

**EXPLORING FACILITATORS AND BARRIERS FOR ONCOLOGY SERVICES
DELIVERY: PERSPECTIVES FROM HEALTHCARE SERVICES PROVIDERS
AND PATIENTS**

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by

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Under the Supervision and Guidance of

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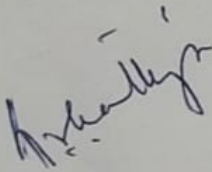
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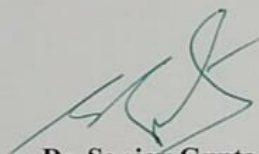
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CERTIFICATE

This is to certify that dissertation titled **Exploring Facilitators, and Barriers for Oncology Services Delivery: Perspectives From Healthcare Services Providers and Patients** is a record of the research work undertaken by **Purva Gulrandhe** in partial fulfillment of the requirements for the award of the degree of MBA (Hospital and Health Management from the IIHMR University, Jaipur under my guidance and supervision and his/her approach to the research study has been sincere, scientific, and analytical.



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DECLARATION BY STUDENT

I hereby declare that this dissertation titled **Exploring Facilitators, And Barriers for Oncology Service Delivery: Perspectives from Healthcare Service Providers and Patients** is the bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.

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ABSTRACT

Cancer remains the second-leading cause of death globally, with low- and middle-income countries bearing a disproportionate burden due to limited access to healthcare resources. Sub-Saharan Africa (SSA), including Kenya, faces a rising cancer burden, with escalating incidence and mortality rates compounded by health system inefficiencies. In Kenya, more than 70% of urban dwellers live in informal settlements where healthcare outcomes are poor, and in rural areas, limited access and financial barriers further exacerbate disparities in cancer care. This study aimed to explore the key facilitators and barriers influencing the delivery of oncology services and patient satisfaction at The Nairobi West Hospital, a quaternary care facility in Kenya. A mixed-methods cross-sectional design was employed, integrating both quantitative and qualitative approaches. Data were collected over two months (April–May 2025) through structured questionnaires administered to 50 healthcare professionals and 100 cancer patients, and in-depth interviews with senior oncology staff and hospital administrators. Stratified and simple random sampling techniques were used for participant selection. Quantitative data focused on assessing facilitators, barriers, and levels of patient satisfaction using a 5-point Likert scale. Chi-square tests were applied to examine associations between variables. Qualitative interviews provided contextual depth to the quantitative findings. Results revealed significant dissatisfaction among patients, primarily due to financial challenges, prolonged waiting times, high treatment costs, and emotional stress—factors statistically linked to lower satisfaction scores. From the healthcare professional’s perspective, interdisciplinary teamwork and the availability of advanced technology were recognized as major facilitators enhancing timely and coordinated care. However, persistent barriers were identified, including workforce shortages, insufficient funding, and inadequate interdepartmental coordination. Qualitative insights corroborated these findings, highlighting additional challenges such as outdated medical equipment, limited opportunities for continued professional development, and suboptimal communication systems. Patients also emphasized the need for improved staff interaction, reduced waiting times, and better hospital infrastructure. Notably, both patients and healthcare providers shared aligned concerns regarding systemic inefficiencies, indicating consensus on areas needing reform. This study underscores the urgent need for strategic interventions at institutional and policy levels to address critical gaps in oncology care.

Recommendations include investing in workforce development, modernizing infrastructure, improving communication systems, and implementing patient-centred care models. By addressing these barriers and reinforcing existing facilitators, healthcare institutions can significantly enhance the quality, accessibility, and efficiency of oncology services in resource-limited settings. The findings provide evidence-based direction for healthcare leaders and policymakers aiming to improve cancer outcomes in Kenya and similar contexts.

Keywords: Patient satisfaction, Management, Administration, Cancer, Service delivery

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Abbreviations

1. **SSA** – Sub-Saharan Africa
2. **WHO** – World Health Organization
3. **HDI** – Human Development Index
4. **SDM** – Shared Decision-Making
5. **IAHPC** – International Association for Hospice and Palliative Care
6. **CINAHL** – Cumulative Index to Nursing and Allied Health Literature
7. **IV** – Intravenous
8. **IO** – Integrative Oncology
9. **ASCO** – American Society of Clinical Oncology
10. **ACCC** – Association of Community Cancer Centers
11. **NCCN** – National Comprehensive Cancer Network
12. **CSR** – Chart-Stimulated Recall
13. **FP** – Family Planning
14. **HIV** – Human Immunodeficiency Virus
15. **SPSS** – Statistical Package for the Social Sciences
16. **SRS** – Stereotactic Radiosurgery
17. **SBRT** – Stereotactic Body Radiation Therapy
18. **LMIC** – Low- and Middle-Income Countries

Chapter 1: Introduction

Cancer is the world's second-deadliest noncommunicable disease after cardiovascular disease, accounting for approximately 19.3 million cases and over 10 million deaths in 2020 according to the World Health Organization (WHO). Lower-income countries with less developed healthcare systems bear a significant and rising share of the global cancer mortality burden (1). According to the International Agency for Cancer Research, by 2040, there will be a 96% rise in new cancer cases in low-HDI nations and 65% in medium-HDI countries. Despite this burden, these affected nations will only get around 5% of global cancer resources (2). Sub-Saharan Africa (SSA) is currently dealing with a tremendous cancer problem. According to data estimates, cancer mortality will significantly increase from 520,348 in 2020 to nearly 1 million deaths annually by 2030 if rapid measures are not taken (3). Kenya's 2019 human development index score is 0.601, ranking it 143rd out of 190 nations. In 2020, there were an estimated 42,116 new cancer cases and 27,092 deaths in Kenya (4). Common types of cancer in Kenya include cervical, breast, oesophageal, and prostate cancers, as well as others such as head and neck cancers, colorectal, stomach, liver cancers, and soft tissue sarcomas. The situation is particularly severe for more than 70% of urban residents living in informal settlements, where healthcare outcomes are notably poor. These communities face higher rates of illness and death compared to other regions, largely due to weak health system governance, inefficiencies, and widespread corruption. In rural areas, the cancer burden further exacerbates existing health disparities, with challenges such as limited access to healthcare facilities and financial barriers that prevent many from seeking care in private institutions (5). Cancer research is critical to formulating policies and procedures, hence locally generated evidence is the basis for effective policy formulation in the particular region (4).

Oncology services play a crucial role in providing specialized care for cancer patients. All African health systems should prioritize the establishment of a standardized system and standard operating procedures to probe, estimate, and verify patient information, including age and residential address (6). The delivery of oncology services is influenced by facilitators and barriers, impacting patient outcomes, treatment efficacy, and overall healthcare efficiency. Facilitators include advanced technology, multidisciplinary teams, and streamlined treatment protocols, while barriers may encompass resource constraints, financial burdens, and patient compliance issues. The workforce goal should be simple: to get the right number of

workers with the right skills, in the right place, doing the right things. This will develop the agility to respond to oncology crises, fill existing gaps, and anticipate the future (7). Healthcare organizations are always seeking to enhance the experience and satisfaction of their patients. A popular metric for assessing the quality of medical care that the majority of hospitals offer is patient satisfaction. Additionally, it offers useful data on how well healthcare providers fulfil patients' expectations. When services are provided promptly, effectively, and with an emphasis on patient-centeredness, the perceived quality of healthcare is improved. The amount of time spent with the doctor, the doctor's willingness to listen, and patient-specific factors like expectations for care and perceived wait times are all factors that typically affect patient satisfaction. Positive outcomes like increased compliance, decreased litigation, and improved prognosis have all been connected to patient satisfaction (8). Understanding these factors within a quaternary care hospital is essential to enhance service delivery and improve patient care.

Aim:

This study aimed to assess the facilitators and barriers in oncology service delivery to develop informed policy recommendations and optimize the quality of oncology healthcare services.

Objectives:

- To identify key facilitators that enhance the quality and effectiveness of oncology care.
- To explore the barriers hindering optimal oncology service delivery in healthcare institutions.
- To assess patient satisfaction with the oncology services provided by the hospital.

Chapter 2: Review of literature

1. Milou Steenbergen et al. conducted a qualitative study to investigate the views of healthcare professionals on shared decision-making (SDM) in the context of inpatient oncology care. Through focus groups and semi-structured interviews with a range of participants—including nurses, residents, oncologists, and healthcare managers—the study identified several barriers and enablers of SDM. Patients often faced challenges such as difficulty understanding information, language issues, and emotional or physical distress that hindered communication. From the perspective of healthcare professionals, effective SDM was supported by an awareness of the need to present options, the ability to communicate those options clearly, an emotional connection with patients, professional experience, and a strong therapeutic relationship. On the organizational level, time constraints, a lack of private discussion spaces, disruptions in continuity of care, and inadequate use of electronic health records (EHRs) emerged as obstacles. Although healthcare providers acknowledged the importance of SDM, its practical application varied. To improve consistency in SDM implementation, the authors recommend initiatives such as increasing awareness of SDM in inpatient settings, embedding SDM into standard care procedures, clearly informing patients when decisions are needed, documenting SDM efforts in EHRs, and defining the role of nurses in facilitating the decision-making process (9).
2. Lisa Vaccaro's qualitative study provides valuable insights into the barriers and facilitators influencing the implementation of a shared care model for community-based psycho-oncology services. Recognizing that psychological therapies, especially when combined with medication, are effective in treating depression and anxiety in cancer patients, the study highlights the critical shortage of psycho-oncology professionals and limited access to services in rural or non-urban settings. To address this disparity, the research explores the feasibility and acceptability of a shared care approach that links community and hospital-based professionals. Semi-structured interviews were conducted with a diverse group of stakeholders, including general practitioners, community clinical psychologists, and hospital-based psycho-oncology specialists. Through framework analysis, six central themes emerged as either supporting or hindering implementation: initiative

and autonomy, resource availability, clear care pathways, professional support, skills development, and patient engagement. Effective communication and targeted training for community providers were emphasized as key enablers of the model. Overall, participants expressed a positive outlook on adopting the shared care model, viewing it as both feasible and acceptable. The study concludes by recommending further research, specifically a randomized controlled trial, to evaluate the practical outcomes of implementing this model for patients with cancer-related mental health concerns (10).

3. Marco Bennardi et al., conducted a comprehensive systematic review to examine the barriers and facilitators associated with palliative care from various stakeholder perspectives. The review involved a detailed search across multiple databases, including PubMed, PsycINFO, IAHPC/CINAHL, and Communication & Mass Media Complete, focusing on key concepts such as palliative care, perceptions, and influencing factors. After a rigorous screening process, 52 studies were selected for qualitative thematic analysis. The findings were organized into four overarching themes: awareness of palliative care, communication and collaboration within palliative care contexts, beliefs and attitudes surrounding palliative care, and the emotional experiences tied to illness trajectories. The review highlighted that cognitive, emotional, cultural, and social factors significantly influence both the delivery and acceptance of palliative care. On the provider side, barriers included limited understanding of when palliative care is appropriate, while facilitators included the visibility and integration of palliative teams within hospital settings. At the patient and family level, misconceptions about palliative care posed challenges, whereas openness to addressing personal needs acted as a facilitator. The authors conclude that improving the effectiveness and accessibility of palliative care requires increasing general awareness, strengthening communication and emotional skills among healthcare providers, and fostering cultural changes in how palliative care is viewed and understood (11).
4. Oluwadamilola M. Fayanju and colleagues conducted a thematic analysis to explore both patient and provider perspectives on the modifiable barriers and facilitators affecting breast cancer care.

The study involved adult women diagnosed with stage 0 to IV breast cancer who had received all aspects of their treatment—medical, surgical, and radiation—within a single healthcare system, as well as oncology care providers, including physicians and advanced practice professionals. The analysis revealed a range of factors identified by both groups as influencing access to and adherence to recommended treatment. While several facilitators and obstacles were mutually acknowledged, the study also uncovered notable discrepancies between patient and provider views. These misalignments in perception were seen as potential contributors to disparities in care delivery. The authors suggest that improving concordance between provider and patient understanding of what influences adherence to guideline-based care could play a key role in reducing inequities in breast cancer outcomes (12).

5. Charlotte IJssbrandy et al., conducted a qualitative study to examine healthcare professionals' perspectives on the barriers and facilitators involved in delivering physical activity programs to cancer survivors through a shared-care model. The study found that organizational challenges posed the greatest obstacles to effective implementation. Specifically, issues such as poor communication, weak collaboration, unclear roles, and insufficient networking between primary healthcare providers (PHPs) and specialist healthcare providers (SHPs) were highlighted as key limitations. To address these challenges, the authors suggest that the development and use of survivorship care plans, enhanced integration of health information technologies, clearer rehabilitation guidelines, and stronger interprofessional networks could significantly support the successful integration of physical activity interventions in cancer survivorship care (13).
6. Nicole Collaço and colleagues conducted a scoping review to explore the challenges and enablers of integrated cancer care across primary and secondary healthcare settings, drawing on international literature published between 2009 and 2022. Analyzing 32 studies from databases such as Ovid Medline and grey literature, the review found that barriers and facilitators to integrated care could be grouped into three main categories: interactions at the individual level between patients and healthcare professionals, organisational challenges, and broader systemic issues. The findings highlighted the importance of improving cancer-related training for primary

care providers, clarifying the division of responsibilities between general practitioners and oncologists, strengthening communication across care sectors, and implementing clear protocols for cancer follow-up. The authors emphasize that better coordination and information exchange between care levels are essential to improving outcomes for cancer survivors and enhancing healthcare system efficiency (14).

7. Jennifer Hunter and her team carried out a mixed-methods study to examine the obstacles and supporting factors influencing the delivery and accessibility of integrative oncology (IO) services in Australia. The study combined a national survey of cancer services—achieving a 93.2% response rate—with focus group discussions and an online questionnaire completed by cancer survivors from culturally diverse backgrounds. Results highlighted major disparities in IO service availability across regions, limited therapeutic options, and a disconnect between patient use of natural health products and the services offered. The analysis identified two main overarching themes: "barriers and facilitators" and "people and institutions," each broken down into subthemes like access, cost, information, cultural beliefs, as well as the roles of patients, healthcare professionals, organizations, and policies. Financial constraints emerged as a key barrier for both patients and providers, with proposed solutions varying and sometimes conflicting between the public and private sectors. A more subtle yet impactful barrier was the influence of professional and organizational cultures on healthcare policies, definitions of evidence, and patient-provider relationships. The study concludes that addressing these challenges requires more than evidence generation—it calls for national coordination, supportive funding models, clear clinical guidelines, and enhanced collaboration across healthcare professions to better align IO services with patient expectations and needs (15).
8. In their qualitative study, Brenda S. Castillo and colleagues explored the perspectives of oncology professionals regarding the barriers and facilitators to discussing cancer clinical trials (CCTs) with patients, in the context of the ASCO-ACCC Initiative aimed at improving racial and ethnic diversity in clinical trials. Although the National Comprehensive Cancer Network (NCCN)

identifies clinical trials as the preferred treatment option for many cancer patients, actual enrollment remains low, with only about 5% of eligible patients participating. The study examined influencing factors across multiple levels, including healthcare systems, trial design, provider behaviour, and patient-related aspects. Using chart-stimulated recall (CSR) to assess real clinical encounters, the researchers gathered data from ten oncology professionals—primarily oncologists, alongside one research coordinator—with diverse demographic backgrounds. Identified barriers included limited availability of suitable trials, strict eligibility criteria, insufficient provider knowledge, provider biases regarding patient interest or treatment outcomes, and negative patient perceptions or disease-related complications. Conversely, facilitators encompassed having designated time and space to discuss trials, increased trial availability, structured processes for offering trials, proactive patient behaviour, fewer comorbid conditions, and support from other healthcare providers such as surgeons. Notably, several barriers were found to be directly addressable through these facilitators. The authors emphasize the need for broader studies to validate these preliminary insights and to inform strategies that could enhance trial participation, especially among underrepresented populations (16).

9. McKenna C. Eastment conducted a cross-sectional study aimed at examining the prevalence of cervical cancer screening and identifying barriers and facilitators to its implementation within family planning (FP) clinics in Mombasa County, Kenya. Cervical cancer remains a leading cause of cancer-related deaths among women in sub-Saharan Africa, despite being largely preventable through routine screening and early treatment. In Kenya, national health policy recommends cervical cancer screening for all women of reproductive age who seek care at health facilities, with FP and HIV clinics designated as primary screening points. The study utilized structured interviews with randomly selected FP clinic managers to gather data on clinic characteristics, screening practices, availability of essential screening supplies, and staff training. Additionally, data from FP registers over 15 months were reviewed to assess screening coverage. Of the 70 clinics surveyed, just over half reported offering cervical cancer screening services. However, access to necessary supplies—such as speculums and acetic acid—was inconsistent, and staffing shortages were evident, with many clinics lacking trained personnel. Public clinics were more likely to conduct screenings than private ones, and having at least one trained provider was strongly

associated with screening availability. These findings suggest that integrating cervical cancer screening into FP services could significantly enhance access, especially if efforts focus on staff training and consistent supply provision. The study highlights the importance of addressing clinic-level resource and training gaps to improve the uptake of preventive cancer services in underserved populations (17).

10. Mary F. Nyangasi et al. conducted a study assessing the impact of decentralizing cancer care services in Kenya through the establishment of regional cancer centres. Historically, comprehensive cancer treatment was centralized in the capital city, limiting access for many patients. In 2019, the Kenyan Ministry of Health initiated a decentralization strategy, integrating cancer services into existing regional hospitals to enhance accessibility. The study analyzed data from the District Health Information System (DHIS2) and the hospital-based cancer registry at the national referral hospital. In 2021, 29,321 patients visited regional cancer centres, accounting for 38.8% of all public cancer centre visits. The median age of patients was 57 years, with females comprising 57.3% of the cohort. Notably, 71% of patients presented with advanced-stage disease, with a higher proportion among males (74%) compared to females (69%). The study emphasizes the need for comprehensive strategies encompassing screening and early diagnosis programs to improve clinical outcomes. Strengthening patient registration and surveillance systems in cancer centres is crucial for effective planning and policy development. Further research is recommended to identify tailored interventions that could enhance early cancer detection, particularly among ageing populations and males. Overall, the decentralization of cancer care in Kenya has improved service uptake and accessibility. Continued efforts to enhance early detection, data collection, and comprehensive treatment services are essential to further improve patient outcomes and inform health policy (18).

Chapter 3: Methodology

Research Question: The key facilitators and barriers influencing the delivery of oncology services and patient satisfaction in a quaternary care hospital.

Study Design: This study employed a cross-sectional design utilizing both quantitative and qualitative methods to explore key facilitators and barriers affecting the delivery of oncology services at a quaternary care hospital. The objectives were to identify and quantify facilitators, measure the impact of barriers, assess patient satisfaction, and examine the statistical association between these variables.

Setting: The study was conducted within the Oncology Department of The Nairobi West Hospital in Kenya, a quaternary care facility offering specialized cancer treatment services.

Study Population: Participants included oncologists, oncology nurses, hospital administrators, and support staff directly involved in oncology service provision, as well as cancer patients undergoing active treatment.

Inclusion criteria encompassed:

- Healthcare professionals involved in oncology services.
- Cancer patients currently receiving treatment.

The exclusion criteria were:

- Patients exclusively under palliative care.
- Healthcare professionals are not directly engaged in oncology services.

Study Tools: Data collection tools included a structured, self-administered questionnaire for healthcare professionals and patients, featuring closed-ended questions scored on a 5-point Likert scale. The questionnaire evaluated key facilitators and barriers to oncology service delivery, patient satisfaction, and care outcomes. Additionally, in-depth interviews were conducted with senior oncology service providers and hospital administrators to complement and contextualize the quantitative findings.

Duration of Study: The study was carried out over two months, from April 2025 to May 2025.

Sample Size and Sampling Technique:

A convenience sampling approach was used to select participants based on ease of access and availability within the hospital premises.

- 50 healthcare professionals and hospital administrators were enrolled using stratified random sampling.
- 100 cancer patients were selected using simple random sampling methods.

Data Collection Procedure:

Quantitative data were collected through:

- Structured questionnaires were administered to hospital staff.
- Standardized patient experience surveys.

Qualitative data were obtained through in-depth interviews with senior oncology service providers and hospital administrators. The mixed-methods approach enabled a comprehensive analysis of the factors influencing oncology service delivery.

Operational Definitions:

Facilitators: Measurable factors that enhance the delivery of oncology services, such as technology availability, staff expertise, and patient support programs.

Barriers: Quantifiable challenges that hinder oncology services, including financial constraints, resource shortages, and patient non-compliance.

Oncology Services: All medical, surgical, and supportive treatments provided to cancer patients in a hospital setting.

Data Analysis Plan: The collected data were analyzed using SPSS version 27 to examine the impact of facilitators and barriers on oncology service delivery. Descriptive statistics such as means, standard deviations, and frequency distributions were used to summarize responses from patients and healthcare professionals. Inferential statistical methods, including chi-square tests, t-tests, and regression analysis, were applied to assess associations between identified barriers, facilitators, and patient care outcomes. A

p-value of less than 0.05 was considered statistically significant. Additionally, qualitative data from interviews and open-ended responses were thematically analyzed to identify key patterns, enrich the quantitative findings, and provide deeper insights into experiences and perceptions related to oncology service delivery.

Ethical Considerations:

Informed consent was obtained from all study participants before data collection, ensuring voluntary participation. Anonymity and confidentiality of participant information were strictly maintained, with all personal identifiers removed from the dataset to protect privacy. To ensure data security, all collected data were stored in a protected database with access limited to authorized research personnel only. Ethical guidelines were rigorously followed throughout the study to uphold participant rights and maintain the integrity of the data.

Chapter 4: Result and Discussion

Result

4.1 Descriptive Statistics of Patient-Reported Barriers

Table 1 summarizes the descriptive statistics for key barriers to oncology service delivery as reported by patients undergoing chemotherapy or radiotherapy. Each barrier was rated on a 5-point Likert scale, where 1 indicated "Strongly Disagree" and 5 indicated "Strongly Agree."

Table 1: Descriptive and Inferential Statistics for Barriers to Oncology Service Delivery

Barrier	Mean	Std Dev	Min	Max	Chi ²	p-value	Significant (p < 0.05)
Financial Difficulty	4.28	0.90	1.0	5.0	16.80	0.00	Yes
Provider Access	2.94	1.14	1.0	5.0	5.20	0.27	No
Long Waits	4.41	0.63	2.0	5.0	14.28	0.00	Yes
Cost	4.39	0.59	2.0	5.0	13.72	0.00	Yes
Emotional Stress	2.80	1.11	1.0	5.0	13.03	0.01	Yes

Inference:

Financial barriers (mean = 4.28), cost (4.39), and long waits (4.41) received the highest concern ratings, indicating they are widely experienced by patients. Chi-square analysis revealed that all these barriers — along with emotional stress — have a statistically significant association with treatment satisfaction ($p < 0.05$), suggesting these factors directly impact perceived quality of care.

4.2 Interpretation of Findings

Chi-square tests showed statistically significant associations between patient satisfaction and the following barriers: Financial Difficulty ($p = 0.00$), Long Waits ($p = 0.00$), Cost ($p = 0.00$), and Emotional

Stress ($p = 0.01$). These findings suggest that patient experiences and satisfaction levels are strongly influenced by systemic and personal challenges.

- **Financial Difficulty, Long Waits, Cost, and Emotional Stress** were the most frequently cited barriers, with mean scores exceeding 4.0 in the first three categories.
- Chi-square tests revealed statistically significant associations between **patient satisfaction** (chemotherapy vs. radiotherapy) and the following barriers:
 - **Financial Difficulty** ($\chi^2 = 16.80, p < 0.01$)
 - **Long Waits** ($\chi^2 = 14.28, p < 0.01$)
 - **Cost** ($\chi^2 = 13.72, p < 0.01$)
 - **Emotional Stress** ($\chi^2 = 13.03, p = 0.01$)
- These results suggest that patients receiving chemotherapy or radiotherapy perceive significantly different levels of these barriers, indicating potential disparities in care delivery or experience.

4.3 Healthcare Professionals' Findings

4.3.1 Facilitators

The following facilitator aspects were evaluated by healthcare professionals using Likert-scale responses. Table 2 provides the descriptive statistics.

Table 2: Summary of Facilitators Rated by Oncology Healthcare Professionals

Facilitator	Mean	Std Dev
Availability of advanced technology	3.80	1.10
Regular training in oncology services	3.34	1.24
Interdisciplinary teamwork effectiveness	4.04	0.92

Financial resource adequacy	3.26	1.15
Cultural/language considerations in care	3.10	1.33

Inference:

Teamwork (mean = 4.04) and technology availability (3.80) were rated highest, highlighting the strengths of collaborative care and access to equipment. Cultural and training-related factors were rated lower, suggesting room for improvement in staff development and culturally responsive care.

4.3.2 Barriers

Table 3 summarizes perceived barriers among oncology staff.

Table 3: Summary of Barriers Rated by Oncology Healthcare Professionals

Barrier	Mean	Std Dev
Inadequate resources (equipment/supplies)	2.72	1.09
Financial constraints	3.06	1.20
Staff shortages	2.98	1.04
Patient non-compliance	3.14	1.05
Inefficient coordination	2.76	1.06

Inference:

While patient non-compliance and financial constraints were rated as the most pressing barriers, all items scored near the mid-range, reflecting systemic inefficiencies rather than isolated problems. These areas are potential targets for hospital policy reforms.

4.4 Qualitative Findings**4.4.1 Healthcare Professionals**

As a result of the in-depth interviews conducted with senior oncology service providers and hospital administrators, several key themes emerged regarding barriers and opportunities in oncology service delivery. Participants reported significant communication gaps, particularly around financial planning and decision-making, which often left oncologists and patients uninformed. There was a strong call for formalized communication processes, including email-based updates and designated financial counsellors to assist patients. Additionally, the lack of private counselling areas and rushed consent processes were identified as detrimental to patient-centred care. Respondents emphasized the importance of empathetic, private, and adequately timed psychological support for patients and their families throughout the treatment journey.

Resource limitations were a recurring concern, with inadequate equipment (e.g., brachytherapy units, SRS/SBRT technology), outdated infrastructure, and staffing shortages cited as major challenges. Financial barriers, including high treatment costs and hidden charges, were seen to drive patients toward more affordable private facilities. Participants also highlighted logistical difficulties for patients travelling long distances, underscoring the need for on-site accommodations. Suggestions to improve service delivery included regular staff training and CMEs, expanding the healthcare workforce, enhancing interdepartmental coordination, and improving transparency in billing. There was strong advocacy for greater access to affordable oncology drugs, increased use of multidisciplinary care models, and collaboration with government and other stakeholders to subsidize care and expand access to clinical trials.

Sample staff response:

“We face challenges such as inadequate resources, lack of training, and communication delays. Streamlining service delivery and improved management decisions could enhance patient care.”

4.4.2 Patients

Patients commonly requested:

- **Reduced waiting times**
- **Better food and ward amenities**
- **Improved communication with care providers**

Example patient feedback:

“Reduce the long waiting times during the visit and ensure more than one doctor is available for cancer care.”

Inference:

The qualitative data supports the quantitative findings and adds depth, highlighting the emotional and logistical realities faced by both providers and patients. There is alignment between stakeholder concerns, particularly regarding delays, financial barriers, and operational efficiency.

4.5 Summary of Key Results

- The findings from this study provide a multifaceted understanding of oncology service delivery from the perspectives of both patients and healthcare professionals. Patients reported high levels of dissatisfaction associated with several key barriers. Among these, **financial difficulty**, **long waiting times**, **treatment-related costs**, and **emotional stress** were statistically identified as having a significant influence on patient satisfaction. These barriers were consistently rated as severe on the Likert scale and further confirmed by chi-square tests, indicating that they directly affect the perceived quality and effectiveness of care.
- From the perspective of healthcare professionals, several facilitators were highlighted as strengths within the system. **Interdisciplinary teamwork** received the highest ratings, followed by the **availability of advanced technology**. These factors were seen as enhancing patient care by

promoting coordinated, timely, and effective treatment strategies. However, notable barriers were also identified by staff. These included **staff shortages**, **inadequate financial resources**, and **inefficient coordination**, all of which were cited as hindrances to optimal service delivery.

- The qualitative data further reinforced the quantitative findings. Healthcare professionals emphasized challenges such as outdated equipment, lack of ongoing training, and poor communication systems. Patients, on the other hand, frequently called for shorter wait times, improved staff communication, and enhancements in hospital amenities. Both groups expressed a strong desire for systemic improvements, particularly in areas related to resource allocation, patient-centred care, and infrastructure.
- Overall, the study reveals a clear alignment between the barriers experienced by patients and those recognized by staff, underscoring the need for strategic reforms to improve oncology service delivery at the institutional level.

Chapter 5. Discussion and Recommendation

5.1 Discussion

This study aimed to explore the facilitators and barriers to oncology service delivery from the perspectives of both patients and healthcare providers at a quaternary care hospital in Kenya. The findings reveal that systemic inefficiencies, emotional burdens, and resource-related challenges significantly affect service quality and patient satisfaction.

D Alaina L Carr et al. stated that despite the presence of facilitators, many obstacles remain. At the patient level, difficulties in understanding, language differences, emotional strain, and a lack of social support impede effective communication and adherence to treatment plans (24). One of the most prominent patient-reported challenges was **financial difficulty**, with a mean rating of 4.28 on a 5-point scale and a statistically significant association with treatment satisfaction ($p < 0.001$). This is consistent with findings from Fayanju et al. (2023), who noted that financial barriers are a modifiable but persistent determinant in delayed or incomplete cancer care among underserved populations. **Treatment costs** and **long waiting times** followed closely as key concerns, underscoring systemic access issues common in oncology services across low- and middle-income countries (LMICs) (19). Long wait times were also found to negatively influence satisfaction, a pattern similarly reported in a study by Nyangasi et al. (2023), which noted delays in cancer care delivery even after decentralization efforts in Kenya (20).

Healthcare professionals identified **interdisciplinary teamwork** and **access to advanced technology** as core facilitators of effective oncology service delivery. The high ratings for teamwork (mean = 4.04) suggest that staff value collaborative approaches in improving patient outcomes, a concept echoed in literature emphasizing the benefits of multidisciplinary cancer care models (Steenbergen et al., 2022) (9). Healthcare professionals encounter issues such as heavy workloads, insufficient staffing, limited time, and inadequate oncology training, particularly in primary care environments (25). However, facilitators were often undermined by reported **barriers** such as **staff shortages**, **resource constraints**, and **inefficient coordination**. These internal system-level issues parallel the barriers cited by Collaço et al. (2024), who identified gaps in integrated care and communication breakdowns as persistent obstacles to cancer service continuity (14).

Thematic analysis of qualitative responses provided deeper insight into the human and institutional factors at play. Patients expressed dissatisfaction with prolonged waiting times, lack of communication from staff, and hospital environment issues such as food quality and comfort. These qualitative insights reinforce the quantitative data and align with findings from Vaccaro et al. (2019), who noted that poor communication and insufficient psychosocial support were critical patient-level deterrents to effective oncology care (21). Organizational challenges include poor communication systems, underutilization of electronic health records, limited physical infrastructure, and inconsistent availability of resources (24).

Problems with insurance coverage and financial limitations further restrict access to timely and comprehensive care. Moreover, administrative and financial difficulties related to involvement in clinical oncology programs can reduce hospital and provider participation (25). It is also worth noting that both staff and patients expressed a strong desire for improvements in **communication, coordination, and training**. Healthcare professionals in particular highlighted the lack of structured training programs and called for clearer protocols and better leadership. These suggestions are well aligned with Hunter et al. (2021), who advocated for the implementation of national clinical guidelines and coordinated funding models to streamline integrative oncology practices in LMIC settings (15).

Overall, the findings from this study mirror those from other LMICs, suggesting that the barriers to oncology service delivery are both structural and behavioural. Addressing these barriers holistically requires a multi-pronged strategy targeting institutional policy, resource allocation, workforce development, and patient-centred communication.

M. Steenbergen emphasized that strong communication and teamwork among healthcare professionals including oncologists, primary care providers, nurses, and pharmacists—are essential for delivering coordinated and continuous care. The involvement of multidisciplinary teams and the use of shared decision-making (SDM) foster greater patient involvement and lead to better treatment outcomes by ensuring that care aligns with individual patient needs and preferences (22). Laureline Gatellier et al., in their study, suggested that in the treatment of patients with more advanced, metastatic cancers, supportive and palliative care should be closely integrated with therapy for curable cancers. Effective integration has been shown to lower unwarranted cancer treatment, family burden, and healthcare expenses while also improving quality of life, end-of-life care, understanding of disease, physical and psychological symptoms, survival, and patient satisfaction (23). Addressing these obstacles requires a holistic and multi-

pronged strategy. M. N. Hennings advocated for the enhancement of oncology-specific education and training for healthcare professionals, the clear delineation of roles between primary and secondary care providers, and the improvement of communication systems. Additionally, the introduction of care coordination roles—such as patient navigators was recommended to help manage logistical barriers and mitigate resource limitations (24).

5.1.1 Strengths and Limitations of the Study

This study had several notable strengths that contributed to the validity and depth of its findings. First, the use of a mixed-methods design combining both quantitative and qualitative approaches enabled a robust and comprehensive assessment of oncology service delivery. By collecting and triangulating data from surveys and interviews, the study was able to quantify measurable outcomes while also capturing the nuanced experiences of stakeholders. Second, the inclusion of multiple stakeholder groups—patients, healthcare professionals, and hospital administrators—offered a holistic view of the barriers and facilitators influencing oncology care. This multi-perspective approach provided a more complete understanding of the systemic and individual factors affecting service quality.

Another strength of the study was its contextual relevance. Conducted in a quaternary care hospital in Kenya, the findings are particularly applicable to similar low- and middle-income country (LMIC) healthcare settings, where resource constraints and system inefficiencies often parallel those observed in the study. Additionally, the data collection tools used—structured Likert-scale questionnaires and in-depth interviews—were tailored to evaluate key dimensions of service delivery, thereby enhancing the reliability and applicability of the results. Ethical rigour was also maintained throughout the research process. Informed consent was obtained from all participants, and stringent measures were taken to ensure confidentiality and data security, upholding the integrity of the study.

However, the study also faced several limitations that should be acknowledged. The use of convenience sampling, particularly for patient recruitment, may have introduced selection bias, potentially limiting the generalizability of the results. While stratified random sampling was employed for healthcare staff, the overall sampling approach relied heavily on participant availability rather than representativeness of the entire population. Moreover, the study was conducted in a single hospital setting, which restricts the

applicability of the findings to other institutions with different organizational structures, resources, or patient demographics.

Another limitation was the reliance on self-reported data, which may be subject to response bias or social desirability effects, particularly in assessments of satisfaction and perceived service quality. The short data collection period of two months may have also restricted the ability to observe long-term trends or seasonal variations in oncology service delivery. Lastly, the exclusion of patients exclusively receiving palliative care means that the experiences of this important subgroup were not captured, potentially overlooking key barriers related to end-of-life care.

Chapter 5: Recommendation

5.2 Recommendations

Based on the findings of this study, the following recommendations are proposed:

5.2.1. Integrated Care at the Individual Patient Level

- Foster strong, trust-based communication between patients and all healthcare professionals by promoting shared decision-making, patient activation, and individualized care planning.
- Involve **primary care providers (PCPs)** as active members of the **multidisciplinary care team** from the point of cancer diagnosis through to survivorship.
- Ensure **direct and efficient communication** channels (e.g., dedicated phone lines or secure email systems) between primary and secondary care providers to support timely updates and coordinated care.
- Develop and implement **survivorship care plans** tailored to individual needs, emphasizing long-term wellness, goal setting, and patient empowerment.

5.2.2. Integrated Care at the Organizational Level

- Provide **additional oncology-specific training** for primary care providers to equip them for roles in post-treatment and survivorship care.
- Facilitate **interdisciplinary understanding** by organizing joint training sessions and team-building activities to build mutual respect and awareness of each professional's role.
- Clearly **define and communicate roles and responsibilities** within primary and secondary care teams to both providers and patients.
- Establish and implement **standardized protocols and care guidelines** for ongoing cancer management and follow-up.
- Introduce **care coordinators, community link workers, or patient navigators** to assist with appointment scheduling, inter-provider communication, and patient guidance.
- Explore **practical care models** that support a gradual transition of responsibilities from oncology specialists to PCPs in survivorship care.

5.3 Implications for Policy and Practice

The results of this study provide evidence to guide hospital administrators, policymakers, and oncology program leaders in designing responsive and sustainable service models. Strategic investment in staff, infrastructure, and patient-centred protocols is essential to elevate oncology care quality and reduce disparities. Moreover, integrating patient and provider feedback into quality improvement processes may drive more adaptive and inclusive healthcare delivery frameworks.

Chapter 6: Conclusion

This study concludes that the most significant barriers to effective oncology service delivery in the Kenyan quaternary care hospital setting are financial difficulties, long waiting times, high treatment costs, and emotional stress. These challenges were consistently rated highly by patients and were statistically associated with lower satisfaction levels, indicating a direct impact on the quality of care. The findings highlight the urgent need to address systemic inefficiencies that hinder timely, affordable, and supportive cancer treatment, particularly for vulnerable populations. Notably, both patient feedback and statistical analysis confirm that financial and operational constraints are key determinants of poor care experiences.

From the healthcare provider's perspective, interdisciplinary teamwork and access to advanced technology were identified as core facilitators of care, suggesting that the system has valuable assets that can be leveraged. However, these strengths are undermined by persistent institutional barriers such as staff shortages, inadequate training, poor communication, and insufficient infrastructure. The alignment between patient and provider concerns underscores the systemic nature of these issues and points to the necessity of coordinated reforms. Overall, the study calls for comprehensive, multi-level interventions to improve resource allocation, strengthen workforce capacity, and promote patient-centred communication and care planning.

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