer community sensitization and screening (119).

The National policy for cancer control 2018 to 2022 offers Federal Ministry of health guidance on the implementation through the National Cancer Control program (46). This includes seven thematic areas which are Prevention, Diagnosis and Treatment, Hospice and Palliative care, Advocacy and social mobilization, Data Management and Research, Supply Chain Management (Logistics) as well as Governance and Finance (46). This is in a bid to improve on the implementation gaps noted in the earlier plan hence these gaps formed the template of activities in the updated plan. In relation to cervical cancer, ongoing activities include improvement in access to clinical services for cancer prevention, early diagnosis and treatment. Not yet commenced before plan elapsed was the integration of primary prevention of cervical cancer into PHC centres and introduction of HPV vaccine into the routine immunization schedule of the country(46).

The current policy for cancer is a merged plan for cervical, breast, prostate and colorectal cancer which are prioritized. However, the documented cervical cancer plan of prevention is in line with WHO recommendation (6,46). On primary prevention, plan includes both boys and girls between 9 to 13 years be vaccinated against HPV and preventive messages should be transmitted to general public taking advantage of social media. Adolescents should be targeted with age specific sexuality education consisting of reduction in number of sexual partners, delay in sexual debut, ability to negotiate safe sex, condom use promotion messages and male circumcision benefits (6,88). This is because infection with the HPV virus commonly occurs in mid-teens or just after 20years (88).

Similar messages are already being applied on the national HIV/AIDS program through the National Family Life and HIV Education (FLHE) curriculum which was introduced into secondary schools curriculum since 2003 (120). Cancer control plan highlights this and intends to piggy back on similar activities across programs for improved dissemination of information on uptake of preventive services (46). Worthy of note is that the plan does not prioritize young adults and men but lays emphasis particularly on women. Since HPV vaccine is not on the national immunization schedule, it is not covered by the National Health Insurance scheme (NHIS) (121,122). The basic benefit package of the NHIS also does not cover cervical cancer screening services (122). Since 2009, the WHO recommended the inclusion of HPV vaccine into the national immunization program of countries where CC is a public health concern and where it is cost-effective and feasible to implement (123).



On secondary prevention strategies, the framework for implementation of cervical cancer prevention also indicates that Visual Inspection with Acetic acid (VIA) and management of pre-cancerous lesions with Cryotherapy or Loop Electrosurgical Excision Procedure (LEEP) when not eligible with cryotherapy to be instituted at PHC. HPV testing should also be done where applicable at PHC level for high risk patients (46). This is also in line with WHO recommendation. See Annex 8 and 9 for WHO recommendation for secondary prevention.

Implementation of these policy documents have not been well harmonized among government, partners and stakeholders (50,88). As a result, the health system suffers from lack of funding, sustainability issues, lack of technical man power as well as poor infrastructure (124,125). This has ripple effect on the health system not being able to respond to the need of the populace. In addition to poor funding, there are also competing priority area for government funds such as infectious disease control (126). So far Nigeria does not have a population based cervical cancer screening program, due to this, most screening activities are opportunistic and not sustainable (88,121,126,127). In order to overcome some of the barriers associated with screening, calls are being made for cheaper or more convenient methods for screening for cervical cancer such as HPV DNA self-testing (106).

Highlighted earlier are the challenges with health care financing for individuals which often leads to catastrophic spending. Nigeria, also could not benefit from the Global Alliance on Vaccine Immunization (GAVI) subsidy of \$4.50 per dose of HPV vaccine because it could not meet the target for routine vaccination, which is DPT<sup>5</sup> coverage of at least 70% (126,128). Countries that could not meet this target, could apply to GAVI for HPV demo program which provides a platform for support for a period of 2 years (129). Nigeria was eligible for HPV demo program between 2013 and 2015 (129). Currently, country has to source for funds to be able to provide affordable vaccines to the populace. However, the country needs data to be able to make plans for services and determine disease burden. One of the sources is the cancer registries which gives information on the incidence, prevalence and mortality associated with reported cancers (130). There are currently 13 Population based cancer registries (PBCR) and 20 Hospital based cancer registries (HBCR) (131). The coordination of all the registries remains poor with no central coding system leading to poor data quality hence not being able to feed into global data base (46,130).

Developed countries achieved significant reduction in cervical cancer cases through organised Pap smear screening programs. Development of organized screening to cover at least greater than 80% of population at risk is important for success of screening program but this has not been the case for countries in Sub-Saharan Africa due to problems highlighted earlier (126,132). Facing similar challenges, Rwanda attempted to launch a national cervical cancer screening program but this has been poorly implemented (133). South Africa rolled out its national CC screening program in 2008 and school-based vaccination program in 2014 targeting 450,000 girls across 17,000 schools. Commencing a national program was important due to the 5.7 million lives affected by HIV of which 60% are women and the progression of precancerous lesions to CC is more rapid in HIV positive women (134). Effects of vaccination program can only be realized in coming decades (134).

The next chapter will examine gender transformative approaches that can improve uptake of reproductive health services.

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<sup>5</sup> Nigeria switched DPT vaccine to Pentavalent vaccine in 2012 and coverage for Pentavalent vaccine is now 50% according to the preliminary report of the 2018 Nigerian Demographic Health Survey (NDHS).

## **Chapter Five: Case studies of successful transformative interventions in Sub-Saharan Africa**

This chapter aims to identify and discuss relevant interventions that leverage on gender and male involvement in cervical cancer prevention or relevant SRHR programs in similar contexts, that can be adopted in Nigeria.

Gender transformative approaches are interventions that attempt to change societal assigned roles of men and women in such a way that it promotes more gender equitable relationships (135). Programs are said to be gender transformative when they change gender dynamics and take into cognisance empowerment approaches (136). Hence the criteria for selecting interventions which also includes male involvement and outcome measured. When gender equality is promoted it tends to reduce negative health and social outcomes (11). A program systematic review showed that programs in LMIC that have successfully engaged men were more effective in terms of in HIV and STI program success (11).

Below I present 3 case studies of successful gender transformative interventions in Sub-Saharan Africa from which lessons can be drawn to apply in Nigeria for a gender transformative approach to strengthen access to cervical cancer preventive services.

### **5.1. Male partner involvement in reducing loss to follow-up after cervical cancer screening in Uganda.**

Uganda is a LMIC in East Africa. It is ranked 162 out of 189 according to UNDP's Human Development Index (HDI) of 2018. The life expectancy at birth is 60.2 years (26). The objective of this study was to evaluate the efficacy of male partner involvement in reducing loss to follow-up among women in Uganda referred for colposcopy after a positive cervical screening test. This was an open intervention study carried out in Mulango hospital, two kilometres from the capital city, Kampala. Opportunistic screening was carried out at two family/post-natal clinics within the hospital.

Strategies used included group education sessions held each morning at the clinics. Information received by participants include causes and risk factors of CC, symptoms and treatment options. Participants were informed about prevention strategies and those eligible were offered screening test with VIA/VILI. Those with a positive result were to return for colposcopy within a week after result and implications had been explained to participants. A total of 5094 women were screened for cervical lesions. Study took place over a period of 1 year and 6months between February 2008 and August 2009 (137).

The intervention was a letter addressed to the male partner. Those that had a positive result were split into intervention group (415 women) and control group (419 women). The intervention group had the findings of result explained to them, then they received letters which were to be delivered to male partners. Content of letter was explained to them which informed male partner of condition which required further treatment and that he was also to assist in ensuring her return to hospital on indicated date. Letter was written in English and local language and there was a phone number to call for further enquiries. Control group did not get a letter and received standard treatment. Logistic regression models were applied to calculate the probability of women returning for colposcopy (137) and data analysed with STATA 10.

Outcome measured was if women returned for colposcopy during the duration of the study. See figure 8 for results. About 66% returned for colposcopy in the control group while 84% returned in the intervention group.

The conclusion was that male involvement had positive impact on reducing loss to follow-up rate for women referred for colposcopy. See Table 4 below.

Table 4: Showing the result of Male partner involvement in reducing loss to follow-up after cervical cancer screening in Uganda.

Outcome in the 2 groups.<sup>a,b</sup>

Outcome	Control group (n = 419)	Intervention group (n = 415)	Total (n = 834)
Lost to follow-up	143 (34)	66 (16)	209 (25)
Returned for colposcopy	276 (66)	349 (84)	625 (75)

<sup>a</sup> Values are given as number (percentage).

<sup>b</sup>  $\chi^2$  36.87;  $P < 0.001$ ; odds ratio 2.7 (95% confidence interval, 1.97–3.82).

Source: (137)

5.2 Exposure to family planning messages and modern contraceptive use among men in urban Kenya, Nigeria and Senegal: a cross-sectional study.

Senegal has similar characteristics to Nigeria. It is ranked 167 by UNDP's Human Development Index (HDI) out of 189 countries and has a life expectancy at birth of 67.5 years (26). Kenya ranked 142 in the HDI ranking and has a life-expectancy at birth of 67.3 years (26). Details of Nigeria are available in Background of chapter 1. The Urban Reproductive Health Initiative (URHI) funded by Bill and Melinda Gates Foundation and commenced in 2009 (138). The project was implemented in India, Kenya, Nigeria and Senegal. A cross-sectional survey was carried out in Kenya, Nigeria and Senegal.

The objective was to determine if exposure of men to country specific family planning demand generation activities was associated with reported uptake of modern contraceptive methods (139).

Data collected by the Measurement, Learning and Evaluation project for URHI between 2012 and 2013, across cities in the three countries was used. That is at base-line and mid-line<sup>6</sup>. A two-stage cluster sampling design was used to select representative sample of men at study sites. This included men between ages 15 to 59 years. A total of 696 men were selected from Kenya, 2311 from Nigeria and 1613 from Senegal and interviewed. Several evidence based strategies were used which included URHI radio programs, URHI television programs, participation in URHI community events, URHI print media<sup>7</sup>, URHI logo and brands, URHI English language slogans<sup>8</sup>, URHI local language slogans, radio advert and religious leaders speaking in favour of family planning<sup>9</sup> (139). Other strategies were improved quality of Family Planning (FP) services at facilities and maintaining a steady supply of contraceptives at facilities and improved quality of service (138).

At midline the percentages of men exposed to at least one of these activities was 84.8% in Kenya, 81.2% in Nigeria and 79.9% in Senegal. The proportion of men who used

<sup>6</sup> Same study for end-line data was not available. End-line report was located online but men were not interviewed in India, Nigeria and Kenya.

<sup>7</sup> In Kenya, URHI program was known as Tupange and print media included newspaper, magazine, comic books, posters, leaflets and brochures.

<sup>8</sup> In Nigeria, URHI program was known as NURHI and English slogans were "Get it together", "know talk go", "no dulling".

<sup>9</sup> In Senegal URHI program was known as ISSU (The Initiative Sénégalaise de Santé Urbaine) and religious leaders speaking in favour of family planning were used.

modern methods of contraception was 58% in Kenya, 43% in Nigeria and 27% in Senegal (139). In Kenya, men who participated in URHI led community events had 4 times higher odds of reporting use of modern contraceptive method than non-exposed men (aOR 3.70; p<0.05)(139). In Senegal, exposure to URHI television program (aOR 1.40; p<0.05) and having heard a religious leader speak favourably about FP (aOR 1.72; p<0.05) were associated with usage of modern contraceptive methods (139).

### 5.3 Rwandan HPV Vaccination program for Adolescent Girls.

Rwanda is a country in the east central Africa, has a human development index (HDI) rank of 158 out of 189 and a life expectancy at birth of 67.5 years (26). In 2008, Rwanda had 34.5 cases and 25.4 deaths per 100,000 attributable to CC (140). The government of decided to vaccinate in-school grade six adolescent girls against HPV virus (141). About 99,000, school girls were targeted in 2011 for first-ever HPV vaccination.

This was achieved through a "public-private community partnership"(141). From the onset of program there was high level political leadership and commitment. There was also involvement of various stakeholders within the government such as the Ministry of Health, Education, Ministry of Gender and Family promotion, Centre for Treatment and Research on AIDS, Tuberculosis, Malaria and other Epidemics and health workers working in cancer care(141). Due to the fact that Rwanda had been able to meet high target for routine immunizations as recommended by WHO, they were able to receive HPV vaccine through the GAVI program at no cost to the care givers. They also worked with international partners, pharmaceutical companies and several other stakeholders including teachers, community leaders, parents and community health workers.

A nationwide population sensitization program ensued which involvement of mass media (141). Both men, women, community leaders were targeted. The vaccine were administered on designated educational 'health days' where the trained teachers and local health workers educated the children on reproductive health issues as well as hygiene and infectious disease control (141). Parents or guardians were instructed through the mass media campaigns to accompany girls to school on designated 'health days'. About 12% adolescent girls who were not enrolled in school were targeted through tracing by community health workers (141). At the end of program 93% HPV cumulative vaccination coverage was achieved for adolescent girls in 2011.

### 5.4 Cervical cancer screening and preventive therapy via reproductive health networks (CCS&PT).

In 2012, a project on CC screening was carried out in Kenya, Nigeria, Tanzania and Uganda. Tanzania is ranked 154 out of 189 in the UNDP HDI and has a life-expectancy at birth of 66.3years. Initiative was implemented by a consortium consisting of Marie Stopes International (MSI), Society for Family Health (SFH), International Planned Parenthood Federation (IPPF), Population Services International and was funded by Bill and Melinda Gates Foundation. The CCS&PT operated for four years (142).

The objective of the evaluation report in 2015 was to measure CC screening provided and cryotherapy delivered to clients. Method was to collect routine management information systems from service delivery sites (142).

Results showed that between 2012 to 2015, 911,501 screenings and 7,234 treatments were provided in the four countries. Loss to follow-up also reduced from 87% to 35%. Tanzania was the most successful, screening 479 women per 100,000. Government commitment was evident and "test and treat" approach was adhered to, further reducing

loss to follow-up (142). Strategies used included mobile outreach to community members, static service provision and social franchising (143). See table 5 below on analysis of gender transformative interventions

Table 5: Analysis of country examples of gender transformative evidence-based interventions in Sub-Saharan Africa

Project and Country example	Criteria for Selection	Factors addressed from framework	Intervention Implemented	Measured Outcome
Uganda Male partner involvement in reducing loss to follow-up after cervical cancer screening in Uganda.	<ul style="list-style-type: none"> <li>• Changes gender dynamics</li> <li>• Measures relevant behavioural outcomes</li> <li>• Takes into cognisance empowerment approaches,</li> <li>• Can be scaled up</li> <li>• Male involvement</li> </ul>	Ability to perceive <sup>1</sup> Ability to seek <sup>2</sup> Ability to reach <sup>3</sup> Ability to pay <sup>4</sup> Ability to engage <sup>5</sup>	-Male partner involvement <sup>2</sup> -Couple communication <sup>3</sup> -Care giver support <sup>5</sup> -Health literacy talks <sup>1</sup>	-Reduced loss to follow up in intervention group
URHI program Kenya, Nigeria, Senegal	<ul style="list-style-type: none"> <li>• Changes gender dynamics</li> <li>• Measures relevant behavioural outcomes</li> <li>• Takes into cognisance empowerment approaches,</li> <li>• Can be scaled up</li> <li>• Male involvement</li> </ul>	Ability to perceive <sup>1</sup> Ability to seek <sup>2</sup> Ability to reach <sup>3</sup> Ability to pay <sup>4</sup> Ability to engage <sup>5</sup>	-Community dialogue with men <sup>1</sup> -Community dialogue with religious leaders <sup>2</sup> -Facilities close in close proximity <sup>3</sup> -Free FP commodities <sup>4</sup> -Improved quality of FP services <sup>5</sup> Mass media campaigns e.g Television and Radio, Slogans, leaflets, magazines, comics <sup>1</sup>	-Improved uptake of long acting contraceptives -Increased dialogue between couples to take decisions about family planning - Contraceptive use among married women increased.

<p>Rwanda</p> <p>HPV vaccination for in school Adolescents Program.</p>	<ul style="list-style-type: none"> <li>• Changes gender dynamics</li> <li>• Measures relevant behavioural outcomes</li> <li>• Takes into cognisance empowerment approaches,</li> <li>• Can be scaled up</li> <li>• Male involvement</li> </ul>	<p>Ability to perceive<sup>1</sup></p> <p>Ability to seek<sup>2</sup></p> <p>Ability to reach<sup>3</sup></p> <p>Ability to pay<sup>4</sup></p> <p>Ability to engage<sup>5</sup></p>	<p>-Community sensitization and social mobilization involving parents and community leaders<sup>1,2</sup></p> <p>-Capacity building for teachers and community health workers<sup>5</sup></p> <p>-In school teachings on reproductive health issues<sup>1</sup></p> <p>-Focused group discussions, in depth interviews.</p> <p>-Use of mass media, radio, television, newspaper, magazines<sup>1,5</sup></p> <p>-Multi-stakeholder involvement<sup>5</sup></p> <p>-Free vaccines<sup>4</sup></p> <p>-In school vaccination<sup>3</sup></p>	<p>-92.23% vaccination coverage nationwide.</p> <p>-Empowering children on reproductive health issues</p> <p>-Working towards reduction of CC incidence in country.</p>
<p>Nigeria, Tanzania, Uganda</p> <p>Cervical cancer screening and preventive therapy via reproductive health networks (CCS&amp;PT) project.</p>	<ul style="list-style-type: none"> <li>• Changes gender dynamics</li> <li>• Measures relevant behavioural outcomes</li> <li>• Takes into cognisance empowerment approaches,</li> <li>• Can be scaled up</li> <li>• Male involvement</li> </ul>	<p>Ability to perceive<sup>1</sup></p> <p>Ability to seek<sup>2</sup></p> <p>Ability to reach<sup>3</sup></p> <p>Ability to pay<sup>4</sup></p> <p>Ability to engage<sup>5</sup></p>	<p>-Outreach<sup>3</sup></p> <p>-Community sensitization activities<sup>1</sup></p> <p>-Information and Education material distribution<sup>1</sup></p> <p>-Free services during outreach activities<sup>4</sup></p>	<p>-911501 screenings and 7234 treatments were provided.</p> <p>- Loss to follow-up also reduced from 87% to 35%.</p>

Source: Uganda (26,137), URHI program (26,138,139), Rwanda (26,140,141), CCS&PT(26,142,143)

Note: superscript numbers link the tested interventions (column 4) to the framework factors (column 3).

## Chapter Six: Discussion

The main findings presented in the preceding chapters will be discussed in this chapter. Several crosscutting issues affecting men, women and adolescents were identified in the course of study that influence support for and uptake of cervical cancer preventive services. Also highlighted were misconceptions about causes of cervical cancer, the level of knowledge of disease and extent of support women and adolescents can obtain to take up available services. The findings will discuss issues surrounding primary and secondary prevention from gender-related demand perspectives as this is in a bid to reduce the pool of cervical cancer case incidence which has been on the rise.

### 6.1 Discussion of key findings.

Cervical cancer commonly affects women with lower socio-economic status (SES) living in rural areas. As a result, it can be termed a disease of inequity. Low SES is associated with poverty which can be heightened in the presence of gender issues further worsening health outcomes. Findings revealed a low knowledge of cervical cancer, its risk factors and association with HPV among the populace.

#### **Gender-related factors influencing access to cervical cancer preventive services**

**Ability to perceive** - information is required to fill the knowledge gap which enable an individual perceive his or her exposure to risk of acquiring the disease. In this case, women lag behind men on literacy levels with adult male at 75% and adult female at 53%. Taking this into cognisance, this should have implications for the mode of communication of health literacy materials to women. Evidence revealed that women in higher socio-economic class and higher levels of education are likely to use cervical screening services. Also, in the case of men, those with up to college education had heard about disease and often supported partner screening while men with less education had lower levels of knowledge. Knowledge on information identifying HPV infection as the single most important risk factor in getting disease was poor in most studies and knowledge on information about disease was low, much lower in men than in women. Men are the gate keepers in their communities, often taking major decisions for their families including decisions regarding women's health service access. Involving and helping them perceive the risks their partners are exposed to, can assist them in making informed decisions about cervical screening services. Men and boys should be targeted with information as they seem to lag behind on information despite having higher literacy levels on average.

Evidence also revealed that for both men and women, the perception of seeking preventive care when healthy was not valued since they did not have symptoms. There needs to be more awareness about the benefits of uptake of preventive services. Lack of trust of the health system is common with women who usually make more use of the health system in their reproductive age compared to men. My review revealed that this is based on perception of low-quality services by the clients. Evidence based strategies for communication have included use of mass media and community sensitization activities which were available in local language and adapted to context. This was done on the family planning projects implemented in Kenya, Nigeria and Senegal which can be replicated for cervical cancer programming. This is in a bid to reach community members with appropriate information.

In the case of vaccines, findings revealed that community gate keepers and care givers where not in support but adolescents who received information were willing to receive vaccines.

**Ability to seek** - When the risk of exposure to or having a disease is perceived, it enables an individual to want to seek health care. Seeking cervical cancer preventive services is influenced by personal and social values, culture, gender as well as autonomy. The diagnosis of cervical cancer is stigmatized in the community among others because it is a disease associated with sexual behaviour. This creates barriers in conservative societies as may occur in Nigeria. Evidence revealed that unmarried young females accessing cervical screening services are then identified to be sexually active and this can result in stigmatization further creating barrier for use of service. CC is caused by a sexually transmitted infection and a woman being diagnosed with this might be labelled as promiscuous or driven from her home, further ostracizing her within her community. Due to these fears, she may not want to carry out screening.

Unequal power relations in a relationship influences a woman's autonomy over her health decisions as may occur in the extreme in situations of child marriage. Child marriage is linked with early sexual debut, early child bearing and exposure to STIs like HPV and HIV. Child marriage also affects the average school years of the child and empowerment further plunging her into poverty. Child marriage is more common in the northern part than southern part of the country. These girls are often excluded from the labour market further having impact on socio-economic development and health outcomes of herself and her children. Lack of autonomy also results in inability to take important decisions. Studies carried out in north and south Nigeria documented that permission should be obtained male partners or other male relatives, before going for services, that way, it will be easier to share results when positive.

Women find the pelvic examination embarrassing; alternative means such as HPV DNA self-testing may not be feasible in low resource settings due to cost. Some men are not comfortable with partners coming in for cervical screening due to perception of pelvic examination but are more comfortable with female health workers attending to them. This should be well thought through particularly in very conservative societies in northern part of Nigeria. Beliefs persist regarding the use of traditional herbs to prevent CC as the disease is perceived as not having affected previous generations of women. This also makes women approach the wrong providers for information and prevention, especially when there are barriers in reaching a health facility. The importance of having the right information and deciding to seek care cannot be over emphasized.

The belief that CC is a woman's disease makes it difficult for men to identify with disease. However, women are exposed after intimate contact with partners, hence vaccines should not be available for girls only but also be made available for boys which can confer herd immunity in the community.

**Ability to reach** - Creating the enabling environment to reach the facilities where services are available is important as well. Improved communication about reproductive health issues with partners has been shown to improve uptake of services particularly in HIV and family planning. Men have been shown to support process once their knowledge gap is bridged through education but some still remain incapacitated due to non-flexibility of work hours, lack of mobility and even provision of funds where applicable. Women are also less likely to be employed or be involved in income generating activities, which also affects ability to be able to fund her needs. Particularly challenging is that women living in rural areas have to travel long distances to get to facilities which are often situated in urban areas and mobility is an issue as well as challenges with domestic chores. An evidence-based approach in Uganda, showed that men were able and willing to support their partners in getting to the facility for colposcopy once they understood the problem.



Evidence also revealed that mothers did not present their daughters for vaccination due to disapproval in community and lack of partner approval.

**Ability to pay** - In Nigeria cervical cancer preventive measures are not funded by the national health insurance scheme while private insurance may be beyond the reach of women who are not gainfully employed hence most women have to make out of pocket payment for services. In Kenya, it has been documented that having health insurance increases a woman's chance of accessing Pap smear. Women again lag behind in engaging in economic activities and acquiring assets compared with men. Even when employed, they tend to earn less than men which reduces access to disposable income. This makes women to be likely to be dependent on their partners for upkeep. User fees have shown to deter uptake of services. Evidence based interventions that have been successful also take care of barriers linked to user fees by subsidizing cost or making services free. There are also other indirect costs that may be incurred in order to access services. This includes loss of time from work or trade, cost for child care as applicable and cost of transportation to health facility. These indirect costs may even be higher than user fees. In the case of URHI, services were provided in close proximity to the clients through PHCs and family planning services were provided at no cost to the client. In the case of vaccination of girls in schools in Rwanda, services were delivered in school, within their communities and also at no cost. Sustainability of such programs however remains a challenge.

**Ability to engage** - Empowerment of women should be promoted in such a way that she has access to information that can enable her make informed decisions and engage meaningfully with health care providers. One of the indices measured is the level to which a woman has control over her earned income. This has implications on what she can spend money on especially when partner does not see it as a priority. In relation to CC preventive measures she may not be able to engage with the health system adequately. When a woman is not empowered it also has implications for the health of her children. What motivates women to take up services is availability of a test and treat system and by limiting services to only one visit, which is more affordable for her. This can promote adherence as indicated in a study in SE Nigeria. This is also the WHO recommendation for resource limited settings.

Evidence also revealed that women who had access to information on HPV vaccination combined with more than post-secondary education presented their daughters for vaccination and even recommended to others.

Based on discussion above, most important gender related factors include autonomy, women empowerment, feminization of Cervical Cancer and male involvement. These gender related issues are not in separate silos but are interlinked through cross cutting issues such as level of education, access to information as well as income.

### **Current policy and programs on cervical cancer**

The prerogative lies with the government of Nigeria to create the enabling environment to cater for the population that is affected by these dimensions discussed and bridge the equity gap between rich and poor women and reduce premature deaths due to CC in a sustainable way. So far, strategic documents developed for prevention of cervical cancer are in place in line with WHO recommendation for resource limited settings. What is yet to be seen is the political will and commitment to implement these plans. The plans attempt to provide services along the continuum of care for cervical cancer, however there are several weaknesses due to lack of funding, prioritization and coordination among stake holders. Policies identify stakeholders in other reproductive health programs; hence

government recognises the fact that the cervical cancer control program cannot operate in a silo, yet it is still to act on this.

### **Lessons learned for Nigeria from evaluated interventions**

The introduction of the HPV vaccine into the national immunization program is still on the way and subsequently meeting immunization coverage levels as recommended by WHO will be a challenge. Nigeria had issues with population acceptance of vaccines as has been seen in the past with rejection of vaccines in the northern parts of country on account of alleged side-effects of resulting sterility. Intensive health education needs to be done as one of the misconceptions of HPV vaccine is that it can promote promiscuity. Learning from Rwanda's successful in and out of school vaccination program, there was high level government commitment, international partnerships and coordinated stakeholder involvement across line ministries. This included Ministry of Gender and Family Promotion as well as situation analysis, focus group discussions and in-depth interviews. This involved working from all angles of community in order to get support for program and address misconceptions. Learning from this, Nigeria can apply same concepts to involve all stakeholders especially since plan is to vaccinate both boys and girls as this enables herd immunity to be achieved in the population. The policy fails to outline process of stakeholder coordination across the public and private sectors. Also not highlighted is the funding for vaccines to be available either free, on subsidies or through health insurance.

The FLHE program is also important in providing correct sexuality education to adolescents. This implementation has not been well coordinated and also poorly funded, of which implementation in the north in some states is as low as 13% and in the southern states as high as 100%. According to NAIIS preliminary findings, HIV prevalence in females (15-49years) is 1.9% compared to males of same age group which is 0.9%. When a woman has HIV, she is at a greater risk of developing HPV associated CC because HPV infection often does not resolve due to a weakened immune system, as a result she is at increased risk of developing precancerous lesions. The government intends to leverage on the FLHE program to reach adolescents with cervical cancer prevention information hence this program is a ready platform and does not need to be built up from the ground.

The strategy is also to introduce the population-based screening as opposed to opportunistic screening so that more women can be reached. Targets are set for implementation of this by 2022. For women to access this service, they need to be informed. Support is also important within the household and there should be reduced stigmatization as well. Examining reproductive health services that had an impact on a reasonable scale, made clear is that male involvement was conducive towards success along with community mobilization as exemplified by URHI program in Kenya, Nigeria and Senegal. Male involvement was visible and community mobilization activities included community dialogues and interpersonal communication. Religious leaders were also encouraged to promote couple communication during sermons. Use of modern contraception increased. This approach was effective particularly in Senegal which is a predominantly Muslim country.

### **6.2 Strengths and Weaknesses of this study**

This study contributes to knowledge in the sense that it applies a gender lens on cervical cancer which is often not considered. It highlights the gender issues faced by women in accessing cervical cancer preventive services. It also identifies barriers that need to be overcome in accessing services through a multisectoral approach. However, there was paucity of literature on male involvement and cervical cancer in Nigeria hence reference had to be made to Sub-Saharan Africa and other reproductive health problems. Also not

adequately highlighted in literature was men as care givers influencing uptake of HPV vaccination.

### 6 .3 Usefulness of the framework.

The frame work was used to organize findings and also guide search strategy which was useful in highlighting issues preventing uptake of services from demand perspective. The frame work however did not highlight a gender lens which I then applied myself. The framework does not include a component on the role of the policy environment, which is pertinent to add as it is affecting the organization and funding of preventive services especially on a national scale thereby promoting sustainability.

## **Chapter Seven: Conclusions and Recommendation**

### **7.1 Conclusions**

Findings from this study were able to identify the key gender-related demand side barriers as well as policy gaps that affect uptake of cervical cancer preventive measures in Nigeria. The most important barriers identified include lack of adequate information, cultural beliefs and personal values linked to gender issues leading to myths and misconceptions about cervical cancer, lack of social support, financial constraints and women empowerment.

Key gender-related barriers are linked with inequities in health that can be addressed by appropriate implementation of policies thereby producing sustainable solutions. However due to competing priorities in government, funding for cervical cancer prevention activities have been abysmal leading to lack of coordination among stakeholders, absence of a national CC screening program, absence of a national vaccination program against HPV infections, poorly implemented sexuality education program, poor data quality and poor health systems response overall. Consequence is that disadvantaged members of society are left behind and this leads to premature death as a result of CC.

Evidence based interventions to address gender-related barriers to increase access to CC preventive services include use of multiple mass media health campaigns such as radio and television programs, comics, leaflets and movies to enlighten the general populace. Community sensitization activities such as interpersonal communication and community dialogues involving men, community gate keepers have proven useful in bridging the knowledge gap, thereby reducing stigmatization and increasing support for women to take up services. Other interventions include provision of free services which helped to reduce financial constraints in accessing services and also "test and treat" approach further reducing loss to follow-up. Appropriate information also empowers the woman with adequate information on where to access care and make informed decisions.

Below are recommendations for improving uptake of cervical cancer preventive measures.

### **7.2 Recommendations**

Based on the findings elicited during this study, below are the recommendations to the Ministry of Health and relevant stakeholders to improve uptake of cervical cancer preventive measures by reducing gender related barriers.

#### **Policy**

- Develop a frame-work for funding cervical cancer prevention strategies by working with the National Health Insurance Scheme (NHIS) and Private Health Insurance providers. This is to ensure funding constraints are reduced.
- Review the FLHE curriculum to include cervical cancer primary prevention messages while working with the Ministry of Education (MoE) and other relevant stakeholders.
- Effectuate the introduction of HPV vaccine into the national program for immunization while working with international partners, the National Primary Health Care Development Agency (NPHCDA) and identified relevant stakeholders.
- Develop a frame-work for feasible public private partnerships involving counterpart funding and co-ordination of partner efforts through partner forum meetings. This will enable government keep track of partners activities and also prevent double dipping.

**Program**

- Set up a national program for education of the general populace on CC through the collaboration of the advocacy and social mobilization unit of the National Cancer Control unit and other reproductive health program.
- Fast track set up of population-based screening while working with relevant stakeholders such as SOGON and Association for Public Health Practitioners of Nigeria (APHPN) to cater for the needs of women in both the urban and rural areas.

**Context specific program**

- Before introduction of vaccines, awareness campaigns in the northern part of Nigeria should include stakeholders such as religious leaders, community sensitization activities involving men, women and youths, radio and tv programs.
- Southern Nigeria may benefit from use of mobile phone text messages in addition to community sensitization activities and other mass media channels.

**Research**

- More research should be done with respect to implementation science as regards policy in Nigeria in order to be able to track extent of implementation so that lessons learnt can be applied. Policy documents are well drafted but over the years, have been poorly implemented.
- Qualitative research needs to be done as regards male involvement regarding acceptance of HPV vaccines in Nigeria.

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## Annex

### Annex 1: Nigeria National Health Accounts 2012 to 2016

Indicators	2012	2013	2014	2015	2016
Current Health Expenditure (CHE) as % Gross Domestic Product (GDP)	3	3	3	4	4
Current Health Expenditure (CHE) per Capita in US\$	92	102	107	98	79
Domestic Health Expenditure (DOM) as % of Current Health Expenditure (CHE)	92	88	88	90	90
Domestic General Government Health Expenditure (GGHE-D) as % Current Health Expenditure (CHE)	16	14	13	16	13
Domestic Private Health Expenditure (PVT-D) as % Current Health Expenditure (CHE)	75	73	74	74	77
Out-of-pocket (OOPS) as % of Current Health Expenditure (CHE)	73	71	72	72	75
External Health Expenditure (EXT) as % of Current Health Expenditure (CHE)	8	12	12	10	10
Domestic General Government Health Expenditure (GGHE-D) as % General Government Expenditure (GGE)	4	4	4	5	5

Domestic General Government Health Expenditure (GGHE-D) per Capita in PPP Int\$	30	28	27	36	28
Government Budget Transfers to Social Health Insurance (SHI- G) as % of Social Health Insurance (SHI)	0	0	0	0	0

**Source:** WHO Global Health Expenditure data base (24) .

Annex 2: Available cadre of Health Work force in 2012

Health Professional Category	Total number registered	Number per 100,000 population	Ratio
Doctors	65,759	38.9	1:2,572
Dentists	3,129	1.9	1:54,056
Optometrist	2,676	1.6	1:63,207
Dispensing Optician	168	0.10	1:1,006,793
Nurses and Midwives	249,566	148	1:677
Dental Nurses	266	0.15	1:635,868
Radiographers	1,286	0.76	1:131,525
Pharmacists	16,979	10	1:9,961
Physiotherapists	2,818	1.7	1:60,022
Community Health Officers	5,986	3.5	1:28,256
Senior CHEWs	42,938	25.3	1:3,939
Junior CHEWs	28,458	16.8	1:5,914
Medical Lab Scientists	19,225	11.3	1:8,798
Medical Lab Assistant	11,067	6.5	1:15,283
Medical Lab Technicians	8,202	4.8	1:20,622
Environmental Health Officers	6,542	3.9	1:25,854
Health Records Officers	2,926	1.73	1:57,806

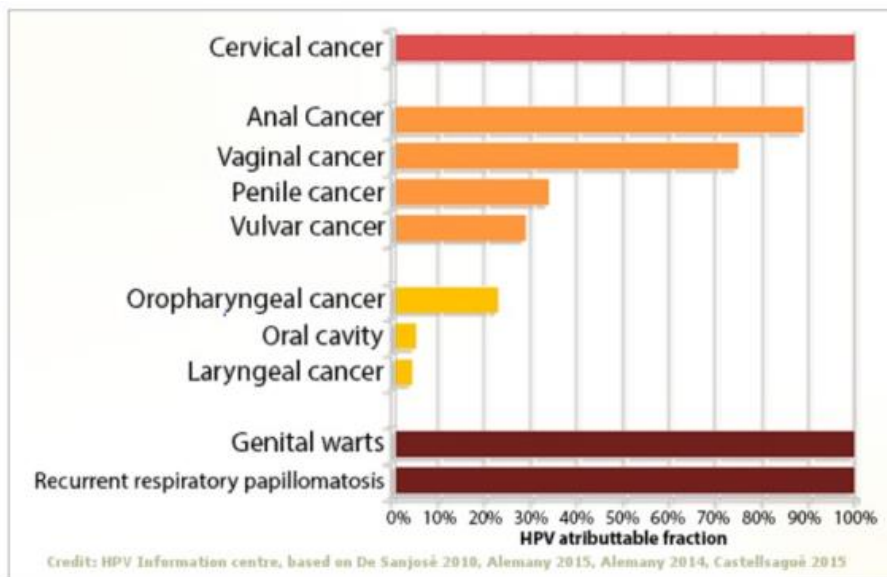
**Source:** National Strategic Health Development Plan II, 2018-2022(31)

Annex 3: Distribution of various cadre of health work force by geo-political zone

Health Workers	Total Number	North Central %	North East %	North West %	South East %	South South %	South West %
Doctors	52408	9.73	4.06	8.35	19.59	14.37	43.9
Nurses	128,918	16.4	11.65	13.52	15.29	27.75	15.35
Radiographers	840	14.3	3.66	5.97	15	18.3	43
Pharmacists	13,199	19.94	3.8	7.79	11.74	12.39	44
Physiotherapists	1,473	10.8	2.73	8.32	8.58	7.93	62
Medical Lab Scientist	12,703	6.82	1.72	3.6	35.26	23.89	29
Environmental & Pub HW	4,280	9.39	11.27	18.94	12.36	15.69	32.08
Health Records Officers	1,187	13.34	4.85	11.6	14.64	29.9	26
Dental Technologists	505	14.08	5.92	5.92	12.96	16.62	44.5
Dental Therapists	1,102	13.19	10.29	21.86	10.19	12.99	31.5

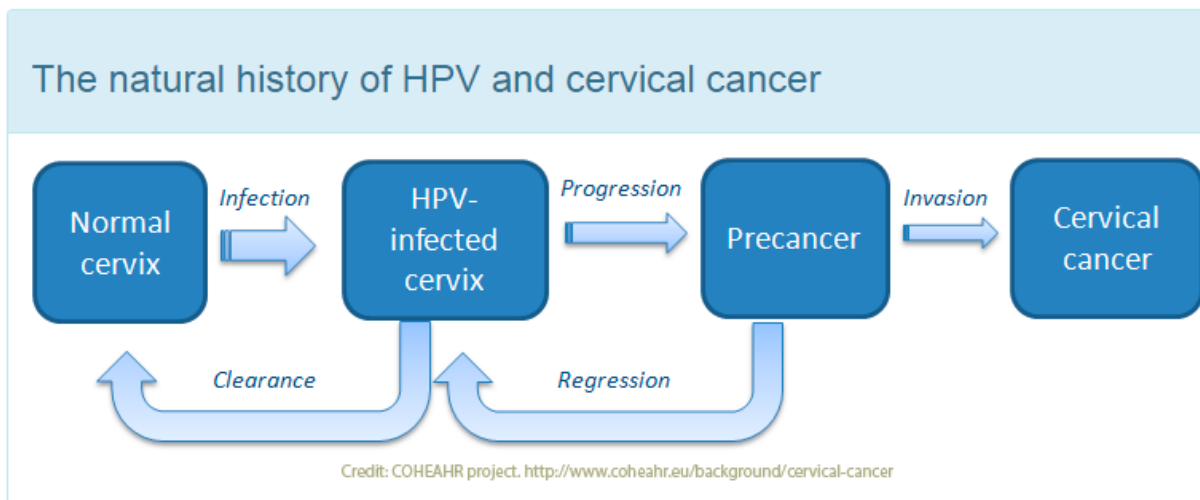
**Source:** National Health Policy 2016 (34)

Annex 4: Comparison of Global HPV prevalence among HPV related diseases



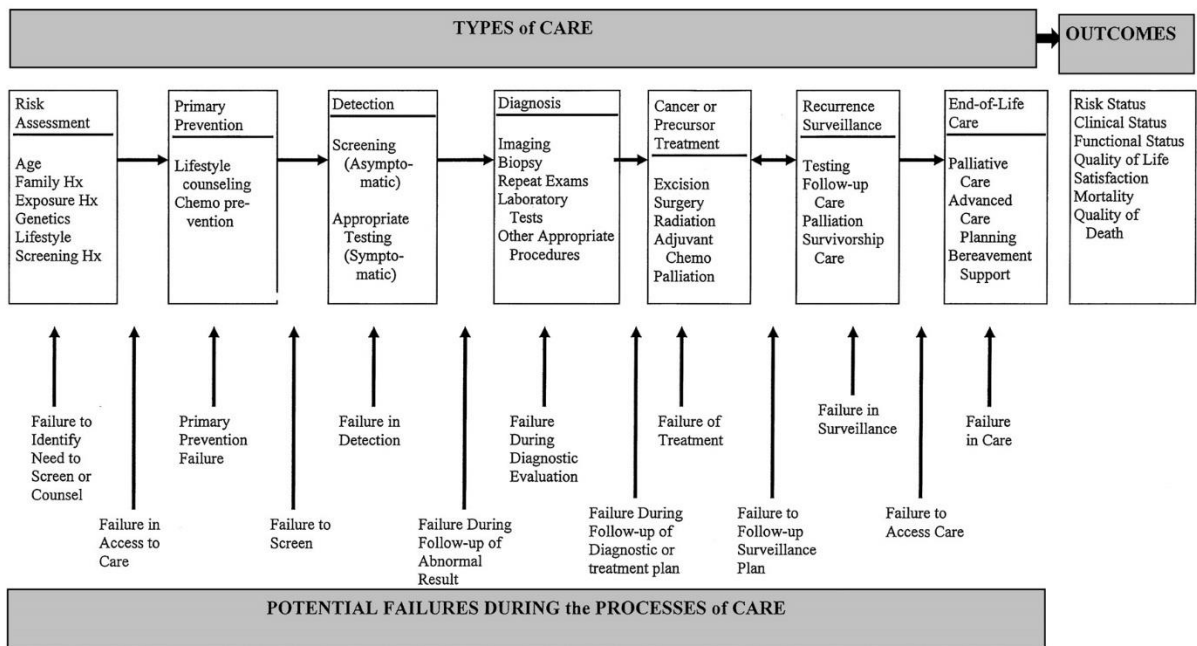
Source:(52)

Annex 5:Chart showing progression of cervical cancer disease.



Source:(52)

Annex 6: Showing continuum of care for cervical cancer

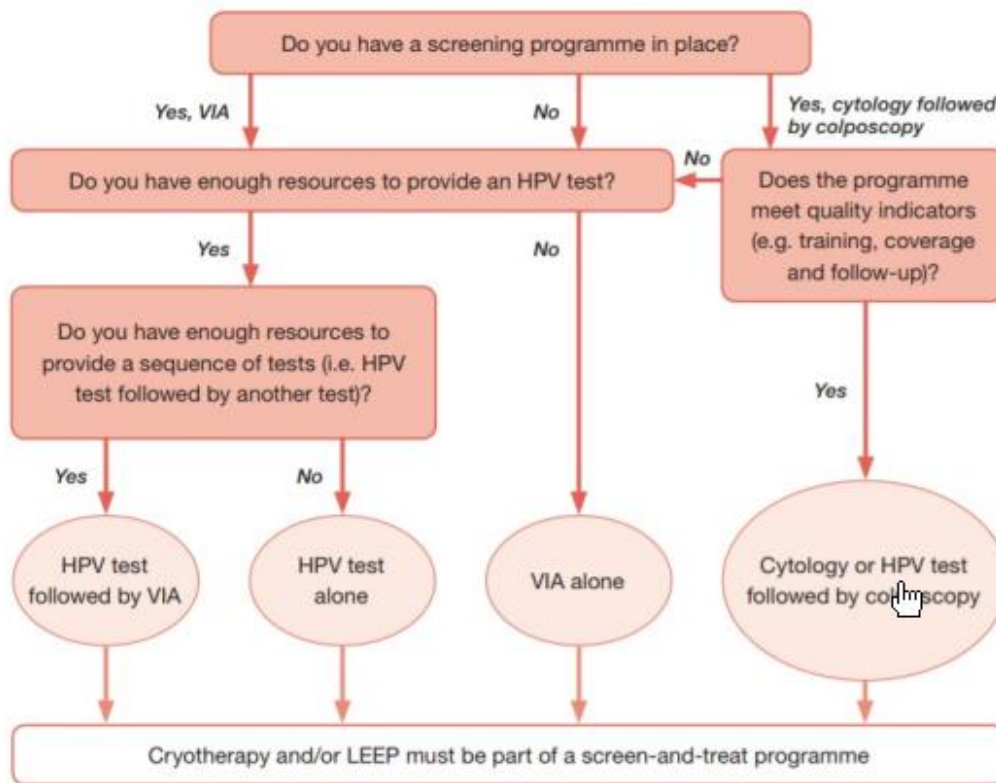


**Source:** A conceptual framework, Quality in the Continuum of Cancer Care (QCCC). Jane G. Zapka, Stephen H. Taplin, Leif I. Solberg, and M. Michele Manos (59).

## Annex 7: Literature Search strategy

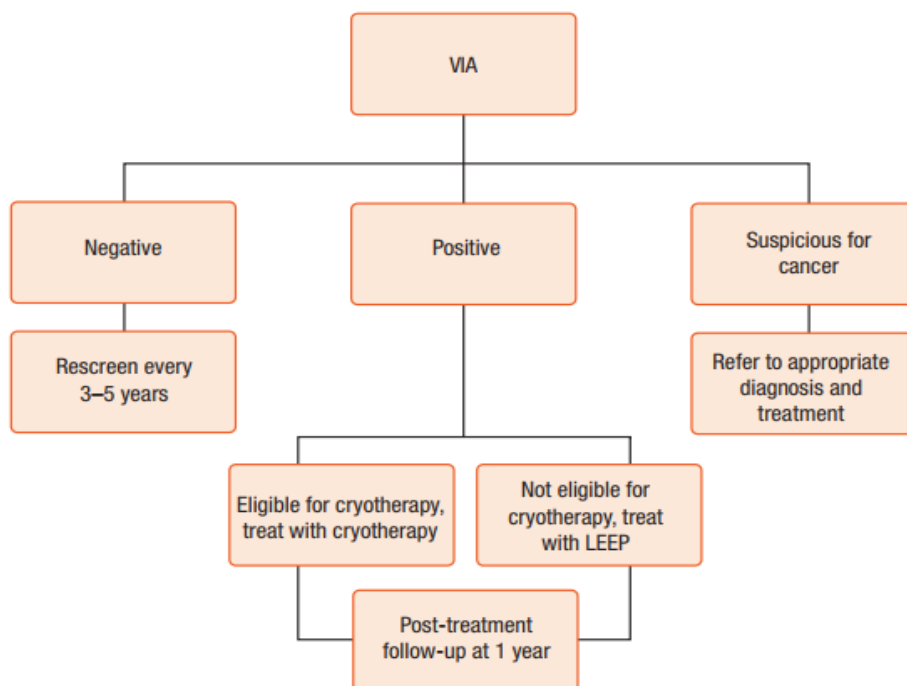
<b>Objective</b>	<b>Key words</b>
To identify and discuss the role gender plays in influencing access to cervical cancer preventive services	Gender, gender equity, social norms, social values, personal values, access, Health seeking behaviour, Cervical cancer, Nigeria, Africa, Sub-Saharan Africa, values, decision making, male partners, male involvement, male partner support, cultural practices, autonomy, socio-economic status, enabling factors, Information, mass media, adolescents, sexual debut, HPV vaccines, HPV infection, Screening, health literacy, health beliefs, Living conditions, Living environment, transport, mobility, social support, patriarchy, Assets, ownership, social capital, health insurance, empowerment, adherence, care giver support, Reproductive health.
To analyse and discuss the current policy and programs on cervical cancer in comparison to international standards from a gender perspective	Cervical cancer policy, Gender, Nigeria, Sub-Saharan Africa, WHO, cervical cancer control policy, effective cervical cancer control, Cervical cancer programs.
To identify and discuss relevant interventions that leverage on gender and male involvement in cervical cancer prevention in similar context that can be adopted in Nigeria	Cervical cancer, control, interventions, Sub-Saharan Africa, Nigeria, LMIC maternal health, male involvement, family planning, end of project reports, gender transformative approaches, implementation strategies, implementation outcomes
To make recommendation to the Federal Ministry of Health and other stake holders on improving uptake of preventive services through gender transformative approaches	Best practices, success stories, Sub-Saharan Africa

Annex 8:WHO Guidelines for screening and treating precancerous lesions for cervical cancer prevention.



**Source:** WHO Comprehensive Cervical Cancer Control, 2014 (6)

Annex 9:WHO recommendation for secondary prevention in low resource settings. Screen with VIA and treat with cryotherapy or LEEP when not eligible for cryotherapy.



**Source:** WHO Comprehensive Cervical Cancer Control: A guide to essential practice (6).