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Strategies for improving door-to-ECG time in acute coronary syndrome patients: Bumrungrad International Hospital

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Objective: To improve door-to-ECG time for achieving door-to-ECG time within 8 min in ACS patients.

Background: Target ACS is a hospital quality initiated by setting challenging target for achieving the door-to-ECG time within 8 min in ACS patients (The goal standard of door-to-ECG time benchmark is < 10 min). Our hospital's STEMI Subcommittee has recognized the importance of improving door-to-ECG time because the benefit of a rapid initial ECG results can lead to rapid reperfusion.

Methods: This study was conducted at Bumrungrad International Hospital, Thailand. This hospital has 580 in-hospital beds and the emergency cardiac catheterization is available 24 hours. Multi-component strategies are as follows. (1) Infrastructure is provided in an especially high-risk area for heart attack in hospital to facilitate early identification of critical arrhythmias such as ECG monitoring, fast track communication, etc. (2) A standardized annual education program is developed to ensure ongoing competency in ECG acquisition skill to identify STEMI patients in the field. (3) A dedicated quality assurance process is provided to monitor performance of the STEMI bypass system. (4) A real time dashboard is applied to monitor STEMI performance and for gap analysis based on a comparison of current practice and best practice to develop the consensus recommendations for improvements in the management of STEMI patients in hospital.

Results: A total of 257 patients were included in the study; 112 before (Jan. to Dec. 2014) and 145 after the intervention (Jan. to Dec. 2016). Before the intervention, 48% received an ECG in 8 mins or less. After the intervention, 97% met the time requirement. A mean difference was at 49%. The mean (min-max) time from door-to-ECG decreased by 4 (1, 7) mins after the intervention.

Conclusion: The overall percentage of patients with a door-to-ECG time within 8 min improved without increasing staffing.

Biography

Porawan Bunleng completed her Graduation at Faculty of Nursing, Khon Kaen University. She has 15 years of experience in Nursing and eight years of experience at Heart Center, Bumrungrad International Hospital. She has an experience of Supervising and Overseeing the Nursing department to meet the specified goals; controlling service standards; administering the organizational and personnel works and managing the medical supplies to meet the policy; reviewing administrative process and procedures to achieve efficient results.

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