

Supplemental Table 1. Classification of active and passive physical therapies and occupational therapies

Physical Therapy		
Passive Therapies	Active Therapies	
Splinting Positioning Passive Range of Motion	Active range of motion In-bed mobility Side-of-bed sitting Strengthening exercises Transfers Out-of-bed sitting Righting and balance skills Pre-gait skills Ambulation	
Occupational Therapy		
Passive therapies	Active therapies	Feeding skills
Splinting Positioning Passive Range of Motion Sensory stimulation	Active range of motion Bed mobility Transfers Activities of daily living skills according to patient care plan developed during assessment including toileting, dressing and grooming Independent activities of daily living skills including meal prep, executive functioning when planning to complete a task, object retrieval for completion of functional activity, and leisure activities (video games, board games and crafts) Visual skills	Oral stimulation Pre-feeding skills

Supplemental Table 2. Total number of adverse safety events during study period

Event	Pre-implementation	Post-implementation
Loss of vascular access	0	0
Dislodgement of endotracheal tube	0	0
Fall	0	0
Persistent change in vital signs requiring discontinuation of therapy session	4	2
Pressure ulcer during ICU admission	2	2
Deep venous thromboembolism during ICU admission	2	1

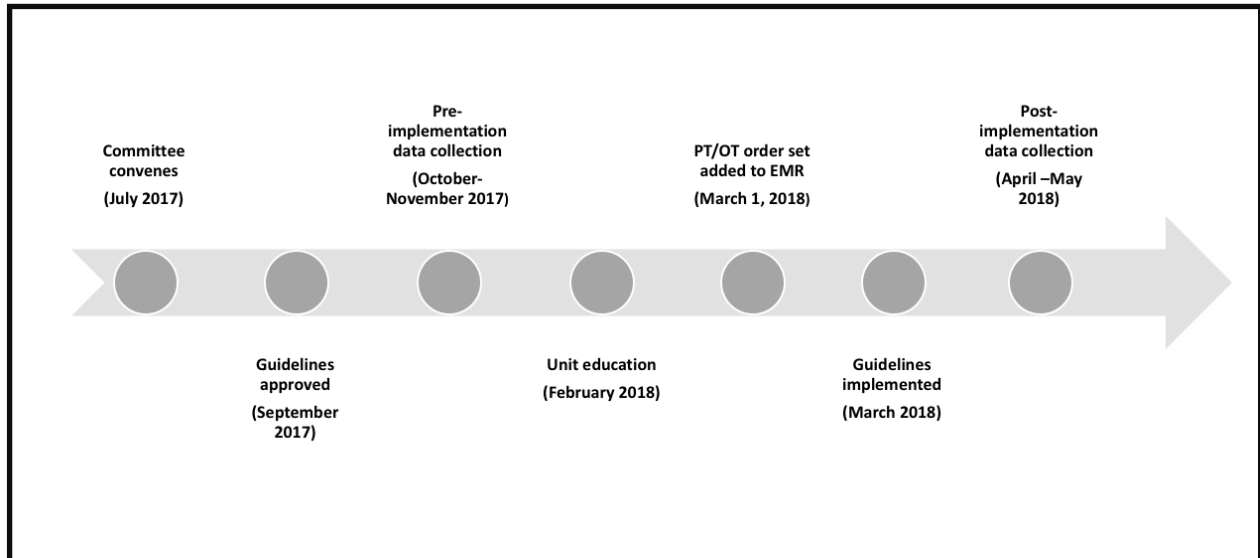
ICU: Intensive Care Unit

Supplemental Figure 1. Clinical classification category based on severity of illness for ICU-based mobility activities.

Category	Respiratory	Cardiac	Neurological	Goals of Care and Treatment Recommendations
Level 1	<ul style="list-style-type: none"> Natural airway or tracheostomy without positive pressure 	<ul style="list-style-type: none"> No inotrope/pressor or antihypertensive infusions 	<ul style="list-style-type: none"> Baseline neuro status 	<ul style="list-style-type: none"> Goals: Independence with all functional skills; minimal therapist assistance Education/ Passive/ IB Active / OOB Active
Level 2	<ul style="list-style-type: none"> High-flow/RAM cannula Home IMV/NIMV settings Weaning on IMV/NIMV support with ETT Continuous albuterol 	<ul style="list-style-type: none"> On 1 therapy and weaning VAD OK 	<ul style="list-style-type: none"> Stable but altered mental status (GCS 9-15) No ICP treatment Refractory status epilepticus, chronic 	<ul style="list-style-type: none"> Goals: Towards independence with all functional skills; some therapist assistance Education/ Passive/ IB Active/ OOB Active
Level 3	<ul style="list-style-type: none"> PIP \leq 35 PEEP \leq 8 FiO₂ < 0.7 No escalation / worsening on ECMO, CRRT, HFOV, NO, prone 	<ul style="list-style-type: none"> On 1 or more stable therapies (not weaning) VAD OK 	<ul style="list-style-type: none"> Coma (GCS <9) ICP < 20 & no or decreasing ICP treatment Uncontrolled agitation, pain, delirium Refractory status epilepticus, acute 	<ul style="list-style-type: none"> Goals: Improve strength, endurance, and tolerance for mobility; therapist assistance required Education/ Passive/ IB Active/ OOB Active Treating ICU team to approve initial session
Level 4	<ul style="list-style-type: none"> New tracheostomy PIP > 35 PEEP > 8 FiO₂ > 0.7 New nitric oxide New prone position New HFOV O₂ sat < 90% or > 10% outside patient norm Unstable airway Open chest/abdomen 	<ul style="list-style-type: none"> Escalating therapy Anti-arrhythmics Hypertensive crisis (systemic or pulmonary) Uncontrolled bleeding 	<ul style="list-style-type: none"> New coma (GCS <9) Intracranial hypertension (ICP > 20 mmHg) ICU-only treatment (pentobarbital) Unstable fracture/spine 	<ul style="list-style-type: none"> Goals: Improve & maintain muscle length; positioning for skin integrity Education/ Passive only <u>if treating team approves (each session)</u> No IB/OOB active treatments recommended

IB: In bed; OOB: out of bed; IMV: invasive mechanical ventilation; NIMV: non-invasive mechanical ventilation; VAD: ventricular assist device; GCS: Glasgow coma scale; ICP: intracranial pressure; PIP: Peak inspiratory pressure; PEEP: Peak end expiratory pressure; FiO₂: fraction of inhaled oxygen; ECMO: extracorporeal membrane oxygenation; CRRT: continuous renal replacement therapy; HFOV: high frequency oscillatory ventilation; NO: nitric oxide; ICU: intensive care unit

Supplemental Figure 2: Timeline of Intensive Care Unit mobility guideline development and implementation



EMR: Electronic medical record