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Acute Care Back to the Basics Virtual Conference

Guest Editor: Lyndsay Laxton, OTR/L; Meghan Morrow, OTR/L

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<td>Marianna Marie Andrews, MS, OTR/L, BCG, MSW</td>
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Acute Care Back to Basics:
OT’s Role in Critical Care

By: Lyndsay Laxton, OTR/L
Meghan Morrow, OTR/L

Disclosures

Presenters received a one-time honorarium for this presentation.
No other disclosures to endorse.
Learning Outcomes

1. Identify 3 reasons occupational therapy practitioners (OT/COTA) are a crucial interdisciplinary team member within critical care.
2. Describe at least 2 potential hospital acquired barriers to discharge specific to patients who are admitted to the ICU.
3. List 5 evidence-based interventions occupational therapy practitioners can employ within the critical care environment.

Overview

- Unique Value of OT in Critical Care
- Prevention of Hospital-Acquired Deficits
- Outcome Measures
- Evidence-Based OT Interventions
- Role of Advocacy
- Q&A
Unique Value of OT in Critical Care

- Holistic
  - Physical, cognitive, psychological
- Client-centered
  - Interventions that are meaningful to the patient
- Person-Environment-Occupational Model
  - Intimate understanding of the transactional relationship between each component

(*Q1)

Hospital-Acquired Deficits

- Neuro-muscular
- Physical Function
- Post-Intensive Care Syndrome
- Psychological
- Cognitive

Desai, Law, & Needham (2013)
Neuromuscular

- Critical Illness Polyneuropathy & Myopathy
- Diffuse atrophy
  - 85-95% of ICU survivors experience persistent weakness
- Also- impaired deep tendon reflex, sensory loss, foot drop, and heterotopic ossification

Desai, Law, & Needham (2013)

(*Q2)

Physical Function

- Impairment in ADLs & IADLs
  - ADLs: >50% of ICU survivors requiring assistance in the first year after illness
  - IADLs: >70% of ICU survivors requiring assistance in the first year after illness
- Decreased 6-min walk distance

Desai, Law, & Needham (2013)
Psychological Symptoms

- **Depression**
  - Occurs in more than 1 in 3 ICU survivors
  - Independently associated with severity of executive dysfunction
  - Risk factor: delirium

- **Post-traumatic Stress Syndrome**
  - 60% of ICU survivors
  - Risk factor: delirium

- **Anxiety**
  - Experienced by up to 85% of patients in the ICU
  - 62% of patients experience anxiety up to a year post-discharge

*Desai, Law, & Needham (2013)*

Cognitive

- Impairments in memory, attention, & executive functioning
  - 70-100% of ICU survivors at hospital discharge
  - 46-78% of ICU survivors at 1-year post-discharge

- Impairments in executive functioning are associated with higher rates of depression

*Desai, Law, & Needham (2013)*

*Wilcox et al. (2013)*
Outcome Measures

Purpose of Assessment

Clinical Utility

Patient Capacity

Tool Measurement

Perry et al. Critical Care (2017) 21:249

(*Q4)

Physical Function

- Basic:
  - Manual Muscle Testing (MMT)
  - Dynamometry

- Advanced:
  - The Clinical Frailty Scale
  - Functional Status Score – ICU
  - ICU Mobility Scale

Additional Outcomes:
- Physical Function in ICU
- Chelsea Critical Care Physical Assessment Tool

Perry et al. Critical Care (2017) 21:249
Cognitive & Psychosocial

- Basic:
  - Richmond Agitation Sedation Scale (RASS)
    https://www.mdcalc.com/richmond-agitation-sedation-scale-rass
  - Confusion Assessment Method (CAM –ICU)
  - Montreal Cognitive Assessment (MoCA)
    https://www.parkinsons.va.gov/resources/MoCA-Test-English.pdf

- Advanced:
  - Hospital Anxiety and Depression Scale (HADS)
    http://www.svri.org/sites/default/files/attachments/2016-01-13/HADS.pdf
  - JFK Coma Recovery Scale (CRS)
    http://www.tbims.org/combi/crs/CRS%20form.pdf
  - Glasgow Outcome Scale- Extended (GOS-E)

(*Q5, Q6)
Evidence-Based OT Interventions: Neuromuscular

- Early Mobility & Engagement
  - Increase muscle strength
  - Reduce incidence of ICU-acquired weakness
  - Increase incidence of independent functional status at hospital discharge

Schweickert et al. (2009)

(*Q7)

Evidence-Based OT Interventions: Physical Function

- Early Rehabilitation
  - ADL re-training
  - Functional transfer training
  - Sleep hygiene
  - Communication

Campbell (2014)
Evidence-Based OT Interventions: Psychological Symptoms

- Delirium prevention & management
  - Detection
  - Management
    - Environmental Modifications
    - ADL engagement
    - Sensory regulation (visual, auditory, etc).
- ICU Diary
  - Reduction in anxiety and depression
- Adaptive Communication
- Leisure engagement

Parker, A., Sricharoenchai, T. & Needham (2013)
Clancy et al. (2015)

Evidence-Based OT Interventions: Cognitive

- Delirium prevention & management
- Early cognitive engagement
  - ICU Diary
  - Puzzles
  - Word search, crossword puzzle, maze
  - Re-orientation activities

Clancy et al. (2015)
Alvarez et al. (2017)
Evidence-Based OT Interventions

- Remain holistic
- Interventions should not be utilized in isolation
- Emphasis on “occupation”

Advocacy

- The Role of OT is evolving!!
  - Emerging evidence suggests the input from an Occupational Therapist can result in:
    - Reduced Delirium
    - Reduced Hospital Length of Stay
    - Return to work at an earlier stage for both patients and caregivers due to reduced dependence
    - Reduce patient morbidity as a result of earlier rehabilitation.

(*Q10)
Questions?

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