Implementation of a Safe Mobility Protocol Using the BMAT Assessment Tool

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Background

The purpose of this multidisciplinary performance improvement project was to promote safe patient handling and mobility practices, and decrease patient falls using a consistent tool for all acute care departments. Hospitalized patients spend an extended amount of time in bed, which can result in: decrease in musculoskeletal ability, cardiovascular and respiratory functions, decrease in skin integrity and cognition (1). The previous consequences can prolong a patient length of stay, increase falls with injury, reduce gastric motility, cause pressure injury and increase nosocomial infections (2).

Nurses must move to a more active role in patient mobility during hospitalization to prevent such events from occurring. A multidisciplinary team was formed to select and integrate a standardized tool for all acute care departments. The Banner Mobility Assessment Tool (BMAT) is an evidence-based tool created for the bedside nurse to assess mobility and initiate appropriate interventions to progress patient mobility(1).

Nurse Driven Protocol

The project authors incorporated the **Johns Hopkins Fall Risk Assessment** and integrated **anticoagulant therapy** risk into the safe mobility protocol to help the bedside nurse decide the safest mobility level for each patient. The expected start date of the new protocol is October 2019. Nurse education based on the best evidence will be provided in an eLearning format using video demonstration, simulation, competency check off, case studies and written materials.

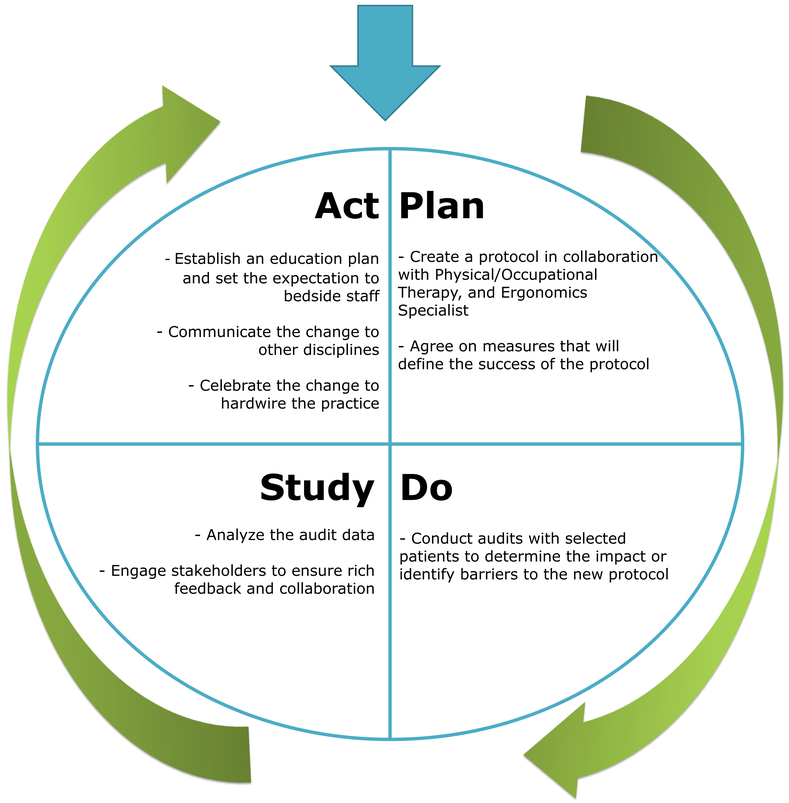
Quality measures for the number of falls, length of stay, hospital readmission and nosocomial infections are expected to decrease after protocol implementation.

PDSA Framework

Aim:
To decrease the number of patient falls while providing nursing staff with proper mechanics and equipment to ensure safe patient handling in all inpatient care settings in 2019.

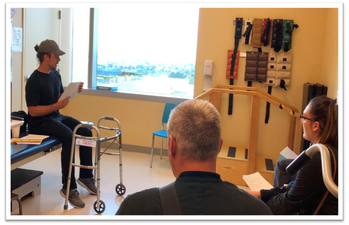
Measures:
The multidisciplinary team will closely monitor the incidents of falls and falls with injury, length of hospital stay, hospital-acquired pressure injuries and employee injuries to measure success or identify gaps.

Change for Improvement:
Standardizing the assessment tool used throughout the inpatient departments will enhance the patient experience by reinforcing early mobility strategies for the duration of their hospitalization.



Education Plan

- Knowledge-based eLearning modules:
  - Used to communicate the why
  - Provided video demonstration
  - Explained the connection to purpose
- Live Classes
  - Provided demonstration with content expert
  - Reviewed eLearning content
  - Conducted case studies
  - Allowed small group discussion and opportunity for feedback/questions



	Scenario	Questions:
1	Your patient is a 75 years old woman POD 2 from an appendectomy. She can sit & shake without concern, stretch & point both legs, stands without assistance, and is able to march & step, and walk with a walker.	1. What BMAT Level? 2. Name the nursing interventions. 3. If she was on Lovenox, what BMAT interventions would be used? 4. Name the equipment to use while mobilizing.

Safe Mobility Protocol

Eskenazi Health Safe Mobility Protocol using BMAT Assessment

Physician Order: "Medically Cleared for Progressive Mobility" & "Nurse Driven Safe Mobility Protocol"

	BMAT Assessment	Patient Response	Interventions	Ergonomic Techniques
Exclusion Criteria	➢ Hemodynamic or cardiac instability ➢ Concern for airway device integrity ➢ Unstable Spinal fractures ➢ Chemical Paralysis ➢ Increased intracranial pressure or acute neurological event o Status post 24 hours after TPA infusion ➢ Difficult to manage agitation (Increase RASS, High CIWA) ➢ Uncontrolled pain		• **Order PT/OT Consult** • Assess each shift and PRN • Address pain and agitation and reassess	❖ Use adequate lighting ❖ Adjust bed height to protect your back ❖ If you are lifting more than 35lbs assisting patient – use ceiling lift
Intubated Patients	**Follow Eskenazi Health Critical Care Vented Mobility Program Guidelines**			❖ Communicate (and ask) mobility phase ❖ Stay hydrated with water ❖ Ask for assistance
BMAT Level 1	**Sit and Shake:** From semi-reclined position, ask patient to sit upright and rotate to a seated position at the side of the bed – may use bed rail. Then ask patient to reach out and grab your hand and shake making sure the patient reaches across his/her midline, or take medcup from and put on table.	**Passes** by following commands, remain seated for 2 minutes without assistance, shows upper body awareness and strength. **Continue to BMAT Level 2** **Fail = Initiate Level 1 Interventions** ➔➔➔➔➔➔	**Mobility 1 Interventions:** • **Order PT/OT Consult** • **2 Caregivers to transfer.** • **Use repositioning sling + ceiling lift** • O2 hour turns while in bed • Activity: Up in cardiac chair, once per day (use lift) • Toileting: Use bedpan • Assess each shift and PRN	Consider use of: ❖ Repositioning Slings with ceiling lift for rolling and transferring out of bed. Place repositioning sling when making bed ❖ Roller bands with ceiling lift to lift legs ❖ Sally Tube for lateral transfer when repositioning slings/ceiling lifts are not present or indicated
BMAT Level 2	**Stretch and Point:** With patient seated at side of bed, patient placed both feet on floor/stool with knees bent (no higher than hip level). Ask patient to stretch one leg and straighten the knee, then point and flex toes and ankle; repeat with other leg.	**Passes** by exhibiting lower extremity stability, strength, and control. **Continue to BMAT Level 3** **Fail = Initiate Level 2 Interventions** ➔➔➔➔➔➔	**Mobility 2 Interventions:** • **Order PT/OT Consult** • **1-2 caregiver to transfer** • Activity: Up to chair/cardiac chair, twice per day (use lift) Out of bed for meals and ADL (use lift as needed). • Toileting: use bedside commode, provided weight bearing restricts • Assess each shift and PRN	Consider use of: ❖ Gait belt around waist when standing ❖ Ceiling lift (Repo or combi sling) if patient fatigues quickly or is impulsive. Place repositioning sling when making bed if using overhead lift. ❖ Sally Tube for lateral transfer when repo slings/ceiling lifts are not present or indicated ❖ OR: Use Sara Steady
BMAT Level 3	**Stand:** Ask patient to elevate off the bed from the bed/chair (seated to standing) using an assistive device (cane, walker, bedrail). Patient should be able to raise buttocks off bed and hold for a count of five. May repeat once.	**Passes** by exhibiting upper and lower body stability and strength. *May test weight bearing leg only. **Must stand for at least 5 seconds. **Continue to BMAT Level 4** **Fail or assisted device is needed = Initiate Level 3 Interventions** ➔➔➔➔➔➔	**Mobility 3 Interventions:** • **1-2 caregiver to transfer** • Activity: **Stand step transfer with assistance** of a caregiver to chair and bedside commode, several times daily • Ensure pathways to bathroom are free of clutter • Chair and Bed Alarms ON • Assess each shift & PRN	Consider use of: ❖ Gait belt around waist for safety ❖ Ceiling lift (Combi Sling) if patient fatigues quickly or is impulsive ❖ OR: Use Sara Steady
BMAT Level 4	**Walk (March and Step):** Ask patient to march in place at beside, and then to advance step and return each foot.	**Passes** by exhibiting steady gait and balance when marching or stepping. **Continue to Independent Care** **If patient is scored a **high fall risk** per Johns Hopkins score or **anticoagulants**, treat patient with Level 3 (=>Now) interventions or below based on physical assessment.	• **Remain independent for toileting needs** • Ensure pathways to bathroom are free of clutter • Assess each shift and PRN	❖ No lift equipment ❖ Consider gait belt for safety

References:
1. Dickinson, S., Taylor, S., & Anton, P. (2018). Integrating a Standardized Mobility Program and Safe Patient Handling. *Critical Care Nursing Quarterly 41*(3), 240-252.

2. Boynton, T., Kelly, L., Perez, A., Miller, M., An, Y., Trudgen, C. (2014). Banner Mobility Assessment Tool for Nurses: Instrument Validation. *American Journal of Safe Patient Handling Movement(4)*3, 86-92