Impact of Implementing the Geriatric Resource Nurse Model on Fall and Hospital Acquired Pressure Ulcer Rates, and Length of Stay in Older Adults in an Acute Care Hospital

Kmiecik E., MSA, RN, DNP student, GWU; Guzzetta C., PhD, RN; Brown MM., DNP, RN; Zhou Q., PhD, RN; Sameer D., MS

Background
Older adults are at high risk for adverse care outcomes, such as injuries from falls, hospital acquired pressure ulcers (HAPUs), and prolonged length of stay (LOS). Available evidence suggests outcomes may improve when older adults are cared for by healthcare providers with competence in geriatrics.

Objectives
To examine the effects of GRN model implementation on fall and HAPU rates, and LOS in older adults in medical-surgical and cardiac units in an acute care hospital.

Methods and Analysis
Design: A retrospective chart review of two different samples (before and after) was conducted in this study to measure fall and HAPU rates, and LOS before and after implementation of the GRN model
Sample: A convenience sample was used and data from N=1176 charts (609 in the before and 567 in the after intervention group) was reviewed
Intervention: Prior to start of this study, the GRN model was implemented on three medical-surgical units and one cardiac unit in an acute care hospital with educational and mentoring activities constituting the core of the intervention

Procedures: • 90 self selected RNs on the four units completed the web based geriatric education course and received GRN certificates

Results
• Total number of falls was 24 (2.0%) with 13 (2.1%) before and 11 (1.9%) after intervention group
• Total number of HAPUs was 26 (2.2%) including 18 (3.0%) before and 8 (1.4%) after intervention group
• LOS ranged from 1-71 days. LOS mean for total population was 5.14 (SD=5.10), with a mean of 4.88 (SD=4.71) before and a mean of 5.41 (SD=5.49) after intervention
• There were no statistically significant differences in fall (x²=0.06, p=0.81) and HAPU (x²=3.24, p=0.07) rates or LOS (t=-1.78, p=0.07) before and after the intervention (see Table 1)

Conclusion
Our findings did not identify significant differences in fall and HAPU rates, and LOS before and after the intervention. These findings may be a result of inconsistencies in the institutional application of a systematic approach to geriatric care.

Clinical Implications
• To ensure standardization of care and its quality, healthcare institutions should learn environment and assume responsibility for supplying a workforce environment in geriatric care
• New outcome measures, more representative of nursing service, and measuring methodology should be identified
• Nursing service research should be conducted to measure the impact of the geriatric education on nursing service sensitive outcomes

Tables and Figures
Table 1. Comparison of outcomes variables before and after the GRN intervention

<table>
<thead>
<tr>
<th>Outcome Variable</th>
<th>Total</th>
<th>Before Intervention Group</th>
<th>After Intervention Group</th>
<th>Statistic</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>24</td>
<td>13.9 (2.1)</td>
<td>11.1 (1.9)</td>
<td>X²=0.06</td>
<td>0.81</td>
</tr>
<tr>
<td>HAPU</td>
<td>26</td>
<td>18 (3.0)</td>
<td>8 (1.4)</td>
<td>X²=3.24</td>
<td>0.07</td>
</tr>
<tr>
<td>LOS (days)*</td>
<td>5.14</td>
<td>4.88 (4.71)</td>
<td>5.41 (5.49)</td>
<td>t=-1.78</td>
<td>0.07</td>
</tr>
<tr>
<td>Range</td>
<td>1-71</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*For LOS, one patient stayed 127 days that was an outlier, and was removed from analysis.

Graph 1. Geriatric Resource Nurse skills training

Limitations
• Retrospective chart review of this research project did not guarantee data integrity because of our lack of control over the data entry, which may have influenced the study outcomes
• During the study period, the institution did not utilize standardized HAPU documentation and reporting procedures, possibly leading to the HAPU incidence underreporting
• Utilization of primary diagnosis instead of Disease Related Group (DRG) codes, opened opportunities for an error in interpreting or categorizing data
• Non-probability convenience sampling offered a risk of sample bias resulting in oversampling of both female gender and unit type
• Because of study limitations caution should be used in generalizing the findings of our study to other populations or settings

References

Contact: Ella.Kmiecik@gmail.com

The Journal of Nursing

Nursing