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Evidence-Based Update in Practice Development of a Nursing Checklist for Documentation of Pediatric Pre-Operative Fall Safety Measures

Susan Shemper

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EVIDENCE-BASED UPDATE IN PRACTICE DEVELOPMENT OF A
NURSING CHECKLIST FOR DOCUMENTATION OF PEDIATRIC
PRE-OPERATIVE FALL SAFETY MEASURES

by

Susan Shemper

A Doctoral Project
Submitted to the Graduate School,
the College of Nursing and Health Professions
and the School of Leadership and Advanced Nursing Practice
at The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Nursing Practice

Approved by:

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ABSTRACT

Fall safety is an important component of patient care in the healthcare setting. Communication and implementation of fall safety measures are a critical part of the plan of care for each patient. Pre-operative pediatric patients have an increased risk of falls due to sedation, under-developed motor skills, and fall safety education. It is important for the pre-operative nursing staff to evaluate and implement a plan of care, including fall safety measures, according to each patient's needs. The Joint Commission, (additionally known as TJC), is a United States based nonprofit, tax-exempt 501(c)(3) organization that accredits more than 22,000 U.S. healthcare organizations and programs. Each year TJC gathers information about emerging patient safety issues and develops the National Patient Safety Goals. Effective January 1, 2021: Sentinel Event Policy to define fall events. Fall safety is currently not a National Patient Safety Goal but a provision of care with the TJC. The Joint Commission addresses falls in NPSG.09.02.01: Reduce the risk of falls. Reducing the risks of fall safety and increasing awareness of pre-operative pediatric patients can increase patient outcomes. Pediatric fall safety is essential for healthcare facilities to maintain patient safety and high-quality patient care for a safer pediatric surgical experience.

The project focused on developing a specific checklist for the pre-operative staff to complete on each pediatric patient having an outpatient surgical procedure. A preoperative fall safety checklist was developed for the nursing staff to trial for two weeks. At the end of the two weeks, the staff answered a questionnaire to evaluate their opinions on fall safety and future recommendations. The purpose of this study is to develop a nursing checklist for documentation of pediatric pre-operative fall safety

measures. With fall safety being a rare event and difficult to measure, it is better to take a proactive approach rather than a reactive one.

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Without the help and support of my committee, I know that this project would not have been completed. To Dr. Nina McLain, thank you for attending the Merit IRB meeting, I do not doubt that you are the reason that the board approved my project, and I will forever be grateful. To my chair, Dr. LaWanda Baskin, without your help and guidance, this project would not have been possible. Thank you for your knowledge, encouragement, patience, and support. To Dr. Cathy Hughes, thank you for being there and helping shape the project from the beginning. I would also like to thank the nursing staff at Merit for your participation in my project, you made this project possible. To my fellow classmates, it has been a pleasure to be in class with each of you, and thank you for your hard work.

DEDICATION

This project is dedicated to my family and friends. To my husband and kids, thank you for your love, support, patience, and encouragement throughout this entire process. I would also like to thank the staff and The University of Southern Mississippi for their support and for keeping me on track with this project and program.

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LIST OF ABBREVIATIONS

<i>CDC</i>	Centers for Disease Control
<i>CITI</i>	Collaborative Institutional Training Initiative
<i>DNP</i>	Doctor of Nursing Practice
<i>EMR</i>	Electronic Medical Record
<i>IRB</i>	Internal Review Board
<i>JC</i>	Joint Commission
<i>LS</i>	Little Schmidy
<i>USM</i>	The University of Southern Mississippi
<i>WHO</i>	World Health Organization

CHAPTER I - INTRODUCTION

Falls are one of the most preventable incidents in a healthcare setting, that if not prevented can have detrimental outcomes for the patient and liability costs for the facility. There has been relatively little research on pediatric falls, but what exists suggests that children fall less often-with an estimated 0.56 to 2.19 falls per 1,000 patient days versus 1.4 to 17.0 for adults- but that they are also at risk for injury from minor bumps and bruises to serious head injury (Austin, 2017). The World Health Organization (WHO) defines a fall as an event that results in a person coming to rest inadvertently on the ground or floor or other lower level (WHO, 2018). The Joint Commission in 2005 mandated that hospitals implement fall risk prevention programs as a response to the ninth national patient safety goal, which is to reduce the risk of patient harm resulting from falls. The lack of supportive research poses a challenge for the development and implementation of specific pediatric fall safety programs. These programs were broad and did not include pediatrics, which led to facilities developing and implement their programs specific for pediatric falls from adult fall assessment tools. From this mandate, the facilities created pediatric fall risk assessment tools such as The Little Schmidy (LS), GRAF-PIF, I'M SAFE, CHAMPS, and The Humpty Dumpty Fall Risk Assessment Tool. The Little Schmidy was developed from the adult assessment tool the Schmid, by the director of Nursing Education and Performance at USCF Medical Center. The General Risk Assessment for Pediatric In-patient Falls (GRAF-PIF) was developed by Elaine Graf and is one of the two tools that is validated. The purpose of this study is to increase pre-operative pediatric fall safety among the inter-collaborative healthcare team by

implementing a pre-operative checklist to ensure appropriate safety measures and documentation has been implemented.

Problem Statement

In a local South Mississippi 211-bed hospital surgical department, the staff currently uses the pediatric fall assessment tool, Little Schmidy (LS), for the preoperative fall assessment for surgical pediatric patients. The facility is accredited by the Joint Commission and therefore must follow all patient safety guidelines to remain accredited. Founded in 1951, The Joint Commission, (JC), seeks to continuously enhance health care for the public, in collaboration with other stakeholders, by assessing healthcare organizations and involving them to excel in supplying the highest quality of care and price (Joint Commission, 2015). The LS is the only pediatric fall safety documentation at this facility, this Doctor of Nursing Practice (DNP), seeks to improve fall safety for the pre-operative pediatric patient.

Background and Significance

“Any patient of any age or physical ability can be at risk for a fall due to physiological changes due to a medical condition, medication, surgery, procedures, or diagnostic that can leave them weakened or confused” (Joint Commission, 2015). With falls being a major concern for the healthcare industry and easily preventable, increasing awareness of fall safety and fall-related injuries by having a pre-operative fall safety checklist for the inter-collaborative healthcare team will provide a safe environment, decrease incidences, increase awareness, and remind the staff to document in the electronic medical record. Healthcare providers play a huge role in identifying fall risks and implementing plans to decrease the incidents of falls. Falls in children can be life-

threatening after an operation and in those with a hemorrhagic tendency (Fujita et al., 2013). The reported incidence rate of pediatric patient falls is between 0.51 and 2.19 falls per 1000 patient days (Harvey et al., 2010). Falls are the vast majority of the current type of childhood injury presenting at emergency departments, accounting for between 20-25% of such visits (Joint Commission, 2015). Occurrence and reporting of pediatric falls are rare which in turn makes it difficult in finding research on this subject. Nationally, falls occur in more children 14 years and younger than any other unintentional injury (Centers for Disease Control and Prevention [CDC], 2016). With children being a high risk for falls, pediatric patients having a surgical procedure increases their risk of falls and fall-related injuries. As healthcare providers, we understand the pediatric population is at risk for falls, and the implementation of pediatric fall risk assessments because of the 2005 Joint Commission National Patient Safety Goals. Assessment of risk for falls has become not only a quality issue but also a cost issue (Razmus & Davis, 2012). The current fall assessment tool with an additional pre-operative checklist specific for the pre-operative pediatric patient is a proactive approach instead of a reactive one. According to the Centers for Disease Control and Prevention (CDC), "in 2007, the direct and indirect costs associated with a fall totaled over \$19 billion, including \$179 million for fatalities following a fall" (Parasol Medical LLC, 2018). Falls are a national patient safety goal and healthcare facilities have a vested interest in preventing them, preserving their reputation, and not undergo litigation.

Clinical Question

In the pre-operative pediatric population ages 6 months to 6 years (P), does performing pre-operative fall assessment tool and safety checklist (I), compared to the current practice (C), increases awareness of fall safety and fall-related injuries among the inter-collaborative healthcare team (O). The electronic medical record (EMR) does not have a prompt to document fall safety and the staff must rely on their memory to document that fall safety measures and education has been implemented. Having a preoperative checklist will increase the awareness of fall safety among the healthcare team for this population.

Needs Assessment

Reducing or eliminating falls and fall-related injuries is a national patient safety goal and having a more specific pre-operative fall safety assessment tool that will provide a safer environment and a pre-operative fall safety checklist will increase the staffs' awareness of fall safety for the surgical pediatric patient which is a crucial part of patient care. There is a gap in the assessment not being specific for surgical pediatric patients and that the EMR does not prompt the staff to complete the assessment. "A collaborative team approach, with rigorous, ongoing research allied with clinical judgment and consideration of patients' individual needs, to inform and improve practice and make the hospital a safer area for patients" (Franck et al., 2017).

Preoperative pediatric patients have an increased risk of falls due to medication, age, and development. There is also a gap in the research concerning fall safety and fall-related injuries that is available due to lack of incidences and reporting of incidences. With the local facility having broad fall safety guidelines for surgical pediatric patients, the

facility could be proactive instead of reactive in preventing falls in the surgical pediatric patient.

Synthesis of Evidence

Gathering evidence that is scholarly and peer-reviewed is a critical step in addressing the PICOT for this project. The review of the literature was conducted using the databases; CINAHL (Cumulative Index of Nursing Allied Health Literature), Cochrane Library, MEDLINE (Medical Literature Analysis and Retrieval Systems Online), and PUBMED from the years 2012 to 2020. Keywords used in all databases were pediatric falls, fall prevention, falls with or without sedation, statistics, costs of falls, and pediatric fall assessment tools. The search was using keywords and looking for full-text articles. There was little information discovered on pediatric falls involving surgical patients. It was evident that adult fall safety is more prominent than pediatric fall safety.

The search engine CINAHL is citations and selected full-text coverage (back to 1982) of journals in nursing, biomedicine, health sciences librarianship, alternative/complementary medicine, consumer health, and 17 allied health disciplines. CINAHL is a search engine containing selected full-text coverage (back to 1982) of journals in nursing, biomedicine, health sciences, librarianship, alternative/complementary medicine, consumer health, and 17 allied health disciplines. Cochrane Library yielded zero articles using all keywords. MEDLINE are citations to articles from more than 4800 journals in the biomedical field including medicine, nursing, dentistry, veterinary medicine, the health care system, and pre-clinical sciences. MEDLINE first yielded 498 articles, research refined using key words leaving seven articles and out of the seven, only one was of use. PubMed comprises more than 23 million citations for

biomedical literature from MEDLINE, science journals, and online books. PubMed yielded 1,373 and after using keyword prevention left 357. When adding the assessment tool to the search it left zero. Refining the search results using keywords, only in English, and full text left less than 14 articles that were useful for this project.

Preventable Incidence in a Healthcare Setting

The consensus of the literature revealed that falls are the most preventable incident in a healthcare setting, but further research would be beneficial for the pediatric population. Pediatric fall assessment tools were developed due to The Joint Commission mandates that fall safety was a national patient safety guideline, and for healthcare facilities to be accredited, the facility must have a fall assessment tool. Also, the pediatric fall assessment tools were developed from adult fall assessment tools and therefore not specific for the pediatric population. Fall Risk screening tools are an extremely efficient intervention for maintaining and improving fall prevention programs (Kim et al., 2019). The Joint Commission articles reviewed, provided information about the development of fall assessment tools, and fall safety as a national patient safety goal. The currently available research suggested that falls are preventable, costly, and further research was needed for the fall safety of the pediatric population.

Risk Factors for Pediatric Falls and Injuries

Pediatric falls in a hospital setting can lead to numerous negative consequences. Pediatric patients are a vulnerable population for falls and identifying fall risk factors promotes patient safety and satisfaction. The review of the literature revealed that falls are a rare occurrence which makes finding data on the subject extremely difficult. The pediatric assessment tools that have been developed recognize the following as risk

factors for children: ambulation difficulty (birth defect, mental disability, IV pole/oxygen); the age of the patient; impaired mentally, developmentally delayed; non-compliance of safety recommendations; administration of medications (narcotics, multiple antihypertensives, local anesthesia, general anesthesia); and seizures/neurological impairment. Identifying children at high risk for falls, the staff can appropriately implement the correct fall risk measures for each child. Healthcare facilities have had a difficult time implementing pediatric fall risk assessment tools due to the lack of occurrences and research.

Pediatric Fall Assessment Tools and Limitations

Fall risk assessment tools have played an important role in the safety of pediatric surgical patients. There is limited research regarding pediatric fall risk assessment tools and only five have been published. These assessment tools are The General Risk Assessment for Pediatric Inpatient Falls (GRAF PIC), I'M SAFE, The Humpty Dumpty Falls Scale, The Little Schmidy, and CHAMPS. The General Risk Assessment for Pediatric Inpatient Falls (GRAF PIF) and the Humpty Dumpty Falls Scale (HDFS) have been validated using a retrospective pair-matched case-control method of research. Limitations for pediatric fall risk assessments were sparse due to the limited amount of research performed on the subject. There is extensive research regarding fall prevention in adults, but the research literature on pediatric falls is limited. There are only a few pediatric fall assessment tools that were developed by single pediatric hospitals', which make them a generalized assessment. The assessments need to be specific to develop an accurate plan of care with appropriate interventions. Another limitation is the low rate of occurrence and the impact it has on the amount of research that is available. A regulatory

questionnaire in 2012, identified fall risk assessment as an area for improvement in the Children's ER (Pasquarello, 2014). Limitations regarding nurses' fall prevention interventions would be that it is unethical for nurses not to document or implement fall prevention measures. Continual efforts and further research performed on developing specific pediatric fall assessment tools will aid in the patient being appropriately assessed and correct interventions implemented.

Rationale

The available pediatric fall risk assessment tools are not specific to the pediatric patients undergoing a surgical procedure. With the pediatric fall assessment tools being broad, having a pre-operative fall safety checklist will aid the healthcare team to ensure that each step for fall safety has been implemented and that the current fall assessment tool has been completed. If an action is not documented, then it is considered to not have been done. There is a strain on the inter-collaborative healthcare team to maintain focus on the patient while also documenting up-to-date care. With such busy schedules, a checklist will aid the staff in reminding them to chart what actions and education have been implemented. The use of a specific preoperative pediatric fall assessment and checklist for the pre-operative staff will increase the awareness of fall safety and injuries among the inter-collaborative healthcare team.

Theoretical Framework

An effective pediatric fall safety assessment tool and pre-operative fall safety and fall-related injury checklist will require an inter-collaborative approach between patients, families, staff, and administrators. All patients are at risk for a fall when entering a healthcare facility. Appropriate interventions and implementation of fall

safety assessment tools and checklists would decrease the incidences of falls and increase awareness of fall safety and injuries among the inter-collaborative healthcare team. All patients entering a healthcare facility are at risk for a fall or fall-related injury. Appropriate interventions and implementations of fall safety assessment tools and a preoperative checklist would decrease the incidence of falls and increase awareness of fall safety and injuries among the inter-collaborative health care team. Donabedian's theory of quality was the theoretical framework to guide this project. Avedis Donabedian developed a theory of quality of health care and a process for evaluating it. Donabedian proposed that "how we conceive of health, and our responsibility for it makes a fundamental difference to the concept of quality and, as a result, to the methods that we use to assess and assure the quality of care" (Grove & Gray, 2019, p .443). Effective quality nursing care and collaboration between staff, patients, families, and/or guardians are vital components in protecting pediatric patients from falls and injuries. During the initial assessment, the nurse can determine the fall risk score, relay it to family/guardians and staff to determine the appropriate interventions. When the healthcare team and a patient and family/guardian have a trusting relationship, a nurse is being able to appropriately assess the patient, communicate the interventions with staff, patient, and family/guardian, and quality care is then achieved. The IOWA Model was the guide in constructing, evaluating, and implementing this project. The IOWA Model was developed at the University of Iowa and serves as a guide to nurses to use research findings to help improve patient care (Carrabus College, 2020). With the Donabedian's framework and the IOWA Model to guide the development of this project to develop a

more accurate fall safety assessment tool and pre-operative checklist for pediatric patients undergoing a surgical procedure.

Specific Aims

Prevention of falls is an important aspect of the care and outcomes for a pediatric patient. Failure to provide a safe environment can lead to falls that may result in injury (DiGerolamo & Davis, 2017). Some examples of pediatric fall assessment tools are the GRAF PIF, The Humpty Dumpty Fall Scale, I'M SAFE, and The Little Schimdy Falls Risk Assessment. The issue of fall safety among pediatric patients in a healthcare setting could benefit from further research and improvement. Fall safety is a national patient safety goal and there is a need for developing a specific fall safety for pediatric patients having a surgical procedure and a pre-operative checklist to ensure that fall safety was assessed and documented. The purpose of this project was to increase fall safety and fall-related injuries among the inter-collaborative healthcare team. Upon reviewing the data, the findings will allow the researcher to determine the need for a pre-operative fall safety checklist and if additional measures need to be added to the fall assessment tool to increase awareness of fall safety for the pediatric surgical patient. Having a more specific pre-operative fall safety checklist for the staff to assess and implement a plan of care, will increase their knowledge and awareness so they in turn can decrease patient falls for this population.

DNP Essentials

There are eight essentials of the Doctor of Nursing Practice (DNP) degree and the DNP student must meet these essentials to apply these to research and practice. These essentials are the “foundational outcome competencies deemed essential for all graduates

of a DNP program regardless of specialty or functional focus” (Chism, 2019, p. 13). DNP essentials are vital in aiding the nurse practitioner to possess the skills to both design and implement evidence-based projects.

DNP Essential I: Scientific Underpinnings for Practice

This essential was met by gathering data from the retrospective chart review (RCR) and Qualtrics questionnaire.

DNP Essential II: Organizational and Systems Leadership for Quality Improvement and Systems Thinking

This essential was met by reviewing the current fall assessment tool and measures taken to recognize the need for a more specific pre-operative pediatric fall assessment to increase awareness of fall safety and fall-related injuries.

DNP Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice

This essential was met by conducting the RCR and using the data collected to identify the need to increase fall and fall-related awareness among the inter-collaborative healthcare team. This essential was also be met by applying research findings to recommend evidence-based changes.

DNP Essential IV: Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care

This essential was met by conducting an RCR and Qualtrics Questionnaire and using the data collected to recommend changes to the current practice to increase awareness of fall safety and fall-related injuries among the healthcare team.

DNP Essential V: Health Care Policy for Advocacy in Health Care

This essential was met using the results to present to the stakeholder of the facility to increase awareness of fall safety and fall-related injuries.

DNP Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes

This essential was met by the healthcare team working together to increase awareness of fall safety and fall-related injuries and implementing actions to improve fall safety.

DNP Essential VII: Clinical Prevention and Population Health for Improving the Nation's Health

This essential was met for the potential it has to increase awareness of fall safety and fall-related injuries among the staff and patients and families.

DNP Essential VIII: Advanced Nursing Practice

This essential was met by using evidence-based practice to increase awareness of fall safety and fall-related injuries.

Summary

Falls are the most preventable event in a hospital setting and the implementation of specific fall safety measures for the pediatric surgical patient would increase the awareness of fall safety and fall-related injuries, provide a safer environment, be cost-effective, increase the knowledge of the staff, and decrease the incidence of falls. The pre-operative fall safety checklist is a proactive approach to a problem that could have critical outcomes mentally, physically, and financially. The goal of this project is to increase awareness of fall safety and fall-related injury prevention of the healthcare

team to provide a safe environment with high-quality, collaborative care for the sedated pediatric patient undergoing a surgical procedure.

CHAPTER II – METHODOLOGY

Introduction

Chapter II of the project outlines how this project was performed and analyzed. The data that was collected provided information that is beneficial to the quality of care of the patient, to the healthcare team, and the facility. The collected data could also lead to further research and interventions, and routes for future projects for DNP students.

Setting

The setting for this project was a local hospital located in South Mississippi with 211 beds. Stakeholders included patients, the parents/guardians, nursing staff, managers, directors, and administrative staff. For this project, there were three parts to increase awareness of fall safety and fall-related injuries among the inter-collaborative healthcare team. Part one was a paper pre-operative checklist that was available for the staff to complete each day for two weeks. Part two was a paper questionnaire for the nurse manager, director of surgery, the safety officer, and the nursing staff on the pediatric unit, pre-operative unit, intra-operative unit, and post-operative unit. The paper questionnaire included questions regarding the current assessment tool and further recommendations from the staff. The third part was the communication of the executive summary of the project's results and recommendations with the staff, directors, managers, and administrations for further steps. The goal of this project was to implement a pediatric pre-operative fall safety pre-operative fall safety checklist that is specific for the preoperative pediatric population. Now that this project has been completed, a more specific pediatric fall assessment tool for surgical patients and a pre-operative checklist can be implemented.

Population of Interest

The population of interest for this project was the pre-operative nursing staff providing care for pediatric patients ages 6 months to 6 years, that is having a surgical procedure for two weeks, at a local South Mississippi hospital. The only exclusions were the age range, and the inclusions were all pediatric surgical patients. The checklist and questionnaire were for the nurse managers of the pediatric unit and surgery department, director of surgery, safety officer, and the nursing staff that worked in these units and facilities during the time frame.

Intervention

With the approval of The USM Institutional Review Board (IRB -20-237) and Merit Health Wesley IRB (IRB00010639), a paper questionnaire and checklist were administered to the nursing staff, managers, directors, and safety officer that provided information regarding the current pediatric fall safety assessment. The checklist was made available for a period of two weeks and after completion, the data was then gathered. The pre-operative checklist was available for two weeks with data gathered at the end of those two weeks. After two weeks of the staff implementing the checklist, a questionnaire was administered to the staff to gather information on the pre-operative checklist. Two questions on the questionnaire that provided vital information are the assessment of the current fall assessment tool and further recommendations from the staff. The results of the questionnaire indicated a need for the facility to implement the additional measures to have a more specific and accurate pre-operative checklist for the surgical pediatric patient. The idea for this project was that fall safety and injury prevention is an important component of patient care and pediatric surgical patients are

a vulnerable population. A more accurate preoperative fall safety assessment and preoperative checklist for the pre-operative staff for this population will provide evidence-based practice for a safe environment by increasing fall safety awareness and injury prevention among the staff and family/guardians. With this facility performing anywhere from 30-40 pediatric surgical procedures weekly, an accurate pre-operative pediatric fall safety checklist is imperative in providing high-quality patient care. The success of this project was greatly influenced by the staff's cooperation. This project provided a quality improvement for fall safety and a fall-related injury checklist for a pediatric patient before a surgical procedure. Reviewing the data assessed the need for additional information and measures to be added to the pre-operative assessment tool and improve patient outcomes by decreasing the incidence of falls. There is currently not a pre-operative fall safety checklist that is specific for this population for the inter-collaborative healthcare team to implement and document fall safety and education. The patient, family, staff, and facility could benefit by implementing a checklist that could increase the accurate assessment of this population with appropriate safety measures implemented. A questionnaire will be developed to gain the perspective of the nurses who worked at the facility during this timeframe, for the ease and validity of adding the additional measures to the assessment tool and a checklist to remind the staff to perform the assessment tool and document on the EMR. Future research related to fall screening and prevention is necessary to promote patient safety in the special needs pediatric population (Pauley et al., 2014). An executive summary of the findings of this project will be presented to the IRB board at the facility for further review to consider the implementation of the pre-operative fall safety checklist.

Questionnaire

The second part of this project is a /questionnaire to be completed anonymously by the staff and will be available for two weeks. The DNP student created the questionnaire with questions developed from the literature regarding pediatric preoperative fall safety. The questionnaire introduction included guidelines for required COVID-19 precautions, an inclusion criteria statement about age, and consent to participate. The second part of the questionnaire was administered to the staff at the facility to be filled out. After gaining approval to perform the questionnaire, the researcher will take COVID-19 precautions in administering and retrieving the questionnaire from the facility. The last step of the project was to gather and analyze the data from the questionnaire and write a summary of the findings. The results of the questionnaire provided important information in aiding a course for fall safety improvements at this facility.

Measures

The information used for this study was provided by the results of the questionnaire and the pre-operative checklist. Statistics for the questionnaire included the number of participants, the number of yes and no answers to each question, and recommendations/suggestions for fall safety. The checklist was created with specific questions pertaining to fall safety, the current fall assessment tool, a need for a preoperative fall safety checklist and given to the appropriate staff to answer at the end of two weeks. The questionnaire included questions stating that the person taking the questionnaire is 18 and older, worked at the facility during the time frame, and agrees to participate. The questionnaire was kept anonymous and should take no more than two

minutes to complete. The pre-operative checklist contains information on the patients' age if they received pre-op sedation, and what fall safety measures were implemented. The executive summary will be a conclusion of the findings and recommendations to implement additional fall safety measures to the current fall safety assessment and a preoperative checklist.

COVID-19 Precautions

COVID-19 is a pandemic that has placed a burden on healthcare facilities and researchers wanting to conduct studies. The managers were notified ahead of time of when the questionnaire is to be administered and the researcher will take all COVID-19 precautions which include: wash hands for 20 seconds before administering the questionnaire; have hand sanitizer available for use before and after each questionnaire; maintain social distancing of at least six feet; wear PPE (mask, face shield, gown, and gloves); have each individual use own personal pen or pencil to fill out a questionnaire; have a designated box for collection of questionnaires, and the researcher will be the only person handling the questionnaire and box. Maintaining COVID-19 precautions and the safety of everyone is of utmost importance to the researcher.

Ethical Considerations

The researcher addressed all ethical aspects of this project and conformed to all moral and ethical considerations. The researcher has completed the Collaborative Institutional Training Initiative (CITI) prior to the beginning of this project. The researcher kept an open line of communication between the faculty, chair, and facility, and kept them updated with developments. The questionnaire and checklist did not compromise personal information and are on the researcher's password-protected

computer. The University of Southern Mississippi and Merit Health Wesley Covid-19 precautions were maintained by the researcher. The researcher did not coerce or construe the results of the checklist and questionnaire. All policies and procedures of The University of Southern Mississippi (USM) and the facility were followed. All data collected by the DNP student will be kept on the student's password-protected personal a computer for 6 months after all graduation requirements are completed.

Summary

Falls are the most preventable event in a hospital setting and the implementation of this project's additional fall safety measures would provide a safer environment for the pediatric patients and increase awareness for the nursing staff. "Health and IP professionals have a responsibility to recognize that falls contribute significantly to the burden of injuries of our youth and must be treated with the same importance as other unintentional injuries" (Lombard et al., 2019). This project also creates a proactive approach instead of a reaction to what could be a devastating outcome. Although pediatric falls in a healthcare setting are rare, it only takes one to be a sentinel event. The responsibility of the nursing staff and facility is to provide a safe environment and high-quality care for every patient. Nurses have a busy schedule a checklist to increases their awareness of fall safety, not time-consuming to document, and would alert them if more appropriate actions are needed will increase patient safety and outcomes. Fall safety prevention is an evidence-based practice with a collaborative effort to produce optimal patient outcomes.

CHAPTER III - RESULTS

Methods

The inclusion criteria for the checklist were pediatric patients ages 6 months to 6 years of age and having an outpatient surgical procedure. The inclusion criteria for the staff completing the checklist and questionnaire are participants that are nurses who are 18 years old and older who work at Merit Health Wesley during the timeframe of the questionnaire and clinical project. The participants will be staff nurses on: pre-operative unit, intra-operative unit, post-operative unit, manager of the surgical unit, director of the surgical unit, and the safety officer at the facility. A sample of five nurses was obtained to complete the pre-operative checklist for the two-week timeframe. The staff was provided the checklist at the beginning of the two weeks and given time to review it before completion. After the two weeks, a questionnaire was administered to the same staff in addition to the nurse manager of surgery, director of surgery, and the safety officer.

The data gathered was gathered from willing participants and kept anonymously. The percentages for each question on the checklist are provided in Table 1. An example of the pre-operative checklist is provided in Appendix A. At the top of the checklist, the age of the patient and what day of the week are documented by the staff. 42 patients were documented on and the number for each age are as follows: two patients were age 1, three patients were age 2, seven patients were age 3, 17 patients were age 4, seven patients were age 5, five patients were age 6, and one patient was 16. Question 1 on the checklist addressed if the pediatric patient received preop sedation. Out of the 42 patients, 40 patients received preop sedation and two of them did not.

Question two is asking if there is a crib available for patients under the age of 3. All 42 answered either no or not applicable to this question. This facility does not have a crib available in the preoperative area for patients under the age of 3. Question 3 is addressing if extra padding was added to the stretcher. All 42 patients had answered no to this question. There are two pads the length of the rails provided in the preop area for extra padding. Questions 4 and 5 are pertaining to the rails up x2 or x4 on the stretcher. Out of the 42, 40 stated the rails were up and the other two, the parents help the patient in arms until the surgical team transported the patient to the operating room. Question 6 asked if the bed was located closest to the nurse's station and out of the 42, 17 of the patients were not located close to the nurse's station. Question 7 instructed parents/caregivers to stay at the bedside and all 42 followed the instructions. Question 8 indicated if there was safety signage available for the family and it was made available for 38 out of the 42. Question 9 was asking if the patient under the age of 3 was transported to the operating room via a sled and there is not a sled available at this facility, so the N/A for all 42 patients. Question 10 was patients being transported to the operating room via a stretcher and all 42 patients were transported this way. Question 11 asked if a fall-risk bracelet was placed on the patient and out of the 42 patients only one did not have a bracelet placed. Question 12 asked if special alerts on bracelets or ID for special needs were implemented and 19/42 answered yes, 9/42 answered no, and 14/42 answered not applicable. Question 13 asked for suggestions pertaining to the improvement of fall safety and 9/42 answered bracelets were appropriate and 33 did not answer. Question 14 had 100% not answering other suggestions. Question 15 asked how long it took to complete the checklist and 38/42 said it took 1 minute and 4/42 said

it took two minutes. The last question asked if this checklist was accurate in capturing the needed safety measures for sedated pre-operative pediatric patients and 42/42 agreed.

Table 1

Checklist for Preoperative Safety Measures for Sedated Pediatric Patients in OPS to Reduce Fall Risks

Questions	YES	NO	N/A
Question 1	40 (95%)	2 (4.7%)	
Question 2			42 (100%)
Question 3		42 (100%)	
Question 4	40 (95%)		
Question 5	Same as #4		
Question 6	25 (59%)	17 (40%)	
Question 7	42 (100%)		
Question 8	38 (90%)	4 (9.5%)	
Question 9		42 (100%)	
Question 10	42 (100%)		
Question 11	41 (97.6%)	1 (2.3%)	
Question 12	19 (45%)	9 (21%)	
Question 13	9 (21%) for bracelet		33 (78%) did not answer
Question 14			42 (100%) no answer
Question 15	1 minute 38 (90%) 2 minutes 4 (9.5%)		
Question 16	42 (100%)		

In the questionnaire part of this DNP project, data was gathered from 11 willing participants. The questionnaire is in Appendix B. Questions 1-3 asked if the participants are 18 and older, consent to participate, and work at the facility. All 11 answered yes to questions 1-3. Question 4 asked if they thought the current assessment tool, the LS, appropriately assesses pediatric fall safety. Two out of the 11 agreed that it did

appropriately assess pediatric fall safety. Question 5 asked they thought there was a need for more specific pre-operative pediatric fall safety measures to be assessed. One out of the 11 participants answered no. Question 6 asked along with the LS, what additional measures could be included on the checklist and documentation to increase fall safety precautions for pre-operative pediatric patients. Eleven out of 11 all stated that instruction to parents/caregivers should be added. Question 7 asked for further suggestions and 10 out of 11 stated that more precautions needed to be addressed with special needs patients.

Table 2

Questionnaire for Nursing Health Care Team

Question	Yes	No
Question 1	11/11 (100%)	
Question 2	11/11 (100%)	
Question 3	11/11 (100%)	
Question 4	2/11 (18%)	
Question 5	1/11 (9%)	
Question 6	100% instructed parents/caregiver at bedside	
Question 7	10/11 (90%) special needs	

Summary

The goal of this project was to determine a need for a pre-operative checklist that would be beneficial both for the staff and the patient. To summarize the results of the two-week pre-operative checklist and the questionnaire, a total of 42 checklists were performed by the pre-operative staff. The results of the questionnaire completed by 11 staff members, suggested that a need for further fall safety measures should be implemented and that the pre-operative checklist was helpful, time-efficient, and beneficial. Falls are a rare, reported occurrence in pediatrics, which makes it difficult to

research and develop specific fall risk assessment tools (FRATs). “This integrative review highlights the importance of choosing a FRAT based on an institution’s identified risk factors and validating the tool for one’s own patient population as well as using the tool in conjunction with nursing clinical judgment to guide interventions” (DiGerolamo, 2017). Being aware of pediatric fall safety, having the correct equipment, a specific FRAT, and documentation on the EMR (electronic medical records) are all ways of improving fall safety among the pediatric population.

CHAPTER IV –DISCUSSION

The objective of this DNP project was to gather data and determine if there is a need for a pediatric preoperative checklist. The pre-operative staff was to complete a pediatric pre-operative checklist and the pre-operative staff, safety office, surgery director, and surgery manager were to complete a questionnaire with seven questions. The majority of the staff approved of the checklist and agreed that the facility could benefit from increased awareness of fall safety of the pre-operative pediatric population.

Implications for Future Nursing Practice

The data gathered from this project and the participants implied the need for improved fall safety measures for the pediatric population. The participants in the project stated that there is a need for improved future nursing practice of fall safety measures for special needs patients and certain equipment, especially for pediatric patients. It was also stated that fall safety signs and sedation education need to be available for the parents/caregivers. The staff agreed that a checklist is helpful especially since the only form of documentation for fall safety is the LS and free-text documentation. The administration, nursing staff, nurse anesthetists, and safety officers could improve fall safety for pediatric patients at this facility. This DNP project could take on many routes, but the area of special needs patients could be extremely beneficial for the staff, patients, and facility.

Limitations

One of the greatest limitations of this DNP project was the low number of staff participants. Participation in the checklist and questionnaire was optional and the questionnaire only yielded 11 participants. The number of patients that the staff

completed a checklist on was of adequate size, but the sample size of 11 participants for the questionnaire was small. This DNP project could have benefited from more participants. Another limitation was the checklist was only available for two weeks and the questionnaire at the end of the two weeks.

Recommendations

Future recommendations could potentially lead to more specific fall safety measures for special needs patients. Another recommendation is developing a better fall safety communication system between the different departments that are involved with pediatric patient care. This facility saw over 11,000 pediatric patients (under the age of 18) in the emergency department (ED), and the ED currently does not have a fall safety protocol for pediatric patients. Having more specific fall safety guidelines, measures, and communication between the inter-professional healthcare team would improve patient care and satisfaction.

Conclusion

Implementing and documenting appropriate fall safety measures for pediatric patients is essential in achieving high-quality patient care. All healthcare professionals have a duty to take care of each patient to the best of their ability and do no harm. Accidents are inevitable, but the better the staff is equipped, the less likely accidents are to happen. The participants in this DNP project agreed that pediatric fall safety could be improved and implemented a pre-operative pediatric fall safety checklist is a positive start.

APPENDIX A – Checklist

Checklist for Preoperative Safety Measures for Sedated Pediatric Patient in OPS to Reduce Fall Risks

Age: Circle Months (If less than 1 year)	6	7	8	9	10	11	Months
Age: Circle Years	1	2	3	4	5	6	Years
Day of the Week:	M1 TH2	TU1 F2	W1	TH1	F1	M2	TU2 W2

Mark any of the choices below that you have taken for the sedated pediatric patient today.

Yes	No	Question
		The child received pre-operative sedation.
		<u>If the child is under age 3:</u> Crib for pediatric patients under the age of 3
		Extra padding was added to the stretcher.
		Raise rails x 2 on the stretcher. <u>Write in NA if no stretcher is used.</u>
		Raise rails on the bed. <u>Write in NA if no bed is used.</u> <i>If Yes, Circle:</i> Rails x 2 Rails x 4
		Stretcher/Bed located closest to nurse's station
		Instructed parents/caregivers to stay at the bedside with the pediatric patient
		Safety signage on walls in the pre-operative area is visible to parents/guardians.
		Transport to OR from Preop Area-Sled for a patient under the age of 3 (<u>Write NA if child older than 3</u>)
		Transport to OR from Preop Area-Stretcher or Bed
		Correct fall-risk bracelet placed on patient or chart

		Special alerts on bracelets or ID for special needs/health conditions
		Suggestion for improvement of fall identification for the pediatric patient Suggestion: Bracelet Sticker Other_____
		Other(s) Please List: (Can use back)
		Write in the approximate minutes you took to complete this form.
		For this pediatric patient, do you feel this Checklist is accurate in capturing the needed safety measures for this sedated pediatric patient?

APPENDIX B – Questionnaire

Hello, my name is Susan Shemper, and I am a DNP Family Nurse Practitioner student at The University of Southern Mississippi. The questionnaire below is regarding *Pre-operative Pediatric Fall Safety Measures for Sedated Pediatric Patient with Planned OPS* for my evidenced-based clinical project. Your participation in this clinical project is greatly appreciated and will only take less than 10 minutes of your time. Before beginning the questionnaire, please take all COVID-19 precautions.

Questionnaire for Nursing Health Care Team

Yes	No	Question
		1. Please indicate that you are 18 years of age or older
		2. Do you consent to participate? <i>If "No," do not continue.</i>
		3. Do you currently work as a nurse at Merit Health Wesley on the: pre-operative unit, intra-operative, post-anesthesia care unit, or in education?
Yes	No	Question
		4. Do you think the current pediatric fall assessment tool, The Little Schmidy, appropriately assesses pre-operative pediatric patients with or without sedation for falls and fall-related injuries?
		5. Do you think there is a need for more specific pre-operative pediatric fall safety measures to be assessed?
Circle	Circle	6. Along with the Little Schmidy, what additional fall safety measures could be included and documented by the HC team to increase the safety precautions for the sedated pediatric patient during the OPS experience? <u>Circle all that apply:</u> <ul style="list-style-type: none"> • Extra padding for stretchers • Rails up x 4 or x 2 on bed or stretcher and wheels locked • Bed closest to nurse's station • Instructed parents/caregivers to stay at the bedside with the patient • Carried in arms to the operating room • A crib for all patients under the age of 3 • Correct fall identification placed on the patient • Visual signs for Precautions for parents or caregivers • None • Other (s) Please List:
Note	----	7. What further suggestions would you have for the pediatric pre-operative fall safety and fall-related injuries?

APPENDIX C – IRB Approval Letters

Office of
Research Integrity



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NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident template on Cayuse IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.

PROTOCOL NUMBER: IRB-20-237

PROJECT TITLE: Evidence-based Update in Practice: Development of a Nursing Checklist for Documentation of Pediatric Pre-operative Fall Safety Measures.

SCHOOL/PROGRAM: School of LANP, Leadership & Advanced Nursing

RESEARCHER(S): Susan Shemper, LaWanda Baskin

IRB COMMITTEE ACTION: Approved

CATEGORY: Expedited

7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

PERIOD OF APPROVAL: August 5, 2021

Donald Sacco, Ph.D.
Institutional Review Board Chairperson



5001 Hardy Street
Hattiesburg, Mississippi 39402
601-268-8103 Phone
601-268-5008 Fax

June 2, 2021

Susan Shemper
11 Abbeywood Lane
Hattiesburg, MS 39402

Re: Case Presentation MHW2021-03

Dear Susan:

The Merit Health Wesley IRB (IRB00010639) met on June 2, 2021, and reviewed your case presentation:

Topic: Evidence-based Update in Practice: Development of a Nursing Checklist for Documentation of
Pediatric Pre-operative Fall Safety Measures

Primary Investigator: Susan Shemper

Sponsor: Dr. LaWanda Baskin, USM Asst Professor, College of Nursing

The IRB approved the study. Please let me know if you have any questions or need any additional
information from the IRB to proceed.

Sincerely,

A handwritten signature in red ink, appearing to be "D. Hunt", written over a horizontal line.

Derek Hunt, DO
Chair, Merit Health Wesley IRB

APPENDIX D – DNP Essentials

There are eight essentials of the Doctor of Nursing Practice (DNP) and the DNP student must meet these essentials to apply these to research and practice. These essentials are the “foundational outcome competencies deemed essential for all graduates of a DNP program regardless of specialty or functional focus” (Chism, 2019, p. 13).

- NP Essential II: *Organizational and Systems Leadership for Quality Improvement and Systems Thinking.*
- DNP Essential III: *Clinical Scholarship and Analytical Methods for Evidence-Based Practice.*
- DNP Essential IV: *Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care.*
- DNP Essential V: *Health Care Policy for Advocacy in Health Care.*
- DNP Essential VI: *Interprofessional Collaboration for Improving Patient and Population Health Outcomes.*
- DNP Essential VII: *Clinical Prevention and Population Health for Improving the Nation’s Health.*
- DNP Essential VIII: *Advanced Nursing Practice:*

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