Methodology: The tool utilizes a thorough investigative process that can be used to produce credible and practical data and presented based on patients' responses to an emergency department users' questionnaire.

(A80) Nationwide Study to Improve Door-to-Balloon Times in Patients with Acute ST Elevation Myocardial Infarction Requiring Primary Percutaneous Coronary Intervention Using Prehospital ECG Transmission

Objective: To reduce nationwide door-to-balloon times (DTB) in patients presenting with acute ST-elevation myocardial infarction (STEMI) requiring primary percutaneous coronary intervention (PCI), by adoption of pre-hospital wireless 12-lead electrocardiogram (ECG) transmission by Singapore's national ambulance service.

Methods: A phased, prospective, before-after, interventional study of all patients who presented to the national ambulance service with the diagnosis of STEMI. In the 'Before' phase, chest pain patients only received 12-lead ECGs on arrival at the Emergency Departments (ED), where diagnosis of STEMI could be made. In the 'After' phase, 12-lead ECGs were performed in the field by ambulance crews and transmitted while en-route to the hospitals. Diagnoses of STEMI were made on-duty emergency physicians (EP) prior to patients' arrival and PCI activated. Data was collected from ambulance run sheets, ECG transmission logs, EDs and cardiology units.

Results: 451 eligible patients from “Before” and 214 patients from “After” phase were included in the analysis. Median DTB time was 88 minutes in the “Before” and 52 minutes in the “After” phase (p = 0.0001). During office hours, median DTB times for ‘Before’ and ‘After’ phases were 84 minutes and 47 minutes, respectively (p = 0.0001). After office hours, median DTB times for ‘Before’ and ‘After’ phases were 95 minutes and 54 minutes, respectively (p = 0.0001). There were 11 false positive activations in “Before” phase and one in the “After” phase.

Conclusion: Pre-hospital ECG transmission resulted in significant reduction of DTB time; this effect occurred regardless of whether patients presented to the ED before or after office hours. No increase in false activations was found in the “After” phase. Pre-hospital ECG transmission should be adopted as “standard of care” for all STEMI cases meeting the criteria for PCI.

(A81) Curing Overcrowding and Boosting Patient Flow in a High Volume, Low Capacity Emergency Department

Background: Overcrowding afflicts emergency departments (ED) worldwide. The CDC has reported that EDs in the...