Evaluating Morse Fall Scale Cutoff Scores to Predict Fall Risk
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Problem: A focus to improve fall rates resulted in adoption of the Morse Fall Scale (MFS)\(^1\), in this facility in 2004.

Evidence: Joint Commission reports patient falls as the sixth most frequent adverse event in acute care facilities\(^2\). MFS was one of a few validated fall assessment tools in 2003 when it was chosen\(^3\)–\(^6\).

Practice Change: MFS does not specify cutoff scores\(^1\). A 3-fall risk category system was implemented: standard (0-24), moderate (25-50), high (>51). This study determined if a 2-fall risk system was as effective at predicting falls as three categories.

Evaluation: Quantitative comparison of medical patient fall risk at a community hospital was undertaken. Admission MFS scores, age, gender, fall type, and injury severity were collected. To compare the two systems, Spearman rank order correlation coefficients were calculated (CI=99.97%). Receiver operator characteristic (ROC) analysis was utilized to determine the optimal cutoff point.

Results: Redistribution of MFS scores with >45 as high and <45 as low risk resulted in 605 low risk and 1019 high fall risk subjects. Fall status was associated with each MFS score and correlation coefficients calculated. Values were “identical; rs = 0.97045 and rs = 0.97057 for the 2- and 3-fall risk systems, respectively. ROC analysis revealed a MFS cutoff score of 45 to be optimal with a 42% sensitivity increase over the previous high risk cutoff point.

Recommendations: Adoption of the 2-risk system was recommended. Since MFS was implemented here, Kim et al\(^7\) compared assessment tools in common use, and the Hendrich II Fall Risk Model outperformed MFS. Future fall assessment evaluation should take this into consideration.

Lessons Learned: Education is key to maintaining focus on patient safety issues. Annual fall risk assessment competency is required of nurses. The 2010 medical inpatient fall rate was lower than recent years. This positive result is not contributable to the simpler fall risk assessment system alone. Mandatory education and frequent focus on fall prevention in concert are responsible.

Bibliography