

Emergency department (ED) overload: are we waiting for it to explode?

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ABSTRACT

Introduction: The emergency department (ED) has long been recognized as one of the hospitals' primary gateways. The yearly increasing trend of patient load contribute to the overcrowded ED and has been a main concern within the Ministry of Health as well as among the ED healthcare providers throughout the country. This scenario may result in hospitals being unable to cope with patient loads and end up finally boarding their inpatients in ED. Access block is defined as the situation where patients are unable to gain access to appropriate wards within a reasonable amount of time, no greater than 8 hours. **Methodology:** Primary data from ED of selected hospitals in Peninsular and East Malaysia were collected with exclusion of direct admission maternal and paediatrics cases from other health facilities. **Results:** Based on the sampled hospitals, 47.6%-62.6% of the total admission through ED suffer accessed block. Non-state hospitals had higher prevalence of access block (46.4%) where their patients faced excessive delay in access to appropriate inpatient beds, as compared to 38.1% patients in state hospitals. Congested wards is the main contributing factors (90%) and followed by unavailable beds due to discharged patients' delayed departure (8%). General Medicine department recorded the highest incidence of access block (82.8%) followed by General Surgery (10.3%) and Orthopaedic department (6.6%). **Conclusion / Discussion:** Non-state hospitals recorded higher magnitudes of access block due to relatively smaller hospital, hence smaller wards, fewer staff and constantly overburdened. The common factor leading to access block is ward congestions due to hospitals suffering from high bed occupancy rate (BOR) resulted from high patient volume. This vicious cycle will inevitably result in the inability of ED to cope with the patient loads. Thus, the problem might escalate and access block will be a common situation in many ED in major Malaysia public hospitals.

KEY WORDS:

Access Block, Emergency Department, Adult Inpatients

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Estimation of 24-hour sodium and creatinine excretion from spot urine samples

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ABSTRACT

Introduction: Although 24-hour urine sodium (24HUNa) collection is the 'gold standard' to estimate population sodium intake, spot urine (SU) sodium has increasingly been used as a convenient and affordable alternative. This study aimed to assess the accuracy of predicting 24HUNa and creatinine excretion from a single SU sample using two published formulae. **Methodology:** This cross-sectional study involved 1027 staffs aged 18-59 years old who worked in 16 Ministry of Health state health departments and research institutes. Data collection was conducted from November to December 2015. Participants voided the first urine and collected 24-hour urine (24HU) until the first urination of the following morning. SU was collected as the second urination after completing the 24HU collection. The 24HUNa and creatinine excretion was predicted using equations developed by Tanaka (2002) and Kawasaki (1993). Correlation between the predicted 24HUNa and creatinine, and the actual 24HUNa and creatinine excretion was assessed. **Results:** The Kawasaki equation (4487.3 mg/d) predicted the sodium excretion higher than the Tanaka equation (3439.9 mg/d). Both equations overestimated the measured 24HUNa collection (2860.1 mg/day). Correlation analysis showed a significant and fair relationship between the measured 24HUNa and the predicted urine sodium; Tanaka ($r=0.319$), Kawasaki ($r=0.334$). The correlation between the measured 24HU creatinine and predicted 24-hour creatinine indicated a moderate and stronger association, Tanaka ($r=0.41$); Kawasaki, ($r=0.38$; male), ($r=0.40$; female). **Conclusion:** As a conclusion, the weak correlation between the first morning spot urine with the measured 24HUNa suggested a different spot urine collection time to present a stronger correlation of sodium intake.