Reducing Falls on the Neurovascular Unit

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Reducing Falls on the Neurovascular Unit

M. Rand Kaller, BSN, RN, CMSRN, Isabelle Pisani, BSN, RN

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Background

Falls often result in injury and prolonged hospital stays, as well as diminished confidence from patients (Jung et al.). At Providence St. Vincent Medical Center (PSVMC), one of the highest priorities in patient care is patient safety, specifically fall prevention and reduction. PSVMC’s neurovascular unit is a 40 bed unit which provides care to patients who have a vast array of diagnoses, cerebral vascular accidents (CVA) being one of the most common. For each patient admitted to PSVMC, the Morse Fall Risk Scale is used as a quick tool to categorize a patient’s risk for falling. The Morse Fall Risk Score is general enough for use with all patients, and does not address neuro-specific diagnoses or subsequent issues.

During 2018, there were 61 falls on the neurovascular unit, which was more than double the unit’s goal. Falls are devastating to both patients and unit caregivers. Neurovascular’s current fall risk prevention practices include the Morse Fall Risk Scale, bed alarms, strip alarms, fall gowns to indicate a fall risk patient, fall risk signs on most doors, hourly caregiver rounding, bracing plans for impulsive patients, and the use of safety equipment for standing and ambulating such as gait belts, walkers, sit-to-stand aids and lifts.

From a review of research on falls in neurovascular specific populations, it became clear that there were factors known to cause falls not currently being examined, measured, or addressed in the otherwise extensive protocol currently implemented. Current interventions were universalized for all medical-surgical patients, leaving room to grow implementing a targeted therapy for concerns that primarily affect patients hospitalized for neurological reasons (Mendoza et al.). The next step appeared to be an intervention tailored to the need of the neurovascular patient population.

Purpose

The purpose of this study is to determine if a neuro-specific fall risk tool (SAFR) which addresses the neuro-specific risk factors for falls, would be more effective than the current generalized Morse Fall Risk assessment tool at predicting patient fall risk among CVA patients, in turn reducing the fall rate on the neurovascular unit.

Methods

A retrospective chart audit reviewed all neurovascular unit falls in 2018. Factors considered included diagnosis, age, sex, time of fall, length of hospital stay, BMI, National Institute of Health Stroke Scale (NIHSS) score that measures stroke severity before and after a fall if relevant, and comorbidities. This analysis revealed that the plurality of unit falls (37%) occurred in stroke patients.

A literature review explored factors affecting inpatient stroke patients’ fall risks and the strategies implemented to prevent their falls. The Stroke Assessment of Fall Risk (SAFR) tool looks at memory and orientation, hemi-neglect, and mobility and stability with regard to fall risks (Bresinger et al.). SAFR was used as starting point to develop a modified tool to determine neuro-specific fall risks. Physical therapists, occupational therapists, and nurse leaders collaborated with the investigators to develop the modified SAFR. All unit nurses, nursing assistants and other interdisciplinary team members were educated about how to use SAFR.

Two weeks were allotted for training staff on the neurovascular unit and staff in the medical-surgical float pool as they work on the neurovascular unit often. Although a competency was not created for SAFR training purposes, completion was tracked: 84% of neurovascular staff and 33% of medical-surgical float pool staff completed the training during these two weeks. Charge nurses on the neurovascular unit also assisted with real-time training for any nurse unfamiliar with the protocol with the expectation that the nurse begin using the SAFR while providing care that day.

Once SAFR was implemented, all patients admitted or transferred to the neurovascular unit who were placed on stroke protocol (NIHSS assessments) were enrolled in SAFR and the fall reduction study. A paper copy of the SAFR audit was placed at bedside in addition to a SAFR sign placed on the patients room door. A SAFR binder with guidelines for implementation, the assessment tool itself, audit sheets for patient bedheads, and door signs was added to an existing file organizer with paperwork relevant to care.

The Morse Fall Risk Assessment (Morse) tool was still used on each shift in addition to the SAFR tool for all patients to maintain the standard of care. Patients refusing the listed interventions or refusing assessment were removed. Patients falling in the specified time frame had their records audited to ensure staff compliance. Completed SAFR and audit forms were labeled and placed in a secure data collection folder at the change nurse station.

Results

The number of falls on the neurovascular unit during the study period was half that of the same period the previous year, resulting in the lowest number of falls for over a year. SAFR differentiates the risk levels of the patients using information associated with fall rates in stroke populations, resulting in a smaller target of high fall risk patients than Morse. It is possible that other unit changes also contributed to the decline in fall rate, including the unit reuniting to a single location after being divided into two locations for over a year, and the implementation of Remote Visual Monitors.

The Morse scale scored nearly the entire population as high fall risk, which results in reduced ability to triage resources and target care to the patients with the greatest needs and can result in alarm fatigue, increased injury rate, and other consequences. The stroke population is particularly vulnerable to falls. The SAFR, which assesses specific fall risks for stroke patients, and differentiates between risk levels, which is the first step of prevention. As a result, it is possible to allocating resources to the patients at the highest risk.

Even if the SAFR imperfectly gauges a patient’s risk, it begins a dialogue on the unit. The nature of this study brought together nurses, nursing assistants, and therapists in a collaborative effort to discuss what really causes falls within their home unit. A tangible paper at bedside and a sign on a door make a larger statement and require more consideration in real time than information in medical record that may not be looked at by each caregiver interacting with the patient.

The limits of this study lie primarily in the small sample size falls patient, and results about decreasing fall rates will become more challenging as the number of falls decreases. Despite the vanishingly small pool of data, an important trend has arisen that is worthy of further investigation in the available data. Falls on the unit are significantly decreasing. The next step is validating that this trend is worth that attention, and editing it to improve its function and accuracy.

Perhaps other populations can benefit from also adapting tools to their specific needs and the deficits of their populations. Through increased time and study, perhaps it can be shown that there is statistical evidence that it can result in this kind of difference and keep patient on their feet.

Table 1. Comparative Fall Risk Ratings: Morse vs SAFR

<table>
<thead>
<tr>
<th></th>
<th>Low Risk</th>
<th>Medium Risk</th>
<th>High Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morse</td>
<td>0</td>
<td>6 (17%)</td>
<td>30 (83%)</td>
</tr>
<tr>
<td>SAFR</td>
<td>13 (42%)</td>
<td>15 (48%)</td>
<td>3 (10%)</td>
</tr>
</tbody>
</table>

Figure 1. 2018 and 2019 Neurovascular Unit Falls

References


