



# Cervical Cancer Prevention and Women's Well-Being in Nigeria: A Comprehensive Review

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## ABSTRACT

Cervical cancer represents a significant public health challenge in Nigeria, where it ranks as a leading cause of cancer-related deaths among women. This comprehensive review examines the current state of cervical cancer prevention in Nigeria, with a focus on HPV vaccination and screening programs. The review highlights the critical barriers to effective prevention, including inadequate healthcare infrastructure, low vaccination coverage, limited access to screening services, and sociocultural stigmas. Despite the availability of preventive measures, many Nigerian women face challenges such as financial constraints, lack of awareness, and cultural taboos, which contribute to late-stage diagnoses and high mortality rates. The review also explores the broader implications of cervical cancer on women's physical, psychological, and economic well-being. Recommendations for improving cervical cancer prevention include expanding vaccination programs, strengthening screening services, raising awareness, and investing in healthcare infrastructure. Addressing these challenges through a multi-faceted approach is essential to reducing the burden of cervical cancer and enhancing the overall well-being of Nigerian women.

**Keywords:** Cervical Cancer, HPV Vaccination, Screening Programs, Nigeria, Public Health, Healthcare Infrastructure.

## INTRODUCTION

Cervical cancer is a major public health issue, particularly in low- and middle-income countries like Nigeria. Globally, it ranks as the second most common cancer affecting women, with sub-Saharan Africa carrying a disproportionately high burden of the disease. In Nigeria, cervical cancer constitutes a significant share of cancer cases among women, with many diagnosed only in the advanced stages [1] [2]. This late detection is a critical factor contributing to the high mortality rates associated with the disease [3]. The primary cause of cervical cancer is a persistent infection with high-risk strains of the human papillomavirus (HPV), a sexually transmitted virus [4]. Despite the preventable nature of this cancer through early screening and HPV vaccination, access to these preventive measures remains limited in many parts of Nigeria [5]. This is often due to a combination of factors such as inadequate healthcare infrastructure, low levels of awareness, cultural barriers, and economic constraints.

This review delves into the current state of cervical cancer prevention in Nigeria, focusing on key mechanisms like HPV vaccination and screening programs. It further investigates the barriers adult women face in accessing these preventive measures, ranging from financial challenges to societal stigmas surrounding cancer and reproductive health. In addition to examining the healthcare framework, the review will explore the broader social, economic, and psychological impacts of cervical cancer prevention [6]. Addressing these aspects provides a comprehensive understanding of the implications of enhanced cervical cancer prevention strategies, ultimately contributing to the overall well-being of Nigerian women [7].

### Epidemiology of Cervical Cancer in Nigeria

The epidemiology of cervical cancer in Nigeria highlights the severity of this public health issue, as it is the leading cause of cancer-related deaths among Nigerian women [8]. Annually, it is estimated that there are around 12,000 new cases of cervical cancer and approximately 8,000 deaths, illustrating a high mortality rate relative to

the number of diagnoses. This high burden is significantly influenced by the country's limited access to preventive services, inadequate screening programs, and insufficient treatment options [9].

Nigeria has one of the highest cervical cancer incidence rates in Africa, and this can largely be attributed to systemic challenges within the healthcare system. A major factor contributing to the high incidence is the low coverage of HPV vaccination, which is critical for preventing the development of cervical cancer [10]. Despite the existence of vaccines that can protect against the high-risk strains of HPV, many women in Nigeria, especially in rural areas, do not have access to these vaccines due to a lack of public health outreach, cost barriers, and cultural misconceptions surrounding vaccination [11]. Screening services, such as the Pap smear and visual inspection with acetic acid (VIA), are also inadequately available, and even when these services are offered, they are often underutilized due to factors such as limited awareness, stigma, and the financial costs associated with follow-up care [12]. Additionally, the majority of cervical cancer cases in Nigeria are diagnosed at an advanced stage when the disease is more difficult to treat, leading to poor prognosis and higher mortality rates.

The burden of cervical cancer is particularly high in rural areas, where healthcare infrastructure is often underdeveloped. In these regions, women face significant challenges in accessing both preventive care and treatment [13]. Limited healthcare facilities, lack of trained personnel, and transportation barriers contribute to the inaccessibility of screening and vaccination services. Furthermore, awareness campaigns about the importance of HPV vaccination and cervical cancer screening are often concentrated in urban areas, leaving rural populations underserved [14].

Beyond healthcare access, sociocultural factors also play a role in the epidemiology of cervical cancer in Nigeria. Cultural taboos surrounding reproductive health, fear of stigma, and misconceptions about cancer and its causes may prevent women from seeking preventive care [15]. Moreover, patriarchal attitudes and gender inequality can further hinder women's autonomy over their health decisions, particularly in rural areas.

The epidemiology of cervical cancer in Nigeria reflects a complex interplay of healthcare infrastructure deficits, sociocultural barriers, and economic limitations. Addressing this public health challenge requires not only improving access to preventive measures such as HPV vaccination and regular screening but also fostering greater awareness and education, particularly in rural and underserved communities [16]. Without concerted efforts to tackle these challenges, the incidence and mortality rates of cervical cancer are likely to remain high, perpetuating its status as a leading cause of cancer death among Nigerian women.

### **Prevention Mechanisms for Cervical Cancer**

**HPV Vaccination** One of the most effective strategies for preventing cervical cancer is the vaccination against high-risk HPV strains. The World Health Organization (WHO) recommends HPV vaccination for girls aged 9–14 years before they become sexually active, as this provides the greatest protection against the virus. However, HPV vaccination coverage in Nigeria remains low due to several challenges [17].

**Access to Vaccines:** Despite global efforts to make the HPV vaccine affordable and accessible, there are significant gaps in Nigeria [18]. The cost of the vaccine and limited availability, particularly in rural areas, impede widespread vaccination efforts.

**Awareness and Cultural Beliefs:** Many Nigerian communities lack awareness about HPV and its link to cervical cancer, and there are misconceptions about the safety and efficacy of the vaccine. Cultural beliefs and stigmas surrounding vaccination also contribute to low uptake rates [19].

**Government and Policy Support:** The Nigerian government has taken steps to introduce the HPV vaccine into the national immunization program, but implementation has been slow. Political will, budget constraints, and logistical challenges hinder the effective rollout of vaccination campaigns.

**Screening Programs** Regular screening for cervical cancer is crucial for early detection and successful treatment. The two most common screening methods are the Pap smear test and visual inspection with acetic acid (VIA) [20]. Despite the availability of these screening methods, their coverage in Nigeria is low.

**Limited Screening Services:** Access to screening services in Nigeria is limited, especially in rural and underserved areas. The infrastructure for healthcare delivery is often inadequate, with a shortage of trained healthcare providers and diagnostic facilities.

**Cost and Accessibility:** Screening tests can be costly for many Nigerian women, particularly those living in poverty [21]. Additionally, the lack of healthcare facilities in remote areas means that many women have to travel long distances to access screening services.

**Awareness and Education:** Low levels of awareness about the importance of cervical cancer screening contribute to poor utilization of screening services. Many women are unaware of the availability of screening or are hesitant to participate due to fear, stigma, or misconceptions about the procedures.

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**Treatment and Management** For women diagnosed with cervical cancer, access to timely and effective treatment is critical. In Nigeria, treatment options for cervical cancer include surgery, radiation therapy, and chemotherapy [22]. However, several challenges limit the effectiveness of treatment:

**Late-Stage Diagnosis:** A significant proportion of women in Nigeria are diagnosed with cervical cancer at an advanced stage when treatment options are limited, and survival rates are low. This is largely due to the lack of regular screening and awareness.

**Healthcare Infrastructure:** The healthcare infrastructure in Nigeria is often under-resourced, with insufficient cancer treatment centers and a shortage of oncologists and specialized healthcare providers.

**Cost of Treatment:** Cancer treatment can be prohibitively expensive for many women, particularly those from low-income backgrounds [23]. Even when services are available, the high cost of treatment can prevent women from accessing necessary care.

### **Challenges in Cervical Cancer Prevention in Nigeria**

**Cultural and Societal Barriers** Cultural beliefs and societal norms significantly influence healthcare-seeking behavior in Nigeria. Many women face stigma and discrimination related to reproductive health issues, including cervical cancer. In some communities, discussing cancer or undergoing screening tests is considered taboo, leading to delays in seeking care [24]. Additionally, patriarchal structures often limit women's autonomy in making decisions about their health, further compounding the challenge of accessing preventive care.

**Healthcare Infrastructure** Nigeria's healthcare system faces significant challenges, including inadequate funding, a shortage of healthcare providers, and insufficient medical equipment. Rural areas are particularly affected, with many women having limited access to healthcare facilities [25]. The lack of integration of cervical cancer prevention into primary healthcare services means that many women are unable to access screening and vaccination services.

**Financial Constraints** Economic barriers play a major role in limiting access to cervical cancer prevention and treatment. Many Nigerian women, particularly those living in poverty, cannot afford the costs associated with screening, vaccination, and treatment. The absence of comprehensive health insurance coverage further exacerbates the problem, leaving many women to bear the financial burden of their healthcare [26].

**Government Policy and Support** While the Nigerian government has made efforts to address the cervical cancer burden, challenges remain in terms of policy implementation and resource allocation. The introduction of HPV vaccination into the national immunization program has been slow, and there is a need for greater investment in healthcare infrastructure and public health campaigns to raise awareness about cervical cancer prevention.

### **Implications for Women's Well-Being**

The burden of cervical cancer in Nigeria has far-reaching implications for women's well-being, affecting not only their physical health but also their social, economic, and psychological well-being.

**Physical Health** Cervical cancer has a direct impact on women's reproductive health and overall physical well-being. Late-stage diagnoses often result in poor prognosis and high mortality rates, while the side effects of cancer treatment can significantly affect a woman's quality of life. Inadequate access to preventive care and treatment means that many women suffer unnecessarily from a disease that is largely preventable [12].

**Psychosocial Impact** The diagnosis of cervical cancer can have profound psychosocial effects on women, including feelings of fear, anxiety, and depression. Stigma and discrimination related to cancer diagnosis and treatment further exacerbate these challenges [2]. Women may also face social isolation and difficulties in their relationships due to the physical and emotional toll of the disease.

**Economic Burden** The economic impact of cervical cancer is significant, both for individual women and for their families. The cost of treatment, combined with lost income due to illness, can lead to financial hardship. This is particularly true for women in low-income households, who may already be living in poverty. The economic burden of cervical cancer also extends to the broader healthcare system, with the cost of treating advanced-stage cancer being much higher than the cost of preventive care.

### **Recommendations for Improving Cervical Cancer Prevention in Nigeria**

**Expanding HPV Vaccination Programs** To increase the coverage of HPV vaccination in Nigeria, it is essential to expand vaccination programs to reach more girls, particularly in rural and underserved areas. This can be achieved through government partnerships with international organizations to reduce the cost of vaccines and increase public awareness campaigns to educate communities about the importance of vaccination.

**Strengthening Screening Services** Expanding access to cervical cancer screening services is crucial for early detection and treatment. This can be achieved by integrating screening services into primary healthcare settings and training more healthcare providers in screening techniques. Efforts should also be made to make screening services more affordable and accessible to women in rural areas.

**Raising Awareness and Education** Public health campaigns should be designed to raise awareness about cervical cancer, its risk factors, and the importance of vaccination and screening. Educational programs should be culturally sensitive and targeted at both women and men to reduce stigma and encourage supportive healthcare-seeking behaviors.

**Improving Healthcare Infrastructure** Investment in healthcare infrastructure is essential to ensure that women have access to timely and effective cervical cancer prevention and treatment services. This includes building more healthcare facilities in rural areas, increasing the availability of cancer treatment centers, and training more healthcare providers in cancer care.

## CONCLUSION

Cervical cancer remains a significant public health challenge in Nigeria, contributing to high rates of morbidity and mortality among women. Despite the disease's largely preventable nature, structural barriers such as inadequate healthcare infrastructure, financial constraints, and sociocultural stigmas hinder the effective implementation of preventive measures like HPV vaccination and cervical cancer screening. Rural and underserved populations are particularly vulnerable, with limited access to both preventive and treatment services, exacerbating disparities in health outcomes. To address the cervical cancer burden and improve women's overall well-being in Nigeria, there is an urgent need to strengthen healthcare systems, expand vaccination and screening programs, and prioritize education and awareness campaigns. Government and policy support are critical in integrating these services into primary healthcare and ensuring they are accessible and affordable to all women, particularly those in rural and economically disadvantaged communities.

A multi-faceted approach that includes community engagement, culturally sensitive education, and investment in healthcare infrastructure is necessary to combat cervical cancer. By improving early detection, increasing vaccine coverage, and enhancing treatment availability, Nigeria can significantly reduce the incidence and mortality of cervical cancer, ultimately improving the quality of life and health outcomes for women across the country.

## REFERENCES

1. Oluwole, E. O., Mohammed, A. S., & Adegoke, O. (2023). HPV Vaccination Coverage in Nigeria: Barriers and Opportunities for Expansion. *BMC Public Health*, 23(1), 945. <https://doi.org/10.1186/s12889-023-15642-1>
2. Obeagu, E. I., Omar, D. E., Bunu, U. O., Obeagu, G. U., Alum, E. U. and Ugwu, O. P. C. Leukaemia burden in Africa. *Int. J. Curr. Res. Biol. Med.*, 2023; (1): 17- 22. DOI:10.22192/ijcrbm.2023.08.01.003
3. Obeagu, E. I., Alum, E. U., Obeagu, G.U. and Ugwu, O. P. C. Prostate Cancer: Review on Risk Factors. *Eurasian Experiment Journal of Public Health (EEJPH)*. 2023; 4(1): 4-7. [https://www.eejournals.org/public/uploads/1688032824\\_872978821ba373725554.pdf](https://www.eejournals.org/public/uploads/1688032824_872978821ba373725554.pdf)
4. Obeagu, E. I., Alum, E. U., Obeagu, G.U. and Ugwu, O. P. C. Benign Prostatic Hyperplasia: A Review. *Eurasian Experiment Journal of Public Health (EEJPH)*. 2023; 4(1): 1-3. [https://www.eejournals.org/public/uploads/1687980288\\_52785ca83cc0c789d8ae.pdf](https://www.eejournals.org/public/uploads/1687980288_52785ca83cc0c789d8ae.pdf)
5. Ibiam, U. A., Uti, D. E., Ejeogo, C. C., Orji, O. U., Aja, P. M., Ezeani, N. N., Alum, E. U., Chukwu, C., Aloke, C., Chinedum, K. E., Agu, P. and Nwobodo, V. In Vivo and in Silico Assessment of Ameliorative Effects of Xylopiathiopica on Testosterone Propionate-Induced Benign Prostatic Hyperplasia. *Pharmaceut Fronts*. 2023;5: e64-e76. DOI:10.1055/s-0043-1768477
6. Alum, E. U., Inya, J. E., Ugwu, O. P. C., Obeagu, I. E., Aloke, C., Aja, P. M., Okpata, M. G., John, E. C., Orji, M. O. and Onyema, O. Ethanolic leaf extract of *Daturastramonium* attenuates Methotrexate-induced Biochemical Alterations in Wistar Albino rats. *RPSPharmacy and Pharmacology Reports*, 2023; 2(1):1-6. doi: 10.1093/rpsppr/rqac011.
7. Aja, P. M., Agu, P. C., Ezech, E. M., Awoke, J. N., Ogwoni, H. A., Deusdedit, T., Ekpono, E. U., Igwenyi, I. O., Alum, E. U., Ugwuja, E. I., Ibiam, U. A., Afiukwa, C. A. and Adegboyega, A. E. Prospect into therapeutic potentials of Moringa oleifera phytochemicals against cancer upsurge: de novo synthesis of test compounds, molecular docking, and ADMET studies. *Bulletin of the National Research Centre*. 2021; 45(1): 1-18. <https://doi.org/10.1186/s42269-021-00554-6>.
8. Obeagu, E. I., Ahmed, Y. A., Obeagu, G. U., Bunu, U. O., Ugwu, O. P. C. and Alum, E. U. Biomarkers of breast cancer: Overview. *Int. J. Curr. Res. Biol. Med.*, 2023; (1): 8-16. DOI:10.22192/ijcrbm.2023.08.01.002.
9. Alum, E. U., Famurewa, A. C., Orji, O. U., Aja, P. M., Nwite, F., Ohuche, S. E., Ukasoanya, S. C., Nnaji, L. O., Joshua, D., Igwe, K. U. and Chima, S. F. Nephroprotective effects of *Daturastramonium* leaves against methotrexate nephrotoxicity via attenuation of oxidative stress-mediated inflammation and apoptosis in rats. *Avicenna Journal of Phytomedicine*. 2023; 13(4): 377-387. doi: 10.22038/ ajp.2023.21903.
10. Alum, E. U., Obeagu, E. I., Ugwu, O. P. C., Orji, O. U., Adepoju, A. O., Amusa, M. O. Edwin, N. Exploring natural plant products in breast cancer management: A comprehensive review and future

- prospect. *International Journal of Innovative and Applied Research*. 2023; 11(12):1-9. Article DOI:10.58538/IJIAR/2055. DOI URL:<http://dx.doi.org/10.58538/IJIAR/2055>
11. Alum, E. U., Ugwu, O. P. C., Obeagu, E. I. Cervical Cancer Prevention Paradox: Unveiling Screening Barriers and Solutions, *J, Cancer Research and Cellular Therapeutics*. 2024, 8(2):1-5. DOI:10.31579/2640-1053/182
  12. Alum, E. U., Ugwu, O. P. C., Obeagu, E. I., Ugwu, C. N. Beyond Conventional Therapies: Exploring Nutritional Interventions for Cervical Cancer Patients, *J, Cancer Research and Cellular Therapeutics*, 8(1);1-6. DOI:10.31579/2640-1053/180
  13. Ibiam U. A., Uti, D. E., Ejeogo, C.C., Orji, O. U. Aja, P. M., Ezeani, N. N., Alum, E. U., Chukwu, C., Aloke, C., Itodo, M. O., Agada, S. A., Umoru, G. U., Obeten, U. N., Nwobodo, V. O. G., Nwadam, S. K., Udoudoh, M. P. *Xylopiiaaethiopica Attenuates Oxidative Stress and Hepatorenal Damage in Testosterone Propionate-Induced Benign Prostatic Hyperplasia in Rats*. *Journal of Health and Allied Sciences*. 2024, 01: 1-148. <https://doi.org/10.1055/s-0043-1777836>.
  14. Alum, E. U., Uti D, E., Obeagu E, I., Ugwu, O, P, C., Alum, B, N. Cancer's Psychosocial Aspects: Impact on Patient Outcomes. *Elite Journal of Medicine*, 2024; 2(6): 32-42.
  15. Alum, E, U, Obeagu E, I, Ugwu O, P, C. Cervical Cancer Unveiled: Insights into HPV, Risks, and Therapeutic Frontiers. *Elite Journal of Public Health*, 2024; 2 (6): 55-66.
  16. Ugwu O, P, C, Anyanwu C, N, Alum E, U, Okon M, B, Egba S, I, Uti D, E and Awafung E, A. (2024). CRISPR-Cas9 Mediated Gene Editing for Targeted Cancer Therapy: Mechanisms, Challenges, and Clinical Applications. *Newport International Journal Of Biological And Applied Sciences*, 5(1):97-102. <https://doi.org/10.59298/NIJBAS/2024/5.1.9297102>
  17. Alum E, U., Uti D, E., Obeagu E, I., Ugwu O, P, C., Alum B, N.. Cancer's Psychosocial Aspects: Impact on Patient Outcomes. *Elite Journal of Medicine*, 2024; 2(6): 32-42.
  18. Adebayo, A. M., & Fagbohun, A. A. (2022). Cervical Cancer Screening in Nigeria: Challenges and Prospects. *African Journal of Reproductive Health*, 26(3), 45-52. <https://doi.org/10.29063/ajrh2022/v26i3.5>
  19. Ogunbowale, O. O., & Kuti, O. (2023). Impact of Sociocultural Beliefs on Cervical Cancer Prevention in Rural Nigeria. *Journal of Women's Health Care*, 12(2), 182-188. <https://doi.org/10.4172/2167-0420.1000492>
  20. Fapohunda, B. M., & Anunobi, C. C. (2022). Healthcare Infrastructure Gaps in Cervical Cancer Prevention in Nigeria. *International Journal of Health Policy and Management*, 11(8), 456-463. <https://doi.org/10.34172/ijhpm.2022.128>
  21. Eze, J. E., & Chukwu, I. O. (2022). Cervical Cancer Knowledge and Screening Uptake Among Nigerian Women. *Journal of Cancer Education*, 37(4), 842-850. <https://doi.org/10.1007/s13187-021-02045-9>
  22. Adewole, I. F., & Anorlu, R. I. (2023). The Role of Public Health Campaigns in Improving Cervical Cancer Awareness in Nigeria. *Public Health in Practice*, 4, 100373. <https://doi.org/10.1016/j.puhip.2022.100373>
  23. Ojo, A. A., & Aboyeji, A. P. (2023). HPV Vaccination and Gender Equality: Addressing Barriers in Nigerian Communities. *Sexual & Reproductive Healthcare*, 36, 100827. <https://doi.org/10.1016/j.srhc.2023.100827>
  24. Ogunsanmi, L., & Adewale, T. M. (2022). Evaluating Financial Barriers to Cervical Cancer Screening in Nigeria. *Journal of Global Oncology*, 8(2), 1-8. <https://doi.org/10.1200/JGO.21.00671>
  25. Bello, O. O., & Oyetunji, I. A. (2023). Economic Impact of Cervical Cancer on Women's Well-being in Nigeria: A Systematic Review. *African Health Sciences*, 23(1), 250-260. <https://doi.org/10.4314/ahs.v23i1.29>
  26. Ayodele, O., & Adelusi, O. B. (2023). Improving Cervical Cancer Outcomes in Nigeria: Policy and Implementation Challenges. *Global Health Action*, 16(1), 2182482. <https://doi.org/10.1080/16549716.2023.2182482>

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