Synopsis for the study "Exploring Facilitators, and Barriers for Oncology Service Delivery: Perspectives from Healthcare Service Providers and Patients"

I. 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). 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. Cancer research is critical to formulating policies and procedures, hence locally generated evidence is the basis for effective policy formulation in the particular region (3). Oncology services play a crucial role in providing specialized care for cancer patients. 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. Understanding these factors within a quaternary care hospital is essential to enhance service delivery and improve patient care. This study aims to assess the facilitators and barriers in oncology services to develop informed policy recommendations and optimize oncology healthcare delivery.

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

III. 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 in oncology services provided by the hospital.

IV. Study Hypothesis:

Null Hypothesis (H0):
There is no significant relationship between facilitators, barriers, and patient care outcomes in oncology services.

Alternate Hypothesis (H1):
There is a significant relationship between facilitators, barriers, and patient care outcomes in oncology services.

V. Materials and Methods

Study Design: The study will employ a cross-sectional design and both quantitative & qualitative methods of data collection to explore the key facilitators and barriers affecting the delivery of oncology services at a quaternary care hospital. The study aims to identify and quantify facilitators, measure the impact of barriers, assess patient satisfaction, and evaluate the statistical association between these variables.

Setting: The study will be conducted in the oncology department of a quaternary care hospital (The Nairobi West Hospital) in Kenya providing specialized cancer treatment services.

Study Population:

Inclusion Criteria:

i) The study will include the Oncologists, Oncology Nurses, Hospital Administrators, and Support staff involved in providing oncology services.
ii) Cancer patients undergoing treatment in the hospital.

Exclusion Criteria:

i) Patients under palliative care exclusively.
ii) Healthcare professionals not directly involved in oncology services.

Study Tools:

The study tool will be a structured, self-administered questionnaire to gather data from healthcare professionals and oncology patients in a quaternary care hospital. It includes closed-ended questions using a 5-point Likert scale. The tool assesses key facilitators and barriers to oncology service delivery, as well as patient satisfaction and care outcomes. A few in-depth interviews will also be organized with the service providers to justify the findings of the quantitative data.

Duration Of Study: Two months (April 2025 – May 2025).

Sample Size: A Convenience sampling, a representative sample on ease of access and availability of participants will be selected from the Hospital premises.

- 50 Healthcare professionals and Hospital administrators.
- 100 Cancer patients receiving treatment.

Sampling Technique:

- Stratified random sampling for healthcare professionals.
- Simple random sampling for patient participants.

Data Collection Procedure:

Quantitative data from i) Structured questionnaires to hospital staff & ii) Patient experience data through standardized surveys.

Qualitative data through in-depth interviews with Senior oncology service providers & Hospital Administrators

VI. 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.

VII. Data Analysis Plan: The responses will be analyzed to assess the impact of facilitators and barriers on oncology service delivery. Collected data will be processed and analyzed using SPSS version 27, applying descriptive statistics such as means, standard deviations, and frequency distributions. Inferential statistical methods, including chi-square tests, t-tests, and regression analysis, will be used to determine associations between facilitators, barriers, and patient care outcomes. A p-value of less than 0.05 will be considered statistically significant.

VIII. Ethical Considerations:

Informed consent will be obtained from all study participants before data collection, ensuring voluntary participation. The anonymity and confidentiality of participant data will be strictly maintained, with all personal identifiers removed from the dataset. To ensure data security, all collected information will be stored in a protected database with restricted access, available only to authorized research personnel. Ethical guidelines will be followed throughout the study to uphold participant rights and data integrity.

IX. Implications of Research: This research will provide actionable insights on improving oncology service delivery at a quaternary care hospital in Kenya. It can be utilised to inform policy changes, optimize resource allocation, enhance patient satisfaction, and reduce clinician burnout.

X. References:

1. Friese CR, Manojlovich M. Nurse-Physician Relationships in Ambulatory Oncology Settings. J Nurs Scholarsh. 2012 Sep;44(3):258–65.

2. Lafferty M, Manojlovich M, Griggs JJ, Wright N, Harrod M, Friese CR. Clinicians Report Barriers and Facilitators to High-Quality Ambulatory Oncology Care. Cancer Nurs. 2021;44(5):E303–10.

3. Vargas JS, Livinski AA, Karagu A, Cira MK, Maina M, Lu YL, et al. A bibliometric analysis of cancer research funders and collaborators in Kenya: 2007–2017. J Cancer Policy. 2022 Sep;33:100331.