

Changing with the Times: An Analysis of Virtual Patient Safety Monitoring and the Impact on Patient Falls



Jodi Thurman, MBA, BSN, RN, CEN; Debra Arnow, DNP, RN, NEA-BC
Vanderbilt University School of Nursing

Introduction

Methods

Results

A literature review regarding video monitoring programs revealed limited high levels of evidence and a variation in methods for virtual monitoring programs. The review did highlight the potential of video monitoring programs as a strategy for fall reduction, in addition to a cost savings benefit for hospitals. The need for additional studies to evaluate protocols, including the use of validated fall risk assessments, virtual monitoring criteria, clear escalation, and de-escalation interventions, and criteria for patient identification for a virtual sitter.

Topic

- In the United States, hospitals report up to 1 million falls each year despite numerous quality improvement initiatives targeting this problem (Francis-Coad, et al., 2020)
- 30% of hospital falls result in injury with 4-8% classified as moderate or severe (Francis-Coad, et al., 2020)

Problem

- With the advent of telehealth and innovative technology solutions in healthcare, video sitter programs have emerged as a solution to fall interventions (Hogan-Quigley, et al., 2021)
- Limited high levels of evidence in virtual monitoring as a fall prevention method
- **Variation** in current virtual monitoring programs across HCA:
 - Protocols
 - Validated risk assessment tools
 - Virtual monitoring criteria
 - Escalation and de-escalation interventions
 - Virtual sitter patient identification criteria

Team

- Division Chief Nursing Executives
- Facility Chief Nursing Officer
- Director of Care Process Delivery
- Clinical Informatics Consulting Analyst
- Director of Performance Improvement

Aim

- To determine the variation in practice for virtual safety attendant programs across HCA Healthcare, and their effect on falls within the organization to inform the need for a structured, standardized virtual patient safety attendant program pilot

In order to determine variation in virtual and in-person practice the PDSA cycle was used to develop a needs assessment that was distributed to facility nursing leadership with and without virtual monitoring programs to determine the effects on patient falls.

PDSA Cycle

- **Plan:** identify facilities with current virtual monitoring programs
- **Do:** Distribute needs assessment to 15 facilities with and without virtual monitoring programs
- **Study:** Analyze Data from needs assessment and compare to the hypothesis
- **Act:** Share variation with organizational leadership to develop a rigorous pilot with standardized processes for virtual monitoring

Measures

- Percentage of facilities using validated fall risk assessment tools
- Percentage of facilities using escalation and de-escalation criteria
- Percentage of facilities with specific patient reassessment frequency process defined
- Fall with injury/1000 patient days pre and post-virtual monitoring program launch

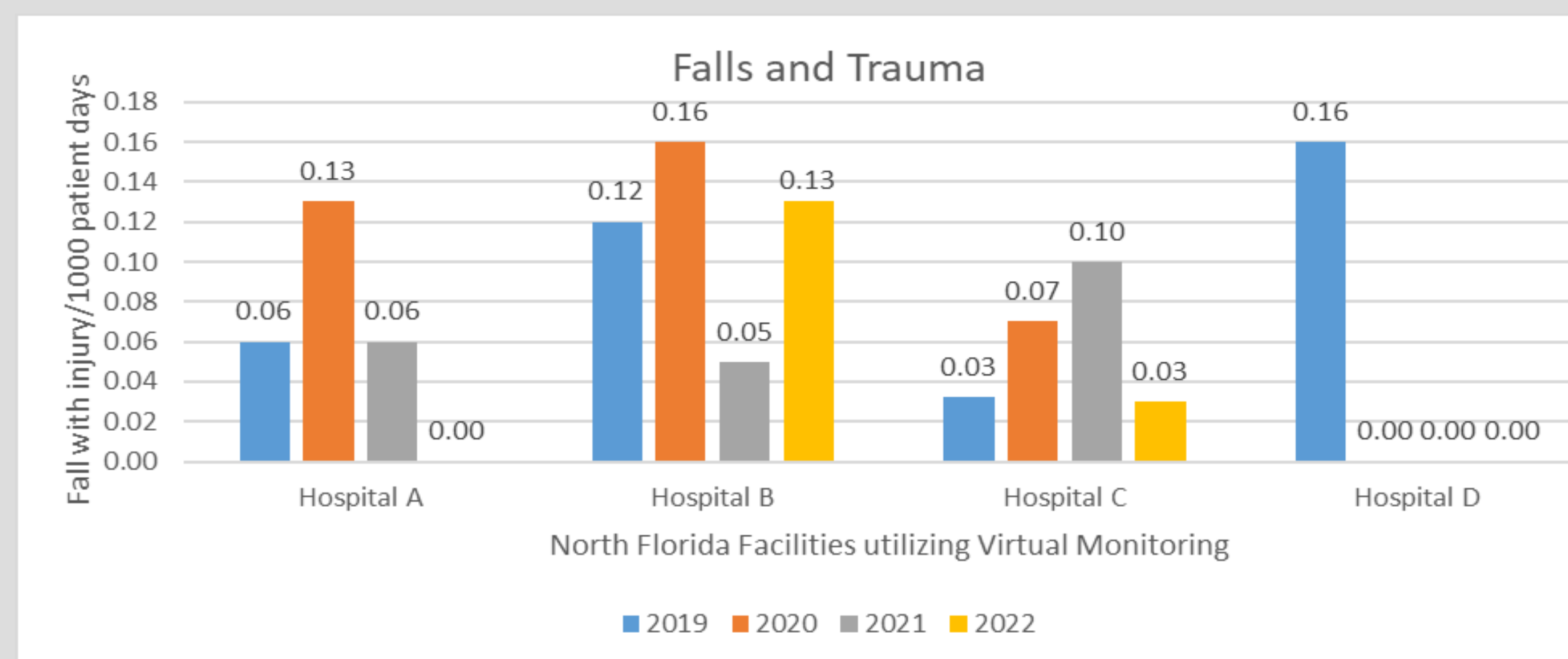


Table 1: Escalation & De-escalation Criteria for assigning a Patient Safety Attendant (PSA)

Survey Respondent	Defined Escalation/De-Escalation Criteria	Use of Validated Fall Risk Assessment Tool	Level of Leadership Required to utilize a PSA	Reassessment Frequency
1	Yes	Yes	CNO	Undefined
2	Yes	Yes	Supervisor, Director, and CNO	Q4hr
3	Yes	Yes	CNO/House Supervisor	Undefined
4	Yes	Yes	Supervisors	Q12 hr
5	Yes	Yes	Undefined	Undefined
6	No	Yes	None	None
7	Yes	Yes	Supervisor	Undefined
8	Yes	Yes	Supervisor	Q4 hr
9	Yes	Yes	Undefined	Undefined
10	Yes	Yes	ACNO/CNO	Undefined
11	Yes	Yes	Undefined	Q4 hr
12	Yes	Yes	Supervisor/CNO	Q4 hr
13	Yes	Yes	Supervisor	Q4 hr
14	Yes	Yes	Team	Q4 hr
15	Yes	Yes	Charge RN/Director/Manager/Supervisor	Q4 hr

The needs assessment was completed by 100% (n-15) of the North Florida Division Hospitals.

Virtual Patient Safety Programs:

- 27% (n-4) of North Florida facilities implemented a Virtual Patient Safety monitoring program in 2019
- Falls with injury/1000 patient days showed improvement at Hospital D only with 0 falls with injury/1000 patient days in the last 3 years
- Falls with injury/1000 patient deaths at Hospitals A,B,C did not show an improved trend (See graph)

Fall Safety Monitoring Program Structure:

- 93% (n-15) had defined escalation and de-escalation criteria defined
- Specific Escalation/De-escalation criteria varied across all 15 facilities (see Table 1)
- 100% (n-15) utilize the validated Morse fall risk assessment tool
- 53% (n-15) of the North Florida facilities utilize defined specific reassessment frequency and 75% (n-4) of the facilities with virtual monitoring have defined specific reassessment criteria
- 80% (n-15) of the North Florida facilities have a defined leader responsible for approving a patient safety attendant, however, the level of leadership escalation varies (see Table 1)
- 75% (n-4) of the facilities with virtual monitoring have a defined level of leadership escalation

Implications for Practice

The needs assessments revealed the facilities utilizing virtual patient safety monitoring programs are all utilizing the validated Morse fall risk assessment tool, and 3 of the 4 facilities have defined escalation and de-escalation criteria, as well as reassessment frequency processes. The escalation process to leadership for approval of a patient safety attendant varies across all of the North Florida facilities. Hospital D showed a trend of improvement and would be a facility that could be studied for success and a structured rigorous pilot utilizing this hospital processes could be implemented at Hospitals A, B & C to determine the ability to scale, and generalizability in the data. If this pilot is successful the process could be standardized across the HCA enterprise, improving patient safety and effectively reducing the number of falls with injury.

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