

Acute Care in the Classroom

Designing realistic and effective teaching tools throughout the curriculum

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Objectives

1. Engage clinicians effectively in the didactic component of acute care education throughout the DPT curriculum
2. Develop cardiopulmonary and acute care didactic content to prepare students for successful clinical education and entry level employment in acute care or with cardiopulmonary patient populations.
3. Create and improve a standardized patient program for teaching acute care and cardiopulmonary skills.
4. Improve and integrate clinical decision making skills throughout a physical therapy curriculum and especially with advanced and complex topics, such as acute care, critical care, and cardiopulmonary proficiencies.

Current research supporting Acute Care Physical Therapy¹

- "Overall, physical therapists' discharge recommendations were implemented 83% of the time. Patients were 2.9 times more likely to be readmitted when the therapist's discharge recommendation was not implemented and recommended follow-up services were lacking (mismatch with services lacking) compared with patients with a match."
- "This study supports the role of physical therapists in discharge planning in the acute care setting. Physical therapists demonstrated the ability to make accurate and appropriate discharge recommendations for patients who are acutely ill."
- Another study by Hu et al found that early and intensive rehabilitation, including physical therapy, benefited patients with severe stroke and improved outcomes such as walking.
- "Rehabilitation commencement time and intensity, after adjusting for admission functional status and severity of stroke, remained to be important predictors of stroke functional outcomes. This study supported the recommendation to commence rehabilitation early and intensively and provided evidence that this claim can be extended to acute stroke patients admitted to an ICU."
- In persons with acute respiratory failure, physical therapist led exercise improved function, reduced sedation, decreased length of stay in the ICU, and decreased overall length of stay in the hospital, per a study out of John Hopkins by Needham et al.
- "Compared with before the quality improvement project, benzodiazepine use decreased markedly, with lower median daily sedative doses. Patients had improved sedation and delirium status. There were a greater median number of rehabilitation treatment per patient with a higher level of functional mobility. Hospital administrative data demonstrated that across all MICU patients, there was a decrease in intensive care unit and hospital length of stay by 2.1 and 3.1 days, respectively."

Engage clinicians effectively in the didactic component of acute care education throughout the DPT curriculum

- Engaging the right people in the right way
- Defining contemporary expertise:
 - "Expertise beyond that obtained in an entry-level physical therapy program that represents knowledge and skills reflective of current practice." [Standard 4A – CAPTE]
- Very common for other classes to have adjunct faculty experts, but rare for acute care
- Identify acute care clinicians to associate with a DPTE program
 - Alumni, outstanding clinical instructors, former colleagues, networking events

Stressors on Academic Programs

- Under-represented acute care contact time
- Expanded instructional content
- Poorly defined mastery benchmarks
- Lack of identified acute care experts
- Artificial learning environment
- Fragmented adjunct development programs
- Reduced numbers of quality clinical education sites in hospitals

2, 3

Stressors on Clinical Experts in Acute Care Setting

- Philosophical mismatches with academic programs
- Undesirable compensation models
- Coverage/staffing issues
- Lack of mentorship on best teaching practices
- PRODUCTIVITY

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Personal and Professional Outcomes

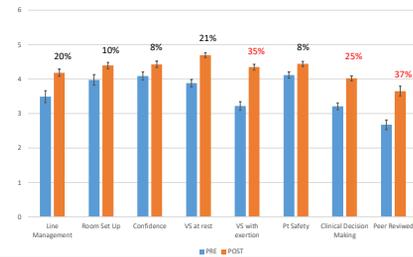
- Improved clinical skill set
- Enhanced ability to promote critical thinking in learners
- Expanded community of colleagues
- Increased professional opportunities at the local and national level
- Heightened job satisfaction and organizational allegiance

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Develop cardiopulmonary and acute care didactic content to prepare students for successful clinical education and entry level employment in acute care or with cardiopulmonary patient populations.

- Main focus: if DPTE's are graduating doctorate level PTs, we have the responsibility to prepare students to hold up that standard
- Representing the profession to the medical community
- Prior to cardiopulmonary course, students must have strong physiology base
- Focus on clinical and critical decision making
- Expounding upon already-learned physiological concepts

Changes in Students Perceptions as a Result of Participating in Simulation Experience



Create and improve a standardized patient program for teaching acute care and cardiopulmonary skills

- Simulation: "a technique – not a technology – to replace or amplify real experiences with guided experiences that evoke or replicate substantial aspects of the real world in a fully interactive manner"
- Effective learning environments must provide repeated realistic practice of increasing difficulty with opportunities for feedback and reflection
- Gaps in knowledge can be identified easier, improves student perception and confidence of clinical skills
- Objectification of subjective content and skill

Literature to Support

- Improves students' ability to make clinical decisions based on ECG and vital sign interpretation using simulations compared to traditional ECG teaching methods. Students reported a preference to seeing physiology change in a simulated patient and monitor than on paper strips taught in class⁴.
- Students were noted to excel during acute care clinical experiences in areas that were practiced in simulation, including safety managing the environment, communication with the interdisciplinary team, and monitoring patients' physiologic status. The same themes identified as strengths for students in the experimental group were discussed by CI's of students in the control group as areas needing improvement at the midterm of the clinical experience⁵.

Literature to support

- Simulated learning experience induce anxiety and stress, both of which are common for students working with real patients on clinical placements. With more and earlier exposure, students may be able to reduce the degree to which stress and anxiety affects them in the acute care setting⁶.
- A positive introduction to the acute care, and specifically critical care, setting may increase interest in working in that areas, given anecdotal reports that physical therapists feel uncomfortable and inadequately prepared to work in a high risk environment such as an ICU⁴.

Standardized Patients

- Members of our community who are educated to portray a real patient within a staged healthcare setting to enhance the learning experience of students
- Have been used in medical schools for over 30 years, but relatively new to physical therapy education
- Elon has made a commitment to use standardized patients as an alternative clinical environment to supplement didactic content and clinical rotations

Educational Advantages

- Uniform teaching and/or testing experience for students
- Clinical realism
- Specific and personal “patient” feedback to student
- Experiences designed by instructors to achieve specific educational goals
- Dynamic experiences can be created by making the SP’s responses dependent on the students actions
- Can replay videotaped encounters for reflection, critical analysis, clinical coaching, and adjustment of curricular goals

Improve and integrate clinical decision making skills throughout a physical therapy curriculum and especially with advanced and complex topics, such as acute care, critical care, and cardiopulmonary proficiencies.

- Clinical decision making cannot be taught exclusively from a textbook, nor can it be tested via multiple choice questions
- Need to have whole faculty on board in order to incorporate during an entire curriculum
- Extent of teaching decision making in acute care has been “do no harm,” with safety and lack of harm has been the main focus
- “Safe assertiveness” – risk taking in the benefit of the patient and challenge their physiology

Clinical Decision Making

- “Calculated risk” – introduce the concept of calculated risk in the patient simulations to set students up for success in acute care
- Plant the seed that being safe is a minimal expectation and does not typically result in large functional gains
- Emphasize lab activities, hands on, simulations, large and small group discussions
- Learning from past mistakes
- Eliminating fear and the unknown will make more confident therapists

References

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