MEDICAL UNIVERSITY OF SOUTH CAROLINA
CENTER FOR EVIDENCE-BASED PRACTICE
Evidence-Based Practice Summary
Use of the Banner Mobility Assessment Tool for Nurses

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ASK THE QUESTION

Question 1: Is the Banner Mobility Assessment Tool a valid tool for use by nurses to assess mobility and equipment needs in hospitalized patients?

SEARCH FOR EVIDENCE

Search strategies included research-based articles published in English

Databases included PubMed, Scopus, CINAHL, also looked at references and citing articles

Key words/terms (strength OR stability OR gait OR balance OR mobility OR mobility limitation[Mesh]) AND (assessment OR tool OR screen*) AND (inpatients[Mesh] OR inpatient* OR hospital* OR bedside) AND valid* AND "last 10 years"[PDat] AND English[lang])

CRITICALLY ANALYZE THE EVIDENCE

Question 1: Is the Banner Mobility Assessment Tool a valid tool for use by nurses to assess mobility and equipment needs in hospitalized patients?

Practice Recommendation/Conclusion: The Banner Mobility Assessment Tool has been validated for use by nurses for assessing mobility and equipment needs in hospitalized patients. Future research using the BMAT is needed to provide additional knowledge regarding its usefulness and validity in specific patient populations, and in other healthcare organizations.
To date, one validation study has been completed for the Banner Mobility Assessment Tool (BMAT), which was created specifically for use by bedside nurses to assess mobility in hospitalized patients. Boynton and colleagues (2014) assessed for validity and reliability using a prospective, non-experimental design in an acute care facility. Nurse training and standardized use of the BMAT began six months prior to the initiation of the validation study. Construct validity, which evaluates whether a test measures what is intended, was assessed by: 1) expert-agreement from a physical therapist during 55 BMAT evaluations performed by a registered nurse with an 81% agreement (κ = 0.75) and by 2) a contrasted-groups approach comparing BMAT scores between cohorts of ICU (n=20) and med-surg (n=20) patients resulting in a Pearson chi-square of 22.68 (p<0.001). The inter-rater reliability of the BMAT was assessed by three nurses during 20 BMAT evaluations with a 93% agreement (κ = 0.91). These results suggest that the BMAT is able to discriminate differences in patient populations, is valid when compared with expert PT evaluation, and has a high level of reliability when used by different nurses. Though not a focus of the study, it was also noted that staff injuries decreased after implementation of the BMAT. Like most initial validation studies, this study was completed by the same organization that created the tool (Banner Health) and additional validation studies from other organizations will be helpful in corroborating these results.

Comparable validated mobility instruments exist, most notably the de Morton Mobility Index (DEMMI) and the Hierarchical Assessment of Balance and Mobility (HABAM). The DEMMI, which assesses older people across all spectrums of mobility based on observation of performance, was actually developed due to the ceiling effect (25% scoring highest possible score) of the HABAM. A head-to-head analysis of the DEMMI versus the HABAM was performed during the development and validation process showed a significant and high correlation. However, while the DEMMI can be quickly and easily administered in an acute hospital (15 questions) with minimal equipment, it does not link to any interventions or patient handling equipment like the BMAT. The HABAM was developed and validated in the 1990’s to quickly (22 questions) evaluate balance and mobility in older patients admitted to the hospital with minimal equipment. It has also been evaluated for inter-rater reliability in everyday use for geriatric care with favorable results. However, the HABAM does not assess the full spectrum of mobility like the BMAT.

REFERENCES

