Early mobility in the intensive care unit (ICU) is critical to a patient’s short- and long-term recovery. Studies show early mobility programs result in more ventilator-free days, fewer skin injuries, shorter ICU and hospital stays, reduced delirium duration, and improved physical functioning.

But accomplishing early mobility requires significant coordination, commitment, and physical effort by the multidisciplinary team. How do we balance the benefits of early mobilization against the potential risk of staff or patient injury during the mobilization activity? Part of the solution to ensuring safe mobilization of critically ill patients is to view mobilization along a continuum based on patient readiness, progression based on goals, strategies to prevent complications, and assessment of activity tolerance. This view keeps safety at the forefront.

Within the ICU, barriers to early mobility may include clinicians’ knowledge deficits and fears, insufficient human and equipment resources, patients’ physiologic instability, lack of emphasis on the value and priority of mobilizing patients, and the ICU culture related to mobility. A 2014 international survey of early mobilization practices in 833 ICUs found only 27% had formal early mobility protocols, 21% had adopted mobility practices without a protocol, and 52% hadn’t incorporated early mobility into routine care practices. Barriers to implementation of mobility initiatives included competing staffing priorities, insufficient physical therapy staff, and concern about patient and caregiver injury. The study found that a standardized protocol may promote successful implementation of an early mobility program.
Importance of a culture change

Sustaining any clinical improvement initiative requires an organizational culture change. Baseline assessment of the current culture as well as early engagement of team members is the starting point. In 2012, the authors led a VHA, Inc. critical care improvement team collaborative of 13 ICUs from eight organizations to implement safe and effective early patient mobility in the ICU. Efforts focused on elements central to sustainable change. First, team members acquired key knowledge to understand why ICU mobility is important. Next, strategies for organizational, leadership, and clinical staff engagement were discussed. To promote the transition in practice and the required culture change, ICU clinicians needed guidance. An organizational development tool was designed to help teams create an effective culture change. Although it was adapted specifically to integrate with early patient mobility efforts in the ICU, this tool can be applied to other settings.

(See Learning progression for patient mobility.)

Three elements are crucial to successfully implementing and sustaining an improvement initiative:

- Team members must understand and be able articulate what’s being proposed. To help them understand, they must receive evidence-based literature and other relevant information.
- Team members must grasp why the initiative is important to the patient, themselves, and the organization. Clinicians typically respond favorably to change when they can connect it to real impacts.
- The leader of the initiative must
define the role of each team member and discipline. Understanding team roles creates a solid platform on which the culture change builds.

Four stages of learning
To learn a skill or concept, a person progresses through four stages, according to a learning model attributed to Abraham Maslow. This model can be applied to clinicians learning about safe patient handling and mobility (SPHM).

Stage 1: Subconscious, unskilled
In this stage, team members are unaware of how little they know and don’t realize a change is necessary. Also, they may have fears and misconceptions about the change. For example, some critical care clinicians believe repositioning or mobilizing critically ill patients threatens the security of vital tubes and lines. But with the proper knowledge, training, and resources, staff can mobilize and reposition ICU patients safely without jeopardizing tubes and lines. In one study, 1,449 activity events (such as sitting up in bed, sitting in a chair, and ambulating) were performed with mechanically ventilated patients; fewer than 1% experienced adverse events. As part of the culture change, misconceptions about SPHM need to be addressed through education and coaching. Once the purpose of SPHM is defined clearly and misconceptions have been addressed, team members are ready to move on to stage 2.

Stage 2: Conscious, unskilled
In the conscious, unskilled stage, team members understand why SPHM is important but don’t know how to accomplish it. Although open to new learning, they may have fears about specific processes or actions involved in patient mobilization. For instance, they may fear certain

Decision tree for mobilizing hemodynamically unstable patients

This diagram helps clinicians determine whether and when an intensive care unit patient is ready to begin mobility activities.

Screen for mobility readiness within 8 hours of admission to the ICU and daily and initiate in-bed mobility strategies as soon as possible.

Is the patient hemodynamically unstable with manual turning?
- O₂ Sat ≤ 90%
- New-onset cardiac arrhythmias or ischemia
- HR < 60 or > 120
- MAP < 55 or > 140
- SBP < 90 or > 180
- New or increasing vasopressor infusion

No

Begin in-bed mobility techniques and progress to out-of-bed mobility as the patient tolerates.

Yes

Is the patient hemodynamically unstable after allowing a 5- to 10-minute adaptation after position change before determining tolerance?

No

Begin in-bed mobility techniques and progress to out-of-bed mobility as the patient tolerates.

Yes

Have activities been spaced sufficiently to allow rest?

No

Allow the patient a minimum of 10 minutes of rest between activities and then try again to determine tolerance.

Yes

Has the manual position turn or head-of-bed elevation been performed slowly?

No

Try the position turn or head-of-bed maneuver slowly to allow adaptation of cardiovascular response to the inner-ear position change.

Yes

Initiate continuous lateral rotation therapy via a protocol to train the patient to tolerate turning.

Key
- HR: heart rate
- ICU: intensive care unit
- MAP: mean arterial pressure
- SBP: systolic blood pressure
- O₂ sat: oxygen saturation

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In-bed mobility encompasses repositioning activities lateral-rotation therapy, tilt-table exercises, and bed-chair sitting.

In-bed and out-of-bed activities
Strategies to promote patient and caregiver safety during mobilization can be divided into two basic categories—those used when the patient is in bed and those used when the patient is out of bed. In-bed mobility encompasses repositioning activities, lateral-rotation therapy, tilt-table exercises, and bed-chair sitting. Modern critical-care beds should be capable of rotating the patient continuously, creating a tilt table through the use of a reverse Trendelenburg position and an adjustable footboard, progressing the body through the head elevation–foot down position to a chair, and ultimately assisting the patient with standing. These features reduce the risk of patient and caregiver injury and make it easier to perform mobility actions. For in-bed repositioning from side to side and moving up, using a breathable glide sheet and specially designed foam wedges helps reduce shear and friction for the patient and help prevents injuries to caregivers because they require a pulling rather than lifting motion. In one study, implementation of this turn-and-position system reduced hospital-acquired pressure ulcers by 28% and reduced staff injuries by 58%. Lifts can be used for some in-bed mobility activities and are effective during ambulation and the transition from in-bed to out-of-bed activities.

Stage 3: Conscious, skilled
Stage 3 learning focuses on implementing the change, with attention to fine-tuning the process. Coaching, mentoring, and maintaining engagement are critical. In previous stages, much effort was expended in educating and training staff. During the transition from stage 3 to stage 4, the skills and knowledge required for the SPHM initiative must become “hard-wired” or ingrained into caregivers’ subconscious. This requires deliberate, focused energy on continued engagement. However, staff energy, resource availability, and competing priorities may pose barriers to sustaining the change. Throughout stage 3, positive feedback, motivation, and sharing of successes and challenges are important for driving continual improvement and culture change. These goals can be accomplished in various ways. Here are some examples:

• Networking with other organizations in various stages of the practice change can be extremely useful. It allows collaborative identification and sharing of challenges, struggles, effective strategies, and success stories. This process creates synergistic energy among the team members, helping to motivate them and accelerate the change.

• Within the VHA mobility collaborative network, teams shared reward strategies. One team gave out M&M’s® when “caught in the act” of Moving and Mobilizing patients. Such moments present crucial coaching opportunities. For example, after a mobility event, staff can huddle briefly to discuss the event and what, if any, improvements could be made to make the process more effective.

Stage 4: Subconscious, skilled
During this stage, the practice and culture changes are well on their
units. On the other hand, using a PAR system means slings will be readily available on all shifts, which leads to better compliance with the SPH M program.

**Centralized distribution**
With this system, access to slings may not be available when needed, especially on evenings, nights, weekends, and holidays. A staff member must be put in charge of maintaining central storage for efficient distribution, and a process for obtaining slings must be established. For instance, is a runner needed? If so, who supplies the runner?

Nonetheless, a well-organized centralized distribution process can be highly effective if communication is clear and consistent. Also, lack of unit storage for slings isn’t a concern.

**Sling tracking**
Sling tracking promotes return of slings to the proper unit. Tracking can be handled in several ways:
- Slings can be labeled with an indelible marker, barcoded, or embroidered. A simple marking system can yield valuable benefits.
- Vendors may have sling tracking systems your facility can use.

**Support for the SPH M program**
A well-developed sling management system supports a facility’s SPH M program. The SPH M must elicit input from units that will use the system and from the laundry department or outsourced laundry company to ensure all parties’ needs are met. It must choose sling styles and fabric and put in place procedures for sling purchase, inventory maintenance, care, laundering, tracking, and replacement. Once these issues have been addressed, the facility is ready to embark on an SPH M program that can improve patient care and help prevent staff injuries.

**Selected references**


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(continued from page 10) Way to becoming firmly rooted and incorporated into caregivers’ daily practice. Although the practice change is becoming the new norm, coaching and mentoring are needed to help maintain momentum. Stories learned along the journey should be used to inspire both novice and expert clinicians.

Objective evaluation of the improvement process should continue, focusing on outcome measures and identifying improvement opportunities to promote refinement. Team members are now doing things they never thought were possible—and previously believed to be unsafe. Recently, I learned of a ventilator patient at St. Luke’s Medical Center, Boise/Meridian (Idaho) who was receiving continuous renal replacement therapy (CRRT). Staff safely mobilized the patient to the chair using the hospital’s mobility protocol. In many ICUs, such a patient would be bedbound. But at St. Luke’s, early mobility is now routine practice even for these patients. Conversation about mobility occurs in daily rounds and often is a major focus of daily patient goals.

In fact, staff members are likely to comment that they no longer ask the question “Can we mobilize this patient?” Instead, they ask, “Is there a reason why we can’t mobilize the patient?” Key lessons learned to promote and maintain this cultural transformation include the importance of testing new practices on a small scale, getting regular feedback of performance and outcome data, providing sufficient education, and increasing caregivers’ will to mobilize patients by seeing the work in action.

**Deliberate focus, full engagement**
Incorporating new evidence into daily practice isn’t enough to sustain a culture change to emphasize early mobility and SPH M. Such a change comes only with a deliberate focus on three key questions: What are we are doing? Why are we doing it? What’s my role? Full engagement and cultural transformation can occur only when all team members can respond to these questions with full understanding.

Visit www.AmericanNurseToday.com/Archives.aspx for a multidisciplinary progressive mobility continuum tool and a list of selected references.

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