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Emergency Department

FALLS WITHIN THE EMERGENCY DEPARTMENT: AN ANALYSIS OF RISK ASSESSMENT TOOLS

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Clinical Problem

- To find an accurate means of predicting falls for patients within the emergency department.

Background

- More than one-third of in-hospital falls result in injury, including serious injuries such as fractures and head trauma. Death or serious injury resulting from a fall while being cared for in a health care facility is considered a never event, and the Centers for Medicare and Medicaid Services do not reimburse hospitals for additional costs associated with patient falls [1].

Background

- Falls in the inpatient hospital setting have been widely studied, however there is limited research regarding falls in Emergency Departments [6]. A study in 2015 predicted that falls in the emergency department cause approximately 50 billion dollars in injuries [5]. The risk for falls continually increases in the Emergency Department. This is due to the fast-passed, high-acuity and often crowded environment [8]. Researchers in 2018 found that due to the high volume of patient and their frequent movement within the ED, quick and easy to use tools for assessing falls should be utilized [4].

Background

- A study in 2020 found that an ED specific fall scale was vital in the identification of fall risk patients and a decrease in falls [7]. Additionally, a study performed in 2013 found that fall scales used in inpatient units do not accurately identify emergency department fall risk patients [2]. In 2020 researchers concluded that many inpatient fall scales have been utilized in the ED setting despite their lack of validation. In our level 1 trauma center, the Morse Fall Scale is currently utilized. However, a study in 2020 proved that the Morse Fall Scale had poor sensitivity for patients in the emergency department. Therefore, the search for an ED specific fall scale is warranted [3].

Implication to Practice

- Due to the lack of evidence of the existing fall scales ability to predict falls within the emergency department, data from the 2018 - 2020 NYULH-Long Island Patient Safety Intelligence (PSI) data base were obtained and analyzed against the (Morse Fall Scale, which was already in use in this institution), the Emergency Hester Davis Scale (EHDS) and the Kinder Fall Risk Assessment Tool. With the data from these analyses; falls were analyzed against subcategories of each fall scale for predictability of the falls. Within the PSI incidents, contributing factors were identified and used to create a new fall scale specific for the Emergency Department, the BOMSNAC Fall Risk Assessment Tool (FRAT).
- Upon the review of the PSI incidents, common contributing factors along with our clinical expertise were used to construct a fall scale that would specifically and more sensitively predict patients at risk for fall within the emergency department before they occur.

Methods

- A database search was conducted in November 2020 using Boolean phrases. The authors conducted title, abstract, and full text screening. The population of interest were adults who had fallen during their stay in the emergency department. Fall data was obtained using the NYU Langone Hospital Long Island Patient Safety Information (PSI) database (2018 - 2020). There were initially 58 falls (2018 – 2020); five were excluded due to insufficient information included in the report.

Methods

- Contributing factors from PSI were screened against the risk factor categories in the Morse, EHDS, BOMSNAC and Kinder fall risk assessment tools. Each risk factor category was marked ‘YES’ or ‘NO’ as to whether or not that fall risk assessment tool could have predicted that risk factor category. The averages of ‘YES’ and ‘NO’ were calculated. These averages were the percent of sensitivity that each fall risk assessment tool (FRAT) had in relation to each contributing factor.

Fall Risk Assessment Tools

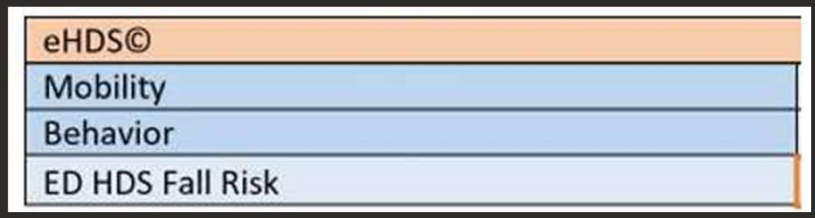
Morse Fall Scale

Variables		Score	Admission Date	Review Date	Review Date
History of Falling	No Yes	0 25			
Secondary Diagnosis	No Yes	0 15			
Ambulatory Aid	None/bedrest/nurse assist	0			
	Crutches/cane/walker	15			
	Furniture	30			
IV or IV access	No Yes	0 20			
Gait	Normal/bedrest/wheelchair	0			
	Weak	10			
	Impaired	20			
Mental Status	Knows own limits	0			
	Overestimates or forgets limits	15			
		Total			
		Signature & Status			

To obtain the Morse Fall Score add the score from each category.

Morse Fall Score	
High Risk	45 and higher
Moderate Risk	25-44
Low Risk	0-24

Emergency Hester Davis Scale



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Fall Risk Assessment Tools

Kinder FRAT

RISK	YES	NO	Fall Protocol Interventions Initiated Bracelet Triangle Exit alarm
Present to ED because of fall			
Age > 70			
Altered Mental Status Intoxicated with Alcohol or Substance Confusion			
Impaired Mobility: Ambulates or transfers with assistive devices or assist Ambulates with unsteady gait and no assistance Unable to ambulate or transfer			
Nursing Judgment (free text)			

Yes to any risk = high fall risk

Once an ED patient is deemed a high fall risk in the emergency department –the patient remains a high fall risk throughout the ED stay.

If patient does not have any fall risks identified at triage, fall risk reassessments must be performed at the time of any change of condition or after an intervention which may impact the patient's fall risk. If the patient falls in the ED, the patient becomes a high fall risk.

If a high fall risk---- fall prevention interventions are instituted, including hourly rounding.

BOMSNAC FRAT

Cognitive/ Behavioral	☐ AMS ☐ Non-compliant with instruction/ poor judgement ☐ Intoxication ☐ Nurse's Judgement
Physical Limitations	☐ Unsteady gait ☐ Needs assistance in mobility (device or person) ☐ Age>70 ☐ Severe sensory deficit (blindness, deafness)
Physiological Limitations	☐ C/o dizziness, lightheadedness, syncope, seizure ☐ Significant blood loss/ volume loss, orthostatic changes ☐ Altered elimination (frequency, urgency) ☐ Current treatment with opioids or sedatives, or sedative medications

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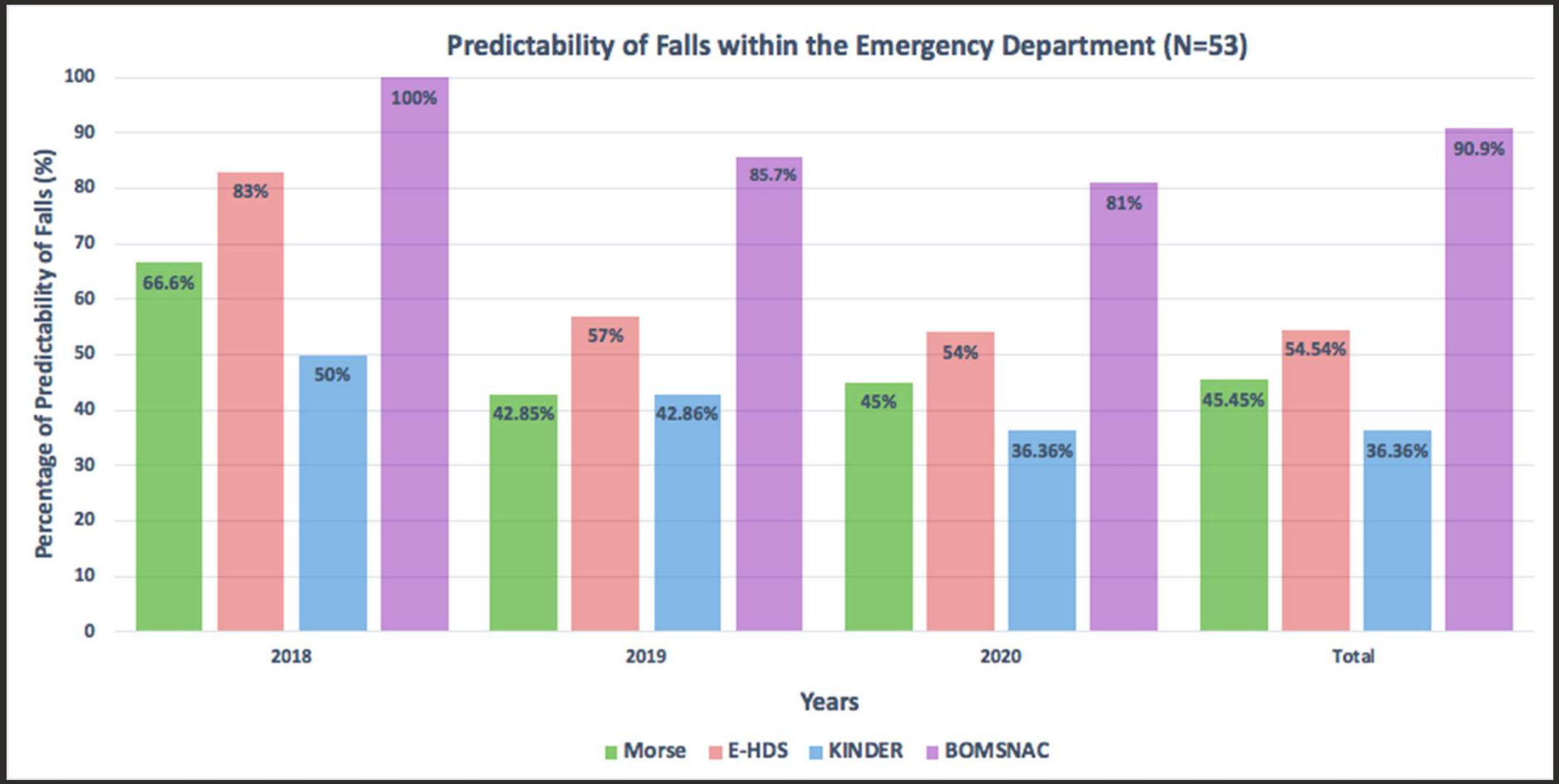
Evidence



These averages were the percent of sensitivity that each FRAT had in relation to each contributing factor.

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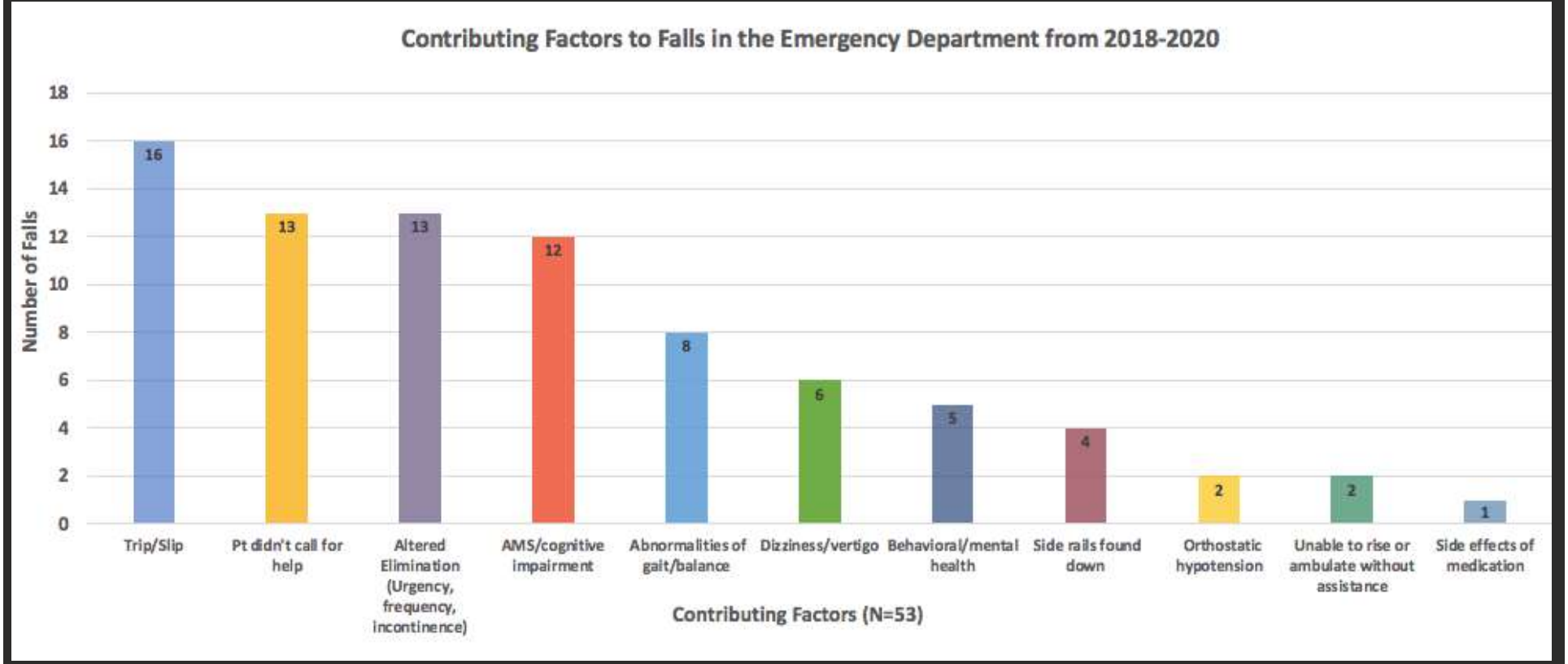
Evidence



The above contributing factors were extracted using the PSI Database from 2018-2020.

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Conclusion

- Our findings indicate the need for an effective, validated Emergency Department specific fall scale. Inpatient fall scales have been utilized in the ED without validation, and thus have inaccurately predicted falls. This review compared the efficacy of the Morse Fall Scale, the EHDS, the Kinder and the BOMSNAC. Ultimately the BOMSNAC was able to predict falls with greater accuracy in comparison to the Morse, Emergency Hester Davis Scale and the Kinder. Further research is required to verify its use in Emergency Departments.

Limitations

- The limitation of this study was the lack of, or missing information in the reporting system that was used from 2018 – 2019 which lead to researcher subjectivity when obtaining contributing factors from these falls.

References

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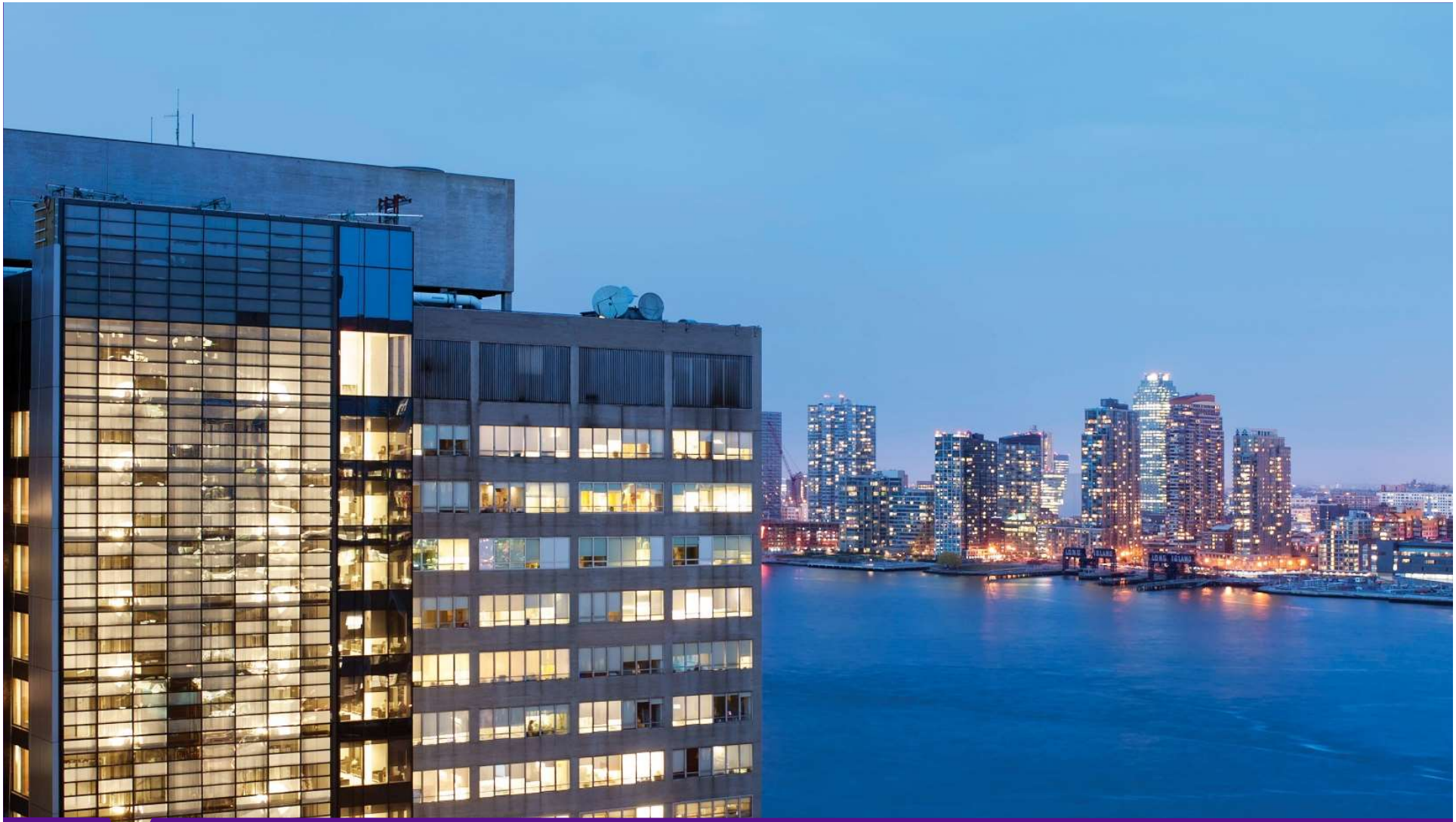

THANK YOU

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