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Citation

Evaluation and optimization of medication related fall risk at a community hospital

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Abstract

Background: Falls occur commonly in older adults at a rate of 3-5 per 1000 beds in healthcare settings. They can results in increased length of stay, morbidity and mortality, and healthcare costs. Some risk factors include older age, environmental hazards and medications. Currently at BHM, patient's risk for falling is assessed based on Morse Fall Scale (MFS), which does include drugs as part of its assessment. The purpose of this project is to integrate medication risk evaluation into our current fall assessment.

Methodology: single-centered, retrospective, IRB-reviewed quality improvement project at BHM. We included patients over age 18 who fell with at least a minor injury (F2 level) in 2019. Our primary outcome was to determine prevalence of common high-fall-risk medications administered in patients who fell and our secondary outcome was to identify pharmacy-led interventions to decrease fall risk. Since MFS does not include medications as part of its score, we then evaluated each patient using a medication scoring system with point value of 1-3 for high-fall-risk medications (point value of 3 is assigned to high-fall-risk medications and point value of 1 is assigned to low fall risk medications). Any patient with a cumulative score of higher than 6 is recognized to be at high fall risk.

Results: Primary outcome showed that cardiac agents, followed by opioids, and by benzodiazepines/sleep aids were the highest administered medications in our patients who fell. Based on those findings, we identified 29 opportunities where patient could have received lower

doses and/or have had medication scheduling changes in order to reduce fall risk. We are proposing automatic dose adjustments similar to hydromorphone and zolpidem/temazepam protocols where pharmacists can reduce starting doses to lowest dose possible for drug naïve patients. In addition, we are proposing to have medication scoring system to be implemented into our software so pharmacists are notified if a patient is high risk for falls based on MFS score and medication score system.

Conclusion: Pharmacists can play a huge role in reducing falls in inpatient settings. Based on our findings, some opportunities where pharmacists can intervene to reduce risk of falling include scheduling and automatic dose reductions with medications such as cardiac agents, opioids, and benzodiazepine/sleep aids.