MEWS and the Automated Download Of Vital Signs: Improving Patient Safety by Implementing Technology at the Bedside
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Failure to Rescue
- The term Failure-To-Rescue [FTR] refers to cases where hospital doctors, nurses or caregivers fail to notice symptoms, or respond adequately or swiftly enough to clinical signs, when a patient is dying of preventable complications in a hospital. (Retrieved from http://medicalexecutivepost.com/2008/04/16/failure-2-rescue-patients)
- Patients show evidence of a deteriorating condition on average six to eight hours before cardiopulmonary arrest occurs.
- What if there was a scale or device to help the nurse in her clinical assessment to warn of a subtle change in status?

Modified Early Warning System - MEWS
- What is MEWS? MEWS is an early warning system that trends a deteriorating condition well before a possible arrest occurs.
- A three year study was conducted in the United Kingdom and United States validating that an increase in MEWS increased the probability of transfer to the ICU or death. This study included 2,974 patients.
- How is the MEWS calculated? Combination of Vital Signs and Level of Consciousness (LOC)
  - Heart rate, blood pressure, respiratory rate, and temperature
  - LOC choices include awake, reacting to voice, reacting to pain or unresponsive

Examples of MEWS Displays in the EHR

Using Bedside Devices to Enter the MEWS
- For MEWS to be most effective, the score must be calculated and available to caregivers and providers in a timely manner.
- Healthcare Corporation of America (HCA) has embarked on an ambitious project to utilize the Modified Early Warning System (MEWS) with bedside technology using the Capsule Tech Vital Sign Neuron

Utilization Audits of the Bedside Devices
- For the MEWS to be effective in catching subtle changes, the bedside equipment needs to be fully utilized by staff.
- HCA has created dashboards for the bedside devices that display numerous levels of utilization and performance. These dashboard’s include but are not limited to:
  1. Enterprise utilization
  2. Division-level utilization
  3. Facility-level Utilization
  4. Nurse utilization
  5. Device usage
  6. Battery activity/charge rate

Current/Future Data Collection
So the data collection begins!
- HCA is now collecting data on all codes in medical/surgical areas from all hospitals within the company. The data collection will look at MEWS scores four, eight, and twelve hours prior to the code.
- PEWS – The Pediatric Early Warning System is now being implemented throughout the company with plans to collect similar data. Implementation is during the summer of 2013.
- MEWS is now a required field on the Code Blue and Rapid Response form.
- MEWS is now included in the daily bed control meetings with the nursing supervisor.

References