Pediatric Fall Risk Assessment Tool

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BACKGROUND

- PICO Question: For pediatric inpatients, does the current fall risk assessment scale, (Pediatric Schmid), compared to other pediatric fall risk scales (CHAMPS, GRAF-PIF, HDFS) decrease the likelihood of a fall?
  - Most pediatric indicators have no national benchmarks. Organizations pursing magnet designation is challenged with establishing the national benchmarks standard practice (Graf, 2011).
  - There is not a standardized validated pediatric fall risk screening tool.
  - In last 2 years, 77% of the pediatric patients that had fallen where not identified as a high-risk fall.
  - Serious injury with falls is "consistently among the Top 10 sentinel events reported to the Joint Commission's Sentinel Event Database" (The Joint Commission, 2015).

PURPOSE

- ❑Analyze the organization's current pediatric fall risk assessment tool.
- ❑Conduct search for evidence that will support or disprove the tool's use as best practice and suggestions of another best practice tool.
- ❑Develop recommendations for change to best practice.
- ❑Conduct a comparison of the current tool with the recommended tool with patient population to determine if the recommended scale is the best fit for the organization.
- ❑Develop an action plan for implementation, including outcome evaluation and dissemination of findings to the organization.

METHODS

The Pediatric Unit Based Council (UBC) compared the current pediatric inpatient fall risk assessment scale (Pediatric Schmid) to other fall risk scales (CHAMPS, GRAF-PIF, HDFS) to determine which scale could potentially decrease the likelihood of a pediatric fall.

Using the John Hopkins Nursing Evidence-Based Practice (JHNEBP) Model to develop the practice question, review the evidence, and translate the evidence into practice.

- Developed a PICO Question
- Identified stakeholders for the project
- Completed a literature review to recommend the best evidence-based practice tool
- Developed an action plan for implementation
- Developed a dissemination plan

Schmid Pediatric Fall Assessment Tool

Criteria	Conditions	Criteria	Conditions
Mobility	Ambulation with no gait disturbance (0)	Prior Fall history (last 6 months)	Yes-before admission (1)
	Ambulation or transfers with assistive devices (1)		Yes-during this admission (2)
	Ambulation with unsteady gait and no assistive device (1)		No (0)
	Unable to ambulate or transfer (0)	Current Medications	Anticonvulsants/tranquilizers or psychotropics/hypnotics (1)
Mentation	Developmentally appropriate and alert (0)		None of these (0)
	Developmentally delayed (1)		
	Disoriented (1)		
	Coma/unresponsive (0)		
Elimination	Independent (0)		
	Independent with frequency or diarrhea (1)		
	Needs assistance with toileting (1)		
	Diapers (1)		

Low risk =1-2
High Risk ≥ 3

(Harvey et al., 2010)

Johns Hopkins Nursing Evidence-Based Practice Model

- Kim, E., Lim, J., Kim, G., & Lee, M. (2019). Meta-analysis of the diagnostic test accuracy of pediatric inpatient fall risk assessment scales. *Child Health Nursing Research, 25*(1), 56–64. https://doi.org/10.4094/chnr.2019.25.1.56
  - **Level II Meta-analysis**
  - **Identified a need for an effective pediatric inpatient fall risk tool**
  - **Current tools have high sensitivity and low specificity, suggest need to develop a scale with more categories or eliminate items that require subjective judgement of nurse.**
- Harvey, K., Kramlich, D., Chapman, J., Parker, J., & Blades, E. (2010). Exploring and evaluating five pediatric falls assessment instruments and injury risk indicators: An ambisepective study in a tertiary care setting. *Journal of Nursing Management, 18*, 531–541.
  - **Level III**
  - **Study concluded that it could not determine one scales superiority over the other. Presented a need for more research.**
- McNeely, H. L., Thomason, K. K., & Tong, S. (2018). Pediatric fall risk assessment tool comparison and validation study. *Journal of Pediatric Nursing, 41*, 96–103. https://doi.org/10.1016/j.pedn.2018.02.010
  - **Level III**
  - **Study concluded that it would stop using their current I'm SAFE tool and implement HDFS.**

Summary of Evidence

- Identified most common Fall risk scales used
  - Humpty Dumpty Fall scale (HDFS)
  - General Risk Assessment for Pediatric Inpatient Falls (GRAF-PIF)
  - CHAMPS
- Consensus of evidence from literature is more research is needed to identify a national standard pediatric fall prevention assessment scale.
- More work is needed, and individual organizations should validate the specific tool used with their own patient population.

Sensitivity VS. Specificity

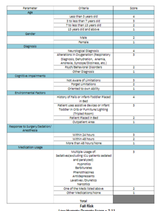
Correctly generates positive result. Who is <u>at risk</u> for falling.	Correctly generates the negative result. Who is <u>not at risk</u> for falling.

Recommendation: To change to the more sensitive tool

HDFS	Pediatric Schmidt
• Sensitivity=85% • Specificity= 24%	• Sensitivity = 30% • Specificity = 97%

(Kim et al., 2019)

Humpty Dumpty Fall Scale

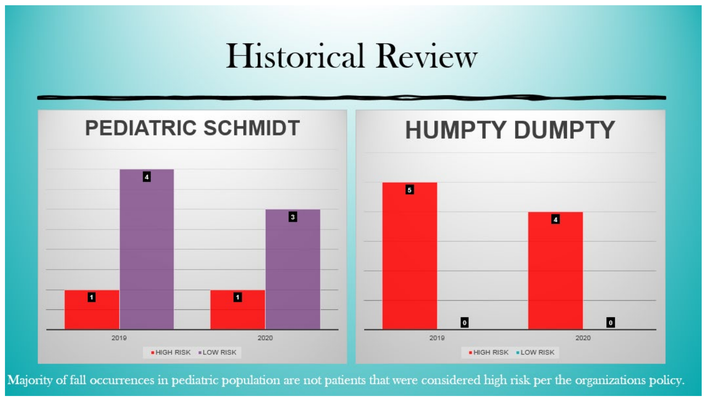


(Gonzalez et al., 2020)

RESULTS

- The Humpty Dumpty Fall Scale (HDFS) was determined to have a higher sensitivity at 85% when assessing who is at risk for falling compared to the Pediatric Schmid which has a sensitivity of 30%.
- In a historical review of pediatric patients who fell in 2019 and 2020 it was identified that the current Schmid Tool did not accurately identify these patients as a risk for falling.
  - In 2019 20% of the pediatric patients who fell were identified as a fall risk.
  - In 2020 33% of the pediatric patients who fell were identified as a fall risk
  - When comparing the Schmid tool with the Humpty Dumpty Fall Scale for the patients who fell in 2019 and 2020 100% of the patients were identified as a fall risk

Historical Review



Majority of fall occurrences in pediatric population are not patients that were considered high risk per the organizations policy.

CONCLUSION

- The Pediatric UBC determined that it would be best practice to change to a more sensitive tool as we are looking to see who is at risk for falling versus who is not at risk of falling. The Pediatric UBC have begun the process of adopting the Humpty Dumpty Fall Scale for the Pediatric Patients at University Medical Center.

REFERENCES

- Available upon request

CONTACT INFORMATION

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