Comparison of Medical Rapid Response Team (RRT) Calls Before and After Adding Acute Care Nurse Practitioner (ACNP) Leadership

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Abstract

RRT’s are dispatched to rescue patients deteriorating outside the ICU with little data regarding impact of team composition on actions and outcomes. In 2011, ACNP’s began to lead the MICU RRT at Vanderbilt. We hypothesized that adding an ACNP leader would increase efficiency, improve communication, and increase survival to hospital discharge among patients subject to RRT calls. We compared interventions and outcomes from 350 MICU RRT calls led by staff nurses (Jan-Dec 2010) with 909 MICU RRT calls led by ACNP’s (Jan 2011-Aug 2012) using a RedCap QI database. Data are proportions and mean ± std unless noted.

Methods

• Comparison of interventions and outcomes of 350 MICU RRT calls led by staff nurses (Jan-June 2010) with 909 MICU RRT calls led by ACNP’s (Jan 2011-Aug 2012)
• RedCap QI database.
• Data shown as proportions, & mean +/- std unless noted.
• GraphPad Chi-square & Students t-test

Results

Rate and Participants in Primary Team Communication

<table>
<thead>
<tr>
<th>Call Characteristics</th>
<th>2010 RN led RRT’s (N=350)</th>
<th>2011-2012 ACNP led RRT’s (N=909)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (yrs.)</td>
<td>58 ± 17</td>
<td>58 ± 18</td>
<td>0.980</td>
</tr>
<tr>
<td>Female (%)</td>
<td>53%</td>
<td>49%</td>
<td>0.187</td>
</tr>
<tr>
<td>Nights (%)</td>
<td>49%</td>
<td>47%</td>
<td>0.529</td>
</tr>
<tr>
<td>Weekends (%)</td>
<td>29%</td>
<td>25%</td>
<td>0.133</td>
</tr>
<tr>
<td>Call length (min)</td>
<td>33 ± 24</td>
<td>30 ± 5</td>
<td>0.004</td>
</tr>
<tr>
<td>&gt; 1 RRT call</td>
<td>20%</td>
<td>19%</td>
<td>0.690</td>
</tr>
</tbody>
</table>

Rationale

• Rapid response teams (RRTs) are dispatched to rescue patients deteriorating outside the ICU.
• There are few data regarding the effect of team composition on actions or outcomes.

Hypothesis

The addition of an Acute Care Nurse Practitioner team leader to a medical rapid response team would:
• Increase efficiency
• Improve communication
• Increase survival to hospital discharge

Summary / Conclusions

ACNP RRT call leader ship was associated with:
• Increased monthly call volume
• Increased diagnostic testing and intervention
• More education of patients, families and nursing staff
• Increased communication with primary teams
• Shorter calls
• Similar rate of pt’s with > 1 RRT / hospital stay
• Similar rate of survival to hospital discharge