Roadmap to the Development of a Critical Care Rehab Team
Combined Sections Meeting 2018
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Live Polling Questions

- 1) What percentage of time, approximately, do you work in the ICU?
- 2) Does your facility have dedicated ICU therapists?
- 3) Are therapists seeing ICU patients in your facility required to pass a competency?
- 4) Are Therapy Technicians utilized in your ICUs?
- 5) What percentage of the time, approximately, does OT/PT co-treating occur?
- 6) What percentage of your ICU patient visits, approximately, do you use an outcome measure in?

Learning Objectives

- Examine specific strategies to assist with incorporating physical/occupational therapy and early mobility into an ICU setting
- Discuss strategies to develop a Critical Care Rehab Team using outcome data to drive meaningful change, therapist efficiency, value to the patient and how implementation success was measured

Course Outline

- Review evidence for early mobility in the ICU
- Discuss challenges and competing demands in the hospital setting as barriers to Critical Care team/coverage
- Share results of dedicated PT in a MICU and SICU trial
- Describe process to develop a Critical Care Rehab team in a large, teaching hospital
- Outline the development of a Critical Care Team Orientation Program
“Early activity is feasible and safe in respiratory failure patients” – (Bailey et al, 2007)

- Assessed safety and feasibility during 3 activity events
  - Sit on edge of bed, Sit in chair, Ambulation
- Results:
  - 1,449 activity events in 103 patients
  - 53% ambulation, 31% sit in chair, 16% sit on edge of bed
  - <1% activity related adverse events
  - No patient was extubated during activity

“Early intensive care unit mobility therapy in the treatment of acute respiratory failure” – (Morris et al, 2008)

- Designed a mobility protocol to provide a mechanism for standard and frequent administrations of PT to acute respiratory failure patients
  - Included a mobility team of critical care nurse, nursing assist and PT
  - Protocol included 4 levels of activity
- Results:
  - More physical therapy sessions
  - Shorter ICU and hospital length of stay for hospital survivors

“Early physical and occupational therapy in mechanically ventilated, critically ill patients: a randomised controlled trial” – (Schweikert et al, 2009)

- Randomized early PT and OT during periods of daily interruption of sedation
- Results:
  - Improved return to (premorbid) independent functional status at hospital discharge
  - Shorter duration of ICU associated delirium
  - PT and OT combined with daily interruption of sedation was safe and well tolerated

We conclude that early activity is feasible and safe in respiratory failure patients. A majority of survivors (69%) were able to ambulate >100 feet at RICU discharge. Early activity is a candidate therapy to prevent or treat neuromuscular complications of critical illness.

We conclude that mobility therapy delivered early in the course of acute respiratory failure patients receiving mechanical ventilation is feasible, safe, did not increase cost and was associated with decreased ICU and hospital LOS in survivors.

Improved return to (premorbid) independent functional status at hospital discharge

Shorter duration of ICU associated delirium

PT and OT combined with daily interruption of sedation was safe and well tolerated

Med Surg
Cardiac
Neuro
Ortho
Peds
Wound Care
Secrets of the past – ICU coverage

- New consults placed in a binder
- Morning scheduling – Therapists pull new consults from the binder
- Last patients in the binder…..

Secrets of the past – ICU coverage

- Therapists that pulled the ICU patients became more:
  - Skilled
  - Interested in learning more about ICU
  - Aware of the importance of PT/OT in the ICU
  - Challenged by competing priorities
  - ASAPs
  - Precerts
  - New consults outside of the ICU

Secrets of the past – ICU coverage challenges

- ICUs were organized within each team
  - Ex. Cardiac Surgery ICUs, Heart Failure ICU and Coronary ICU were a part of the Cardiac Team
  - High volume of consults, ASAPs, Priority calls on the RNFs/SDUs were seen before ICU evals and treatments
- Nursing resistance to therapy and poor MD awareness of PT/OT in the ICU led to low consult volume despite appropriate patients

MICU Pilot

- Physician, RT, and Nurse Champions
  - Meetings with MD, RT, and RN leadership
- Collaboration with Project Manager of hospital wide initiative: “Culture of Mobility”
- Flyers in ICU staff areas to announce pilot
- Immersion of 3 dedicated PTs into our MICUs and SICUs

MICU Pilot

- PTs attending of rounds and huddles to increase collaboration and awareness, and to determine which ones were mission critical
- Coverage of critical care patients with QD frequency goal
  - Trial of BID
  - QD more efficient and practical for team, and better tolerated by patients
MICU Pilot

- Non-patient care time allotted for:
  - Provision of training
  - Education of team
  - Development of materials
    - Training
    - Educational
    - Competencies

MICU Pilot

- Consulting team member education
  - Educational presentations and printed materials, including one-page “When to consult” and “Difference between OT and PT” guides to physicians, PAs, NPs

MICU Pilot

- RN competency
  - Provided printed and emailed educational materials
  - Hands-on training at bedside during a PT session with their patient

MICU Pilot — ICU Nursing Observation Checklist

I have observed the following with Physical Therapy:

- Assisting patient to edge of bed (EOB)
- Assisting patient out of bed to chair (OOBTC)

I understand and feel comfortable discerning:

- Who is appropriate for early mobilization (recovery vs. survival mode)
- When to direct the medical team to consult PT or OT
- Where to find therapy recommendations for mobility in EPIC
- How to initiate mobility for my patients who meet early mobilization criteria
- When not to mobilize or to stop mobilizing a patient

I would like:

- More hands-on training with PT
- Other (specify): ________________________________

Name: ___________________________  Date: _____________
Rehab technician competency

- Development of a “Technician ICU Orientation Manual” for education and setting of standards
- Roles and Responsibilities
- Early Mobilization
- Communication
- Equipment (ICU related and therapy equipment)
  - Lines, tubes, drains
  - Portable telemetry
  - MOVEO
- Set-up and Re-set of patient’s room
- Patient Mobility and Transfers

Welcome to the Intensive Care Unit PT/OT Team!

Physial and Occupational Therapy Intensive Care Unit Team

You will soon discover that your role on this team is vital to ensure the best quality of care for this patient and that care is delivered in a safe and efficient manner. On this service you will be assisting the therapists with the mobility of critically ill patients. These patients are often medically complex and demonstrate weakness and impaired cognition. However, due to the focus on early mobility in the ICU, many critically ill patients can safely sit edgen bed and transfer to a chair, and even progress to ambulate. You will assist with management of ICU lines and monitors, ventilators, ICU beds, other sustaining equipment during the mobility process. It will be necessary to follow all of the Policies & Procedures that have been put into place. These Policies & Procedures will be reviewed throughout your orientation process. Please ask questions throughout your orientation process to clarify any concerns that may arise. The key roles and responsibilities of the technician on the service are outlined in this orientation manual. Thank you for your interest in this service and most importantly for your continued dedication to providing quality patient care.

Roles & Responsibilities

- Communicate with the therapist before each patient session to understand the treatment plan.
- Identify and bring to bedside the necessary patient equipment and supplies.
- Assist the therapist with preparing the room for safe mobility.
- Assist the therapist with transfers and patient mobility.
- Clean and reset the patient room following patient mobility.
- Clean and maintain all therapy equipment and supplies per the ICU Rehab Tech Policy & Procedure manual.
- Assist the therapist with continued readiness tasks and expectations.

Sustaining equipment during the mobility process. It will be important for your continued dedication to providing quality patient care.

Laws of Practice

When providing assistance to the physical or occupational therapist, it is important to be aware of the state laws of physical and occupational therapy practice. When treating patients at the bedside, both the technician and the therapists may look similar if both are assisting with mobility, people different colors of scrubs. It is not uncommon for another healthcare practitioner (physician, nurse, etc) or a family member to inadvertently ask for information from, or delegate a task to, the technician that may not be within the scope of practice to address.

Should you find yourself in this position, please explain to the healthcare practitioner, patient, or family member that you will find the right person to address the matter. Do not feel pressured to perform a task that is beyond your scope of practice no matter what. If you do perform a task that is beyond your scope of practice, it will result in corrective action.

Communication in the ICU

Communication Tips

- Communicating accurate information in an efficient manner is essential for all members of the ICU team.
- The technician and therapist will discuss the basic plan for the session ahead of time.
- Flexibility, alertness, and ongoing communication are key. Patients require constant monitoring and their condition may change, even during therapy. The therapist may need to adjust or change the goals or plan for the session based on the patient's response.
- Speak up if you notice something “doesn't look right” or “doesn't sound right” whether it is related to the patient or equipment. Calmly notify the therapist of concerns.
- The therapist may direct instructions toward the patient to minimize the patient’s anxiety (“We are going to help youray down now.”)
- Confused or delirious patients can be easily distracted by more than one face or voice in the room. If this is the case, conversations and interruptions should be minimized.

Assist the Therapist with Treatment as Directed

Laws of Practice

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Communication in the ICU

<table>
<thead>
<tr>
<th>Communication Tips</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Do</strong></td>
</tr>
<tr>
<td>Identify your patient’s RN (ideally by name) prior to therapy, in case the RN is needed during the session.</td>
</tr>
<tr>
<td>Allow the therapist to initiate RN communication and indicate to you that it is appropriate to begin setting up for the session.</td>
</tr>
<tr>
<td>Refer an RN with specific questions regarding the patient’s treatment plan to the therapist.</td>
</tr>
<tr>
<td>Speak up if you notice something that “doesn’t look right” or “doesn’t sound right.”</td>
</tr>
<tr>
<td>Limit conversations and interruptions during therapy for patients who are confused or delirious.</td>
</tr>
<tr>
<td>Be aware and sensitive whenever “Code Calm” is in effect.</td>
</tr>
</tbody>
</table>

Setup for the ICU Patient’s Room

<table>
<thead>
<tr>
<th>ICU Patient Room Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Do</strong></td>
</tr>
<tr>
<td>Allow the therapist to introduce themselves to the RN, patient, and family first. The therapist must decide if/when it is appropriate to initiate treatment.</td>
</tr>
<tr>
<td>Change line and ensure proper length in case of sitting edge of bed or transferring to a chair.</td>
</tr>
<tr>
<td>Remove pillows, bedding, SCDs, PRAFOs, Prevalon boots, turning wedges, or other positioning devices not needed for mobility.</td>
</tr>
<tr>
<td>Position chair with open sheet and chux.</td>
</tr>
<tr>
<td>Position IV line bag in lowest possible position.</td>
</tr>
<tr>
<td>Put down both side rails to prepare for edge of bed sitting.</td>
</tr>
<tr>
<td>Set up portable Telemon if indicated.</td>
</tr>
<tr>
<td>Put socks on patient.</td>
</tr>
</tbody>
</table>

Specific Bed Functions

<table>
<thead>
<tr>
<th>Identifies and Gathers Necessary Rehab Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Do</strong></td>
</tr>
<tr>
<td>MOVEO (Stored in M72 Gym)</td>
</tr>
<tr>
<td>Shuttle Mini Press (sign-out system on Sharepoint)</td>
</tr>
</tbody>
</table>

Identifying and Gathering Necessary Patient Care Equipment

<table>
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<tbody>
<tr>
<td><strong>Do</strong></td>
</tr>
<tr>
<td>Socks</td>
</tr>
<tr>
<td>Gown</td>
</tr>
<tr>
<td>Sheet for chair</td>
</tr>
<tr>
<td>C-S tubing and connector</td>
</tr>
<tr>
<td>Velcro suction tip</td>
</tr>
<tr>
<td>Recliner chair</td>
</tr>
<tr>
<td>Wheelchair for following</td>
</tr>
<tr>
<td>Portable tolemon</td>
</tr>
<tr>
<td>Bed functions: Boost, max inflate, seat deflate, chair position, OOB position</td>
</tr>
</tbody>
</table>

ICU Team

The following rehab equipment are often used in the ICU:

- MOVEO (Stored in M72 Gym)
- Shuttle Mini Press (sign-out system on Sharepoint)
ICU Team

Identifies and gathers necessary rehab equipment:

- Beds and Chairs
  - Recliner Chair
  - Barton Chair (Bariatric)
  - Hausted All-Purpose Chair

Contacts for locating, ordering, or servicing equipment:

- Liko Lifts
  - Single Lift (left) or Double Lift (right)

Standard Equipment

- ICU Room: Equipment

  - Split monitor so RN can see vitals for both of his/her patients. Right side of screen is patient in this room.
  - Green = telemetry (HR, BP, pulse oximetry, RR)
  - Red = arterial line
  - Blue = central venous pressure line
  - White = monitors ventilator settings/CO2
  - Check BP: Top left gray button

Portable Telemetry

- ICU Room: Equipment

  - To monitor vital signs while transferring or ambulating a patient away from bedside.

- ICU Room: Equipment

  - Portable telemetry
    - Above: Portable “cam” on wall in patient’s room behind wall-mounted black telemetry monitor.
    - Above: Step 1: Use gray tab to gently pull/kick “cam” off its track with camera attached.
    - Above: Step 2: Slide “cam” on the back of portable telemetry monitor. May need to use gray tab to fully “lock” system into place.
Common Lines, Tubes, and Drains

**ICU Room: Lines, Tubes, and Drains**

- **Ventilator**
  - Settings may only be managed by RT/MD
  - In some cases, therapist may be allowed to temporarily increase flow
- **Endotracheal Tube**
  - Keep ETT from twisting in neck
  - Watch for water in tubing, drain towards machine or collection bag
  - If dislodged, can only be reinserted by RT/MD

Above: Patient is intubated with endotracheal tube (ETT) to a ventilator.

Below: Patient has a tracheostomy to a ventilator. May also be transitioned to trach collar.

**Dialysis**

- Catheters may be located in neck or on chest. Ensure direct flow of line from dialysis machine.
- Large machine at bedside with dialysate fluid; is sensitive to changes in weight, particularly if jostled.
- Patients may have “heat hugging” blanket for warmth (blue machine at foot of bed).

**Types of Dialysis Machines**
ICU Room: Lines, Tubes, and Drains

Common Lines, Tubes, and Drains

Arterial Lines

Common Lines, Tubes, and Drains

Patient Mobility and Transfers

Positioning and Line Management

You may need to assist with boosting a patient higher in bed prior to sitting at the edge of the bed. This prevents very weak and/or morbidly obese patients from sliding down or too close to the edge of the bed. Additionally, you may need to assist with bolstering the patient's chest before being placed in the Chair Position of the bed.

The therapist will check the security of all lines prior to mobility. You may be asked to assist in securing lines with tape or hemostats. The therapist and technician will communicate with each other regarding the set-up phase and general plan for the session.

Some patients require a list to maintain their invasive and ventilated during therapy.

You must prioritize preserving your back when mobilizing patients to prevent back injuries. In the event that you should sustain any injury while mobilizing a patient, you must notify the CT and then fill out a SERS report online. You will then be directed to the Emergency Room for evaluation and further instructions.

Arterial Lines

Hi-Flow Oxygen (Nasal Cannula or Mask)

Chest Tube: Alert therapist/RN if knocked over

Patient Mobility and Transfers

Guidelines for Hands-On Assistance to the Therapist

<table>
<thead>
<tr>
<th>Do</th>
<th>Don't</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leave the treatment area briefly to obtain additional supplies only as directed by the therapist.</td>
<td>Don’t leave the treatment area briefly to obtain additional supplies.</td>
</tr>
<tr>
<td>Communicate appropriately and maintain a friendly, professional demeanor.</td>
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</tr>
<tr>
<td>Leave the patient’s side if necessary.</td>
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</tr>
<tr>
<td>Help the patient in the Chair Position of the bed, if necessary.</td>
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</tr>
<tr>
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<td>Don’t communicate appropriately with patients and family members.</td>
</tr>
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<td>Help the patient to stay up straight while assisting with mobility.</td>
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<tr>
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<td>Don’t help the patient to stay up straight while assisting with mobility.</td>
</tr>
<tr>
<td>Move the patient’s side if necessary.</td>
<td>Don’t move the patient’s side if necessary.</td>
</tr>
<tr>
<td>Assist the patient in the Chair Position of the bed, if necessary.</td>
<td>Don’t assist the patient in the Chair Position of the bed, if necessary.</td>
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</table>
### Patient Mobility and Transfers

#### Tips for Equipment and Lines

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<tr>
<th>Do</th>
<th>Don't</th>
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</thead>
<tbody>
<tr>
<td>Keep the head of the bed greater or equal to 45 degrees, unless needed for positioning during session.</td>
<td>Don’t attempt to sit a patient up or transfer a patient without confirmation or direction from the therapist.</td>
</tr>
<tr>
<td>Put tube feed on hold as directed by the therapist if patient needs to be positioned flat temporarily.</td>
<td>Leave tube feed on hold for longer than 15 minutes at a time.</td>
</tr>
<tr>
<td>Leave the ventilator tubing with head of bed at least 45 degrees; may need to be flushed to prevent clogging.</td>
<td>Don’t touch or adjust the ventilator controls (must be directed by therapist).</td>
</tr>
<tr>
<td>Allow condensation/liquids in the ventilator tubing to be drained toward the ventilator.</td>
<td>Don’t allow liquid build-up or condensation in the ventilator tubing to be drained toward the patient.</td>
</tr>
<tr>
<td>Ensure direct flow of dialysis lines from the patient to the machine.</td>
<td>Don’t allow T-tub or I-tub to have in-patient’s hand.</td>
</tr>
<tr>
<td>Prevent the patient from receiving any Foley’s or chest tubes during session.</td>
<td>Don’t allow tube feed to be left on hold greater than 15 minutes.</td>
</tr>
<tr>
<td>Prevent the patient from lying flat, unless needed for positioning during session.</td>
<td>Don’t allow patient to lie flat (head of bed at least 30 degrees, unless needed for positioning during session).</td>
</tr>
</tbody>
</table>

### Cleans and Maintains All Therapy Equipment and Supplies Per Policy & Procedure Manual

#### Cleaning and Maintaining Equipment & Supplies

- Gait belts and walkers can be cleaned with germicidal wipes (PDI Sani-cloths) between every patient treatment session.
- Some therapists may carry portable pulse oximeters and other patient identifiers.

#### Don’ts

- Do not attempt to sit a patient up or transfer a patient without confirmation or direction from the therapist.
- Do not leave tube feed on hold for longer than 15 minutes at a time.
- Do not allow liquid build-up or condensation in the ventilator tubing to be drained toward the patient.
- Do not allow T-tub or I-tub to have in-patient’s hand.
- Do not allow tube feed to be left on hold greater than 15 minutes.
- Do not allow patient to lie flat (head of bed at least 30 degrees, unless needed for positioning during session).

### Resetting the ICU Patient’s Room

#### Resetting the Patient’s Room After a Treatment Session

- After the session is complete, and the patient is positioned, the therapist will communicate to the technician when to begin to rein-set the room. While the technician is resetting the room, the therapist may begin assessing the next patient, but will do so that “while’s” before you both move on.

<table>
<thead>
<tr>
<th>Do</th>
<th>Don’t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leave treatments and procedures for the next patient.</td>
<td>Don’t leave treatments.</td>
</tr>
<tr>
<td>Leave patient’s pillow, bed head, television, call light, TV control, and tray table in place.</td>
<td>Don’t leave patient’s pillow, bed head, television, call light, TV control, and tray table in place.</td>
</tr>
<tr>
<td>Leave rooms, unless directed as “OK” by the therapist or RN.</td>
<td>Don’t leave equipment in working order or instructions for use of equipment management system tubing.</td>
</tr>
<tr>
<td>Apply restraints when necessary.</td>
<td>Don’t leave a patient room until the treatment area has been properly reset.</td>
</tr>
<tr>
<td>Prevent ventilator tube from being left on hold.</td>
<td>Don’t leave ventilator tube on hold.</td>
</tr>
<tr>
<td>Leave up at 4 bed rails (all 4 rails up is not considered a restraint) in the ICU.</td>
<td>Pull up all 4 bed rails (all 4 rails up is not considered a restraint) in the ICU.</td>
</tr>
</tbody>
</table>

#### Continued Readiness

- Everyone has a role.
- Continuous Readiness is the responsibility of each and every staff member that works at the Cleveland Clinic and in our department. This means that every team member is aware of the general policies and expectations required by Joint Commission and CMS and make a daily effort to help contribute and ensure a safe environment for patients, themselves, and fellow team members.
- The CTL will help to review these policies periodically and perform quarterly reviews to ensure compliance. It is the responsibility of the technician and each and every staff member to inquire about policies and processes when questions arise.
- Everyone has an accountability and responsibility to cleanliness and order in our department. If you see something that you think is out of order or an issue you should do something about it or inform a CTL. One person can have an impact and make a change in the department. On the reverse side it only takes one person not taking responsibility to have a negative impact. Take pride in your Department and in your role while assisting the ICU team!!!
**MICU Pilot**

- Teamwork
  - Communication
  - Respect
  - Mutual understanding of workflow
    - Nursing plan, RT wearing
  - Shared goals
    - Patient centered
  - Celebration of successes!
    - Caregiver Celebrations

**SICU Pilot**

- Surgical ICU Trial
  - 1 PT already treating for partial day coverage
  - Nursing and Physicians verbalizing the positives of early mobility and noticing a change in the culture of the unit
  - Rehab Director and SICU Medical Director meeting and agreement to dedicate 1 PT to 30 bed ICU

**SICU Pilot**

- Nursing collected data on patient outcomes before and after dedicated PT for:
  - Length of stay in SICU
  - Pressure ulcer rates
  - Ventilator assisted pneumonia rates
  - Ventilator days
  - Patient satisfaction

**SICU Pilot Data**

- Length of Stay
  - Chart showing data for Q1 2013, Q2 2013, and 2013
  - Prior to and after early mobilization

- SICU Skin Care
  - Chart showing data for 2012, Q1 2013, Q2 2013, and 2013
  - Comparison of rates

- SICU Ventilator Days
  - Chart showing data for 2012, Q1 2013, Q2 2013, and 2013
  - Comparison of days per month
**SICU Pilot Data**

### SICU VAP Rates

<table>
<thead>
<tr>
<th>Year</th>
<th>VAP Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>1.31</td>
</tr>
<tr>
<td>Q1 2013</td>
<td>2.16</td>
</tr>
<tr>
<td>Q2 2013</td>
<td>0.81</td>
</tr>
<tr>
<td>2013</td>
<td>1.84</td>
</tr>
</tbody>
</table>

Number of VAPs/Month

### Press Ganey

<table>
<thead>
<tr>
<th>Year</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>3.97</td>
</tr>
<tr>
<td>2013</td>
<td>4.22</td>
</tr>
</tbody>
</table>

Mean (Average) Score

### Overall Rating of SICU (Press Ganey)

<table>
<thead>
<tr>
<th>Year</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>75%</td>
</tr>
<tr>
<td>Q1 2013</td>
<td>79.41%</td>
</tr>
<tr>
<td>Q2 2013</td>
<td>89.08%</td>
</tr>
<tr>
<td>2013</td>
<td>75.78%</td>
</tr>
</tbody>
</table>

Percent of “Very Good or Better” Answers

**SICU Pilot**

- Mobility log created for communication between PT and nursing
- Combined and applied
- Applied the Delirium Management and Early Mobility Bundles

**SICU Pilot**

- Outcomes
  - Maintained staffing of 1 full time PT
  - Added 1 additional PT 1 year later
  - Opportunities for nursing education
    - In-service on patient mobility with orthopedic precautions
    - In-service on evolving role of PT on the unit
    - Training with nursing technicians with simple mobility procedures and gait belt use
Business Proposal: Case for Change – Increase PT in the ICU

- Leadership from therapy and ICU met with Medical Operations
- Provided rationale for increased therapy in ICU

![Let's Talk. Change](image)

MICU Pilot: Preliminary Results

Identifying the right patients and treating them with skilled therapy is helping to improve MICU patients' functional independence.

![Chart](image)

Proposal

- Develop a new ICU PT clinical team
- Add 6 new physical therapists to the current staff of 3 PTs in the ICU
- Hire 3 additional Rehab Techs to support program
- Resource with new hires or pull existing staff

![Chart](image)

ICU therapy under-utilization

ICU beds make up 17% of total inpatient beds on Main Campus, but only 5% of all physical therapy activity.

![Chart](image)

PT FTE Sizing Methodology

![Table](image)

Alternate Staffing: Pull Existing Staff

Impact of Reducing each Clinical Team by 1 PT FTE: Reduced Response to PT Consults

![Chart](image)
**Business Case / ROI**

<table>
<thead>
<tr>
<th></th>
<th>MICU</th>
<th>NICU</th>
<th>SICU</th>
<th>CCU</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Hospital ALOS</td>
<td>14.7</td>
<td>10.1</td>
<td>14.8</td>
<td>13.1</td>
<td></td>
</tr>
<tr>
<td>Target Reduction</td>
<td>(1.0)</td>
<td>(0.5)</td>
<td>(0.5)</td>
<td>(0.5)</td>
<td></td>
</tr>
<tr>
<td>Direct Cost per Day</td>
<td>$2,162</td>
<td>$2,658</td>
<td>$2,830</td>
<td>$3,290</td>
<td>$2,954</td>
</tr>
<tr>
<td>Total Cost Savings ($000)</td>
<td>$1,984</td>
<td>$201</td>
<td>$251</td>
<td>$516</td>
<td>$2,954</td>
</tr>
<tr>
<td>FTE Incremental Costs ($000)</td>
<td>$429</td>
<td>$44</td>
<td>$44</td>
<td>$125</td>
<td>$644</td>
</tr>
<tr>
<td>Return on Investment</td>
<td>362%</td>
<td>351%</td>
<td>464%</td>
<td>312%</td>
<td>359%</td>
</tr>
</tbody>
</table>

**Business Proposal: Case for Change – Increase PT in the ICU**

**THIS IS WHY.**

- During previous hospital operation meetings the following issues were discussed:
  - PT response time was not being met due to inappropriate referrals
  - Not all staff were meeting 100% of the expected productivity standard

**Business Proposal: Case for Change – Increase PT in the ICU**

- Hospital Operations challenged therapy leadership:
  - Shift work from areas covering inappropriate referrals
  - Work to improve productivity of team members not achieving the expectation

**Business Proposal: Case for Change – Increase PT in the ICU**

- Initial primary focus of allocation of resources started with areas with high 6-click scores
  - “6-Clicks” scores are valid for assessing patients’ activity limitations in acute care settings
- Therapy leadership utilized “6-Click” data to identify areas with a high volume of 23-24 “6-Click” scores
- Meetings were held in these areas with nursing and medical team leadership
Development of the Critical Care Team

- Decision was made to develop a Critical Care Team which included:
  - 1 Clinical Team Leader
  - 8 Physical Therapists
  - 4 Occupational Therapists
  - Positions were shifted from other teams in the department
  - All ICUs throughout the hospital are covered by the Critical Care Team

Critical Care Team – First Year

- PT / OT Critical Care Visits
- Critical Care Team Units
  - MICU – 5 ICUs, 64 beds
  - 2.5 PTs, 1.5 OTs
  - SICU – 3 ICUs, 30 beds
  - 2 PTs, 1 OT
  - NICU – 2 ICUs, 24 beds
  - 1 PT, 0.5 OT
  - Cardiac ICUs (HF-ICU, CICU, CVICU) – 8 ICUs, 110 beds
  - 3 PTs, 1 OT

Development of the Critical Care Team – Initial Staffing

- Critical Care Team Units
  - MICU – 5 ICUs, 64 beds
  - 2.5 PTs, 1.5 OTs
  - SICU – 3 ICUs, 30 beds
  - 2 PTs, 1 OT
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A survey was distributed via e-mail to the following professionals in the ICU:
1) ICU attendings
2) Critical care/Pulmonary critical care/cardiology and vascular surgery fellows
3) Residents with experience in our ICUs
4) Nurses (RN, ANM)
5) Midlevel practitioners (NP/PA)
6) Respiratory therapy

Respondents:
- 12.6% (n=17) residents
- 49.6% nurses (n=67)
- 44.8% (n=101) did not identify their discipline

98% of respondents believed patient outcomes have improved for those patients who worked with PT/OT in the ICU.
92% consider patient readiness for therapy during their daily rounds for patient care.
96.7% of respondents (100% of physician respondents) recommended continued PT/OT presence in ICUs.
87.9% of all respondents rated PT as having significant value in the ICUs, whereas 71.1% rated OT as having significant value in the ICUs.

Majority of comments were positive, while some (≤5) comments were negative or related to adverse events as a result of working with therapy (patient fatigue or O2 desat, PT or OT “in the way” of other treatments).

Critical Care Team Orientation

- Identified the need for a comprehensive and uniform orientation process to critical care for all PT and OT caregivers

Characteristics of ICU Critical Care Team members when it was established:
- Therapists with varied levels of ICU experience (1-20+ years)
- Therapists treating patients of different levels of ICU complexity at large main tertiary hospital versus small regional hospitals
- Therapists trained in variety of ways
- Experience. Didactic knowledge from school. Prior job setting. Other PT/OTs. Continuing Education.
- Therapists experience and comfort in the ICU based on the patient population without the knowledge base to rotate to all ICU units
  - Cardiac, Critical, Medical, Neuro, Surgical

Critical Care Team Orientation

- Current state of orientation process when Critical Care Team was established
  - Therapists with ICU experience orienting therapists without ICU experience
  - Therapists with ICU experience were “grandfathered in” and did not receive orientation
  - Global department orientation processes were used for general acute care knowledge and competencies
  - Lack of uniformity and structure with the process
    - Individualized by the orienting therapist
    - No guidelines for who could treat in the ICU considering prior experience (i.e. new graduate)

- Formal ICU orientation process developed by the CC Rehab and Sports Therapy ICU SIG
  - Approximately 30 member group
    - 20 PTs, 6 OTs, 2 STs, 1 Group leader
    - Began in 2011
    - Met quarterly for 1 hour meetings
    - Yearly commitment
    - All therapists with an interest could join and did not need to be currently staffed in an ICU
Critical Care Team Orientation

- Role and Activities of the ICU SIG
  - Process Development
  - Piloting ICU related patient care competencies
  - Education of ICU therapists
    - Journal article presentations
    - Arranging for guest speakers to give CEU events
    - Developing internal CEU events

- ICU SIG recognized the need for and chose to develop a formal critical care orientation process
  - Assigned a project coordinator
  - Established a timeline (1 year)
  - Majority of members chose to participate
  - Communicated by email and through quarterly meetings (in-person and conference calls)

Critical Care Team Orientation

- Established necessary components to the orientation process through:
  - Literature review
    - Mejia-Downs et al 2015
  - Project coordinator leadership and experience
  - Experience with clinical education
  - SIG member input
    - Used in-person meeting for discussion and input of group members

- Established key components of ICU orientation:
  - General orientation to acute care
  - ICU unit and patient population specific information
  - Literature review for evidence based practice of fundamental ICU literature
  - Observation of a preceptor
  - Patient care with a preceptor
  - Competency checklist
  - Quiz

Critical Care Team Orientation

- Learning Modules
  - Evidence for early mobility. Outcome measures.
  - Role of PT/OT/SLP in the ICU
  - Treatment ideas for PT/OT
  - ICU delirium definition and management
  - ICU lines, tubes, drains. ICU monitors, Bed functions.
  - Ventilators and other oxygen delivery systems
  - Lab values
  - Pharmacology
  - Precautions/contraindications for mobility
  - Strategies for chart review, documentation, communication
  - Room set-up considerations
  - Role of the rehab tech
  - Family role and involvement in care

Critical Care Team Education

- ICU SIG organized CEU opportunities to educate ICU clinicians with all levels of experience
  - Perme Early Mobility and Walking Program in ICU: 2013
  - ICU Fundamentals (2 part): 2014
  - Pharmacology: 2017
Critical Care Team Education

- ICU Fundamentals (internally developed)
  - Lines, tubes, drains
  - Oxygen delivery systems
  - Mechanical Ventilation
  - EKG
  - Lab Values
  - Pharmacology
  - Delirium
  - To treat or not to treat
  - PT, OT, ST treatment ideas
  - Utilization of support staff

Critical Care Team Orientation

- Recognized the need for orientation and education of therapy support staff in the ICU
  - 7-10 rehabilitation technicians staffed at main campus
  - Varied levels of rehab tech experience (20+yrs to <1yr)
  - Varied levels of prior experience
    - Nursing aides
    - PT/OT students, Nursing students, Pre PT/OT students.
  - All rehab techs oriented and trained with general acute care skills to assist therapists during patient care on regular nursing floor units

Critical Care Team Orientation

- A formal multi-modal rehab tech critical care orientation process was established
  - Established 3 PT preceptors to train all rehab techs for training consistency and organization
  - 1:1 preceptor-to-tech training during patient care
  - Orientation binder
  - Competency checklist
  - Simulation Lab

Critical Care Team Orientation

- Management of Oxygen Delivery Systems and Mechanical Ventilation in the ICU (internally developed)
  - Identifying O2 deliver systems
  - Ventilator modes
  - Role of PT/OT in managing a patient’s respiratory status
  - Implementing best practice

Critical Care Team Orientation

- Identified areas to enhance the training and orientation for rehab tech support in the ICU:
  - Role of rehab techs in the ICU setting
  - Brief presentation of the evidence for early mobility
  - Education with considerations for patient interactions specific to the ICU such as delirium and agitation
  - Role of the rehab tech to maintain national patient safety goals
  - Instructions on the role of a rehab tech with:
    - Setting up and ICU room
    - Assisting the therapist during patient care
    - Re-setting the ICU room
    - Sanitization of equipment

Critical Care Team Orientation

- Created 2 page competency checklist
  - Yes/No assessment
  - Four categories of knowledge
    - Equipment and precaution knowledge
    - Room set-up and patient preparation
    - Patient mobility and transfer assistance
    - Re-set of the patient and room
Critical Care Team Orientation

- Rehabilitation technicians SIM Lab Training
  - Worked with Cleveland Clinic Simulation Lab to develop and implement a simulated ICU competency experience
  - Therapist acted as a standardized patient
  - Use of monitors, ICU lines/tubes/drains
  - Used competency checklist for assessment
  - See video

Critical Care Team – Current State

- Critical Care Team Units
  - MICU – 5 ICUs, 64 beds
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Critical Care Team – Current State

- Ongoing Education
  - Monthly Critical Care Team Journal Club
  - Peer to peer on the job shadowing/education
  - Team members encouraged to rotate every 4 month
    - Rotate to another hospital team/service
    - Rotate internally within the Critical Care Team
  - ICU SIG Journal Clubs
  - Providing inservices at satellite hospitals
  - Tech training/SIM lab training

Critical Care Team – Current State

- Ongoing Quality Review
  - Quality Visits by Clinical Team Leader
    - Hand washing
    - Patient Identification
    - Appropriate Communication with patient
    - Treatment provided is skilled and appropriate
    - Billed Treatment is appropriate
    - Plan of Care is appropriate
  - Peer Audit Documentation
    - Performed by Clinical Team Leader, Senior or Clinical Specialist

Critical Care Team – Current State

PT / OT Critical Care Visits
Yr. over Yr. Since 2012

Critical Care Team – Current State

PT / OT Critical Care Visits as % of Total Visits

Here is a graph showing the percentage of PT and OT critical care visits over the years from 2012 to 2017. The data shows a steady increase in the percentage of PT visits, with a slight decrease in OT visits. The graph is color-coded to distinguish between PT and OT visits, with PT visits in blue and OT visits in green.
Critical Care Team – Current State

- Challenges over the past year – 2017
  - Co-evaluation and Co-Treatment changes
    - Co-evaluations are not supported by the Cleveland Clinic Rehabilitation and Sports Therapy Department
    - The decision to co-treat needs to be made on a case by case basis and the need to co-treat needs to be well documented for each patient. Co-treatments should be limited.
  - Point after service documentation
  - Critical Care Team is working together to meet these challenges

Critical Care Team – Future State

- Continue to use Critical Care Team Orientation outline/materials for new team members
- Allow training in the SIM lab to be available for new ICU PT/OT clinicians
- Elevate rehab technicians to continue to assist team in providing world class care to the medically complex, critically ill patients
  - Yearly competencies
  - Continuing education developed by internal staff
- Emotional support for Critical Care Team

References


Audience Learning Questions

- 1) Did you learn something from this presentation that you can apply to patient care?
- 2) Did you learn something (strategies for workflow, staff efficiency) that you could apply to your Critical Care Team or the formation of one in your facility?
- 3) Did you learn something (strategies for data collection, outcome measures) that you could use to increase the value therapists in your facility bring to patients in the ICU?
- 4) Were the tools for therapist and staff training and orientation presented here applicable to your specific department needs?