

wait times exceed a reasonable period. Crowding typically involves patients being monitored in non-treatment areas (eg, hallways) awaiting ED treatment beds or inpatient beds. Crowding may also involve an inability to appropriately triage patients, with large numbers of patients in the ED waiting area of any triage assessment category." This issue of ED overcrowding becomes a serious issue, particularly in resource-limited emergency centers.

**Methods:** An ED overcrowding assessment questionnaire was prepared based on the conceptual model of Emergency Department crowding, and was used to assess particular causes of ED crowding. A well validated NEDCOCS (National Emergency Department Overcrowding Score) tracking tool was used to assess NEDCOS level of a particular ED.

**Results:** Micro-level causes of ED Overcrowding Summary Table. Average NEDCOS score for one month is 141-180/ Severe Overcrowding.

**Conclusion:** Physical capacity of ED and hospital should be increased. Hospitals should have added express admission units.

Causes of overcrowding	Percentage
Those patients who need emergency care in the ED (seriously ill and injured).	1.5%
Unscheduled urgent care patients in the ED (patients from follow up clinics with acute problems).	34%
Safety net care patients in the ED (patients having barriers even for unscheduled care).	0.5%
Throughput component as a cause of crowding (includes patient length of stay in the ED as a potential contributing factor to ED crowding).	31%
Output component as a cause of ED crowding (involves disposition of ED patients).	33%

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### "No Bed Syndrome": Unmet Demand for Hospital Beds in the Emergency Department (ED) of Komfo Anokye Teaching Hospital (KATH)

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**Study/Objective:** To determine the trend of bed usages in the Emergency Department of KATH.

**Background:** The issues of ED bed management are problems of the health sector and to determine if bed usage trends are important for planning and effective management of an ED.

**Methods:** A quantitative, non-interventional, cross-sectional method was used to collect data on the times for all the major events in the ED, and the number of free beds in the main wards for all patients presenting in a 4-weeks duration.

The data from the time series and mobile application were entered into a Microsoft Excel Module to determine the averages of the demand, discharge, free beds, and admissions in 24 hours.

**Results:** The results showed an increased demand for beds with multiple peaks: from 0700hrs-1200hrs, 1500hrs to 1600hrs, and 1800hrs to 2000hrs. There are similar times for the discharge and admission to the ward. All values decline from 22hrs toward 00:00 hrs. Although there are demands from 0000hrs to 0700hrs, there are virtually no discharges and admissions during these periods. The free beds had a steady rate across all hours of the day, but have no corresponding response to the pattern of admissions to the wards;  $r=0.16$  (weak correlation).

**Conclusion:** The trend of bed usage is important for planning, and can be a tool to determine the number of staff per shift and reduce ED overcrowding.

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### Overcrowding in a Low Resource Emergency Setting in West Africa: Perceptions by Health Workers in the Accident and Emergency Center, Komfo Anokye Teaching Hospital (KATH) Kumasi, Ghana

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**Study/Objective:** To assess the health workers' perception of overcrowding in the Emergency Department (ED).

**Background:** Emergency Department (ED) overcrowding is gradually becoming a growing trend in many hospitals worldwide. ED overcrowding has negative effects on the quality of patients' care. It increases staff stress and produces poor work satisfaction among health workers. KATH ED receives an average of 84 patients daily with overcrowding and long boarding hours being challenges.

**Methods:** A cross-sectional study which recruited 110 ED health care workers using systematic random sampling was carried out for three months in 2015. Structured questionnaire-based interviews which were pretested and validated were administered. Analysis was done using Epi Info 7 by the CDC.

**Results:** Of the 110 health workers, 59 (53.64%) were nurses and 51 (46.36%) were doctors. Females were 52 (47.27%) and males were 58 (52.73%). The perceived average waiting time of a patient to see a physician at the ED was 30 minutes. 24.54% thought the afternoon shifts were congested. Inappropriate referrals (59.63%) and delays in getting radiological imaging (49.07%) were the main perceived causes of overcrowding. The negative effects of overcrowding on health workers included increased staff stress (71.03%), poor work satisfaction (57.41%), and increased margin of errors (32.41%). 95% said that overcrowding in the ED contributed to poor patient outcome by increasing staff exhaustion (40.37%) and compromising quality of patient care (36.70%). Health personnel strongly agreed that equipping district hospitals to handle non-emergency cases (77.78%), appropriate referral system (75.93%), and provision of adequate logistics and