OPTIMIZE-ICU: Optimizing Protocols for Timely Implementation of Mobilization in ICU

THE UNIVERSITY OF CHICAGO
UChicago Medicine
Center for Healthcare Delivery Science and Innovation

Bhakti Patel, MD (Project Lead), Jessica Rodriguez (PT lead), Chelsea Thompson & Cheryl Esbrook (OT co-leads), Ann Moon, Sydney Ford, Anne Pohlman, and Ashley Verbeke (RN-Co-Leads), Patrick Costello & Maryam Naveed (Pharm-D co-Leads), and John Kress & Krysta Wolfe (MD Co-Leads)

Problem

- Early Mobilization engages critically ill patients in out-of-bed activity within 72 hours of ICU admission and has been shown to reduce delirium, double the chances of preserving functional independence, and prevents long-term cognitive impairment
- Despite these benefits, only ~22% of intubated patients receive timely early mobilization in the medical ICU at the University of Chicago
- Thus, implementation strategies that prevent delays in early mobilization are urgently needed to bridge this important evidence-to-clinical practice gap

Goal

- To standardize and streamline the process of early mobilization by developing Electronic Health Record tools that can:
  - Identify candidates early using standardized criteria
  - Streamline coordination among multidisciplinary ICU staff
  - Assess Real-time compliance with timing of therapy

Strategy

OPTIMIZE-ICU Process to date:

- Chart review of contextual factors that contribute to delays of ICU Mobilization
- Multidisciplinary meeting with key stakeholders to discuss barriers and set mutual goals
- Educational initiatives:
  - Therapy team reviewed evidence regarding importance of timing of ICU therapy and current standards for eligibility
  - Nursing reviewed accurate documentation of depth of sedation and best practices for sedation titration
  - Real-time RASS Audit and provider ordering processes
- Sub-committees to optimize:
  - Mobilization criteria and protocols
  - Awakening criteria and protocols
  - Compliance goals and metrics for a dashboard
- Use definitions and protocols from subcommittees to develop:
  - Mobilization Eligibility Tool
  - Spontaneous Awakening Eligibility Tool
  - Clinical Dashboard for real-time Compliance

Results to Date

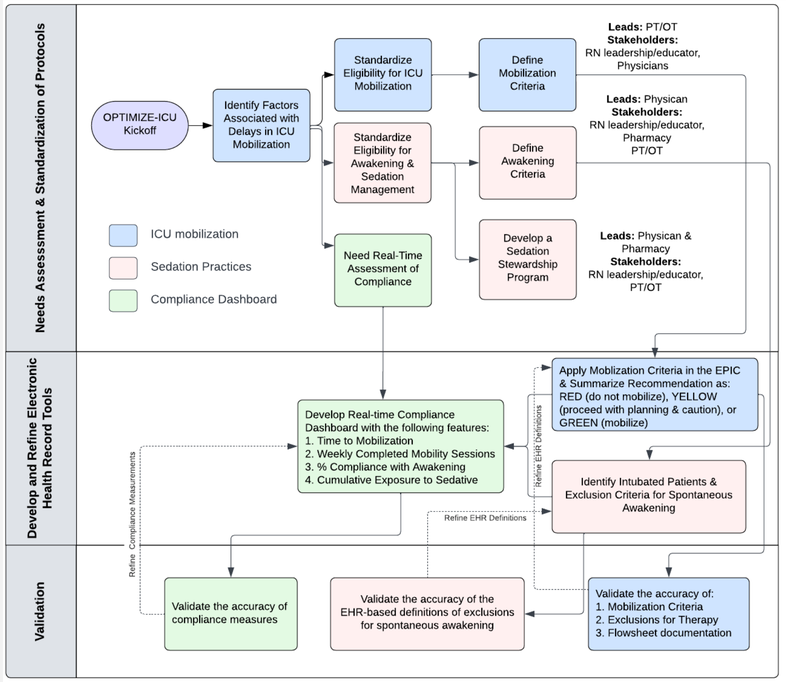

Fig 1: Process of Optimization of Early Mobilization practices

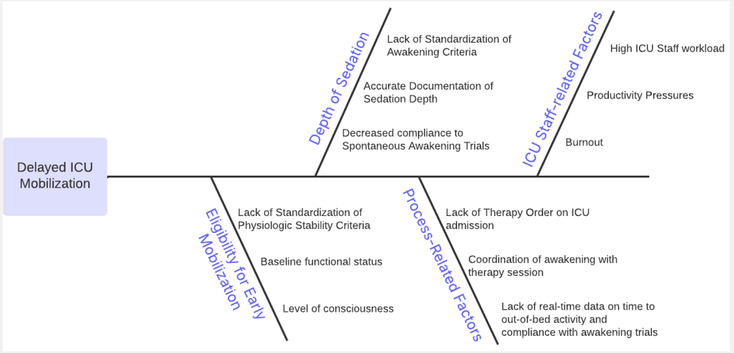

Fig 2: Contextual factors contributing to delays of Early Mobilization

ICU SAT Early Mobilization 3 Patients

Room	Age/Gender	Admission Date	Length of Stay (Days)	Service	SAT Eligibility	ICU Mobilization
9077	47Yrs / M	8/28/25	8	Medical Intensive Care Service	0	
9078	68Yrs / F	8/20/25	16	Medical Intensive Care Service	0	
9079	57Yrs / M	9/3/25	2	Medical Intensive Care Service	10	

Fig 3: EPIC Eligibility tool for SAT and Mobilization

Next Steps

- Complete Compliance Dashboard and validate eligibility tools --> beta test in MICU
  - Pre-implementation phase with data collection of compliance prior to EPIC tool rollout in the Medical ICU
  - Compare the effect of real-time compliance and eligibility identification when EPIC tools are visible to providers
- Utilize feedback to adjust tool and dashboard as needed and roll out in other ICUs
- Assess compliance between staff and units and the effects on staff workload and burnout
- Convert EPIC tool to FHIR format for generalizability across health care systems

Acknowledgements

- IT Support: Soma Chaudhury, Amy Betz, Stacey Borrelli, Zachary Small, Melissa Wilson Zaffrann
- Therapy services support: Megan Teele, PT and Argel Brown, SPT
- Health Care Delivery Science and Innovation Grant