Enhancing Patient Safety: Examining Factors Associated with Recovery of Medical Errors by Medical Surgical Nurses

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- 98,000 deaths result from medical errors
- 33% of hospital admissions experience a medical error
- 70% of these errors are preventable
- $37 billion annually could be saved by preventing medical errors
Human error cannot be completely eliminated.

James Reason

Co-existing health concerns were improperly addressed;
(long-standing and necessary psychiatric medications were not reordered or an unnecessary delay in ordering nutrition for a cachectic patient)

1. None
2. Once
3. 2 to 5 times
4. More than 5 times

Medical Error Recovery Process

Identification → Interruption → Correction
Question

Vital signs were interpreted incorrectly in guiding treatment decisions; (e.g. not recognizing potential danger in a set of slowly changing vital signs; not interpreting changing clinical signs in the context of a potentially developing cardiac complication)

1. None
2. Once
3. 2 to 5 times
4. More than 5 times

Variables

IV
Nurse Characteristics
• Age
• Hospital tenure
• Specialty tenure
• Education
• Expertise
• Certification
• Personality

DV
Recovered Medical Errors

Organizational Characteristics
• Magnet designation
• Workload
Sample

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>168</td>
<td>91.3</td>
</tr>
<tr>
<td>Fulltime</td>
<td>154</td>
<td>83.7</td>
</tr>
<tr>
<td>Staff Nurse</td>
<td>96</td>
<td>52.2</td>
</tr>
<tr>
<td>12 hour</td>
<td>138</td>
<td>75</td>
</tr>
<tr>
<td>Certified</td>
<td>76</td>
<td>41.3</td>
</tr>
</tbody>
</table>

Magnitude

<table>
<thead>
<tr>
<th>Population</th>
<th>Recovered Medical Errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Care Nurses</td>
<td>1 error /week</td>
</tr>
<tr>
<td>Perioperative Nurses</td>
<td>11 errors / case</td>
</tr>
<tr>
<td>Medical – Surgical Nurses</td>
<td>1 error per week</td>
</tr>
</tbody>
</table>

Results

Significantly associated with medical error recovery:

- **Education** ($p = 0.001$),
- **Expertise** ($p = 0.003$),
- **Workload** ($p = 0.028$)
Baccalaureate level nurses were 1.5 times more likely to recover errors than non-university prepared nurses.

Expert nurses were 4.1 times more likely to recover errors than novice nurses.

Question

How do you identify an expert?

1. Years of nursing experience
2. Peer recognition
3. Seniority on the unit
4. Self-described
Take-Aways

1. Measure and articulate the hidden value of nurses
2. Consider nurse characteristics when staffing
3. Consider organizational factors when staffing
4. Create opportunities to transfer knowledge

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