

Implementing a mobility assessment tool for nurses

A nurse-driven assessment tool reveals the patient's mobility level and guides SPHM technology choices.

By Teresa Boynton, MS, OTR, CSPHP; Lesly Kelly, PhD, RN; and Amber Perez, LPN, BBA, CSPHP

A patient's mobility status affects treatment, handling and transfer decisions, and potential outcomes (including falls). Hospital patients spend most of their time in bed—sometimes coping with inadvertent negative effects of immobility. Assessing a patient's mobility status is crucial, especially for evaluating the risk of falling. Yet no valid, easy-to-administer bedside mobility assessment tool exists for nurses working in acute-care settings.

Various safe patient handling and mobility (SPHM) technologies allow safe transfer and mobilization of patients while permitting maximum patient participation and weight-bearing (if indicated). A mobility assessment helps identify the SPHM technology needed to ensure safe activities while taking the guesswork and uncertainty out of deciding which SPHM technology is right for which patient.

Because mobility is so important during hospitalization, members of a Banner Health multidisciplinary SPHM team determined nurses should take a more active role in assessing and managing patient mobility. We concluded it was crucial to develop and validate a tool that nurses can use easily at the bedside to assess a patient's mobility level and the



need for SPHM technology. For both patient and staff safety, a patient's mobility level must be linked with use of SPHM technology. When used consistently, appropriate technology reduces the risk of falls and other adverse patient outcomes associated with immobility. (See *The link between patient immobility and staff injuries.*)

Communication barriers

Historically, mobility assessments

and management have been under the purview of physical therapists (PTs) through consultations. But the entire healthcare team needs to address patient mobility. Nurses conduct continual surveillance of patients and their progress, but typically they haven't performed consistent, validated mobility assessments. Instead, they've relied on therapy services to determine the patient's mobility level and management.

The link between patient immobility and staff injuries

Patient immobility poses the risk of injury to healthcare workers. Nurse workloads continue to rise as patient acuity levels increase and hospital stays lengthen. This situation increases patients' dependence on nurses for assistance with their mobility needs.

What's more, nursing staff frequently rely on the patient or a family member to report the patient's ability to stand, transfer, and ambulate. But this information can be unreliable, especially if the patient has cognitive impairment related to the diagnosis or medications or if he or she has experienced unrecognized decreased mobility and deconditioning from the disease or injury that necessitated hospitalization.

To decrease the risk of caregiver injury, nurses should assess patient mobility and use safe patient handling and mobility (SPHM) technology.

Nurses aren't trained in skilled therapy techniques and may be ill prepared to mobilize patients safely during routine daily activities.

In many cases, though, a PT's assessment doesn't translate to meaningful actionable items for nurses. What's more, PTs don't always adequately communicate a patient's SPHM needs to other healthcare team members. For example, confusion surrounds terminology typically used by PTs, such as numeric mobility levels (1+, 2+, indicating a one-person or two-person assist, respectively) as well as ranges (minimum, moderate, or maximum assist by one or more healthcare workers). Also, PTs are consulted only for a limited number of patients and at different points during the hospital stay. Nurses, for their part, aren't trained in skilled therapy techniques and may be ill prepared to mobilize patients safely during routine daily activities.

In addition to communicating potential risk to other healthcare team members, mobility assessment can identify technology need-

ed to perform SPHM. Especially if PTs aren't available, nurses must rely on their own judgment to move and mobilize patients safely. But they may be uncertain as to which equipment to use for which patients. While a total lift may be used with many patients, such a lift doesn't maximize the patient's mobility potential.

Current mobility assessment options

Although tools to assess mobility and guide SPHM technology selection are used in hospitals, their value for the bedside nurse may be limited or inappropriate with many patients in acute-care settings. SPHM algorithms from the Department of Veterans Affairs have been valuable as training and decision-making tools in determining which SPHM technology to consider for specific tasks. But these can be hard to use at the bedside. Also, they assume the patient's mobility status is known and don't provide quick guidance in determining a patient's overall mobility level. (See *Limitations of common mobility assessment tools.*)

Limitations of common mobility assessment tools

Several of the mobility assessment tools discussed below already are in use, but each has certain drawbacks.

The Timed Get Up and Go Test starts by having the patient stand up from an armchair, walk 3 meters, turn, walk back to the chair, and sit down. But it gives no guidance on what to do if the patient can't maintain seated balance, bear weight, or stand and walk.

The Quick 5 Bedside Guide tool, developed by a registered nurse and physical therapist (PT), was the basis for a research project on what became known as the Quick 3. This tool takes the patient through three functional tasks but doesn't fully address patient limitations. Nor does it recognize weight-bearing limitations or address the issues or abilities of an ambulatory patient. Also, it provides only limited recommendations for SPHM technology.

The Egress test, also developed by a PT, is used in hospital settings. It starts with the patient performing three repetitions of sit-to-stand, at the bedside, marching in place, and advance step and return with each foot. But it's tailored to PTs and doesn't address how the patient performs bed mobility or comes to a standing position. Also, it gives only limited guidance for nurses on use of SPHM technology and isn't appropriate for certain patients (such as those unable to weight bear on one or both legs).



Banner Mobility Assessment Tool for nurses

Nurses have found that the Banner Mobility Assessment Tool (BMAT) is an effective resource for performing a bedside assessment of patient mobility.

Test	Task	Response	Fail = Choose most appropriate equipment/device(s)	Pass
<p>Assessment Level 1</p> <p>Assessment of:</p> <ul style="list-style-type: none"> • Trunk strength • Seated balance 	<p>Sit and shake: From a semi-reclined position, ask patient to sit upright and rotate* to a seated position at side of bed; <i>may use bedrail</i>. Note patient's ability to maintain bedside position. Ask patient to reach out and grab your hand and shake, making sure patient reaches across his/her midline.</p>	<p>Sit: Patient is able to follow commands, has some trunk strength; caregivers may be able to try weight-bearing if patient is able to maintain seated balance longer than 2 minutes (without caregiver assistance). Shake: Patient has significant upper body strength, awareness of body in space, and grasp strength.</p>	<p>MOBILITY LEVEL 1</p> <ul style="list-style-type: none"> • Use total lift with sling and/or repositioning sheet and/or straps. • Use lateral transfer devices, such as roll board, friction-reducing device (slide sheets/tube), or air-assisted device. <p>Note: If patient has <i>strict bed rest or bilateral non-weight-bearing restrictions, do not proceed with the assessment; patient is MOBILITY LEVEL 1.</i></p>	<p>Passed Assessment Level 1 = Proceed with Assessment Level 2.</p>
<p>Assessment Level 2</p> <p>Assessment of:</p> <ul style="list-style-type: none"> • Lower extremity strength • Stability 	<p>Stretch and point: With patient in seated position at side of bed, have patient place both feet on floor (or stool) with knees no higher than hips. Ask patient to stretch one leg and straighten knee, then bend ankle/flex and point toes. If appropriate, repeat with other leg.</p>	<p>Patient exhibits lower extremity stability, strength and control. May test only one leg and proceed accordingly (e.g., stroke patient, patient with ankle in cast).</p>	<p>MOBILITY LEVEL 2</p> <ul style="list-style-type: none"> • Use total lift for patient unable to weight-bear on at least one leg. • Use sit-to-stand lift for patient who can weight-bear on at least one leg. 	<p>Passed Assessment Level 2 = Proceed with Assessment Level 3.</p>
<p>Assessment Level 3</p> <p>Assessment of:</p> <ul style="list-style-type: none"> • Lower extremity strength for standing 	<p>Stand: Ask patient to elevate off bed or chair (seated to standing) using assistive device (cane, bedrail). Patient should be able to raise buttocks off bed and hold for a count of five. May repeat once. <i>Note:</i> Consider your patient's cognitive ability, including orientation and CAM assessment if applicable.</p>	<p>Patient exhibits upper and lower extremity stability and strength. May test with weight-bearing on only one leg and proceed accordingly (e.g., stroke patient, patient with ankle in cast). If any assistive device (cane, walker, crutches) is needed, patient is Mobility Level 3.</p>	<p>MOBILITY LEVEL 3</p> <ul style="list-style-type: none"> • Use non-powered raising/stand aid; <i>default to powered sit-to-stand lift if no stand aid is available.</i> • Use total lift with ambulation accessories. • Use assistive device (cane, walker, crutches). <p><i>Note:</i> Patient passes Assessment Level 3 but requires assistive device to ambulate or cognitive assessment indicates poor safety awareness; patient is MOBILITY LEVEL 3.</p>	<p>Passed Assessment Level 3 AND no assistive device needed = Proceed with Assessment Level 4. Consult with physical therapist when needed and appropriate.</p>
<p>Assessment Level 3</p> <p>Assessment of:</p> <ul style="list-style-type: none"> • Standing balance • Gait 	<p>Walk: Ask patient to march in place at bedside. Then ask patient to advance step and return each foot. Patient should display stability while performing tasks. Assess for stability and safety awareness.</p>	<p>Patient exhibits steady gait and good balance while marching and when stepping forward and backward. Patient can maneuver necessary turns for in-room mobility. Patient exhibits safety awareness.</p>	<p>MOBILITY LEVEL 3</p> <p>If patient shows signs of unsteady gait or fails Assessment Level 4, refer back to MOBILITY LEVEL 3; patient is MOBILITY LEVEL 3.</p>	<p>MOBILITY LEVEL 4 MODIFIED INDEPENDENCE Passed = No assistance needed to ambulate; use your best clinical judgment to determine need for supervision during ambulation.</p>

Always default to the safest lifting/transfer method (e.g., total lift) if there is any doubt about the patient's ability to perform the task.

Banner Mobility Assessment Tool

At Banner Health, we developed the Banner Mobility Assessment Tool (BMAT) to be used as a

nurse-driven bedside assessment of patient mobility. It walks the patient through a four-step functional task list and identifies the mobility level the patient can

achieve (such as mobility level 1). Then it guides the nurse to the recommended SPHM technology needed to safely lift, transfer, and mobilize the patient. (See

Banner Mobility Assessment Tool for nurses.)

Implementing BMAT

The BMAT was created in our hospital's electronic medical record (EMR) in a way that guides the nurse through the assessment steps. Patients are determined to have a mobility level of 1, 2, 3, or 4 based on whether they pass or fail each assessment level. Educational tools and tip sheets are used to train nurses and support staff on what technology to consider for patients at each level.

To stay current on the patient's mobility status nurses are expected to complete the BMAT on admission, once per shift, and with the patient status changes.

Communication tools also are used. For instance, a sign outside the patient's room indicates his or her mobility level, instantly telling anyone passing by or entering if the patient can ambulate independently or if SPHM technology must be used. To stay current on the patient's mobility status (for instance, at handoffs, after procedures, with medication changes, or after a potentially tiring therapy session), nurses are expected to complete the BMAT on admission, once per shift, and with the patient status changes. The BMAT also is linked to Banner's fall assessment risk in the EMR.

Throughout BMAT implementation, we recognized that identifying a patient's mobility level and fall risk score are pointless unless

appropriate interventions are implemented and the outcomes evaluated. Nurses need to be empowered and able to recognize the connection between these assessments and choice of interventions, including SPHM technology.

Here's an example of BMAT in action at Banner: A 35-year-old male was admitted to a surgical floor late in the evening. He was 6'2" tall and weighed 350 lb (158 kg). He didn't want to use a bedpan, but his nurse wasn't comfortable getting him up to use the bathroom because he hadn't been evaluated by physical therapy, and a PT wasn't available in the evening. A nurse passing by who'd used the BMAT (which hadn't been formally rolled out Banner-wide at that time) came in and assessed the patient; the assessment found him at mobility level 3. He was transferred to the toilet using a nonpowered stand aid. Both patient and nurse were relieved and happy.

A step in the right direction

As a quick bedside assessment tool, the BMAT is a step in the right direction. It's part of a broad program of increased staff awareness, education, and training around patient assessments, preventing staff injuries and patient falls, and achieving better patient outcomes. Initial evidence from a validation study completed at one Banner hospital supports the BMAT as a valid instrument for assessing a patient's mobility status at the bedside.

As we work toward customizing actions and interventions to meet individual patient needs, we continue to evaluate which additional assessment components or fall interventions or precautions are needed

or require greater focus. Although we know nurses should be more involved in assessing mobility than they have been historically, we recognize the value of involving and communicating effectively with all members of a good interdisciplinary team to help reduce patient falls and staff injuries caused by patient handling. 

Selected references

Dionne M. Practice Management: Stand and deliver. *Physical Therapy Products*. March 2005. www.ptproductsonline.com/2005/03/stand-and-deliver/. Accessed June 30, 2014.

Hook ML, Devine EC, Lang NM. Using a computerized fall risk assessment process to tailor interventions in acute care. In: Henriksen K, Battles JB, Keyes MA, Grady ML, eds. *Advances in Patient Safety: New Directions and Alternative Approaches*; vol 1. Assessment. AHRQ Publication No. 08-0034. Rockville, MD: Agency for Healthcare Research and Quality; 2008. www.ncbi.nlm.nih.gov/books/NBK43610. Accessed July 10, 2014.

Mathias S, Nayak US, Isaacs B. Balance in elderly patients: the "get-up and go" test. *Arch Phys Med Rehabil*. 1986;67(6):387-9.

Oliver D, Healey F. Falls risk prediction tools for hospital inpatients: do they work? *Nurs Times*. 2009;105(7):18-21.

Oliver D, Healey F, Haines TP. Preventing falls and fall-related injuries in hospitals. *Clin Geriatr Med*. 2010;26(4):645-92.

Nelson AL. *Safe patient handling and movement: A guide for nurses and other health care providers*. New York, NY: Springer Publishing Company, Inc.; 2006. www.springerpub.com/samples/9780826163639_chapter.pdf. Accessed June 30, 2014.

Nelson A, Harwood KJ, Tracey CA, Dunn KL. Myths and facts about safe patient handling in rehabilitation. *Rehabil Nurs*. 2008;33(1):10-7.

Wright B, Murphy J. *"Quick-5 Bedside" Guide*. Franklin, MA: Liko, Inc.; 2005.

Teresa Boynton is an injury prevention and workers' compensation consultant, ergonomics specialist, and certified safe patient handling professional for Risk Management at Banner Health, Western Region, based in Greeley, Colorado. Lesly Kelly is the RN clinical research program director for Banner Good Samaritan Medical Center in Phoenix, Arizona. Amber Perez is a safe patient handling clinical consultant for Handicare North America based in Phoenix, Arizona.