INTRODUCTION

Patient falls has been a spotlight of patient safety in the hospital setting for many years. Recently however, the focus has moved towards falls that result in injuries. Among older adults (those 65 or older) falls is the leading cause of injury related death - (CDC). They are also the most common cause of nonfatal injuries and hospital admissions for trauma.

In the United States, the total number of falls resulting in injury is predicted to be as high as 17,293,000 by the year 2020 at a cost of $85.37 billion per year (Englander, Hodson, & Terregrossa, 1996). The mean cost of hospitalization due to a fall was estimated at $17,483 in 2004 dollars (Roudsari, Ebel, Corso, Molinari, & Koesell, 2005).

In 2013, The University Medical Center of Princeton at Plainsboro reported 2 falls that resulted in hip fractures, and 1 fall that resulted in a patient death. Despite sustaining an average fall rate of 2.0 and an injury rate of 0.5 in 2013, the year ended with three injuries which indicated a more in-depth focus was needed to address the needs of those at risk of injury.

In response to this need, an interdisciplinary team was developed in 2014 to develop a standardized injury risk assessment tool for adult patients in an acute-care hospital setting. The Princeton HealthCare Injury Screening Tool was developed based on evidence and literature review.

RESEARCH QUESTION

Does the Princeton HealthCare Injury Screening Tool identify acute care adult in-patients at risk for injury?

LITERATURE REVIEW

Based on an extensive review of the current literature, there were many common factors associated with injury falls.

In response to this need, an interdisciplinary teamwork was developed in 2014 to develop a standardized injury risk assessment tool for adult patients in an acute-care hospital setting. The Princeton HealthCare Injury Screening Tool was developed in 2014 to develop a diagnostic and treatment tool for adult patients in an acute-care setting. The Princeton HealthCare Injury Screening Tool was developed in 2014 to develop a diagnostic and treatment tool for adult patients in an acute-care setting.

Sample

An excel spreadsheet was used as a data collection tool to extract patient demographics and characteristics defined by the PHCS-ICT tool. They included BMI>22.8, female gender, patients taking bone mineralizing medications, recent fall in the past 6 months, gait instability and/or muscle weakness, and four or more fall risk medications.

To assess the inter-rater reliability, two registered nurses completed the PHCS-ICT tool against 28 patients who sustained an injury fall during the months of July 2013 to July 2014. The data was entered into an excel spreadsheet then analyzed by an online SPSS software. Cohen’s Kappa Statistics and percent agreement was used to analyze the agreement between the two nurses.

Descriptive statistics was used to analyze each component of the tool. ROC analysis was performed to determine the optimal cutoff scores and acceptable sensitivity and specificity of the PHCS-ICT tool. The Positive Predictor Value (PPV) and the Negative Predictor Value were also calculated.

RESULTS

A total of 92 patient charts were reviewed who had fallen between the months of July 2013 to July 2014. Among the 92 patients who sustained a fall, 34% had a BMI of 22.8 or less, 41% had a history of falling in the last 6 months, 64% had an unsteady gait and/or muscular weakness, 16% were patients who were taking bone mineralizing medications on admission, 45% were female, and 18% were patients with 4 or more fall risk medications.

The PHCS-ICT is a multi-factor injury risk assessment tool with favorable sensitivity, specificity, and inter-rater reliability that may be useful for prospectively identifying patients at risk of injury among the adult inpatient acute care setting.

This tool can allow for focused interventions based on areas of identified risk and potentially reduce the number of fall-related injuries among the adult inpatient in an acute care facility.

CONCLUSION

The PHCS-ICT was go