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Alexandra Volpe

MaineHealth, Alexandra.Volpe@mainehealth.org

Catherine Close

MaineHealth, Catherine.Close@mainehealth.org

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Fall Rates in patient populations with remote video monitoring compared to companions

Alexandra Volpe, BSN, RN II & Catherine Close, BSN, RN II

Background

Healthcare facilities are constantly searching for new and improved interventions to minimize injury and fall rates within their units. 1:1 companions, or 'sitters', have been used to provide the patient with close monitoring in order to accomplish these goals. However, companions are not always a viable option for facilities due to poor staffing and increased expense in order to staff a ratio of 1 companion to 1 patient. Research has started to develop on the benefits of remote video monitoring, or 'telesitting', as an intervention to minimize fall risk and injury.

Problem

In dementia patients how does telesitters compared to 1:1 companions affect fall rates during hospital stay?

Review of Literature

Title: Sitters as a Patient Safety Strategy to Reduce Hospital Falls

Purpose: To explore the effectiveness of 1:1 companions and alternatives to companions, such as video monitors, on preventing patient falls in the hospital setting.

Method: Evidence review from databases. Targeted studies of any design that assess the effect of adding 1:1 companions to usual care in comparison to alternatives such as video monitors for adult patients in the hospital setting with falls as the primary outcome.

Results: There was very low evidence suggesting that adding 1:1 companions to care in the hospital setting reduces patient falls.

Conclusion: Although the results showed there was little evidence that adding 1:1 companions reduced falls in the hospital setting, there were no randomized trials and the studies had a high risk of bias. Obviously, implementing 1:1 companions is an added expense for hospitals but as nurses, it is something that enhances the overall patient experience and truly reduces falls. In sum, more research must be conducted in a non-biased setting in order to reinforce these beliefs.

Title: One-to-one Observation: A Systematic Review

Purpose: One-to-one observation is used to prevent adverse events in hospitalized patients. However, it is a costly intervention and there is uncertain evidence on its effectiveness. Therefore, this systematic review was conducted to inform policy and practice.

Method: A systematic review of studies and trials that included one-to-one companions as an intervention in an acute hospital's medical/surgical or psychiatric hospital setting and reporting an outcome such as falls, wandering, or suicide/self-harm. Preventing those outcomes had to be the primary goal of the intervention.

Results: The two studies that examined the effectiveness of companions for reducing falls were in Australia and there were 3 to 4 times the number of falls compared to a typical US acute care hospital. There were no identified studies that reported the effects of companions for reducing suicide/self-harm or wandering. There were also no studies that reported the cost-effectiveness of companions because most studies only report the cost savings of reducing the number of companions.

Conclusion: The main finding of this systematic review is that there is a massive gap in the research to show the effectiveness of one-to-one companions in the acute hospital setting. There is a strong mechanistic rationale for companions but little evidence to support. Therefore, there is ample opportunity for members of the healthcare community, especially nurses, to conduct studies to support the rationale that companions reduce the rates of falls, suicide/self-harm, and wandering.

Title: Fall Prevention and Injury Reduction Utilizing Virtual Sitters in Hospitalized Patients

Purpose: Evaluate and determine video monitoring/telesitters applied as an intervention in patients with fall-related injuries and hospital/facility-associated falls/injury. Additionally, examine the expenses and cost reduction of telesitters versus 1:1 companions. Key points: Fall rates and cost savings

Method: Ten observational studies and two quasi-experimental studies were selected in a literature search using the Cumulative Index of Nursing and Allied Health Literature, PubMed, and Scopus databases.

Results: Eight out of the twelve studies concluded that there was in fact fall reduction when applying telesitters/virtual monitoring as an intervention. Three out of the twelve studies provided no statistical evidence that there was improvement when implementing telesitters. All 12 studies provided evidence that overall cost was decreased when switching from 1:1 companions to telesitters.

Conclusion: Incorporating video monitoring and telesitters into the healthcare setting was proven in this study to prevent and decrease falls and, additionally, presents as a more cost efficient intervention compared to 1:1 companions. Limitations within this study include small sample size, limited patient population, and publication bias.

Next Steps

The next step for this subject would be to conduct further research from a nurse-driven, non-bias standpoint. This would, for example, eliminate a financial bias where it is most affordable for the hospital to utilize telesitters compared to in-person companions. Additionally, further research would include present day technology in larger facilities, with a wide variety for patient population. This would ensure that telesitters and in-person companions are being used in the appropriate setting.

Resources:

Greeley, A. M., Tanner, E. P., Mak, S., Begashaw, M. M., Miske-Lye, I. M., & Shekelle, P. G. (2020). Sitters as a patient safety strategy to reduce hospital falls: a systematic review. *Annals of internal medicine*, 172(5), 317-324.

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Quigley, B. H., Renz, S. M., & Bradway, C. (2021). Fall prevention and injury reduction utilizing virtual sitters in hospitalized patients: a literature review. *CIN: Computers, Informatics, Nursing*, 39(12), 929-934.

