Transforming the Rapid Response Process

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Introduction

Missed Rapid Response Team opportunities and generating effective call volumes are challenging.

A proactive , collaborative, nurse driven Rapid Response system improves outcomes. Missed opportunities are costly to patients and hospitals. Measuring the effectiveness of Rapid Response systems is difficult. Our process transformation yielded measurable outcomes and positive results including decreased unplanned transfers to ICU and decreased code blue events outside of ICU.

Materials and Methods

This was a comparative study utilizing data collected for one year prior to the implemented change and for one year following the change. The process change revolved around implementation of an active ongoing surveillance of all adult in-patients outside of critical care areas.

The process involved the following:

- Dedicating an experienced Critical Care RN to perform visual surveillance of the electronic medical record each shift in search of pre-determined vital sign triggers which included SIRS criteria
- Sepsis screening supplemented current clinical triggers
- Active rounding with bedside visits to all previous RRT patients and transfers out of ICU Q12 hr shift x 2 shifts
- Continued availability of the RRT team for primary care RN initiated calls
- One phone extension dedicated to directly reach the RRT RN
- 24/7 staffed position
- Ongoing walking rounds of all nursing units to promote access, remind staff of RRT presence and enhance visibility of the Rapid Response Team.

Materials included:

Electronic Medical Record with view all adult in – patient access, dedicated computer terminal, dedicated RN FTE, tracking form, wireless phone and a dedicated phone extension for direct access.

Prior to initiation of the process change, house wide staff education occurred via staff meetings, email updates, newsletters and posted flyers alerting staff to the changes and staff role expectations.

To evaluate the results and effectiveness of the program change, it was decided to focus on the following measurable elements:

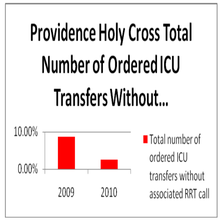
- Number of codes per 1000 discharges
- Number of urgent intubations (Adult Respiratory Compromise /ARC events)
- Number of unplanned transfers to Critical Care without RRT activation
- Total floor codes preceded 8 hours before by a clinical trigger without RRT activation
- Total RRT calls per month
- # RRT calls per 1000 discharges
- % calls occurring due to RRT RN screening vs Primary RN initiated

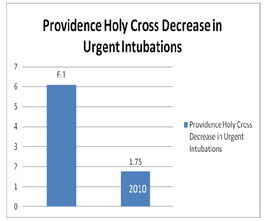
A call was included in the count if either the RRT RN performed an intervention after detection on any patient or the call was a primary activation by the bedside RN.

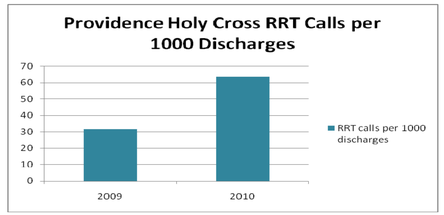
Ongoing RRT Team building was essential.

Results

Outcomes:







Our program changes benefitted the patients, nursing and the medical staff.

- Cardiopulmonary Arrests outside of Critical Care Department per 1000 discharges decreased from 1.44 in 2009 to 1.23 in 2010. This translates to 3.8 lives saved.
- Hospital-wide Cardiopulmonary Arrests (including Critical Care) per 1000 discharges rate decreased from 5.63 in 2009 to 4.64 in 2010. This translates annually as 17 lives saved in 2010.
- ICU transfers as a result of RRT call volume decreased from 25.4% in 2009 to 10.4 % of call volume in 2010.
- 7.6% of RRT volume was the result of the RRT RN trigger identification. Ongoing visibility and vigilance of RRT RN rounding raises awareness of the program and promotes utilization, hence earlier interventions reaching patients.
- Call volume increased from 31.5 /1000 discharges to 63.3/1000 discharges
- Physicians joined the effort and called the RRT for assistance with patient concerns.

Conclusions

An RRT model that promotes primary RN activation combined with an active surveillance program using the electronic medical record generates increased utilization with fewer missed opportunities. This model further reduced emergent events and resulted in beneficial patient and facility outcomes. Increased focus on higher risk populations further reduces unplanned ICU transfers and urgent/emergent events outside of the ICU setting.

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Acknowledgement

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