

PEDIATRIC PATIENT FALLS: PREVENTION

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Question

What is the best available evidence regarding the prevention of falls in hospitalized pediatric patients?

Clinical Bottom Line

Children have a higher risk of falls due to their curious nature, physical development and cognitive growth.¹ In hospitals, pediatric patients aged one to three years are at higher risk of falls, with most falls occurring from an inpatient bed and in the presence of a caregiver.¹ Falls account for 6% to 24% of pediatric safety incidents.¹

- A systematic review and meta-analysis analyzed the contents and effects of falls prevention programs for pediatric hospitalized patients. The authors stated that falls risk should be classified into high and low risk levels and that strategies for the high-risk group should include using stickers or signs to indicate the patients falls risk, close observation such as placing the patient(s) in a room close to the nurse station or leaving the door open and checking on the patient often, and assisting with ambulation. The authors also stated that a general protocol for low risk groups should include educating the patients and families, leaving the bed guards (rails) up and locked, and having caregivers stay with the patient at all times. The authors recommended collaboration between the nurse, patient and their families, and interventions used in adult hospitals such as bed alarm devices and wireless devices should be considered. The authors concluded that there was limited objective evidence to propose a direction for an effective falls prevention program, that programs are developed according to local institutional policies, and that a validated falls risk assessment instrument needs to be developed.¹ (Level 2)
- An exploratory retrospective chart review examined the use of an enclosure bed in the pediatric hospital setting. The enclosure bed has a canopy netting over the entire bed that can be unzipped to allow access to the child for the provision of care. The proposed advantages are that the child is prevented from wandering and therefore decreases their risk of falling, and reduces external stimulation which can improve sleep and reduce agitation. The authors found that the enclosure bed was used for children with congenital development impairment (78%) or new developmental impairment (13%), and no developmental impairment (9%). The authors stated that the enclosure bed reduced the incidence of falls and wandering and recommended the use of the enclosure bed as part of a comprehensive approach to caring for children with behavioral challenges in the pediatric hospital setting.² (Level 2)
- A quality improvement project using a pre-post study design, aimed to reduce harm related to pediatric falls by implementing a fall bundle that included a fall risk assessment tool (Humpty Dumpty Falls Scale), fall bundle elements (communicate patients at risk, ensure a safe environment, implement specific mitigation tools, review safety protocols), and fall prevention education to patients and families. The authors reported an increased compliance of falls prevention from 27% to 88% and zero patient falls in

five out of six months after implementation of the fall prevention program. The details of the bundle include:³ (Level 3)

- Identify low and high risk using a validated, pediatric specific, falls assessment tool.
- Those identified as high risk have a sign at the door or bedside, nurses communicate falls risk at handover, indicate falls risk in the electronic health record, and on the patient with a sticker.
- Assess and assist with toileting, hourly rounding, assist with ambulation, assess need for 1:1 supervision, evaluate medication administration times.
- Bed in low position with brakes on, side rails up and protective barriers to close spaces or gaps, non-skid footwear, appropriately sized clothing, adequate lighting, call light within reach, environment clear of unused equipment and furniture.
- Standardize fall prevention education which includes the patient, their caregivers/families, and healthcare workers.

Characteristics Of The Evidence

This evidence summary is based on a structured search of the literature and selected evidence-based health care databases. The evidence in this summary comes from:

- A systematic review that included nine studies (five QIP, two experimental studies, and two retrospective chart reviews).¹
- An exploratory retrospective chart review over two years that included 141 children.²
- A pre-post study at a large academic children's hospital.³

Best Practice Recommendations

- It is recommended that falls risk is assessed in all pediatric patients using a validated, pediatric specific, falls risk assessment tool. (Grade B)
- Pediatric patients assessed as high risk of falls should be easily identified, for example a bed card or sticker. (Grade B)
- It is suggested that falls risk assessment be documented in the patient record and communicated between the healthcare workers / nurses at each handover if risk is high. (Grade B)
- It is recommended that protocols for identifying and managing pediatric patients at risk of falls be developed according to local policy and guidelines. (Grade B)
- It is recommended that education on falls prevention be provided to the patient, their families and care givers. (Grade B)

References

1. Kim EJ, Kim GM, Lim JY. A systematic review and meta-analysis of fall prevention programs for pediatric inpatients. *Int J Environ Res Public Health*. 2021;18(11):5853.
2. Sherburne E, Snethen JA, Kelber S. Safety profile of children in an enclosure bed. *Clin Nurse Spec* 2017 1;31(1):36-44.
3. Benning S, Webb T. Taking the fall for kids: A journey to reducing pediatric falls. *J Pediatr Nurs* 2019 1;46:100-8.

Archived Publications

1. JBI-ES-2637-2 (Published at 10 June 2022)
2. JBI-ES-2637-1 (Published at 9 April 2021)

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For details on the method for development see Munn Z, Lockwood C, Moola S. The development and use of evidence summaries for point of care information systems: A streamlined rapid review approach. *Worldviews Evid Based Nurs.* 2015;12(3):131-8.

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