Background
Sickle cell disease (SCD) is the commonest monogenic haemolytic disorder in Africa. It continues to be a major public health burden. Newborn screening of SCD has been implemented in Kumasi, Ghana, since 1995 and SCD patients identified have been enrolled into the paediatric SCD clinic. The Sickle Pan African Research Consortium (SPARCo) which commenced in 2017 comprises of the Hub in Tanzania with two collaborating sites in Ghana and Nigeria has established a SCD patient consented database. Despite strides made in managing SCD, a significant proportion of patients are hospitalized from the various complications of the disease. This study set out to describe the main causes and outcomes of hospitalizations among paediatric patients with SCD at the Komfo Anokye Teaching Hospital (KATH) in Kumasi.

Methods
Prospectively, all patients in the database who were hospitalized over the 12-month period between April 2019 and March 2020 at the Pediatric Emergency Unit of KATH were followed up. Indications and outcomes of the hospitalizations were recorded. The data was exported to STATA/SE version 14.0 for analysis.

Results
A total of 201 hospitalizations were recorded over the period. Majority of the patients were males (57.2%, 95%CI: 50.1 - 64.2), in the age group 5-10 years (34.3%, 95%CI: 27.8 -41.3) and of phenotype SCD-SS (83.1%, 95%CI: 77.2 - 88.0). The common causes of hospitalization were VOPE (n=81, 40.3 %), ACS (n=52, 25.9 %), and infections (n=25, 12.4 %). Highest number of admissions was observed in November 2019 (n=34, 16.9 %) followed by June 2019 (n=25, 12.4 %). Six patients (3.0%, 95%CI: 1.1 - 6.4) died and the median (IQR) length of stay was 6 days (4-10). Comparing SCD-SS to SCD-SC, the case fatality was 2.5% and 0.5% respectively (p=0.985)

Conclusion
Vaso-Occlusive Pain Events (VOPE), Acute Chest Syndrome (ACS) and infections were observed as the most common causes of hospitalizations among the SCD patients.