

VA



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**INTERPROFESSIONAL
GERIATRIC**



Bedside Mobility Assessment Tool (BMAT)

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**VISN 6 Mid-Atlantic
Health Care Network**

VA U.S. Department
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OBJECTIVES

At the end of the presentation the participant will be able to:

1. Define Bedside Mobility Assessment Tool (BMAT)
2. Describe basis for the use of BMAT
3. Demonstrate the relationship between BMAT, falls, and the need for early mobilization



EVIDENCE

BMAT is an evidence-based tool linked to positive patient outcomes (Liko R&D 2017):

- ❖ Early mobilization for patients
- ❖ Reduction in patient falls
- ❖ Reduction in pressure ulcers
- ❖ Prevention of lifting/repositioning injuries for staff

Provides a series of tests to objectively measure a patient's ability to mobilize

Identifies lifting equipment and assistive devices needed for patient mobility



4 Levels of Assessment Tasks (during the assessment, patients are to use assistive devices used at home):

- ❖ Level 1: Sit and Shake
- ❖ Level 2: Stretch and Point
- ❖ Level 3: Stand
- ❖ Level 4: Walk

Start with level 1 and proceed to level 2 only if the patient passes level 1; continue until the patient does not pass a level or they pass all 4 levels

Special Considerations - Assign Mobility Level 1 if:

- ❖ Patient unable to follow directions
- ❖ On strict bedrest
- ❖ Have bilateral non-weight bearing orders
- ❖ Does not pass physiologic clearance for early mobility in the ICU

Use ceiling lift, portable floor lift, hover matt



B.M.A.T. - Bedside Mobility Assessment Tool for Nurses

Test	Task	Response	Fail = Choose Most Appropriate Equipment/Device(s)	Pass
Assessment Level 1 Assessment of: -Trunk strength -Seated balance	Sit and Shake: From a semi-reclined position, ask patient to sit upright and rotate* to a seated position at the side of the bed; <i>may use the 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.	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 greater than two minutes (without caregiver assistance). Shake: Patient has significant upper body strength, awareness of body in space, and grasp strength.	MOBILITY LEVEL 1 - Use total lift with sling and/or repositioning sheet and/or straps. - Use lateral transfer devices such as roll board, friction reducing (slide sheets/tube), or air assisted device. NOTE: If patient has 'strict bed rest' or bilateral 'non-weight bearing' restrictions, do not proceed with the assessment; patient is MOBILITY LEVEL 1.	Passed Assessment Level 1 = Proceed with Assessment Level 2.
Assessment Level 2 Assessment of : -Lower extremity strength -Stability	Stretch and Point: With patient in seated position at the side of the bed, have patient place both feet on the floor (or stool) with knees no higher than hips. Ask patient to stretch one leg and straighten the knee, then bend the ankle/flex and point the toes. If appropriate, repeat with the other leg.	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).	MOBILITY LEVEL 2 - 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.	Passed Assessment Level 2 = Proceed with Assessment Level 3.
Assessment Level 3 Assessment of: -Lower extremity strength for standing	Stand: Ask patient to elevate off the bed or chair (seated to standing) using an assistive device (cane, bedrail). Patient should be able to raise buttocks off bed and hold for a count of five. May repeat once. Note: Consider your patient's cognitive ability, including orientation and CAM assessment if applicable.	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.	MOBILITY LEVEL 3 - Use non-powered raising/stand aid; <i>default to powered sit-to-stand lift if no stand aid available.</i> - Use total lift with ambulation accessories. - Use assistive device (cane, walker, crutches). NOTE: Patient passes Assessment Level 3 but requires assistive device to ambulate or cognitive assessment indicates poor safety awareness; patient is MOBILITY LEVEL 3.	Passed Assessment Level 3 AND no assistive device needed = Proceed with Assessment Level 4. <i>Consult with Physical Therapist when needed and appropriate.</i>
Assessment Level 4 Assessment of: -Standing balance -Gait	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.	Patient exhibits steady gait and good balance while marching, and when stepping forwards and backwards. Patient can maneuver necessary turns for in-room mobility. Patient exhibits safety awareness.	MOBILITY LEVEL 3 If patient shows signs of unsteady gait or <i>fails Assessment Level 4, refer back to MOBILITY LEVEL 3; patient is MOBILITY LEVEL 3.</i>	MOBILITY LEVEL 4 MODIFIED INDEPENDENCE Passed = No assistance needed to ambulate; use your best clinical judgment to determine need for supervision during ambulation.

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

"Reproduced with permission from Liko, a Hill-Rom Company, and Banner Health."



MOBILITY ASSESSMENT LEVEL 1: SIT AND SHAKE

Sit and Shake

- ❖ From a semi-reclined position, ask your patient to sit upright and rotate to a seated position at the side of the bed (may use side rail)
- ❖ Ask patient to reach across midline to shake your hand



Is patient able to perform the tasks?

No = Level 1 (patient is dependent)

Yes = Move to Level 2





Stretch and Point

- ❖ Ask patient to extend leg (one at a time) forward until it is straight at the knee
- ❖ Ask the patient to point and flex foot/toes

Is patient able to preform the tasks?

No = Level 2 (patient requires transfer assistance)

Yes = Move to Level 3





MOBILITY ASSESSMENT LEVEL 3: STAND

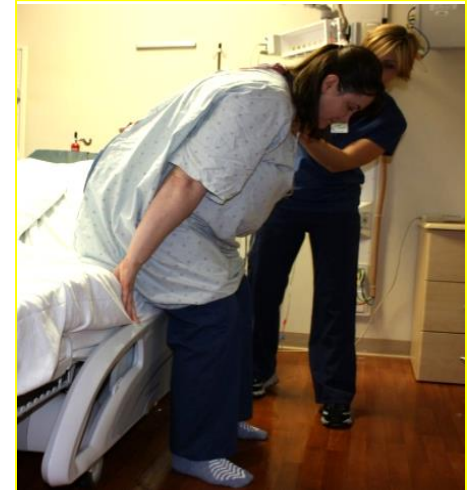
Stand

- ❖ Ask patient to raise buttocks off the bed or chair and stand for five seconds

Is the patient able to preform the tasks?

No = Level 3 (requires ambulation assistance)

Yes = Move to Level 4





MOBILITY ASSESSMENT LEVEL 4: WALK

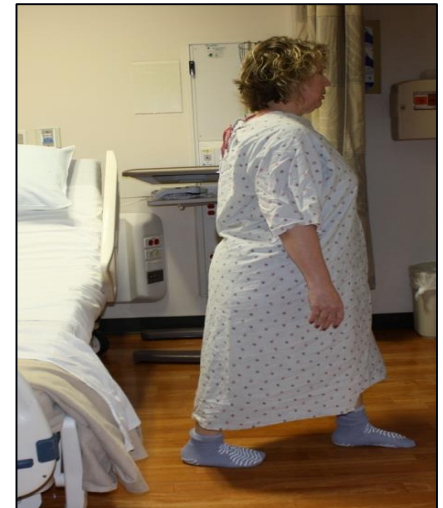
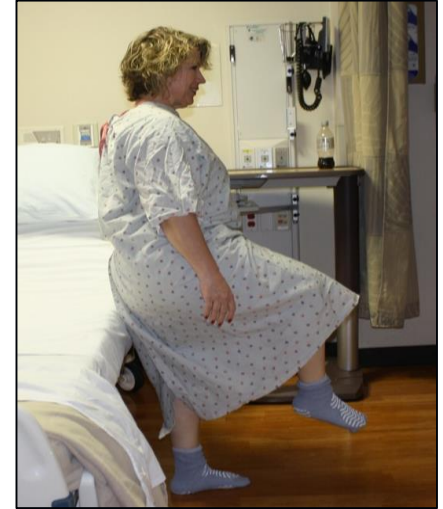
Walk

- ❖ Ask patient to march/step in place at bedside
- ❖ Then ask patient to step forward and backward

Is patient able to perform the tasks?

No = Level 3 (requires ambulation assistance)

Yes = Level 4 (patient is independent)





EQUIPMENT/SLINGS NEEDED FOR LEVEL 1



Care Sling with Head Support

Universal High Back Sling



Repositioning Sling

Repositioning Sling



Twin Turner Sling



Ceiling Lift



Floor Based Lift



Air Assisted Transfer Device



EQUIPMENT NEEDED FOR LEVEL 2



Powered Sit to Stand Lift



Ceiling Lift



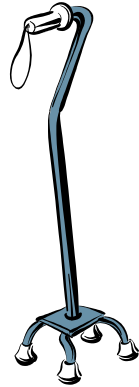
Air Assisted Transfer Device



Floor Based Lift



EQUIPMENT NEEDED FOR LEVEL 3



Assistive Devices: Walker, Cane, Crutches



Bedside Commode



Non-powered Sit to Stand Lift



EQUIPMENT NEEDED FOR LEVEL 4: NONE





COMMUNICATION IS KEY

- ❖ Complete BMAT on admission, every shift, post falls and with change in condition and document (ONS SOP, 2018)
- ❖ Select equipment needed from the BMAT poster displayed in the patient's room
- ❖ Use patient's white board to communicate with everyone the mobility level
- ❖ Include mobility level in all handoff reports

When performed correctly, BMAT will support (Liko R&D, 2017):

- ❖ Communication of the patient's mobility status to all staff
- ❖ Increase safer early mobility
- ❖ Decrease patient falls and staff injuries
- ❖ Improve patient discharge disposition



IMPACT OF IMMOBILITY

Potential Complications of Immobility

Respiratory: VAP associated with 10-11 days more in ICU. Respiratory tract infections, atelectasis, and pulmonary embolism¹

Cardiovascular: postural hypotension, cardiac muscle atrophy, orthostatic intolerance, and deep vein thrombosis¹

Hematologic: anemia¹

Metabolic: glucose intolerance²

Skin: \$43k average cost of care for stage III/IV pressure ulcers in acute care and additional 4 days in LOS³



Neurological: delirium, depression, anxiety, forgetfulness, and confusion¹

Musculoskeletal: strength loss of 50% in first 3-4 weeks take about 4 weeks to recover, osteoporosis, muscle atrophy and weakness, and contractures²

Renal: calculi²

Gastrointestinal: constipation and fecal impaction²

1. Knight J, et al. *Nurs Times*. 2009,106(21):18-20.
2. Knight J, et al. *Nurs Times*. 2009,106(22):24-27.
3. Nigam Y, et al. *Nurs Times*. 2009,106(22):28-32.

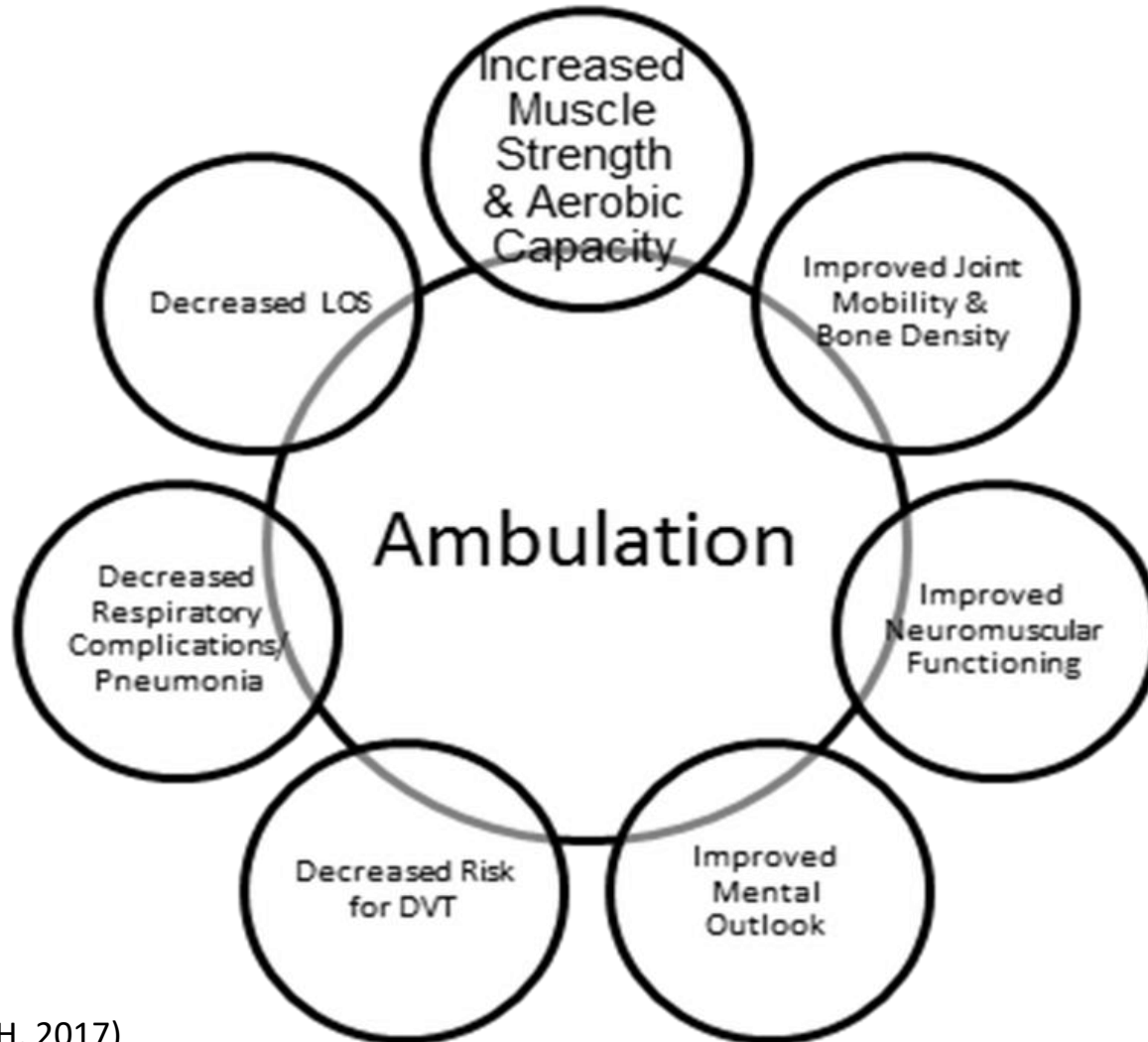


RELATIONSHIP BETWEEN FALLS AND EARLY MOBILIZATION

- ❖ Evidence reveals that patients left in the bed have higher rates of morbidity and mortality when they are not mobilized early (Boynton, T., Kelly, L., Perez, A., 2014)
 - ❖ Patients may survive their injury or illness; but their functional capacity is extremely impaired or limited resulting in short- and long-term complications
 - ❖ Staff are fearful of patients falling, therefore patients are instructed to remain in bed in which patients become weaker and more likely to fall and become injured (Moyer, 2012)
 - ❖ Immobility also presents a risk of injury to healthcare providers
 - ❖ A decline in walking ability begins within 2-3 days of immobilization and remains persistent; half of the normal muscle strength is lost after 3-5 weeks of bedrest; lower limbs are the first muscles to become weak (Liko R&D, 2017)
 - ❖ Mobilizing early and frequently can improve outcomes for the patient, reduce falls and reduce hospital burden
- **Prevention of patient falls need NOT come at the expense of promoting mobility (Bailey, 2019)



IMPACT OF EARLY MOBILITY



(CEOSH, 2017)



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QUESTIONS??