Raising the Bar: Advancing Nursing Skills Through Collaborative Education

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CLINICAL PROBLEM
- Historically, clinical competencies were evaluated and reinforced through high cost education days that yielded poor performance outcomes for high-skill, low-frequency nursing competencies.
- Annual education days as a mode of evaluation and reinforcement result in clinical mastery only for the educator and staff remain below proficient levels of performance.
- A needs assessment demonstrated the opportunity to develop unit-based experts at high-skill, low-frequency nursing competencies.
- Nursing leadership sought to create an environment where high performance standards were the expectation amongst colleagues.

BACKGROUND
- Level 1 Trauma Center in Los Angeles
- 108 ED Nurses
- 2017: 1383 trauma patients, 194 critical trauma activations

EQUIPMENT
- Belmont® Rapid Transfuser is used to administer large amounts of blood products to trauma patients at a rate of 500ml/minute.
- Arterial lines are used for invasive continuous arterial pressure monitoring on patients who need higher level of hemodynamic monitoring.

CLINICAL QUESTION
Would the establishment of a committee comprised of clinical nurses responsible for providing quarterly education on high-skill, low-frequency competencies improve overall staff performance and serve as an effective alternative to annual education days?

INTERVENTIONS
- An Education Committee was formed comprised of 10 staff nurses with a demonstrated interest in clinical excellence, invited by the department’s Clinical Educator.
- The stated objective for the committee was to select high-skill, low-frequency competencies deemed vital for maintaining a safe patient environment and improve overall staff ability to perform them independently.
- Every member of nursing staff, under observation by a committee member or the Clinical Nurse Educator, is to practice performing Belmont® rapid transfusion and arterial line setup, once per quarter, for a 12 month period.

OUTCOMES MEASURED
- Belmont® Rapid Transfuser setup was timed for speed.
- Staff were surveyed regarding frequency of arterial line practice with committee member and use in patient care.
- Cost analysis of annual education day compared to quarterly unit based teaching by education committee members.

RESULTS

MEDIAN TIME TO SET-UP BELMONT TRANSFUSER

<table>
<thead>
<tr>
<th>Quarter, 2018</th>
<th>Median Time (minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>3.5</td>
</tr>
<tr>
<td>Q2</td>
<td>3.0</td>
</tr>
<tr>
<td>Q3</td>
<td>2.5</td>
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</tbody>
</table>

SEMIA-NNUAL ENCOUNTERS WITH ARTERIAL LINE

<table>
<thead>
<tr>
<th>Year</th>
<th>Patient Care</th>
<th>Practice Setup</th>
</tr>
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<tbody>
<tr>
<td>2018</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>2017</td>
<td>0</td>
<td>4</td>
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</tbody>
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RESULTS (continued)

LIMITATIONS
Limitations include the potential inaccuracies related outcome measurements. Arterial line set-up and management was self-reported in a single survey that required staff to estimate the number of times they set-up or managed an arterial line in 2017 and the number to date in 2018. Set-up of the Belmont® Rapid Transfuser was timed by the staff committee member reviewing the procedure and potentially had variance between assessors. Outcome measurements were collected on a subset of the total staff, as available at time of publication. Surveys returned may represent a sampling bias that over-represents the most motivated staff members. Belmont® Rapid Transfuser times may also represent a sampling bias as it possible that more motivated staff sought out educational opportunities with their peers. A total of 23 surveys were collected and 16 times were recorded.

CONCLUSION
Implications for nursing practice: Our results show a decrease in Belmont® Rapid Transfuser set up times and increase in use of arterial line set up. Competency and proficiency in both these skills can prove to be life-saving in a trauma environment. By utilizing a committee comprised of clinical nurses responsible for providing quarterly education on high-skills, low frequency competencies our department was able to increase efficiency, increase staff satisfaction and decrease cost.