A Closer Look at Pediatric Falls: A CHCA Multi-site study

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Problem

➢ The Joint Commission (JC) and Institute of Medicine (IOM) identify inpatient falls as a significant patient safety risk

➢ However research regarding falls in pediatric settings is limited (Jamerson, 2009; Hill-Rodriguez, Messmer, 2008; Razmus, 2006; Graf, 2004; Cooper, 2007).

Review of Literature

➢ AHRQ Health Care Innovations Exchange: Bundle of interventions targeting high risk patients reduces falls and fall –related injuries on medical-surgical units www.innovations.ahrq.gov/popup.aspx?id=2611&type=1&name=print accessed 5/12/2010/

➢ Cooper, 2007

➢ Graf, 2004

➢ Hill-Rodriguez, Messmer, 2008

➢ Jamerson, 2009

➢ Quigley, P., Hahm, B., Collazo, S et al (2009). Reducing serious injury from fall in two Veterans' hospitals medical – surgical units *Journal of Nursing Care Quality* 24(10, 33-41.

➢ Razmus, 2006

Purpose

➤ A prospective multi-site study of inpatient pediatric falls in 26 Child Health Corporation of America (CHCA) sites was sanctioned by the CNOs in CHCA facilities to determine prevalence, fall characteristics and related injuries

Conceptual Framework

- Imogene Theory of Goal Attainment
  - Growth and Development
    - Potential Fall risk are identified based on child's age and development
  - Perception
    - Perception of Nurse towards Patient and Family
    - Perception of Patient and Family towards Nurse
  - Communication
  - Interaction
  - Transaction

Methodology

- A 70-item data collection tool
  - content validity was established by a group of nurses researchers/clinicians
- Sample- 26 CHCA pediatric hospitals
- Exclusion
  - Any child over age 18
- Development age groups
  - Infant- 0-23 months
  - Toddlers/pre-school- 2-4 years
  - School-aged- 5-12 years
  - Adolescents - 13-18 years

Methodology

➢ Data was abstracted from occurrence reports, patient charts and staff interviews.

➢ Data analysis included calculated prevalence rates, descriptive statistics and regression analyses.
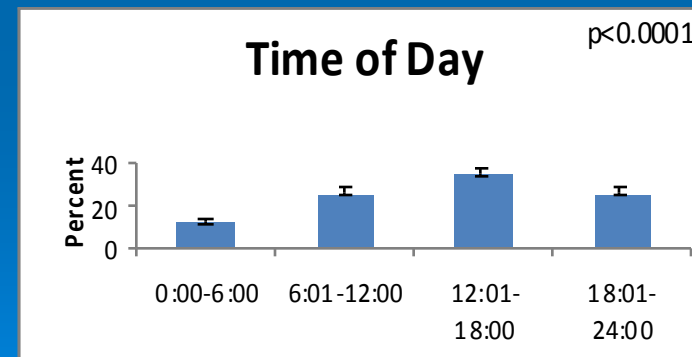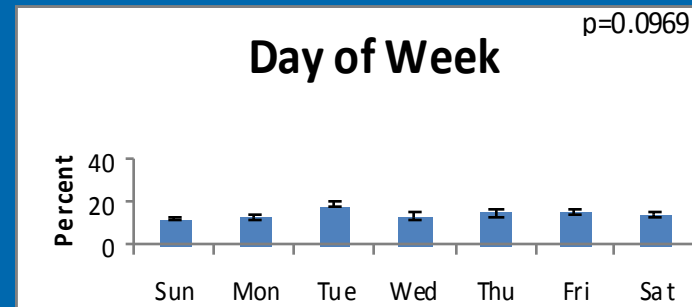
Results

➤ Over a six-month period, 782 pediatric falls were reported.
➤ Prevalence rate (95% CL)- 0.88/1000 patient days
➤ Children who fell were

- 159 infants (20%)
- 192 toddler/preschool (25%),
- 248 school-aged (32%)
- 183 adolescents (23%)

Results (cont'd)

➢ Of those who fell – percent without injury;
- 49% infants,
- 64% toddlers/preschool,
- 72% school-aged and
- 76% adolescence

➢ 27.5% mild injuries;
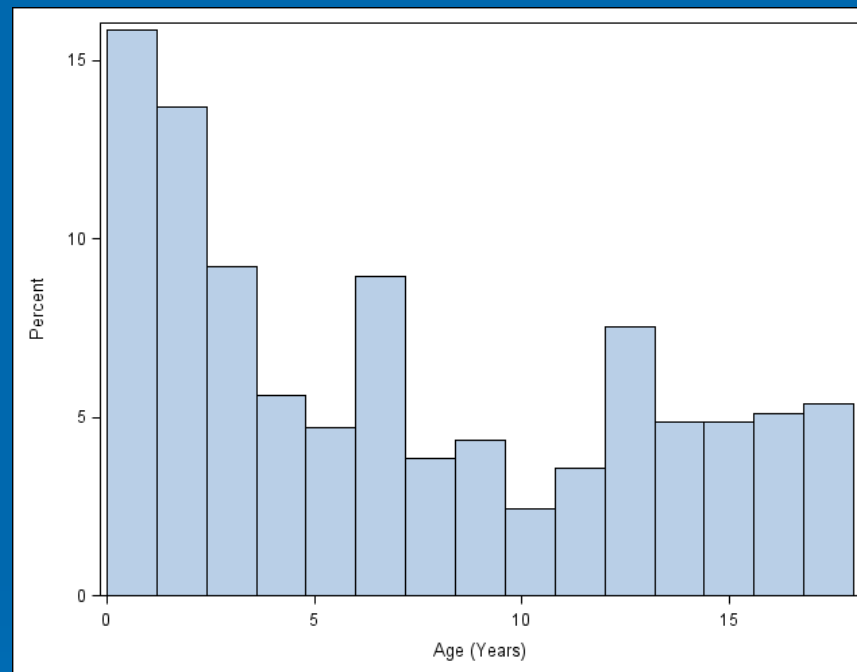➢ none suffered serious injury or death.

Results (cont'd)

- **75%** were supervised by an adult during the fall (p=<0.0001)
- More falls occurred on Tuesday
- More falls occurred between noon-6pm
- More falls occurred in the patient room, non-intensive care (59%)

Day of Week — p=0.0969

Time of Day — p<0.0001

Results (cont'd)

➤ Race
- 65.8% Caucasian
- 19.4% Black/African
- 9.8% Hispanic
- 3% Asian
- 1.2% American Indian/Alaska Native
- .2% Native Hawaiian or other Pacific Islander

➤ Gender
- 54% Males
- 46% Females

Results (cont'd)

- Diagnosis
  - 20.4% Neurologic/developmental delay
  - 13.4% Respiratory
  - 11.1% Gastrointestinal
  - 9.1% Hematology/Oncology
  - 6.8% Infectious Disease
  - 4.5% Cardiac
  - Other-26.8%

Results (cont'd)

- Patients who fell were
  - 86.6% alert
  - 83.3% oriented
  - 27.0% ambulating
- Non-discriminating factors
  - history of falling
  - gender
  - impaired balance
  - sedation
  - environmental conditions were Less than 29% used

Results (cont'd)

Over 87.3% of patients were identified at high risk using fall risk assessment tools

- 11.8%   GRAF-PIF
- 8.8%   Humpty-Dumpty
- 5.3%   CHAMP
- 67.5%   Other tools

Patients identified at high risk

    47.3%   yes

    50.3%   no

Results (cont'd)

➤ Result in injury
- 32.1% yes for minor with no death or loss of function
- 66.2% no

➤ Specific fall prevention interventions in plan of care

53.2% yes

41% no

5.8% unknown

Conclusion

➢ Although fall prevalence rates are lower for pediatrics, as compared to adults

➢ Results indicate that the pediatric fall risk tools need further refinement in an effort to address pediatric falls with adult supervision.

➢ Pediatric patients were alert, oriented, and ambulating

Future Research

➢ Delineate fall risk factors for pediatric patients

➢ Focus efforts to prevent serious injury through education, especially parents

➢ Enhance vigilance for all pediatric patients

QUESTIONS?????????