

**MINISTRY OF HEALTH POLICY BRIEF ON DISSEMINATION OF
GUIDELINES FOR EARLY DIAGNOSIS OF CHILDHOOD BRAIN
TUMORS IN KENYA**

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1. Background

Globally, the cancer burden is rising causing remarkable pressure on populations as well as pressure on health systems, (1, 2). The Sustainable Development Goals (SDGs) by the United Nations recommend a one-third reduction in the deaths caused by non-communicable diseases including cancer (3).

In Kenya, the third leading cause of death is cancer, after infectious and cardiovascular diseases (1). Cancer prevention and control require a holistic approach. This includes prevention, early diagnosis, treatment, palliative care, survivorship, monitoring, evaluation, and research (2).

2. Introduction

Brain tumors are the second most common tumors after Leukemia and the commonest solid tumors in children. Brain tumors are the commonest cause of cancer-related deaths in children (4). Late diagnosis of brain tumors in children is associated with poor outcomes (5). Currently, we do not have any existing local clinical guidelines for the early diagnosis of brain tumors. The use of clinical Guidelines in Kenya will help in early diagnosis, hence timely management and better outcomes of childhood brain tumors in Kenya. The Book is precise, it is written in a simplified language hence a quick reference for healthcare workers.

3. Development of the Guidelines

The process of guideline development constituted a series of steps and different levels of approvals both locally and internationally.

3.1 Summary of Clinical Research

Clinical research was conducted and findings were accepted at the University of Nairobi (UON) and Kenyatta National Hospital (KNH) (6).

KNH/UON institutional research ethics committee approved the study and consent were obtained. First, a cross-sectional study was done that involved children with brain tumors at KNH. Twenty-five signs and symptoms were recorded of which headache was the most common (75.4%). The Pre-Diagnostic Symptomatic Interval (PSI) ranged from one week to 3 years with a median of 3 months and a mean of 7.7 months. Only 18% of the patients were diagnosed within a month. The predominant reason for delayed diagnosis was a lack of awareness by the healthcare worker (59%). The results were used to formulate 25 statements for the second part of the study, the Delphi Survey. The Delphi Questionnaire was presented to Neurosurgeons and Pediatricians at

UON/KNH for professional expertise through the building of consensus. Eighteen (72%) of 25 statements in the Delphi Survey achieved consensus and were formulated into the guideline statements.

The study established the varied and complex presentation of CBT, delayed diagnosis as well as the predominant reason for delayed diagnosis being a lack of awareness of CBT by the healthcare worker. The process of development of the Guidelines was based on the high-quality level of evidence through a combination of a cross-sectional study and a Delphi Survey.

3.2 Scientific Conferences and Book Publication

- In 2017, the research results were presented and accepted at the Neurosurgery Division, University of Nairobi. The research work is published in the University research archives (6).
- In 2020, the research work was presented and accepted at the World Neurosurgery Scientific Conference hosted in the UK. The research is published in the Conference proceedings (7).
- The papers are also published in a peer-reviewed, American Journal (8,9).
- In 2021, the study was accepted and published in a book by an academic publisher in Europe. The book was subsequently printed in the UK (10).
- Later, the book was presented and accepted by neurosurgeons in Kenya; a team that included neurosurgeons at the Division of Neurosurgery University of Nairobi, KNH and Moi Teaching & Referral Hospital (MTRH), and other facilities in the country.
- The book was presented and accepted during the Surgical Society of Kenya (SSK) Annual Scientific Conference in 2021 (11).
- All the teams involved recommended the presentation of a policy paper to the Ministry of Health to facilitate systematic dissemination of the Guidelines in the country.

4. Conclusion

The Use of Clinical Guidelines will assist healthcare workers primarily to guide in the identification of the varied and complex presentations as well as guidance on imaging. This will enable early diagnosis and timely treatment hence better outcomes for children with brain tumors in Kenya.

The book is precise, portable, and written in a simplified language. This will promote use as a quick reference by healthcare workers in health facilities. The Guidelines can also be packaged in summarized formats such as wall posters, pocket cards, brochures as well as digital formats for wider coverage and effective utilization.

5. Recommendation

- Adoption of the Guidelines as a policy document.
- Dissemination of Guidelines to the Healthcare workers in the country especially in the county facilities where patients are reviewed before referral to neurosurgeons in the tertiary facilities.

6. Book Authors

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