INTRODUCTION

Falls in frail elderly have been recognized by Centers for Medicare & Medicaid Services (CMS) as a focus for research to reduce morbidity, mortality, and health care costs in this population. Falls in frail elderly age 65 and older in LTCF can result in temporary or permanently decreased level of function. Injuries resulting in chronic pain, musculoskeletal instability, or even death have a profound effect on LTCF residents and quality of life or premature death (CDC, 2014).

The CDC (2016), estimates the cost of falls and injuries sustained to be $35 billion dollars annually, with approximately one-third of cost from falls sustained in LTCF.

Serious injuries occur in 10% to 20% of falls in nursing homes with fractures accounting for two to six percent (CDC, 2014) and the mortality rate 1,800 per year.

The number of LTCF residents is predicted to double over the next two decades with the disconcerting reality that falls resulting in serious injury may proportionately increase (CDC, 2014).

PICOT STATEMENT OF PURPOSE

The PICOT Question is as follows: P-In the Long Term Care Facility Staff 1 how does the implementation of Stop and Watch C-compared to the facility’s current standard of care O-decrease the incidence of preventable falls and serious injury requiring hospitalization or treatment outside of the facility T-over a three month period.

This is a quality improvement project implementing a staff education tool INTERACT Stop and Watch. The survey done pre and post Stop and Watch intervention is to measure improvement in staff skills learned from Stop and Watch in identification of subtle health status changes in the frail elderly in LTCF to reduce falls with injury.

PROJECT OBJECTIVES

The aims of this study were to:

• There will be a 10% increase in staff confidence in identification and reporting changes in patient’s status potentially leading to improved patient outcomes through decreased falls resulting in injury.

• There will be 80% participation of staff through training in INTERACT “Stop and Watch”.

• Falls with injury will be reduced three months after implementation of INTERACT “Stop and Watch” as evidenced by purposive convenience sampling of 80 LTCF charts with review showing 10% reduction of falls.

MATERIALS AND METHODS

Intervention.

This project included implementation of staff education tool Stop and Watch from the well-developed INTERACT Model and is a guide to trigger reporting of subtle changes in health status of LTCF residents. Stop and Watch was chosen as an intervention because the literature review revealed LTCF staff found the complete INTERACT to be time-consuming when short shifted. First, a survey pre and post Stop and Watch intervention was employed by collecting data at two points in time with a survey including probing questions inviting personal reflection. Second, a longitudinal study design was employed to gather data regarding falls and other selected study variables in the three months after the staff education tool implementation.

Setting, Participants/Population Demographics, and Record sampling.

LTCF Staff Sample. The project was implemented in two Midwest LTCFs in a rural underserved region of Missouri. Participants included non-licensed and licensed staff in the LTCF ages 18-70. The staff were from rural areas surrounding both LTCFs, predominantly white females age 20-40. The sample was accessed during their work shift at the LTCF. The goal was to have 80% staff participation. Nurse Champions were chosen in advance from LTCF staff to be a resource to the staff regarding Stop and Watch. De-identifying of data was employed for confidentiality.

LTCF Resident Sample. The sample was a purposive convenience sample of 94 charts, more than the recommended sample size of 80 determined by Rasosoft (2004) sample size calculator. Margin of error accepted 5%. Confidence level needed 95%. Inclusion criteria were those 65 and older and in each rural Midwest LTCF. Their gender could be male, female, or transgender. Other inclusion criteria were married or single. Exclusion criteria were those less than 65 years old and those not living in either of the selected rural Midwest LTCFs.

Data Collection

The Institutional Review Board (IRB) at the University of Missouri-Columbia December 2016 determined the study to be a Quality Improvement Project. Written consent was obtained from the LTCF Administrators and verbal consent was obtained from staff just prior to participation in the pre survey. Surveys were administered just prior to and immediately after Stop and Watch. Pre and Post-tests were counted to verify the number of LTCF staff completing training. The survey was to measure staff perceived baseline and improvement in confidence gained from Stop and Watch. After three months, data were collected from a convenience sampling of every fifth chart for LTCF residents based on pre-determined variables.

RESULTS

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Paired Samples Test</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>95% Confidence Interval of the Difference</th>
<th>Lower</th>
<th>Upper</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>Number of Falls pre-Stop and Wake - Interventions of Falls post-Stop and Wake</td>
<td>5701</td>
<td>1,4935</td>
<td>14530</td>
<td>-3811</td>
<td>85992</td>
<td>4.010</td>
<td>93</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Pair 2</td>
<td>Number of ER Visits pre-Stop and Wake - Interventions of ER Visits post-Stop and Wake</td>
<td>1159</td>
<td>40375</td>
<td>44133</td>
<td>.04101</td>
<td>.00417</td>
<td>2574</td>
<td>93</td>
<td>.112</td>
<td></td>
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</tbody>
</table>

Table 1. Paired Samples Test to Measure Number of Falls and ER Visits pre and post INTERACT Stop and Wake

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Wilcoxon Signed Ranks Test to Compare Hospital Stays, Types of Injuries and Staff Survey Results Pre and Post INTERACT Stop and Wake</th>
<th>Median</th>
<th>Mean</th>
<th>Median</th>
<th>Mean</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital stays</td>
<td>Pre and Post INTERACT Stop and Wake</td>
<td>18400</td>
<td>16100</td>
<td>23600</td>
<td>21000</td>
<td>.025</td>
<td>93</td>
<td>.93</td>
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<tr>
<td>Types of Injuries</td>
<td>Pre and Post INTERACT Stop and Wake</td>
<td>40</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>.025</td>
<td>93</td>
<td>.93</td>
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<tr>
<td>Staff Survey results</td>
<td>Pre and Post INTERACT Stop and Wake</td>
<td>771</td>
<td>771</td>
<td>771</td>
<td>771</td>
<td>.025</td>
<td>93</td>
<td>.93</td>
</tr>
</tbody>
</table>

Table 2. Wilcoxon Signed Ranks Test to Compare Hospital Stays, Types of Injuries and Staff Survey Results Pre and Post INTERACT Stop and Wake

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It is with sincere thanks that I would like to acknowledge Dr. Lila Pennington, Dr. Kari Lane, and Dr. James McDowell for sitting on my committee. It is with sincere thanks that I would like to acknowledge Dr. Lila Pennington, Dr. Kari Lane, and Dr. James McDowell for their guidance in statistical analysis and scholarly writing. I want to thank the wonderful leadership and staff at the two very special LTCF for allowing me to implement my QI Project.

REFERENCES


Sinclair School of Nursing URL: http://nursing.missouri.edu/index.php