

**Sigma's VIRTUAL 31st International Nursing Research Congress (Wednesday, 22 July - Friday, 24 July)**

## **Adult and Pediatric Patients Seeking Care for Neurological Disorders at a Tertiary Referral Hospital, Kenya**

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### **Purpose:**

The World Health Organization and the Global Burden of Disease Report 2016 suggested that neurological diseases are an important and growing cause of disability adjusted life years (DALYs), morbidity and mortality.<sup>1-3</sup> In Kenya, 70% of DALYs related to non-communicable diseases are due to neurological disorders, which increase the number of patients needing care in clinical settings.<sup>4</sup> Information about hospital-based epidemiology of neurological disorders is extremely limited in Kenya. Hospital-based studies are needed to identify such basic factors associated with these disorders as the population that seeks care for neurological symptoms, and to improve care outcomes. To evaluate the demographic characteristics of adult and pediatric patients seeking care for neurological disorders, we conducted a three-month (March 1st, 2019 through May 31st, 2019) cross-sectional survey of consecutive inpatients and outpatients seeking neurological care at Moi Teaching and Referral Hospital (MTRH) in western Kenya

### **Methods:**

The procedure to identify these patients included the following: (1) For inpatients, daily reviews of hospital admission records and daily inquiries in all wards where patients with neurological disorders were likely to be admitted. (2) For outpatients, all adult and pediatric patients attending the neurology clinic. We also identified deaths in this population due to neurological disorders during the study period. Data analysis methods included descriptive statistics and Wilcoxon Rank Sum test.

### **Results:**

We identified 1,355 patients seeking care at MTRH for neurological disorders.

*Adult population:* A total of n=870 patients (inpatients: n= 646; outpatients: n= 224) were adults with an average age of 46.1 (SD±19.7) years with 25% of them above the age of 60 years. A majority of them were men (n=526). In both inpatient and outpatient setting more men were seeking care for their neurological diseases than women (p<.0001).

Adults were predominantly from rural areas (74.8%), and traveled a mean distance of 85.8 kilometers to access health care. The most common diagnosis was stroke (hemorrhagic 16.8%; ischemic 18.3%), followed by epilepsy (34.2%) and traumatic brain injury (TBI) (25.8%).

*Pediatric population:* A total of n=485 (outpatients: n=338; inpatient n=147) were pediatric patients with an average age of 6.2 (SD± 4.4) years and 46.8% were below the age of 5 years. A total of n=276 children were male patients. Pediatric patients were mainly from rural areas (51%) and traveled an average distance of 53.6 kilometers.

Epilepsy was the most common diagnosis among pediatric population (88.8%), followed by meningitis.

*Mortality:* Forty-eight deaths due to neurological disorders occurred during the study period. Males (86%) accounted for the majority of adult deaths (n=36) and, females (75%) accounted for the majority of pediatric deaths (n=12).

**Conclusion:**

Neurological diseases carry a significant burden in western Kenya. Disparity of care between adult men and women were seen in that more men were seeking care in both inpatient and outpatient settings. Similar to other population-based studies from sub-Saharan Africa,<sup>5,6</sup> our study found stroke, epilepsy and TBI as the predominant neurological diseases among adult and epilepsy to be the most common diagnosis among children. The findings will support development of future research and interventions to improve patient outcomes

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**Title:**

Adult and Pediatric Patients Seeking Care for Neurological Disorders at a Tertiary Referral Hospital, Kenya

**Keywords:**

Adult and pediatric, Low and middle income countries and Neurological disorders

**Abstract Summary:**

To evaluate the demographic characteristics of adult and pediatric patients seeking care for neurological disorders, a three-month cross-sectional survey of consecutive inpatients and outpatients seeking neurological care at a tertiary referral hospital in Kenya was conducted. The findings will support development of future research and interventions to promote care outcomes.

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First Primary Presenting Author

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**Author Summary:** Dr. von Gaudecker is an assistant professor at Indiana University School of Nursing. Her research focuses on identifying cultural factors that contribute to treatment gap among people living with stigmatized neurological disorders in Kenya. This presentation reports the findings of the first survey study conducted among adult and pediatric patients who seek care for their neurological disorders at Moi Teaching and Referral Hospital in western Kenya

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**Author Summary:** Dr Kyololo is a lecturer in the department of Adult, Child and Mental Health Nursing at Moi University in Eldoret, Kenya. He also collaborates on several projects with nursing faculty at The University of Texas at Austin and Indiana University in Bloomington, Indiana, USA.

Third Author

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**Author Summary:** Dr. Buelow has worked with people with epilepsy for 30 years both clinically as a clinical nurse specialist and as a researcher. She has been funded by the Epilepsy Foundation, NIH, and PCORI to study self-management in people with

epilepsy, interventions for parents of children with a rare epilepsy and to study patient outcomes for people with epilepsy.