

**S SENTARA**

- There is a vast amount of research focused on effective interventions for fall prevention, in the elderly population, with national guidelines established for evidence based nursing practice. Despite these efforts, elderly patients continue to experience falls within skilled rehabilitation environments.
- Nurses, within a Sentara Healthcare skilled rehabilitation center, implemented an evidence based fall prevention program based on establish national guidelines. However, residents continued to experience falls despite these precautions.
- A first step in developing and implementing effective fall prevention depends on the ability to accurately identify the at risk patient population.<sup>1</sup> Therefore, a transfer guideline color coded "dot" system was added to standard fall precautions, in a Sentara skilled rehabilitation center, to identify patients' risk for falls. It is unclear whether these additional measures will prevent falls in this vulnerable population.

- Approximately 2 million adults, age 65 years of older, live in long term care environments, including skilled rehabilitation centers. This population is expected to increase to 3.4 million over the next several years.<sup>1</sup>
- This generation of elders approaches retirement expecting to continue current levels of physical activity, creating an increased demand for elective joint replacement surgery and subsequent rehabilitation.<sup>1</sup>
- The combination of impaired mobility and pain medication in the post operative phase makes this population even at a higher risk for falls with injury.<sup>1</sup>

- In long term care settings, including skilled rehabilitation nursing centers, it is estimated that 50% of the elderly population will sustain one or more falls annually, with an economic impact estimated at 20 billion dollars in the United States.<sup>2</sup>
- Approximately, 4% of the elderly who sustain a fall with major injury, such as hip fracture, will die within one year of the fall.<sup>1</sup>
- Almost 17% of elders who fall are unable to return to their prior level of self-care, requiring care in an assisted living or nursing center environment.<sup>1</sup>

This study aimed to explore differences in the number of falls, within a skilled rehabilitation population, age 65 years or older, following the addition of a transfer guidelines color coded "dot" system to standard fall precautions. The following research questions were explored:

1. Does the number of residents who experience a fall decline following program implementation?
2. Does the number of residents who experience multiple falls decline following program implementation?
3. Does the number of residents who experience a fall while being assisted by staff members decline following program implementation?

- This study used a retrospective design with secondary data analyses. Medical records and quality data analysis (STARS reports) were reviewed for all falls in the skilled rehabilitation population. This study design was appropriate given the lack of variable manipulation.
- The study population included a convenience sample of short stay rehabilitation residents, age 65 years or older. Patient medical records (N=182) between March 2013 and February 2014 were examined.
- The study examined group differences based on outcomes to an earlier intervention. Specifically, short stay rehabilitation residents, age 65 years or older, receiving a transfer guidelines color coded "dot" system in addition to standard fall precautions were compared to residents receiving only standard falls precautions.
- March 2013 – November 2013 was designated as the pre-implementation phase with December 2014 – February 2014 the post implementation phase.

- As shown in Figure 1, the fall rate remained flat following implementation of a transfer guidelines color coded "dot" system in addition to standard fall precautions in December 2013.
- The number of residents who experienced multiple falls did not decline following program implementation.
- The number of residents who experience a fall while being assisted by staff members did not decline following program implementation.

This study addressed a major health concern in the vulnerable elderly population receiving skilled rehabilitation services.

- Falls, in the long term care settings, can be devastating to the quality of life resulting in fractures, decreased mobility, increased morbidity and mortality.
- Fall prevention should be multi focused and interdisciplinary examining the high risk factors of vision, gait and balance, medications, cognition, age, and history of falls.
- This sample size was small (182). A larger sample may more accurately reflect the impact of a transfer guidelines color coded "dot" system on falls prevention.
- Additional studies are needed to explore relationships between patient falls and the addition of a transfer guidelines color coded "dot" system to standard fall precautions.

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The line graph displays the 'Fall Rate' over time. The y-axis represents the rate, ranging from 0.2 to 1.6 in increments of 0.2. The x-axis shows months from March 2013 to February 2014. The data points are connected by a red line, and a shaded red area indicates a confidence interval. The rate starts at approximately 0.7 in March 2013, drops to a low of about 0.45 in May 2013, then rises sharply to a peak of 1.4 in June 2013. It then declines to around 0.5 in July 2013, fluctuates between 0.45 and 0.75 through September, and ends at approximately 0.65 in February 2014.

Month	Fall Rate (approx.)
Mar-13	0.70
Apr-13	0.60
May-13	0.45
Jun-13	1.40
Jul-13	0.50
Aug-13	0.45
Sep-13	0.75
Oct-13	0.60
Nov-13	0.70
Dec-13	0.65
Jan-14	0.75
Feb-14	0.65