

Call It In The Field: Stroke Pre-alert and Direct to CT Sentara Williamsburg Regional Medical Center QI Project Assists Acute Stroke Process



Barbara Runk MSN, RN, ACCNS-AG, CCRN; Shannon McDonnell MD; Janet McCoig BSN, RN;
Maureen Green MHA, RTRM, CRA; SWRMC EMS Collaborative

sentara nurse



Background

The American Heart Association and American Stroke Association released TARGET STROKE Phase II and Eleven Key Best Practice Strategies in October 2014. The first of these key strategies is Emergency Medical Services (EMS) Pre-Notification. The aim of this strategy is to reduce time to brain imaging, reduce door-to-needle times and increase the number of eligible patients treated.

In February 2017, the proposal to develop a protocol for moving patients directly to computerized tomography (CT) from Emergency Department (ED) arrival was presented to the stroke committee by Dr. McDonnell, the ED physician stroke lead.

Concurrently a process had been established with local EMS to begin drawing blood specimens after establishing IV access.

A small subgroup of the stroke committee comprised of the ED physician stroke lead, ED manager, stroke coordinator and manager of Imaging worked on establishing an interdisciplinary team process for pre-activation of the stroke alert and moving the patient directly to CT.

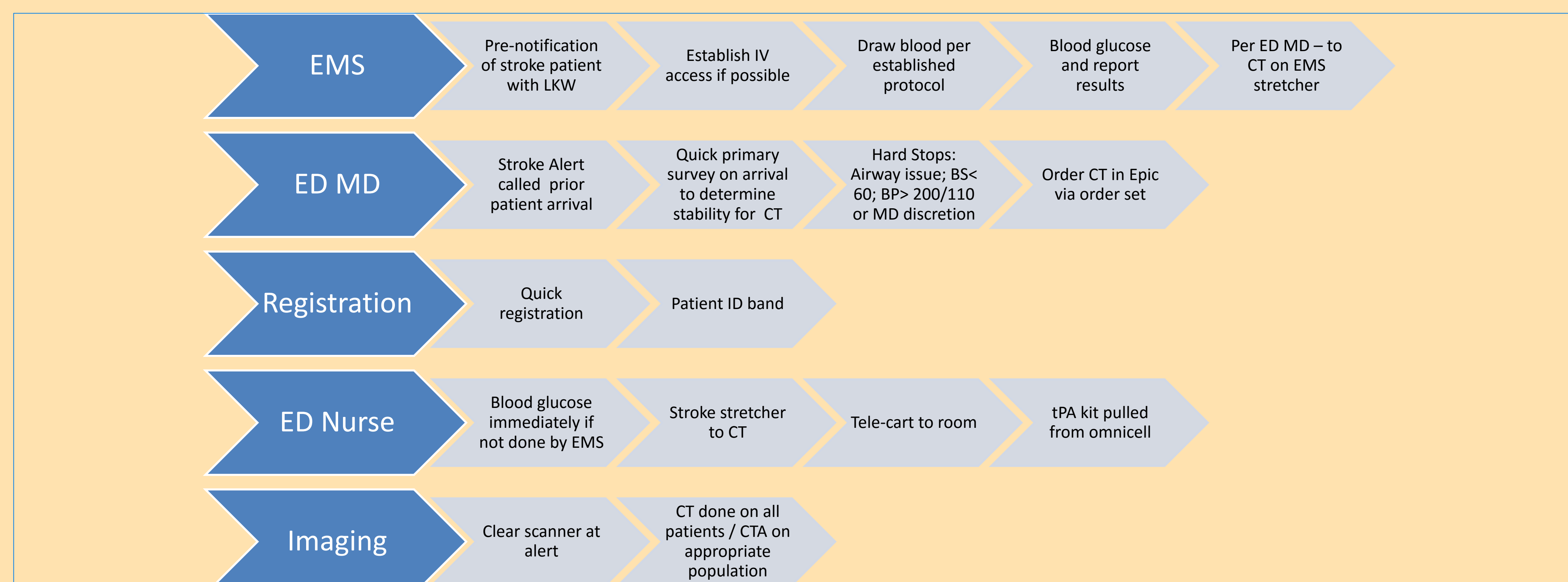
Goal

The goal of this project was to establish and implement a process for pre-alert of stroke patients by EMS in order to take the patient directly to the CT scan. Reduction in the Door to CT time of stroke alerts could ultimately impact Door to Needle (DTN) times and improve time to decision and treatment.

Methods

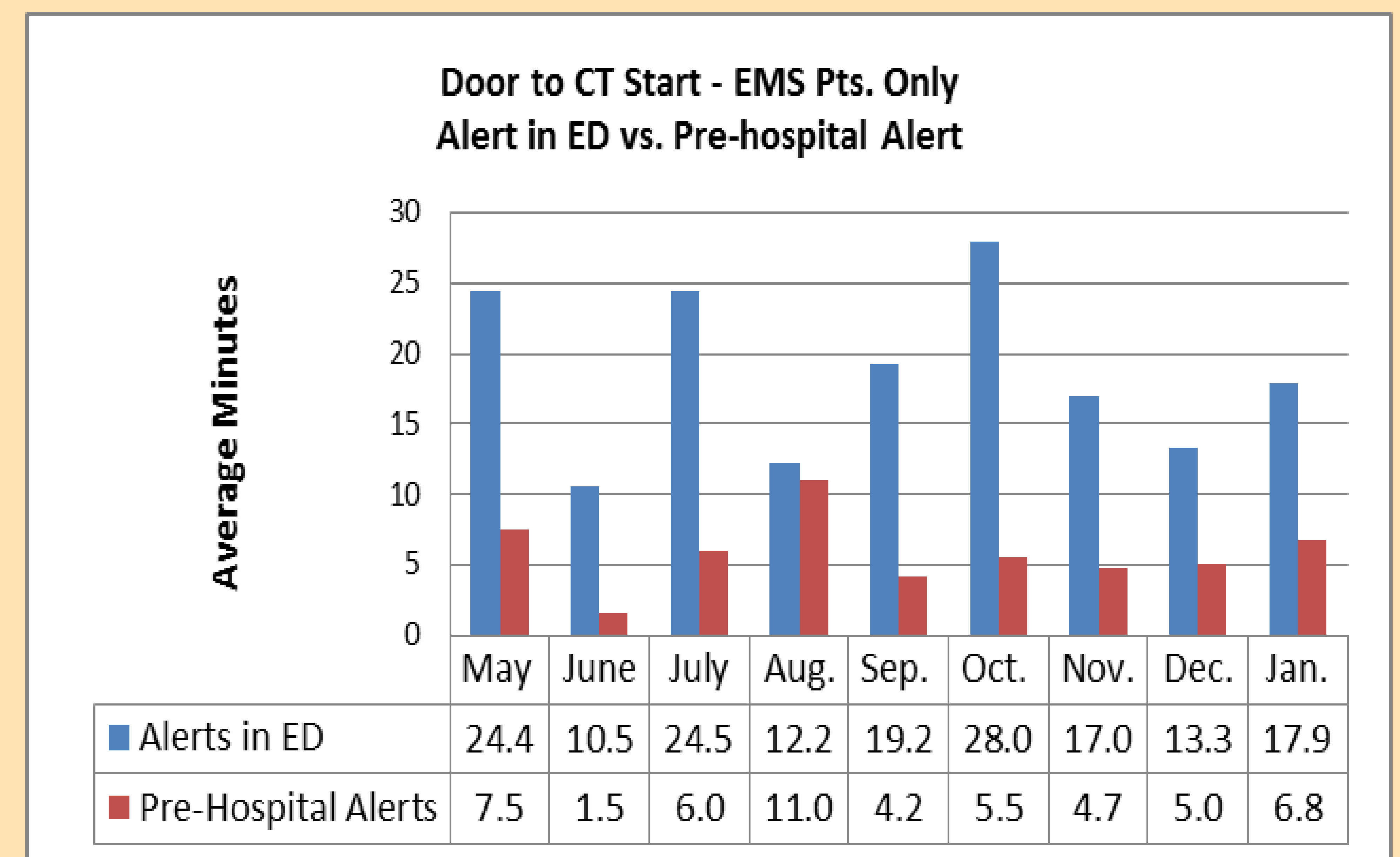
The proposed process was presented to the ED physician group and the EMS collaborative in April with an expected rollout of May 1, 2017.

Below is the SWRMC Direct to CT Parallel Process Protocol



Results

The chart below displays average time in minutes of stroke alert patients that arrived by EMS from May 2017 through January 2018. The blue bar is the average time for EMS patients that were alerted once arriving to the ED. The red bar is the average time for the EMS patients that were alerted in the field. The time saved from ED arrival to CT ranged 1.2 minutes in August to 22.5 minutes in October.



The chart below is the average Door to Needle times for EMS patients with pre-alert, ED alerts and patients that did not arrive by EMS. Though DTN was not impacted greatly by pre-alert, the process was successful and will build on further process improvements for reduction in DTN and additional stroke treatments.

