

Healthcare Accessibility and Cultural Barriers: Why Some Cancer Patients in Eastern Nigeria Delay Seeking Medical Treatment

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ABSTRACT

Cancer remains a growing public health challenge in Eastern Nigeria, where delayed presentation and late-stage diagnosis significantly worsen patient outcomes. This review explores the multifactorial barriers contributing to the delay in seeking medical treatment among cancer patients in the region. These include inadequate healthcare infrastructure, limited access to specialized oncology services, high out-of-pocket treatment costs, and insufficient health insurance coverage. Moreover, sociocultural and religious beliefs often attribute cancer to supernatural causes, leading many patients to seek help from traditional healers or spiritual leaders rather than biomedical practitioners. Fear of stigma, low health literacy, and psychological resistance such as denial and fear of treatment side effects further delay medical intervention. Health system inefficiencies including referral delays, fragmented care services, and a shortage of trained oncology professionals compound these challenges. The review highlights the urgent need for culturally sensitive public health education, improved cancer surveillance systems, expanded access to affordable care, and integration of traditional and spiritual stakeholders into early detection strategies. A holistic, context-specific approach is critical to improving timely cancer diagnosis and treatment, reducing mortality, and enhancing overall cancer care in Eastern Nigeria.

Keywords: Cancer care, healthcare accessibility, cultural barriers, Eastern Nigeria, delayed treatment, traditional beliefs,

INTRODUCTION

Cancer continues to pose a significant public health challenge globally, and its burden is increasingly being felt in low- and middle-income countries, including Nigeria [1]. The World Health Organization (WHO) has projected a steady increase in cancer incidence and mortality rates in Africa, with Nigeria expected to bear a considerable share of this burden [2]. In Eastern Nigeria, cancer-related morbidity and mortality have been on the rise, largely due to late-stage presentation and delayed access to appropriate medical care. This troubling trend points to a deeper issue: while cancer awareness is growing, a significant number of patients continue to delay seeking medical attention until the disease has reached an advanced stage.

In this context, it is essential to understand the barriers impeding timely cancer diagnosis and treatment. These barriers are multifaceted, involving not only the inadequacies in the healthcare system but also deeply rooted sociocultural beliefs, economic hardships, and a lack of health literacy [3]. Despite advancements in oncology and increasing efforts to promote early detection and treatment, a significant proportion of cancer patients in Eastern Nigeria are diagnosed at stages where curative treatment is limited or impossible [4].

Nigeria's healthcare system, though improving in certain aspects, remains characterized by infrastructural deficits, unequal resource distribution, and limited access to specialized care, particularly in rural and underserved areas [5]. In Eastern Nigeria, the challenges are even more pronounced. The region grapples with a shortage of oncologists, diagnostic equipment, and treatment centers, forcing many patients to travel long distances or forego treatment entirely [6].

Compounding these systemic challenges are cultural and religious beliefs that influence health-seeking behaviors. Many communities in Eastern Nigeria have strong traditional belief systems, which often attribute illnesses such as

cancer to spiritual or supernatural causes [7]. As a result, individuals frequently resort to traditional healers or religious interventions before considering biomedical options. Furthermore, fear of stigma, misconceptions about cancer being a death sentence, and mistrust in the healthcare system contribute to treatment delays [8].

Economic hardship is another significant factor. With a large proportion of the population living below the poverty line, the high costs of diagnostic tests, surgery, chemotherapy, and radiotherapy can be prohibitive. In the absence of comprehensive health insurance coverage, many families are unable to afford timely and adequate treatment [9]. Taken together, these challenges create a landscape where cancer patients are caught in a web of delay, delay in recognizing symptoms, delay in seeking help, and delay in accessing effective treatment [10].

Despite numerous awareness campaigns and improvements in diagnostic and treatment capabilities in urban centers, the problem of delayed medical treatment for cancer persists in rural settings [11]. This delay often results in late-stage diagnoses, limited treatment options, and increased mortality rates. The reasons for this delay are not solely medical but are entrenched in the broader sociocultural and economic context of the region.

There is a critical need to explore and understand the specific barriers such as cultural, economic, and systemic that hinder timely cancer care. Current data and interventions often fail to adequately address the unique context of Eastern Nigeria, where traditional beliefs, poverty, and healthcare inequities intersect. Without a comprehensive understanding of these challenges, efforts to improve cancer outcomes in the region are likely to fall short [12].

The review explores the integration of edge computing and artificial intelligence (AI) for real-time data processing in East Africa, highlighting its potential to address infrastructural and connectivity limitations common in the region. Traditional cloud computing often faces latency, privacy, and bandwidth challenges, making edge computing a model that processes data closer to its source more suitable for East Africa. When combined with AI, edge computing enables immediate decision-making in critical sectors such as agriculture, healthcare, transportation, and environmental monitoring. The region has seen emerging use cases like AI-powered diagnostics in rural clinics and smart farming tools aiding smallholder farmers. Despite its promise, widespread adoption faces barriers such as limited infrastructure, high costs, a lack of skilled professionals, and weak regulatory frameworks. To overcome these, the review recommends strategies like fostering innovation ecosystems, public-private partnerships, local capacity building, and investment in critical infrastructure. It also emphasizes the importance of context-specific solutions, such as federated learning and low-power AI models adapted to local needs and constraints. The review concludes that with targeted policies and collaborative efforts, edge-AI technologies can enhance service delivery, support inclusive development, and align with global sustainable development goals in East Africa.

Epidemiology of Cancer in Eastern Nigeria

Eastern Nigeria, which includes states such as Enugu, Abia, Imo, Ebonyi, and Anambra, faces a significant and growing burden of cancer, with breast, cervical, prostate, and colorectal cancers being the most commonly diagnosed types [13]. These cancers represent a major public health challenge due to their high incidence rates and the tendency for many patients to seek medical care only when the disease has reached advanced stages. Late presentation significantly reduces the chances of successful treatment and survival, while simultaneously increasing the complexity and cost of medical care. Factors contributing to this late presentation include limited awareness, socio-cultural beliefs, inadequate screening programs, and poor access to healthcare facilities. Furthermore, the true extent of the cancer burden in this region is difficult to ascertain accurately because of underreporting and the lack of comprehensive cancer registries and reliable data collection systems [14]. This data gap hampers effective planning, resource allocation, and the development of targeted interventions to reduce cancer morbidity and mortality in Eastern Nigeria. Strengthening cancer surveillance and improving early detection efforts are therefore critical priorities for this region.

Healthcare Accessibility Barriers

Healthcare accessibility in Eastern Nigeria faces significant barriers that impede timely and effective cancer diagnosis and treatment. One of the foremost challenges is the inadequate health infrastructure, particularly in rural and semi-urban areas where functional cancer screening and treatment centers are either scarce or nonexistent [15]. Most existing facilities are located in urban centers, are often overburdened with high patient loads, and suffer from insufficient funding and resources. This urban concentration forces many patients from remote communities to travel long distances, sometimes over difficult terrain, which delays access to critical care. Compounding this problem is the acute shortage of oncological specialists, including oncologists, oncology nurses, and radiotherapists. This shortage means that patients experience long waiting periods for consultations and treatments, which can diminish the effectiveness of care and worsen health outcomes. Additionally, financial constraints pose a major barrier to healthcare accessibility. Diagnosis and treatment costs are often prohibitively high and usually must be paid out-of-pocket, as many patients lack health insurance coverage. For low-income families, the choice between seeking cancer care and meeting basic subsistence needs often results in delayed or abandoned treatment, further exacerbating morbidity and mortality rates linked to cancer in the region [16].

Cultural and Social Barriers

In many Eastern Nigerian communities, cultural and social factors significantly impede timely cancer diagnosis and treatment. Traditional beliefs often link cancer to spiritual causes or curses, which leads many individuals to initially seek help from traditional healers or spiritual leaders rather than medical professionals [17]. This reliance on alternative medicine delays early detection and intervention, critically undermining treatment success. Additionally, cancer is heavily stigmatized in these communities, commonly viewed as a death sentence or even a contagious disease. This stigma creates fear of social rejection, causing many patients to hide their diagnosis or avoid seeking medical help altogether, which further exacerbates health outcomes. Gender roles also play a crucial role, particularly in patriarchal settings where women may have limited autonomy over their health decisions. Often, husbands or family elders hold the authority to decide if and when a woman should pursue medical care, delaying critical screening and treatment for cancers like cervical and breast cancer. Religious influences compound these challenges, as some faith groups discourage medical interventions, advocating instead for healing through prayer or spiritual means alone [18]. While spiritual support can be emotionally beneficial, exclusive dependence on faith-based healing without medical treatment often leads to late-stage presentations and poorer prognoses. Together, these cultural and social barriers create a complex environment that hinders effective cancer care and calls for culturally sensitive interventions to improve awareness and access.

Psychological and Educational Barriers

One of the significant obstacles to effective cancer diagnosis and treatment is low health literacy among the population. Many individuals possess insufficient knowledge about cancer symptoms, risk factors, and the crucial benefits of early detection and timely intervention [19]. This lack of awareness often results from limited access to accurate health information, widespread misinformation, and cultural beliefs that downplay or normalize early warning signs. Consequently, people may fail to recognize symptoms as serious, leading to delayed care-seeking and advanced-stage diagnosis. Alongside educational barriers, psychological factors also play a critical role. Fear and denial are common reactions to the possibility of a cancer diagnosis. The dread of undergoing treatments with harsh side effects such as hair loss, disfigurement through procedures like mastectomy, or the anticipation of a fatal outcome can cause individuals to avoid medical consultations altogether. This psychological resistance, coupled with poor health literacy, significantly impedes early detection efforts and reduces the chances of successful treatment and improved survival rates [20].

Health System Inefficiencies

One of the major barriers to effective cancer care in many low- and middle-income countries, including those in sub-Saharan Africa, is systemic inefficiency within the health system. Referral delays are a significant concern, as many primary healthcare centers lack the capacity, resources, or trained personnel to detect, diagnose, or manage cancer cases. As a result, patients often experience prolonged waiting periods before being referred to specialized oncology centers, which can lead to advanced disease progression by the time treatment begins. Additionally, cancer care services are often fragmented, with poor coordination between various critical components such as diagnostics, surgery, radiology, and chemotherapy [21]. This disjointed care pathway frequently results in delays, treatment interruptions, and loss to follow-up, undermining the continuity and effectiveness of care. The lack of integrated care models, standardized protocols, and efficient patient tracking systems exacerbates these challenges, leaving many cancer patients without timely or comprehensive treatment, and ultimately affecting survival outcomes and quality of life.

Strategies to Improve Timely Cancer Care

Improving timely cancer care in resource-limited settings requires a multifaceted approach that addresses awareness, access, workforce, and systemic barriers. Community-based cancer awareness programs play a pivotal role in educating populations at the grassroots level [22]. Utilizing local languages and culturally sensitive materials helps demystify cancer, dispel myths, and encourage early health-seeking behavior, particularly in rural and underserved communities. Involving traditional and spiritual healers who are often the first point of contact for many patients can further enhance early detection. By integrating these influential figures into formal referral networks and training them to recognize warning signs, the healthcare system can bridge the gap between cultural beliefs and biomedical care. Equally important is the expansion of affordable cancer services. Decentralizing oncology care to regional health facilities and subsidizing treatment through public-private partnerships or national health insurance schemes can significantly improve accessibility. Addressing workforce challenges by training and retaining oncology professionals, especially in rural areas, is essential to meet growing demand. Lastly, policy reforms supported by strong political will are crucial. Strengthening national cancer control plans, enhancing healthcare financing, and ensuring the implementation of universal health coverage can lay the foundation for sustainable improvements in cancer care delivery [23].

CONCLUSION

Delays in seeking medical treatment for cancer in Eastern Nigeria are the result of a complex interplay of cultural, economic, psychological, and systemic factors. While the biomedical community emphasizes early detection and intervention, many patients confront a reality shaped by limited healthcare access, entrenched cultural beliefs, financial hardship, and misinformation. Health system inefficiencies including inadequate infrastructure, shortage of specialists, and fragmented service delivery further compound these challenges. Deep-rooted stigma, spiritual interpretations of illness, and limited autonomy among women contribute to late-stage presentations and poor outcomes. Additionally, psychological barriers such as fear, denial, and low health literacy hinder timely care-seeking behavior. Addressing these multifaceted issues requires context-specific, culturally sensitive strategies. Community education, integration of traditional healers into formal health networks, decentralization of cancer services, and improved healthcare financing are essential steps forward. Strengthening cancer surveillance, investing in human resources, and implementing robust health policies can create a more equitable and responsive healthcare system. Ultimately, reducing cancer-related morbidity and mortality in Eastern Nigeria demands a holistic approach—one that bridges cultural understanding with improved healthcare delivery and empowers individuals to seek timely and appropriate cancer care.

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