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A Retrospective Analysis of Falls in Hospitalized Children

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Although the incidence of falls in hospitalized children is less than adults, pediatric falls remain a challenging quality and safety issue in acute care hospitals. Fall risk assessment tools are intended to help identify children at risk and provide specific interventions designed to reduce falls. Children often fall as they grow and gain motor coordination skills and their natural curiosity makes them prone to injury. Lack of awareness, hazards in the hospital environment, medication usage, neurological conditions, and sedation increase the probability that a hospitalized child will fall (Hill-Rodriguez et al. 2009; Harvey, Kramlich, Chapman, Parker & Blades, 2010; Kramlich & Dende, 2016). In addition, physical illness, injury and the unfamiliar hospital environment increase the risk for patient falls. Sources site accidental hospital fall rates in children between 0.56 to 2.19 falls per 1,000 patient days (Gonzalez et al, 2016, Jamerson et al, 2014; Schaffer et al. 2011). The Joint Commission identifies inpatient falls as a significant safety risk and requires pediatric hospitals to implement and evaluate the effectiveness of fall prevention programs (Joint Commission, 2007).

This retrospective study evaluated three pediatric fall risk assessment tools, the Humpty Dumpty Falls Scale, Cummings Pediatric Fall Assessment Scale and the General Risk Assessment for Pediatric Inpatient Falls, and identified patient characteristics and risk factors in 106 children who fell while hospitalized at one Midwestern Children's Hospital. Of the children who fell, the majority were male (56%), adolescents (28%) or toddlers (27%), with an oncology (23%) or neurology (21%) diagnosis, a length of stay of three days or less (63%). The majority of children who fell experienced little to no injury (86%) and had adult supervision (85%). Twenty percent of children who fell had a procedure in the previous 24 hours. Of the children who fell 28% were identified as having developmental delay, altered mental status (21%), or attention deficit hyperactivity disorder (11%). Sixty percent of falls happened between the hours of 0700 and 1900 with nearly 75% occurring in the patient's room followed by the bathroom or shower (18.9%).

These findings highlight the need for additional research to standardize patient characteristics and risk factors for falls in hospitalized children and pursue interventions which reduce fall risk. In this study, the majority of children who fell had adult supervision; therefore, including caregivers in fall prevention education could prove beneficial. Hospitals should consider validating a fall risk assessment tool based on the hospitals identified risk factors and unique patient population.

Title:

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Keywords:

Pediatric Fall risk assessment tools, Pediatric Falls and Pediatric fall prevention

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Abstract Summary:

Pediatric fall risk assessment tools are intended to identify children at risk and provide specific interventions to reduce falls. Review of the literature reveals lack of consensus for fall risk factors, classifications, definitions, and accuracy of fall risk assessment tools.

Content Outline:

Introduction

1. In 2005, The Joint Commission established a National Patient Safety Goal which requires hospitals reduce patient injury from falls (Joint Commission, 2004).
2. Falls remain one of the most commonly reported adverse event in acute care hospitals, resulting in injury, increased health care costs and prolonged hospital stays (CDC, 2010).
3. Magnet designated institutions track falls as a nursing sensitive indicator.
4. According to the American Nurses Association (2009), a fall is defined as an “unplanned descent to the floor, or extension of the floor, with or without injury to the patient” (p. 1).

Background Pediatric Falls

1. Although the incidence of falls in hospitalized children is less than adults, pediatric falls remain a challenging quality and safety issue in acute care hospitals.
2. While there is substantial literature regarding falls in hospitalized adults, little attention has been given to pediatric inpatient falls.
3. Many researchers tried to adapt adult fall risk assessment tools to the pediatric setting without success.
4. Fall risk assessment tools are intended to help identify children at risk and provide specific interventions designed to reduce falls.
5. Multiple studies demonstrate lack of consensus in identification of risk factors for falls in hospitalized children and has called into question the validity of multiple pediatric fall risk assessment tools.

Body

1. A retrospective study design was used to identify characteristics and risk factors of children who fell while hospitalized and to evaluate three pediatric fall risk assessment tools.
2. 106 pediatric falls occurring from July 1, 2010 through July 1, 2017 at one Midwestern Children’s Hospital. Each of the 106 patients were scored on three pediatric fall risk assessment tools: Cummings Pediatric Fall Assessment Scale, Humpty Dumpty Falls Scale, and General Risk Assessment for Pediatric Inpatient Falls Scale.
3. Patient demographics and risk factors collected (36 items for each patient fall)
4. Fall injury classification calculated on 0-4 scale
5. Comparison and evaluation of 3 Fall Risk Assessment Tools

Conclusion

1. Properly identifying hospitalized children at risk for fall ensures better patient outcomes and meets requirements established by accrediting organizations.
2. Although fall risk assessment tools are often used for children, lack of consensus exists on the accuracy of these tools. (high false positive rates)
3. Findings in this study highlight the need for additional research to standardize risk factors and characteristics of children who fall and pursue interventions which reduce fall risk.
4. The majority of children who fell had adult supervision at the bedside (85%); therefore, including caregivers in fall prevention education could prove beneficial.
5. Hospitals should consider validating a fall risk assessment tool based on the hospitals identified risk factors and unique patient population.

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Author Summary: Deborah Spoerner holds more than 30 years of pediatric nursing experience. Beyond teaching at the undergraduate and graduate level, she continues to provide health promotion for pediatric patients as a PNP. She serves as Chair of the Injury Education and Prevention Committee for NAPNAP as well as the CDC representative for pediatric medication safety. Her research focuses on improving the health of children with chronic conditions, quality improvement in the acute care setting, and clinical simulation.