AMERICAN COUNCIL OF ACADEMIC PHYSICAL THERAPY

STRATEGIC INITIATIVE PANELS

Final Reports from:
Common Terminology Panel
Integrated Clinical Education Panel
Student Readiness Panel

June 2017

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American Council of Academic Physical Therapy
Post-Summit Strategic Panel Reports

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OVERVIEW

In October 2014 the American Council of Academic Physical Therapy (ACAPT) coordinated a Clinical Education Summit with the support of the American Physical Therapy Association (APTA), the Education Section of the APTA, the Federation of State Boards of Physical Therapy (FSBPT), and the Journal of Physical Therapy Education (JOPTE).

Following the Summit, the ACAPT Board of Directors assembled and prioritized the Summit findings and recommendations. ACAPT subsequently appointed 3 strategic initiative panels to address the highest priority Summit recommendations. This document is a compilation of the final reports from these 3 panels to the ACAPT Board.

REPORT FORMAT

There are 3 components to this report:

- Summary – this document contains an overview of the process and the final work products from each panel.
- Recommendations for consideration – this document includes the recommendations from each panel that will be considered by the membership.
- Final reports from panels – this document is a compilation of the final report from all 3 panels and contains the detailed methodology leading to the final work products.

SUMMARY

BACKGROUND

The Clinical Education Summit brought together clinical and academic educators to discuss the concerns of the physical therapy clinical education system and develop options to address identified issues within the physical therapist (PT) clinical education system. The Summit goal was to reach agreement on best practice in PT clinical education. Representatives included academic and clinical faculty from 202 of the 212 ACAPT member institutions as well as other key stakeholders. The result of the Summit was a report containing 11 harmonizing recommendations and 3 innovative recommendations.

(Clinical Education Summit Report)

Following the receipt of the report, the ACAPT Board of Directors prioritized the recommendations, integrated the work into the organization's strategic plan, and formed 3 strategic initiative panels to address the highest priority topics. The 3 topics chosen were common terminology for physical therapist education, integrated clinical education, and assessment of student readiness.

PANEL STRUCTURE AND MEMBERSHIP

ACAPT identified a chair of each panel and a coordinator to help facilitate the ongoing work of all 3 groups. In mid-November 2015 a call for volunteers to serve on the three panels was distributed resulting in 62 applicants, several of whom applied to multiple panels. The panel chairs and coordinator reviewed all applications and developed a list of members who possessed the necessary strengths and experiences to address the panel charges and were representative of the profession's variability. The nominees were subsequently appointed to the panels by the ACAPT Board on January 20, 2016. ACAPT also appointed a liaison from the Board to facilitate communication and assist the panels in accomplishing their work.

Common Terminology Panel

Mia Erickson, PT, EdD, CHT, ATC – Midwestern University (Chair)
Debbie Ingram, PT, EdD, FAPTA – University of Tennessee Chattanooga
Emma Wheeler, PT, DPT – Virginia Commonwealth University
Janet Jackson-Coty, PT, DPT – Thomas Jefferson University
John Borstad, PT, PhD – The College of St. Scholastica
Julie Hartmann, PT, DSc. – Gannon University
Laurita Hack, PT, DPT, MBA, PhD, FAPTA – Arcadia University
Marisa Birkmeier, PT, DPT – George Washington University
Melissa Booth, PT, DPT – University of Central Arkansas
Vicki LaFay PT, DPT – Clarkson University

Integrated Clinical Education Panel

Christine McCallum, PT, PhD - Walsh University (Chair)
Jamie Bayliss, PT, DHSc - Mount St. Joseph University
Elaine Becker PT, DPT, MA – New York University
Yvonne Colgrove, PT, PhD - University of Kansas Medical Center
Kimeran Evans, PT, DPT - West Virginia University
Janna Kucharski-Howard, PT, DPT, MSM - MCPHS University
Tara Legar, PT, MPT - Ohio University
Kim Nixon-Cave, PT, PhD - Thomas Jefferson University
Byron Russell, PT, PhD - Midwestern University
Debra Stern, PT, DPT, DBA - Nova Southeastern University, Fort Lauderdale, FLA
Valerie Strunk, PT, MS - Indiana University, Indianapolis, IN
Ellen Wetherbee, PT, DPT, Med - Quinnipiac University, North Haven, CT

Student Readiness Panel

Jean Fitzpatrick Timmerberg PT, PhD, MHS - Columbia University (Chair)
Robin Dole, PT, DPT, EdD - Widener University
Stephen L. Goffar, PT, PhD - University of the Incarnate Word
Divya Mathur, PT, MPA - NYU Hospital for Joint Disease
Amy Miller, PT, DPT, EdD - Arcadia University
Leigh Murray, PT, PhD, MA - Walsh University
Deborah Pelletier, PT - Springfield College
Nicki Silberman, PT, DPT, PhD - Hunter College
Michael Simpson, PT, DPT - University of Southern California
Angela Stolfi, PT, DPT - NYU Langone Medical Center
Anne Thompson, PT, EdD - Armstrong State University
Ralph Utzman, PT, MPH, PhD - West Virginia University

Shawne Soper, PT, DPT, MBA, Virginia Commonwealth University (Strategic Initiative Panel Coordinator)
Michael Sheldon, PT, PhD, New England University (ACAPT Board Liaison)

PANEL PROCESS

The work of the panels is intended to address specific recommendations from the Clinical Education Summit report. The ACAPT Board of Directors developed a specific charge for each group, providing some additional detail and context to help frame their work. The recommendations from the Summit report and the panel charges are summarized below.

Common Terminology

Summit Recommendation I: *Academic and clinical faculty will develop, disseminate, use, and periodically review standard terminology and definitions for physical therapy education.*

Charge: The ACAPT Common Terminology Panel will develop common terminology related to clinical education. This work may also result in templates and models to support clinical education, such as placement request forms and student information forms. This recommendation also relates to other recommendations defining different aspects of clinical education. The specific charge to this working panel is:

- Investigate and identify all current sources of terminology related to clinical education by inviting participation of the National Consortium of Clinical Educators (NCCE), APTA Education Section and Special Interest Groups, Commission on Accreditation in Physical Therapy Education (CAPTE), and other groups
- Review all current support documents – CAPTE, Clinical Performance Instrument (CPI), the *Guide to PT Practice*, and other related documents
- Consider templates and models to support clinical education such as placement request forms and student information forms
- Recommend other items for consideration related to a common terminology
- Develop guidelines for implementation of the proposed terminology

Integrated Clinical Education

Summit Recommendation VII: *All programs will offer goal oriented, diverse active-learning experiences that are developed in collaboration with invested stakeholders and embedded within the didactic curriculum, prior to terminal experiences.*

Charge: The ACAPT Integrated Clinical Education Strategic Initiative Panel will develop a recommendation for implementation of integrated clinical education as a component of physical therapist education. The specific charge to this working panel is:

- Define 'integrated clinical education'
- Make recommendations for achieving consistent use of the term 'integrated clinical education' across ACAPT, APTA and CAPTE
- Discern and describe models of integrated clinical education that currently exist within physical therapist curricula
- Define baseline expectations and parameters for quality integrated clinical education in physical therapist education
- Develop guidelines for collaborative development and implementation of integrated clinical experiences

Student Readiness

Summit Recommendations IX and X: *Develop a requisite core set of knowledge, skills, attitudes and professional behaviors to move into early, intermediate, and final full-time clinical experiences. Establish a process for identifying how and if students meet clinical core performance competencies upon entering each level of full-time clinical experience.*

(Note: Recommendations IX and X were interrelated. Because they were developed by separate teams at the Summit they were both reported to preserve the fullness of their proposal. A related recommendation (XI) was also included in the Summit report. It was not addressed by the Student Readiness Panel; however, it is referenced later in this report.)

Charge: The ACAPT Student Readiness Strategic Initiative Panel will identify and define a core set of competencies (knowledge, skills, attitudes and professional behaviors) that are to be demonstrated by students prior to full-time clinical education. The initial focus of the panel will be on entry to the initial full-time clinical experience. The specific charge to this working panel is:

- Investigate and describe models of competency assessment used across other health professions
- Propose two format options for establishing competencies to the board membership
- Collect broad-based, representative data on minimum competency expectations from the physical therapy practice community
- Once a preferred model is selected and minimum competencies are identified, propose baseline expectations and criteria for minimum competencies that must be met within the academic program by student prior to progressing into full-time clinical education experiences.
- Develop guidelines for academic programs to implement these competency requirements within their curriculum.

Each panel held a face to face initial meeting at the Combined Sections Meeting (CSM) in February 2016 followed by both virtual and face to face meetings spanning the past 18 months.

The panels have worked in concert with one another throughout this process. The coordinator and panel chairs have met on a regular basis, both virtually and face to face. Each meeting has included an update from the panel chairs and identification of areas in which the 3 groups must collaborate to ensure that the work products are supportive and well-coordinated.

In October of 2016 the coordinator and panel chairs presented an educational session at the Education Leadership Conference. The session, entitled *Clinical Education Summit Strategic Initiatives: Updates and Ideas*, served to present the findings of each panel and engage participants in discussion to help shape the future recommendations to be made to the ACAPT Board and membership. This outcome of the roundtable discussions that occurred during the session proved both timely and valuable to the future work of the panels.

Students were also involved in the process of shaping panel recommendations. The coordinator hosted two student focus groups: one face to face session during the National Student Conclave in October 2016 and a virtual session on November 16, 2016. In total 17 students representing 5 universities participated in the focus groups. Information from these sessions was summarized and provided to the panels for consideration as the groups developed their recommendations.

COMMON TERMINOLOGY STRATEGIC INITIATIVE PANEL

SUMMARY OF WORK

From February to April 2016, members of the Panel gathered data, which included terms and their definitions related to any aspect of physical therapist clinical education, from all relevant sources. Sources included ACAPT, APTA, CAPTE, Clinical Education Special Interest Group (CESIG), FSBPT, clinical education consortia, residency, and fellowship documents; clinical education evaluation tools; *A Normative Model of Physical Therapist Professional Education*[1]; and materials from the Clinical Education Summit. A systematic review of the clinical education literature was also performed.

The process described above led to a set of terms for physical therapist clinical education. These terms have been assembled into the Physical Therapist Clinical Education Glossary and are provided in Appendix A. After development of the Glossary, a comprehensive review of professional documents was conducted to identify those that would need to be changed to be consistent with the terminology being proposed by the Panel.

Members of the Panel reached out to other stakeholder groups, collaborating and sharing the work being done across groups. There has been ongoing and extensive collaboration with the Integrated Clinical Education Panel and the Student Readiness Panel. We also invited collaboration with others through 1) round table discussions with the participants at the 2016 Educational Leadership Conference, 2) an open comment period provided for members of the physical therapy academic and clinical communities, and 3) student focus groups during the National Student Conclave and virtually in November 2016. This allowed members to provide feedback on a draft of the Glossary. Feedback was used from the round table discussions and the comment period to develop the final Glossary.

An additional item for consideration is related to the use of the term ‘internship.’ The information detailed above has led the panel to the conclusion that in the current physical therapist clinical education infrastructure, the term is being used inappropriately and the clinical education community needs to take steps to eliminate the use of the term. The Panel recognizes that some of the innovative changes currently being examined may present opportunity for appropriate use of the term in the future.

PHYSICAL THERAPIST CLINICAL EDUCATION GLOSSARY

This glossary of terms was developed after a review of the physical therapy literature, extensive discussion and debate by the ACAPT Common Terminology Panel, and engagement of key stakeholders within the physical therapy clinical education community.

The Glossary is divided into major categories and, as applicable, definitions are referenced.

CLINICAL EDUCATION INFRASTRUCTURE

Clinical education	A formal type of supervised experiential learning, focused on development and application of patient-centered skills and professional behaviors. It is designed so that students gain substantial, relevant clinical experience and skills, engage in contemporary practice, and demonstrate competence before beginning independent practice.[1-3]
Clinical education agreement	A formal and legally binding agreement that is negotiated between academic institutions and clinical education sites or individual providers of clinical education that specifies each party's roles, responsibilities, and liabilities relating to student clinical education.[4]
Clinical education curriculum	The portion of a physical therapy education program that includes all part-time and full-time clinical education experiences as well as the supportive preparatory and administrative components.[4]
Clinical education experience	Experiences that allow students to apply and attain professional knowledge, skills, and behaviors within a variety of environments. Experiences include those of short and long duration (e.g., part-time, full-time), provide a variety of learning opportunities, and include care of patients/clients across the lifespan and practice settings. While the emphasis is on patient-care skills, experiences may also include inter-professional experiences and non-patient care duties such as research, teaching, supervision, and administration. Clinical education experiences are a part of the professional curriculum and include formal student assessment.[5-8]
Collaborative clinical education model	A clinical education experience in which two (or more) physical therapist students are assigned to one (or more) preceptor/clinical instructor(s). The students work cooperatively under the preceptor/clinical instructor(s). Examples include 2:1, 2:2, 3:1, etc. student to preceptor/clinical instructor ratio. Students may be from the same or different programs and may be at the same or different levels of training.[9-11]

Didactic curriculum	The component of the physical therapist professional education program that is comprised of the content, instruction, learning experiences, and assessment directed by the academic faculty.[3,12,13]
Fellowship	A post-professional funded and planned learning experience in a focused area of clinical practice, education, or research (not infrequently post-doctoral or for post-residency or board certified therapists).[14]
Full-time clinical education experience	A clinical education experience in which a student engages for a minimum of 35 hours per week. An integrated clinical education experience may be a full-time clinical education experience; however, full-time clinical education experiences designated to achieve the minimum number of weeks set forth by CAPTE are directed by a physical therapist clinical instructor.[5,7]
First full-time clinical education experience	The first clinical education experience designated to achieve the minimum number of weeks set forth by CAPTE in which a student engages for a minimum of 35 hours per week.
Intermediate full-time clinical education experience	A clinical education experience designated to achieve the minimum number of weeks set forth by CAPTE in which a student engages for a minimum of 35 hours per week and returns to the academic program for further completion of the didactic curriculum.
Terminal full-time clinical education experience	A single, or set of, full-time clinical education experience(s) designated to achieve the minimum number of weeks set forth by CAPTE that occur after the student has completed the didactic curriculum of a physical therapist professional education program. Students may return to the academic program for didactic instruction that does not require additional clinical education experiences. The expected outcome of the final, or last terminal experience is entry-level performance.[7]
International clinical education experiences	An educational opportunity that a student participates in, outside of the country where the physical therapist education program is situated, for which he/she obtains clinical education credit. The abbreviation ICE should not be used to describe an international clinical education experience.[7,15]
Internship	A terminal full-time clinical education experience that provides recompense to participants in accordance with federal labor laws under the Fair Labor Standards Act.[16]
Learning experience	Any experience which allows or facilitates a change in attitude or behavior. A planned learning experience includes a learner, an objective for the learner, a situation devised to produce a response that contributes to the objective, a response by the student, and reinforcement to encourage the desired response.[3]

Part-time clinical education experience	A clinical education experience in which a student engages in clinical education for less than 35 hours per week. Part-time experiences vary in length. A part-time clinical education experience may be considered an integrated clinical education experience depending on the design of the experience and the learning objectives.[7,17]
Physical therapist professional education program	Education comprised of didactic and clinical education designed to assure that students acquire the professional knowledge, skills, and behaviors required for entry-level physical therapist practice.[3,18,19]
Physical therapist post-professional education program	Degree and non-degree based professional development for the physical therapist to enhance professional knowledge, skills, and abilities beyond entry level. Examples include, but are not limited to, continuing education courses, post-professional doctoral education programs, certificate programs, residency, and fellowship.[19]
Residency	Post-professional programs that occur after the graduate physical therapist has obtained a license to practice. They may be clinical programs that advance a physical therapist's knowledge and skills in patient/client management, or nonclinical focusing on advancing a physical therapist's career outside of clinical duties.[20]

CLINICAL EDUCATION SITES

Clinical education site	A healthcare agency or other setting in which clinical education experiences are provided for physical therapist students. The clinical education site may be, but is not limited to, a hospital, agency, clinic, office, school, or home and is affiliated with one or more educational programs through a contractual agreement.[3,4]
Clinical education environment	The physical space(s), as well as the structures, policies, procedures, and culture within the clinical education site.

CLINICAL EDUCATION STAKEHOLDERS

Academic faculty	Teachers and scholars within the academic institution dedicated to preparing students in the skills and aptitudes needed to practice physical therapy.[21]
Academic institution	University or college through which an academic degree is granted.[4]
Clinical education consortia	National and regional groups that include academic and clinical education faculty for the purpose of sharing resources, ideas, and efforts.[4]

Clinical education faculty	The individuals engaged in providing the clinical education components of the curriculum, generally referred to as either Site Coordinators of Clinical Education (SCCEs), preceptors, or clinical Instructors. While the academic institution does not usually employ these individuals, they do agree to certain standards of behavior through contractual arrangements for their services.[7]
Clinical instructor (CI)	The physical therapist responsible for the physical therapist student and directly instructs, guides, supervises, and formally assesses the student during the clinical education experience. When engaged in full-time clinical education designated to meet the minimum number of weeks required by CAPTE, the clinical instructor must be a licensed physical therapist with a minimum of one year of full time (or equivalent) post-licensure clinical experience.[4,22,23]
Director of Clinical Education (DCE)	Academic faculty member who is responsible for planning, directing and evaluating the clinical education program for the academic institution, including facilitating clinical site and clinical faculty development.[22,24,25]
Physical therapist student	Student enrolled in a CAPTE-accredited or approved developing physical therapist professional education program. Students should not be referred to as a physical therapy student.
Preceptor	An individual who provides short-term specialized instruction, guidance, and supervision for the physical therapist student during a clinical education experience. This individual may or may not be a physical therapist as permitted by law.
Site Coordinator of Clinical Education (SCCE)	Professional who administers, manages, and coordinates clinical assignments and learning activities for students during their clinical education experience. In addition, this person determines the readiness of persons to serve as preceptors and clinical instructors for students, supervises preceptors and clinical instructors in the delivery of clinical education experiences, communicates with the academic program regarding student performance, and provides essential information to academic programs.[4,22,26]

CLINICAL EDUCATION ASSESSMENT

Clinical performance assessment	Clinical performance assessment encompasses formal and informal processes designed to appraise physical therapist student performance during clinical education experiences. Assessment may be formative or summative in nature and performed for the purposes of providing feedback, improving learning, revising learning experiences, and determining successful attainment of student performance expectations during clinical education experiences.[3,22,27,28]

Clinical performance evaluation tool	A valid, reliable, and multidimensional clinical performance assessment tool utilized to determine if, and how well, a student meets established behavioral objectives during clinical education experiences.[4,29,30,31]
Entry-level physical therapist clinical performance	Performance that demonstrates knowledge, skills, and behaviors consistent with effective, efficient, and safe patient/client management to achieve optimal outcomes.[22,28]
Supervision	The guidance and direction provided to a physical therapist student by the preceptor or clinical instructor. This varies based on the complexity of the patient or environment; jurisdiction and payer rules and regulations; and abilities of the physical therapist student.[4,22,27]

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Appendix B. Types of documents, methods of change

Section A lists the materials and documents that have language related to clinical education that would need to be changed to be consistent with the terminology recommended in this report. Section B provides the mechanism to achieve change.

A. Type of document/site	**B. Method for change**
APTA's House of Delegates (HOD) positions, standards, guidelines, policies, procedures	Propose revision to the HOD by a delegation (Chapter, Section, Board) to the House
APTA's Board of Directors (BOD) positions, standards, guidelines, policies, procedures	Request the BOD to consider revision
APTA documents/site	
CPI, CSIF, CCCE manual	Request the BOD to consider revision
APTA CCIP	Request the BOD to consider revision
APTA Website	Request the BOD to consider revision
	Would also need to be consistent with HOD policies
Education Section Website	Request the Section to consider revision
Clinical Educators SIG of the Section Form: Request for clinical sites	Request the Section/CESIG to consider revision
American Council on Academic Physical Therapy	
Website	ACAPT should make changes when new definitions adopted
ACAPT policy on Clin Ed	ACAPT should make changes when new definitions adopted
NCCE	ACAPT should make changes when new definitions adopted
Commission on Accreditation of Physical Therapy Education (CAPTE) Standards	Petition CAPTE as a major stakeholder for changes in Standards
Federation of State Boards of Physical Therapy (FSBPT) Model Practice Act and individual state practice acts	Work through FSBPT and individual state boards, in collaboration with APTA
Journal style manuals	PTJ should change with HOD policy, request others do so through information packet to journal editors and their supporting Sections
Chapters	
Materials for members	Request change through information packet
State Practice Acts	Request change through information packet, interact with FSBPT as well as individual boards
Sections/Academies	
Materials for members	Request change through information packet
Information to ABPTRFE, ABPTS	Request the BOD to direct any necessary changes
PTA community	Work through the Education Section PTASIG

INTEGRATED CLINICAL EDUCATION STRATEGIC INITIATIVE PANEL

SUMMARY OF WORK

Phase 1: We embarked on 2 concurrent methods of data collection to establish a broad view of current educational practices involving clinical education delivered through the lens of an integrated curriculum perspective. The data collection methods included a systematic review of the literature and the development and distribution of a descriptive survey.

Review of the literature. One subgroup of panel members completed the systematic review of the literature using standard databases known for publication of educational research of the health professions. The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines were selected to guide the process. The initial search resulted in 3808 articles. Search terms were refined using key works and subject headings and articles were screened for title and abstract which yielded 83 articles. Further review resulted in a total of 22 articles included in the final review of the literature. These articles represent the best available evidence about the topic of integrated clinical education in health professions.

Survey research. A second subgroup utilized survey research to gather information about current program practices that were perceived as integrated clinical education experiences. The results of each of these data collection methods were thematically categorized independent from the other, followed by an aggregation of the categories for group discussion to determine if the identified categories were considered sound educational practices in terms of clinical education experiences offered in an integrated fashion within a professional education program.

Phase 2: Two series of focus groups were conducted to gain perspective from stakeholders involved in clinical education: one with participants at the 2016 Educational Leadership Conference and the second with physical therapist students. After review of both sets of transcribed focus group data, it was determined a point of data saturation was achieved. No further data was sought from other academic or clinical faculty, or DPT students to develop the parameters.

The final results of Phases 1 and 2 included identification of eight (8) categorical parameters that describe components required for integrated clinical education experiences; development of the definition of integrated clinical education, and development of descriptive models of integrated clinical education based on selected peer-reviewed articles.

INTEGRATED CLINICAL EDUCATION FOR PHYSICAL THERAPIST STUDENTS
Definition, Parameters, and Guidelines

Educational literature suggests that integrated clinical education experiences, a form of experiential learning, can expose students to aspects of patient centered care during flexible clinical training periods throughout the curriculum. These experiences afford students an opportunity to facilitate development of their cognitive, affective, and psychomotor skills while concurrently allowing academic and/or clinical faculty to facilitate student development with respect to the transfer of didactic knowledge into clinical application. (Hakim et al, 2014) The definition, parameters, and guiding principles presented in this document are provided to assist programs in the development of integrated clinical education experiences.

Definition
The following is the definition of Integrated Clinical Education (ICE).

Integrated clinical education is a curriculum design model whereby clinical education experiences are purposively organized within a curriculum. In physical therapist education, these experiences are obtained through the exploration of authentic physical therapist roles, responsibilities and values that occur prior to the terminal full time clinical education experience.

Integrated experiences are coordinated by the academic program and are driven by learning objectives that are synchronous with didactic content delivery across the curricular continuum. These experiences allow students to attain professional behaviors, knowledge and/or skills within a variety of environments. The supervised experiences also allow for exposure and acquisition across all domains of learning and include student performance assessment.

For integrated clinical education experiences to qualify towards the minimum number of full-time clinical education weeks required by accreditation (CAPTE) standards, it must be full time and supervised by a physical therapist within a physical therapy workplace environment or practice setting.

ICE=Integrated Clinical Education

Parameters for Integrated Clinical Education
The following are the parameters and baseline expectations for ICE in physical therapist education. Please see the full report for the evidence supporting these parameters.

1. Integrated clinical education may occur in any academic term prior to the completion of the didactic coursework leading to the completion of a terminal full time clinical education experience.

2. Integrated clinical education experiences will have specific desired outcomes that correspond to course and/or programmatic objectives.

3. Integrated clinical education experiences may be represented as a component of a didactic course or a standalone course that occurs in a synchronous fashion with other didactic coursework.

4. Integrated clinical education experience time frames are developed by the academic program based upon the course and/or programmatic objectives. Integrated clinical education may include full time and/or part time experiences.

5. Integrated clinical education experiences may occur in a variety of learning environments including campus or community based clinical or non-clinical settings, based upon the course and/or programmatic objectives. Integrated full time clinical education experiences that qualify for a program's minimum number of clinical education weeks shall be completed in a physical therapy workplace environment or practice setting.

6. Integrated clinical education experiences shall include student assessments that are designed to link to the course or program objectives with expected student progression in professional behaviors, clinical knowledge, and/or skills.

7. Integrated clinical education experiences are coordinated by a faculty member of the academic program, in partnership with a coordinator from the clinical education site.

8. Integrated clinical education experiences are typically supervised by a course instructor and a preceptor. The preceptor may be an academic course faculty member, a clinical instructor, or other healthcare professional at the site the student is engaged in the experience, depending upon the course and/or programmatic objectives. Integrated full time clinical education experiences that qualify for a program's minimum number of clinical education weeks shall be supervised by a licensed physical therapist.

Guidelines for Development of ICE

The following are guidelines for collaborative development and implementation of integrated clinical education experiences. Please refer to the ICE Panel report for the provocative questions and evidence that accompany these guidelines.

The key to well-developed integrated clinical education experiences is intentionality. Intentional and targeted instruction encompasses planning with a purpose, cultivating the learning environment, instructing with intention, and assessing the impact that the model has on student learning which is what the guiding principles are attempting to direct (Fisher, Frey & Hite, 2016). The guiding principles provided focus on the key elements that programs should consider in developing or refining integrated clinical experiences. These include:

1. An academic program identifies the programmatic outcomes that are expected when students participate in integrated clinical experiences.

2. The academic program considers the intentional placement of integrated clinical education experiences within its curriculum.

3. The academic program identifies the course(s) where clinical education should be integrated within the program.

4. The academic program, in collaboration with program faculty develops the course specific objectives for student achievement within an integrated clinical education experience.

5. The academic program, in collaboration with program faculty, identifies the timing and timeframes of when clinical education experiences should be integrated within course(s).

6. The academic program, in collaboration with program faculty, identifies the individual or individuals who will oversee the integrated clinical education experiences.

7. The academic program, in collaboration with program faculty, identifies the methods of student and course assessment to meet the intended course and/or program outcomes.

8. The academic program identifies resources and legal/regulatory parameters that impacts delivery of integrated clinical education experiences within program.

9. The academic program, in collaboration with program faculty, selects the type of clinical or community sites required for integrated clinical education experiences.

10. The academic program, in collaboration with program faculty, accepts responsibility for the development of relationships with representatives of the clinical education site**.**

Current evidence outlines the intentionality of integrated clinical education experience placement, purpose, necessary resource allocation, and desired outcomes within physical therapist education at the program level. As such, integrated clinical education experiences may be embedded within a course or occur concurrent with other coursework depending on the desired programmatic and/or course objectives and desire outcomes. Intentionality also occurs in the design, resource necessities, and placement of objective driven collaborative learning experiences that adhere to pedagogically sound principles that are innovative and/or flexible (Fisher et al, 2016)

While much attention should be placed on the design and implementation of integrated clinical education, planning for and completing a well-rounded assessment is also required (Weddle & Sellheim, 2009). Outcome assessment of student learning, overall course success, and the integrated clinical education program design are three targeted areas for consideration. Selection of valid and reliable outcome measures that provide faculty and students summative and formative feedback to guide learning is imperative. Table 2 provides an example of outcome measures used and type of data collected that have guided academic programs. It is important to note that no attempts were made to compare models or outcome data; rather the data generated provided a thematic analysis of important concepts within the literature.

Despite the fact challenges in educational research exist (Jensen et al, 2016), it behooves our profession to continue researching outcomes of innovative curricular models, including integrated clinical education experiences, to continue to strive for excellence in physical therapist education. Therefore, further investigation into best practice for ICE experiences should continue in a collaborative manner between institutional administrators, academic physical therapy faculty, clinical faculty, patients, and students. It is hunger for improvement that pushes boundaries to promote excellence (Fullan, 2005).

STUDENT READINESS STRATEGIC INITIATIVE PANEL

SUMMARY OF WORK

The panel began by reviewing literature from different health professions including medicine, pharmacy, nursing, speech, athletic training and occupational therapy. The panel investigated the varied competency expectations of the different professions as well as when and how they assessed students at various points along their continuum of learning. The literature review revealed that competency based education and subsequent assessment is present throughout various health professions. The medical profession seems most evolved and can provide us with a structure and process that we might want to consider as such systems are developed for physical therapist education. Before one can truly develop the appropriate assessment system, the minimal knowledge, skills, attitudes and professional behaviors, collectively referred to as KSAs, and at what level of proficiency must first be identified.

The panel discussed various possible options to establish competencies including obtaining consensus within our panel, focus groups, consensus conference, surveys, and a Delphi study. To achieve the aim of our panel, the group selected the Delphi method of consensus development. A Delphi study allows individuals with expertise and insight to provide information and to reach consensus on a particular topic. This method engages a group of participants or experts over multiple rounds of surveys to establish a consensus on the particular topic of interest (Keeney, 2011; Soma, 2009). The purpose of this Delphi study was to gain consensus, defined as 80% agreement, on the pre-requisites for students entering a first full-time clinical education experience, specifically focusing on what attributes signaled readiness. This readiness for the first full-time clinical education experience would be relevant regardless of where it falls within a program's curriculum or the particular setting in which the experience takes place. The Delphi method was identified as the most practical method to gain consensus among the various members of the physical therapy practice community. Clinicians, recent graduates, academic faculty, and Directors of Clinical Education/ Academic Coordinators of Clinical Education were identified as key stakeholders.

Given the variability of curriculum in CAPTE accredited physical therapy programs as well as the placement of clinical experiences within that curriculum, the panel thought it best to begin with a students entrance into the first full-time clinical education experience. The panel also felt that the early clinical experiences can be in any practice setting and are often the most challenging for DCEs/ACCEs to find student placements, as clinicians are reluctant to take on a student while on their first clinical experience. Starting with competencies for this experience would only be one point along the continuum of learning where students would be assessed but was an important place to start.

After four rounds of the Delphi study were completed, there were 95 elements identified and agreed upon by the combined stakeholders as being necessary for readiness for a first full-time clinical experience. These 95 elements were grouped under 14 themes. Participants also provided the level of proficiency (Familiar, Emerging, or Proficient) deemed appropriate for each item identified. Nine elements were identified as requiring proficiency prior to the first full-time clinical experience (Table 7). The majority of these elements fell in the area of professional behaviors while others surrounded successful academic performance. Participants rated the vast majority of elements as requiring at least an Emerging level of mastery (ratings of Emerging or Proficient) prior to beginning the first full time clinical experience (Appendix A). There were, however, 34 elements that did not achieve the level of consensus required to indicate that they be more than Familiar to the student prior to the first full time clinical experience (Appendix A).

Student Readiness for the First Full-Time Clinical Experience

The following table summarizes the minimal knowledge, skills and abilities (KSAs) in which physical therapist students must demonstrate competence prior to entry into the first full-time clinical experience. The KSAs are grouped into 14 themes, numbered and indicated in bold text with the corresponding KSAs listed below. Greater than 80% of participants in the Delphi study indicated that these items were necessary.

Student Readiness Themes and KSAs	
Theme 1	**Students should have foundational knowledge to support application and synthesis in the following content areas:**
1.1	Anatomy (i.e. functional anatomy)
1.2	Common diagnoses related to systems review (e.g. medical, physical therapy
1.3	Kinesiology (i.e. biomechanics, exercise science, movement science)
1.4	Physiology / Pathophysiology (related to general systems review)
1.5	Tissue mechanics (e.g. stages of healing, use/disuse, load/overload)
Theme 2	**Students should meet the specific program identified curricular requirements including:**
2.1	achieve minimum GPA
2.2	meet minimum expectations for practical examinations
2.3	remediation of any and all safety concerns
Theme 3	**Students should take initiative to apply evidence-based strategies to:**
3.1	generate interventions ideas
3.2	guide decision-making
3.3	measure outcomes
3.4	research unfamiliar information or conditions
Theme 4	**Students should engage in self-assessment including:**
4.1	self-assessment of the impact of one's behaviors on others
4.2	the understanding of one's own thought processes (metacognition)
4.3	self-reflection and identification of areas of strength and those needing improvement, development of a plan to improve, and discussion of that plan with instructors
4.4	seeking out resources, including support from others when needed, to assist in implementation of the plan
Theme 5	**Students should utilize constructive feedback by:**
5.1	being open and receptive, verbally/non-verbally
5.2	implementing actions to address issues promptly
5.3	reflecting on feedback provided
Theme 6	**Students should demonstrate effective communication abilities within the following groups:**
6.1	diverse patient populations
6.2	families and other individuals important to the patients
6.3	healthcare professionals
Theme 7	**Students should exhibit effective verbal, non-verbal and written communication abilities to:**
7.1	listen actively
7.2	demonstrate polite, personable, engaging and friendly behaviors
7.3	independently seek information from appropriate sources
7.4	build rapport

7.5	seek assistance when needed
7.6	engage in shared decision-making with patients
7.7	demonstrate a level of comfort and respect with patient handling
7.8	demonstrate empathy
7.9	use language and terminology appropriate for the audience
7.10	introduce one's self to CI, clinical staff, and patients
Theme 8	**Students should be prepared to engage in learning through demonstrating:**
8.1	accountability for actions and behaviors
8.2	resilience/perseverance
8.3	cultural competence and sensitivity
8.4	an eager, optimistic and motivated attitude
8.5	respect for patients, peers, healthcare professionals and community
8.6	open-mindedness to alternative ideas
8.7	punctuality with all assignments
8.8	self-care to manage stress
8.9	responsibility for learning
8.10	self-organization
8.11	taking action to change when needed
8.12	willingness to adapt to new and changing situations
8.13	appropriate work ethic
8.14	maturity during difficult or awkward situations with patients, families and healthcare professionals
Theme 9	**Students should develop the following elements including the documentation of:**
9.1	examination/re-examination (History, systems review, and tests and measures)
9.2	establish and document the problem list
9.3	daily interventions
Theme 10	**Student should recognize and address issues related to safe patient care including the ability to:**
10.1	identify contraindications and precautions
10.2	assess and monitor vital signs
10.3	identify and respond to physiologic changes
10.4	assess the environment for safety, including lines, tubes, and other equipment
10.5	appropriately apply infection control procedures including universal precautions
10.6	provide assistance and guarding for patient safety
10.7	utilize appropriate body mechanics to avoid injury to self or patients
10.8	provide appropriate draping during patient care activities
Theme 11	**Student should demonstrate the following clinical reasoning skills for a non-complex patient:**
11.1	utilize the elements of the patient-client management model including: address various body systems (cardiopulmonary, integumentary, musculoskeletal, neuromuscular) during the examination
11.2	articulate a clinical rationale in patient evaluation
11.3	develop goals that are linked to the patient's activity limitations and participation restrictions
11.4	determine appropriateness for therapy within scope of PT practice
11.5	interpret examination findings
11.6	screen to rule in/out conditions and concerns

Theme 12	**Student should have BOTH the understanding and skill to perform the following examination skills:**
12.1	balance assessment
12.2	chart review to extract relevant history
12.3	dermatome screening
12.4	functional mobility assessment
12.5	gait assessment
12.6	goniometry
12.7	interview / history taking
12.8	lower quadrant screening
12.9	manual muscle testing
12.10	muscle length testing
12.11	myotome screening
12.12	reflex testing
12.13	sensory examination
12.14	medical screening for red flags
12.15	systems review
12.16	upper quadrant screening
Theme 13	**Student should have the understanding and skill to perform the following interventions:**
13.1	prescribe, fit, and instruct patients in proper use of assistive devices
13.2	functional training (including bed mobility, transfers, and gait) with appropriate guarding and assistance
13.3	individualized patient education
13.4	therapeutic exercise: specifically strengthening
13.5	therapeutic exercise: specifically stretching
13.6	therapeutic exercise: specifically aerobic exercise
Theme 14	**Student should recognize and follow specific professional standards, including:**
14.1	appropriate dress code
14.2	core values identified by the APTA as accountability, altruism, compassion/caring, excellence, integrity, professional duty, and social responsibility
14.3	clinical expectations specific to setting
14.4	HIPAA regulations
14.5	legal aspects related to patient care
14.6	obligations of the patient-provider relationship
14.7	passion for the profession
14.8	patient rights
14.9	maintaining professional boundaries
14.10	understanding physical therapy's role in the healthcare system

ACAPT Strategic Initiative Panels: Summary of Recommendations
Common Terminology
Integrated Clinical Education
Student Readiness

Each of the 3 panels developed recommendations based on their work. These recommendations have been reviewed by the ACAPT Board of Directors and will be considered by the member institutions at the ACAPT business meeting in October 2017. This document is a summary of the recommendations.

As these recommendations are being reviewed, it is essential to reflect on the work of the Clinical Education Summit. The Summit generated a significant amount of energy and enthusiasm around the topic of PT clinical education. Attendees left the Summit anxious to tackle the ideas generated during the two-day meeting.

As a result, work on some recommendations has been picked up by groups outside of ACAPT and some has begun to occur organically within the PT clinical education community. The House of Delegates charged the APTA to assess issues around PT clinical education resulting in a report to the APTA Board from the APTA Best Practice for Clinical Education Task Force. Two recent articles have been published in the Physical Therapy Journal (PTJ) because of the National Study of Excellence and Innovation in Physical Therapist Education, a qualitative research project recently completed. These three works outline innovative responses to the issues that plague our clinical education system.

These panel recommendations grew out of the harmonizing recommendations from the Clinical Education Summit. The list of harmonizing recommendations sent a clear message that we need more standardization in some areas of our clinical education system. Achieving this harmonization is necessary to move to more innovative ideas that can shape the future of PT clinical education. The recommendations of the ACAPT panels, if adopted, will lay a strong foundation with common terminology, standards for integrated clinical education, and consistent assessment of student readiness for entry into full-time clinical experiences on which innovative ideas can be built.

COMMON TERMINOLOGY RECOMMENDATIONS

RECOMMENDATION 1 (Terminology)
That the Physical Therapist Clinical Education Glossary (Appendix A) be adopted and used for discussion and description of physical therapist clinical education.

SS: Using a common language to discuss physical therapist clinical education is essential to efficient and effective communication. The participants at the Summit certainly acknowledged this fact and thus developed a Summit recommendation requesting a common set of terms.

In order for this initiative to be successful, it is essential that physical therapist education programs commit to adoption of the common terms. It will also be essential that programs refrain from use of additional terms not included in the Glossary to describe physical therapist clinical education.

There is no doubt that change is hard and it will take work for the common terms to filter down into organizational documents. However, in order for the innovative changes needed to restructure the physical therapist clinical education infrastructure to be effective, we must begin with a strong foundation. Common terminology enables everyone to speak the same language and have clear

understanding about the clinical education system which is an essential building block of the solid foundation.

RECOMMENDATION 2 (Terminology)
That, following adoption of the Physical Therapist Clinical Education Glossary, ACAPT work to encourage adoption of the new terminology in the documents and sites identified in Appendix B.

SS: Adoption of the Physical Therapist Clinical Education Glossary by ACAPT member institutions is an essential component of developing a common language. The second component of this process is to ensure that the common terms are included in documents throughout ACAPT, APTA, the Education Section, and other organizations that impact PT education such as the Commission on the Accreditation of Physical Therapy Education (CAPTE) and potentially the Federation of State Boards of Physical Therapy (FSBPT). Speaking a common language requires that all interested stakeholders adopt the terms and associated definitions.

This recommendation suggests that ACAPT take a leadership role in assisting with the broad dissemination and requests for adoption of the common terminology. Certainly ACAPT adoption of the Glossary does not make it incumbent on some of the organizations listed in Appendix B to adopt these terms. It is the hope of the Panels that ACAPT leaders will be able to negotiate options and assist in the process for the profession to embrace these suggested terms for common use.

RECOMMENDATION 3 (Terminology)
That ACAPT assist member institutions in disseminating the Physical Therapist Clinical Education Glossary to their clinical partners.

SS: Considering the importance of the clinical education community embracing the new common terminology, it is essential to the overall success of this initiative that the dissemination of the terms and an educational program or tools to assist clinical faculty in adapting to the new terms. Options to assist schools in this process may include training materials, links to online resources, etc.

RECOMMENDATION 4 (Terminology)
That the ACAPT policy Terminology for Clinical Education Experiences (AC 2-13) be rescinded.

SS: The proposed Physical Therapist Clinical Education Glossary addresses the terms and situations previously described by this policy. The Glossary is a more comprehensive document and therefore the current policy should be rescinded.

In addition, the final report for the Integrated Clinical Education Panel includes a recommendation to add the definition for integrated clinical education to the Physical Therapist Clinical Education Glossary. Once approved, the acronym ICE will be associated with the term 'integrated clinical **education**' – not 'integrated clinical **experience**.'

INTEGRATED CLINICAL EDUCATION RECOMMENDATIONS

RECOMMENDATION 1 (ICE)
That the proposed definition of integrated clinical education (ICE) be adopted as the definition for use within the profession.

SS: Consistent and proper use of the term 'integrated clinical education' is essential to successful communication within the academic and clinical environments of physical therapist education. The panel, after extensive research, discussion, and debate has developed a definition that is clear and representative of the variety of settings and types of experiences that have developed within our profession. The definition also includes a reference to the CAPTE criteria for full-time clinical education, thus recognizing that ICE can take many forms, some of which meet the criteria set forth in accreditation standards.

RECOMMENDATION 2 (ICE)
That the definition of integrated clinical education be added to the glossary developed by the Common Terminology panel.

SS: The work of the Common Terminology Panel and ICE Panel was coordinated to ensure consistency of terms. Because development of a definition for ICE was a component of this panel's charge, the definition is provided in the report and proposed for adoption. Once adopted, it should be included in the glossary of terms, ensuring consistent dissemination of the term and acronym.

RECOMMENDATION 3 (ICE)
That the currently published definition of integrated clinical experience in the ACAPT policy entitled Terminology for Clinical Education Experiences (AC 2-13) be rescinded.

SS: A definition for integrated clinical experience was adopted by ACAPT in 2014. The work of the ICE panel has led to a recommendation that the appropriate term is integrated clinical education and that the experiences of ICE are referred to as ICE experiences. Once this new definition for integrated clinical education is adopted, the term and definition for 'integrated clinical experience' should be rescinded to ensure consistency in the use of terms and definitions.

RECOMMENDATION 4 (ICE)
That the 8 parameters as presented as baseline expectations for integrated clinical education be adopted and disseminated for use by physical therapist educational programs.

SS: Participants in the Summit recognized both the value of ICE and the variability of ICE experiences within the educational programs. As a result, the participants agreed that the profession is best served by inclusion of ICE that is built on agreed upon standards for design and implementation. The 8 parameters developed by the ICE panel provide such guidance.
These parameters were developed after extensive review of the literature, engagement with stakeholders, discussion, and debate. Adoption of these parameters by ACAPT member institutions will ensure that ICE are developed using a standardized set of expectations yet continue to allow and encourage educational programs to involve their students in a wide variety of ICE experiences to meet unique needs or take advantage of unique situations. This guidance for ICE development will also assist faculty in ensuring that the experiences provided to students are based on sound educational practices.

RECOMMENDATION 5 (ICE)
That the 10 guidelines for development of integrated clinical education experiences be disseminated to physical therapist educational programs.

SS: Distinct from the parameters described above, the panel was also asked to provide guidance to programs interested in developing ICE. The panel developed a list of 10 guidelines that address the intentional steps that faculty should use and consider in the process of developing ICE experiences. The panel believes that the combination of the parameters being used as quality standards along with the guidelines to help guide ICE development will ensure that physical therapist educational programs have the tools necessary to provide high quality and effective ICE to their physical therapist students.

RECOMMENDATION 6 (ICE)
That the ACAPT Board of Directors share this document, once approved, with the members of the Educational Leadership Partnership (ELP) for discussion on how to move forward with consistent use of the term integrated clinical education within the physical therapist clinical education community.

SS: If we are to achieve consistent use of the term integrated clinical education, the term and its definition will need to be disseminated broadly. This term represents a change from the term previously adopted by ACAPT in the policy 'Terminology for Clinical Education Experiences' (AC 2-13) and thus the change will require a coordinated effort to educate educational programs and clinical faculty on the proper term and proper usage. ELP is well positioned to assist in this initiative.

RECOMMENDATION 7 (ICE)
That ACAPT support educational research focused on programmatic outcomes of different models of integrated clinical education using standardized outcome measures.

SS: The panel was asked to discern and describe models of ICE that exist within physical therapist curricula. This portion of the charge was accomplished by a thorough review of the literature and the models were described as they relate to the 8 established parameters proposed by the panel. Through this process the panel discovered that although models are described in the literature, there is little to no assessment of the outcomes of the various models described. In response to this finding, the panel is recommending that additional research be developed and supported. Findings from this research can then be used by the physical therapy educational community to develop the most effective and efficient models of ICE, thus enhancing the education of the physical therapist students.

STUDENT READINESS RECOMMENDATIONS

RECOMMENDATION 1 (Student Readiness)
That the list of knowledge, skills, and abilities (KSAs), grouped into 14 themes, requiring students' demonstration of competence prior to entering their first full-time clinical experience as shown in Appendix C (First Full-time Clinical Experience KSAs) be adopted.

SS: Academic programs should be encouraged to provide students with the appropriate educational experiences/modules so that the student may achieve the level of proficiency indicated for the said items (Appendix A). This information would ensure consistent preparation prior to a student's first full-time clinical experience. Given this information, clinical instructors can be confident that students would begin their clinical experience with competency in these items and can therefore develop and provide a more appropriate learning environment for a student to continue to grow. The format of the themes and elements may be starting points for the potential development of entrustable professional activities and competency milestones that would be applicable to all students in physical therapist education prior to entrance into their first full-time clinical experience.

RECOMMENDATION 2 (Student Readiness)
That ACAPT develop a plan, including an implementation timeline, to guide physical therapist educational programs in implementing the use of the First Full Time Clinical Education Experience KSAs. This plan shall also include guidance on communication to clinical partners.

SS: Adopting the identified KSAs is an important first step of this initiative. The participants in the Summit clearly identified a need for consistency in the level of competence of students entering their first full time clinical experience. This set of KSAs provides the minimal expectations for those students. In order for the educational programs and clinical partners to implement these KSAs, additional considerations to communication, assessment, expectations, and timelines need to be considered.

RECOMMENDATION 3 (Student Readiness)
That ACAPT encourage physical therapist educational programs to evaluate and make appropriate changes to their curriculum to enable students to achieve competency in the First Full-time Clinical Experience KSAs.

SS: As described above, the clinical sites are anxious for a standard set of competencies that all first full-time students have achieved prior to arriving in their clinics. One step in achieving this goal requires educational programs to assess their curriculum and determine if changes are needed to enable students to achieve the described levels of competence. Many programs likely have the components in place that enable students to meet these KSAs; other programs may need to make only small changes to achieve this goal; and still others may need to consider shift in the program design. In any case, being responsive to the Summit recommendations and thus the voice of our clinical partners, starts with an assessment of current state and necessary changes.

RECOMMENDATION 4 (Student Readiness)
That student readiness prior to entrance into clinical practice (entry-level) be examined as the next step to achieving the Summit recommendations related to readiness and competency.

SS: This panel focused on student readiness for entrance into the first full-time clinical education experience. It represents one moment along a student's continuum of learning. The Summit participants identified the need for additional points of competence assessment.

The variability of number, length, and timing of clinical experiences within physical therapist curricula make standardization of competence expectations at several points along the student's education impossible. This realization led the Student Readiness panel to choose the point of entry into the first full-time clinical experience as a common point that was appropriate for standardization.

The other point in time that lends itself to standard competence assessment is just prior to entry into practice. Identifying standard elements of competence that should exist after completion of all didactic and clinical coursework will provide valuable information to clinical instructors and ensure a common level of preparation for students at entry into practice.

RECOMMENDATION 5 (Student Readiness)
That ACAPT support the needed collaborative educational research to determine the most appropriate types of assessments of student readiness and a timeline for implementation.

SS: Participants indicated the various assessment methods that can be utilized for each item that achieved consensus in the Delphi study (Table 7). This list is not meant to be prescriptive but to provide options for academic programs. These items reflect current methods of assessment and may not be the most connected to what is used in CBME. Now that consensus has been achieved on the knowledge, skills, attitudes and professional behaviors students must have or display and given the importance of assessment and evaluation in competency-based education, additional research to determine the best assessment methods is warranted. Best practice should be utilized to develop a continued and frequent assessment process to ensure physical therapist students achieve the milestones at the appropriate time in their continuum of learning.

Competency-based physical therapist clinical education (CBPTCE) necessitates a robust and multifaceted assessment system. The leadership within our profession must attend to the context of the multiple settings where clinical education occurs. CBPTCE, like CBME, further requires assessment processes that are more continuous and frequent, criterion-based, developmental, work-based where possible, use assessment methods and tools that meet minimum requirements for quality, use both quantitative and qualitative measures and methods, and involve the wisdom of group process in making judgments about student progress. In addition, a shift in thinking needs to occur from assessment of learning to assessment for learning. Research into the quality of assessment programs, how assessment influences learning and teaching, new psychometric models and the role of human judgment is much needed (Schuwirth & Van der Vleuten, 2011)

The Student Readiness Strategic Initiative Panel's recommendation compliments with the recommendation #5 by the Excellence in Physical Therapy Education Task Force (APTA, 2015). They note the profession should support the development of a standardized assessment for physical therapist students prior to entering their terminal clinical experience. The assessment would evaluate students' readiness for the clinical education and assist in improving relationships with clinical education sites by setting consistent standards for students before they begin these experiences. The assessment may also decrease unwarranted variation in student preparation, which would decrease the burden on clinical sites due to differences in curriculum across programs.

COMMON TERMINOLOGY STRATEGIC INITIATIVE PANEL

Final Report

June 2017

BACKGROUND

The Summit recommendation related to common terminology was based on the understanding and belief that the ability to use consistent language between academic and clinical facilities is essential for effective and efficient best education practice. The charge for the Common Terminology panel was based on this Summit recommendation. (Recommendation I)

CHARGE

In January 2016, the Common Terminology Panel was convened to accomplish the following:

1. Develop common terminology related to physical therapist clinical education
2. Develop templates or models to support clinical education such as request forms and student information forms. In the spring of 2017, this was modified to:
   Suggest elements of forms to support clinical education*
3. Investigate and identify all current sources of terminology related to clinical education by inviting collaboration with various groups, NCCE, Education Section, CAPTE
4. Review all current support documents, i.e., CAPTE, CPI, Guide to PT Practice
5. Recommend items for consideration related to common terminology
6. Develop guidelines for implementation of the proposed terminology

*The rationale for this change is based on an understanding that more programs are adopting electronic systems built by third-party vendors to manage slot requests, placement notifications, and student information and thus paper forms are used less frequently. In addition, members of this Panel are aware of other groups attempting to develop forms and have concluded that their most valuable contribution is to suggest elements to be included on either paper or electronic forms.

SUMMARY OF WORK

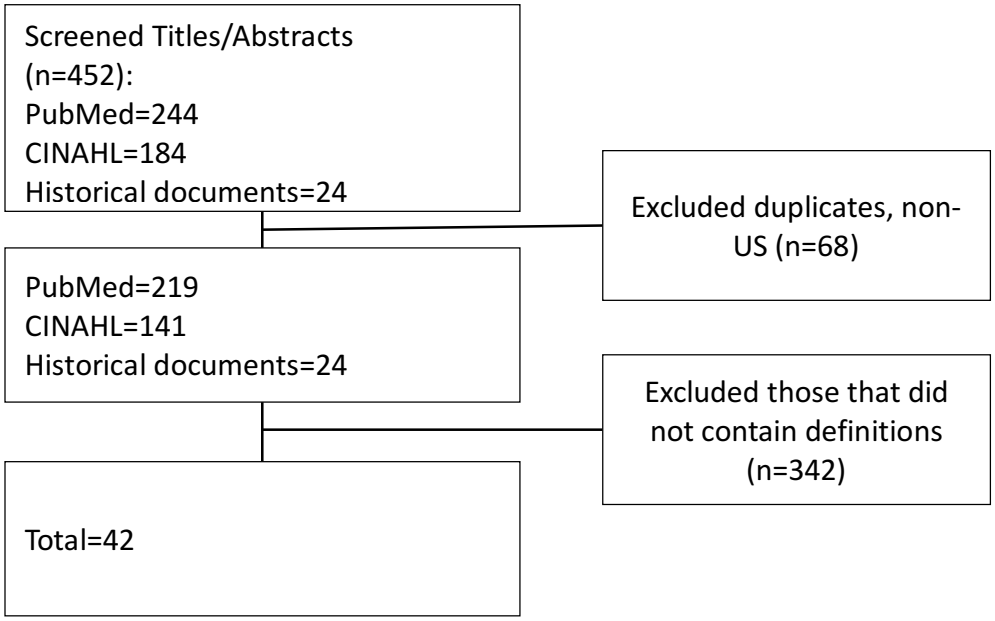
From February to April 2016, members of the Panel gathered data, which included terms and their definitions related to any aspect of physical therapist clinical education, from all relevant sources. Sources included ACAPT, APTA, CAPTE, Clinical Education Special Interest Group (CESIG), FSBPT, clinical education consortia, residency, and fellowship documents; clinical education evaluation tools; *A Normative Model of Physical Therapist Professional Education*[1]; and materials from the Clinical Education Summit. A systematic review of the clinical education literature was also performed.

Systematic review

The systematic review included a MeSH and keyword search in PubMed and CINAHL (1960 to present) using the terms “physical therapy” AND “clinical education,” internship, “clinical

instruct,*" preceptor, residency, fellowship, and terminology. Historical documents were also retrieved from the APTA and additional articles, not already identified in the literature search were retrieved from the Anthology of Clinical Education, Volumes 1 and 2 (Figure).

Figure. Article screening for systematic review.



Data, including all relevant definitions related to clinical education from all relevant sources, were extracted from all sources. The term, definition, and reference were placed into a master spreadsheet.

The master spreadsheet included 260 terms including 6 definitions for clinical education, 12 definitions for academic coordinator of clinical instruction, and 15 definitions for clinical instructor. The 260 terms were categorized into 1 of 5 clinical education constructs reported in the literature.[2,3] The 5 categories were infrastructure, site, stakeholder, assessment, and other. The Panel divided into subgroups (one for each of the aforementioned constructs) and underwent the first round of consensus building to arrive at a definition. Also, additional literature from other professions and from non-US publications were added as needed when there were conflicts from the initial search in order to help in consensus building. In this initial round, the number of terms was reduced to eliminate redundancy and a draft definition for remaining terms was presented back to the entire Panel for additional discussion and further consensus building. The terms that did not achieve consensus by the Panel were presented to the audience in a presentation at the Education Leadership Conference in October of 2016. Terms were discussed in small groups and feedback from the small groups was provided back to

the Panel. All terms and definitions were made available to and additional feedback was sought from the physical therapy community in a 3-week open comment period (Survey Monkey®, San Mateo, CA) in October 2016. There were 154 respondents to the open comment period, 62% academicians and 38% clinicians.

Using feedback from the Education Leadership Conference and the open comment period, the Panel subgroups reviewed definitions and integrated feedback as appropriate. Edits to the terms were further reviewed by the entire Panel between January and March 2017 when consensus on all terms was achieved.

The final set of terms can be found in Appendix A.

Use of the term "Internship"

Following the initial round of consensus building, the Panel agreed that the term Internship would be used to describe any clinical education experience that occurred following the didactic curriculum. However, feedback from the Educational Leadership Conference and the open comment period indicated that some states do not allow use of the term internship to describe clinical education experiences that typically occur in a physical therapist education program.

Additional research on the use of the term internship was conducted by the Panel members. According to the US Department of Labor, Wage and Hour Division, under the Fair Labor Standards Act, there are criteria that must be met to determine if an intern must be paid the minimum wage and overtime when providing services in the "for-profit" private sector.

The following 6 criteria must be applied when making the determination:
1. The internship, even though it includes actual operation of the facilities of the employer, is similar to training which would be given in an educational environment;
2. The internship experience is for the benefit of the intern;
3. The intern does not displace regular employees, but works under close supervision of existing staff;
4. The employer that provides the training derives no immediate advantage from the activities of the intern; and on occasion its operations may actually be impeded;
5. The intern is not necessarily entitled to a job at the conclusion of the internship; and
6. The employer and the intern understand that the intern is not entitled to wages for the time spent in the internship.

If all of the criteria are met, an employment relationship does not exist under the FLSA, and the Act's minimum wage and overtime provisions do not apply to the intern.[4]

Based upon review of the criteria and agreement within the Panel that a) students do provide positive contributions to the clinical site and b) the employer does receive an advantage from the physical therapist student, there is the possibility that an employment relationship could be construed. Also, data from the small-group discussions and open comment period indicated there are state laws that preclude use of the terms "intern" and "internship." Therefore, we are recommending: a) the term internship should not be used to describe physical therapist clinical education experiences in which students are either unpaid or paid less than the federal minimum wage; and b) the term internship could be used to describe a clinical education experience in which participants are being paid in accordance with federal labor laws under the Fair Labor Standards Act.

Charge 1: *Develop common terminology related to physical therapist clinical education.*

The process described above led to a set of terms for physical therapist clinical education. These terms have been assembled into the Physical Therapist Clinical Education Glossary and are provided in Appendix A.

Charges 2, 4, and 6: *Suggest elements of forms to support clinical education*
Review all current support documents, ie, CAPTE, CPI, Guide to PT Practice
Develop guidelines for implementation of the proposed terminology

As described above, all support documents were included in the initial review of documents to develop the list of terms related to physical therapist clinical education.

After development of the Glossary, a comprehensive review of professional documents was conducted to identify those that would need to be changed to be consistent with the terminology being proposed by the Panel. In addition to the many forms in use, policy and regulatory documents were included in the review. Only one document was identified that is in the purview of ACAPT. The responsible parties for the documents and the general means necessary to make changes in the documents are listed in Appendix B.

Charge 3: *Investigate and identify all current sources of terminology related to clinical education by inviting collaboration with various groups, NCCE, Education Section, CAPTE.*

Members of the Panel have reached out to other stakeholder groups, collaborating and sharing the work being done across groups. There has been ongoing and extensive collaboration with the Integrated Clinical Education Panel and the Student Readiness Panel. We also invited collaboration with others through 1) round table discussions with the participants at the 2016 Educational Leadership Conference, 2) an open comment period provided for members of the physical therapy academic and clinical communities, and 3) student focus groups during the

National Student Conclave and virtually in November 2016. This allowed members to provide feedback on a draft of the Glossary. Feedback was used from the round table discussions and the comment period to develop the final Glossary.

Charge 5: *Recommend items for consideration related to common terminology.*

Primary considerations are related to adoption, inclusion, and dissemination of the terms. The Panel has developed three recommendations to address these items.

An additional item for consideration is related to the use of the term 'internship.' The information detailed above has led the panel to the conclusion that in the current physical therapist clinical education infrastructure , the term is being used inappropriately and the clinical education community needs to take steps to eliminate the use of the term. The Panel recognizes that some of the innovative changes currently being examined may present opportunity for appropriate use of the term in the future. The Panel has developed one recommendation related to this issue.

RECOMMENDATION 1:

That the Physical Therapist Clinical Education Glossary (Appendix A) be adopted by the ACAPT member institutions and used for discussion and description of physical therapist clinical education.

SS: Using a common language to discuss physical therapist clinical education is essential to efficient and effective communication. The participants at the Summit certainly acknowledged this fact and thus developed a Summit recommendation requesting a common set of terms.

In order for this initiative to be successful, it is essential that physical therapist programs commit to adoption of the common terms. It will also be essential that programs refrain from use of additional terms not included in the Glossary to describe physical therapist clinical education.

There is no doubt that change is hard, and it will take work for the common terms to filter down into organizational documents. However, in order for the innovative changes that are needed to restructure the physical therapist clinical education infrastructure to be effective, we must begin with a strong foundation. Common terminology enables everyone to speak the same language and have clear understanding about the clinical education system which is an essential building block of the solid foundation.

RECOMMENDATION 2:

That, following adoption of the Physical Therapist Clinical Education Glossary, ACAPT work to encourage adoption of the new terminology in the documents and sites identified in Appendix B.

SS: Adoption of the Physical Therapist Clinical Education Glossary by ACAPT member institutions is an essential component of developing a common language. The second component of this process is to ensure that the common terms are included in documents throughout ACAPT, APTA, the Education Section, and other organizations that impact PT education such as CAPTE and potentially FSBPT.Speaking a common language requires that all interested stakeholders adopt the terms and associated definitions.

This recommendation suggests that ACAPT take a leadership role in assisting with the broad dissemination and requests for adoption of the common terminology. Certainly ACAPT adoption of the Glossary does not make it incumbent on some of the organizations listed in Appendix B to adopt these terms. It is the hope of the Panels that ACAPT leaders will be able to negotiate options and assist in the process for the profession to embrace these suggested terms for common use.

RECOMMENDATION 3:
That ACAPT assist member institutions in disseminating the Physical Therapist Clinical Education Glossary to their clinical partners.

SS: Considering the importance of the clinical education community embracing the new common terminology, it is essential to the overall success of this initiative that educational programs assist in disseminating and aid clinical faculty in adapting the new terms. Options to assist schools in this process may include training materials, links to online resources, etc.

RECOMMENDATION 4:
That the ACAPT policy Terminology for Clinical Education Experiences (AC 2-13) be rescinded.

SS: The proposed Physical Therapist Clinical Education Glossary addresses the terms and situations previously described by this policy. The Glossary is a more comprehensive document and therefore the current policy should be rescinded.

In addition, the final report for the Integrated Clinical Education Panel includes a recommendation to add the definition for integrated clinical education to the Physical Therapist Clinical Education Glossary. Once approved, the acronym ICE will be associated with the term 'integrated clinical **education**' – not 'integrated clinical **experience**.'

MEETING HISTORY

Face-to-face meetings: February 20, 2016 and October 6, 2016

Conference calls: (2016) April 12, May 27, August 12, August 23, November 28
(2017) January 24, January 25, March 28, May 4, 2017

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PHYSICAL THERAPIST CLINICAL EDUCATION GLOSSARY

This glossary of terms was developed after a review of the physical therapy literature, extensive discussion and debate by the ACAPT Common Terminology Panel, and engagement of key stakeholders within the physical therapy clinical education community.

The Glossary is divided into major categories and, as applicable, definitions are referenced.

CLINICAL EDUCATION INFRASTRUCTURE

Clinical education	A formal type of supervised experiential learning, focused on development and application of patient-centered skills and professional behaviors. It is designed so that students gain substantial, relevant clinical experience and skills, engage in contemporary practice, and demonstrate competence before beginning independent practice.[1-3]
Clinical education agreement	A formal and legally binding agreement that is negotiated between academic institutions and clinical education sites or individual providers of clinical education that specifies each party's roles, responsibilities, and liabilities relating to student clinical education.[4]
Clinical education curriculum	The portion of a physical therapy education program that includes all part-time and full-time clinical education experiences as well as the supportive preparatory and administrative components.[4]
Clinical education experience	Experiences that allow students to apply and attain professional knowledge, skills, and behaviors within a variety of environments. Experiences include those of short and long duration (e.g., part-time, full-time), provide a variety of learning opportunities, and include care of patients/clients across the lifespan and practice settings. While the emphasis is on patient-care skills, experiences may also include inter-professional experiences and non-patient care duties such as research, teaching, supervision, and administration. Clinical education experiences are a part of the professional curriculum and include formal student assessment.[5-8]
Collaborative clinical education model	A clinical education experience in which two (or more) physical therapist students are assigned to one (or more) preceptor/clinical instructor(s). The students work cooperatively under the preceptor/clinical instructor(s). Examples include 2:1, 2:2, 3:1, etc. student to preceptor/clinical instructor ratio. Students may be from the same or different programs and may be at the same or different levels of training.[9-11]

Didactic curriculum	The component of the physical therapist professional education program that is comprised of the content, instruction, learning experiences, and assessment directed by the academic faculty.[3,12,13]
Fellowship	A post-professional funded and planned learning experience in a focused area of clinical practice, education, or research (not infrequently post-doctoral or for post-residency or board certified therapists).[14]
Full-time clinical education experience	A clinical education experience in which a student engages for a minimum of 35 hours per week. An integrated clinical education experience may be a full-time clinical education experience; however, full-time clinical education experiences designated to achieve the minimum number of weeks set forth by CAPTE are directed by a physical therapist clinical instructor.[5,7]
First full-time clinical education experience	The first clinical education experience designated to achieve the minimum number of weeks set forth by CAPTE in which a student engages for a minimum of 35 hours per week.
Intermediate full-time clinical education experience	A clinical education experience designated to achieve the minimum number of weeks set forth by CAPTE in which a student engages for a minimum of 35 hours per week and returns to the academic program for further completion of the didactic curriculum.
Terminal full-time clinical education experience	A single, or set of, full-time clinical education experience(s) designated to achieve the minimum number of weeks set forth by CAPTE that occur after the student has completed the didactic curriculum of a physical therapist professional education program. Students may return to the academic program for didactic instruction that does not require additional clinical education experiences. The expected outcome of the final, or last terminal experience is entry-level performance.[7]
International clinical education experiences	An educational opportunity that a student participates in, outside of the country where the physical therapist education program is situated, for which he/she obtains clinical education credit. The abbreviation ICE should not be used to describe an international clinical education experience.[7,15]
Internship	A terminal full-time clinical education experience that provides recompense to participants in accordance with federal labor laws under the Fair Labor Standards Act.[16]
Learning experience	Any experience which allows or facilitates a change in attitude or behavior. A planned learning experience includes a learner, an objective for the learner, a situation devised to produce a response that contributes to the objective, a response by the student, and reinforcement to encourage the desired response.[3]

Part-time clinical education experience	A clinical education experience in which a student engages in clinical education for less than 35 hours per week. Part-time experiences vary in length. A part-time clinical education experience may be considered an integrated clinical education experience depending on the design of the experience and the learning objectives.[7,17]
Physical therapist professional education program	Education comprised of didactic and clinical education designed to assure that students acquire the professional knowledge, skills, and behaviors required for entry-level physical therapist practice.[3,18,19]
Physical therapist post-professional education program	Degree and non-degree based professional development for the physical therapist to enhance professional knowledge, skills, and abilities beyond entry level. Examples include, but are not limited to, continuing education courses, post-professional doctoral education programs, certificate programs, residency, and fellowship.[19]
Residency	Post-professional programs that occur after the graduate physical therapist has obtained a license to practice. They may be clinical programs that advance a physical therapist's knowledge and skills in patient/client management, or nonclinical focusing on advancing a physical therapist's career outside of clinical duties.[20]

CLINICAL EDUCATION SITES

Clinical education site	A healthcare agency or other setting in which clinical education experiences are provided for physical therapist students. The clinical education site may be, but is not limited to, a hospital, agency, clinic, office, school, or home and is affiliated with one or more educational programs through a contractual agreement.[3,4]
Clinical education environment	The physical space(s), as well as the structures, policies, procedures, and culture within the clinical education site.

CLINICAL EDUCATION STAKEHOLDERS

Academic faculty	Teachers and scholars within the academic institution dedicated to preparing students in the skills and aptitudes needed to practice physical therapy.[21]
Academic institution	University or college through which an academic degree is granted.[4]
Clinical education consortia	National and regional groups that include academic and clinical education faculty for the purpose of sharing resources, ideas, and efforts.[4]

Clinical education faculty	The individuals engaged in providing the clinical education components of the curriculum, generally referred to as either Site Coordinators of Clinical Education (SCCEs), preceptors, or clinical Instructors. While the academic institution does not usually employ these individuals, they do agree to certain standards of behavior through contractual arrangements for their services.[7]
Clinical instructor (CI)	The physical therapist responsible for the physical therapist student and directly instructs, guides, supervises, and formally assesses the student during the clinical education experience. When engaged in full-time clinical education designated to meet the minimum number of weeks required by CAPTE, the clinical instructor must be a licensed physical therapist with a minimum of one year of full time (or equivalent) post-licensure clinical experience.[4,22,23]
Director of Clinical Education (DCE)	Academic faculty member who is responsible for planning, directing and evaluating the clinical education program for the academic institution, including facilitating clinical site and clinical faculty development.[22,24,25]
Physical therapist student	Student enrolled in a CAPTE-accredited or approved developing physical therapist professional education program. Students should not be referred to as a physical therapy student.
Preceptor	An individual who provides short-term specialized instruction, guidance, and supervision for the physical therapist student during a clinical education experience. This individual may or may not be a physical therapist as permitted by law.
Site Coordinator of Clinical Education (SCCE)	Professional who administers, manages, and coordinates clinical assignments and learning activities for students during their clinical education experience. In addition, this person determines the readiness of persons to serve as preceptors and clinical instructors for students, supervises preceptors and clinical instructors in the delivery of clinical education experiences, communicates with the academic program regarding student performance, and provides essential information to academic programs.[4,22,26]

CLINICAL EDUCATION ASSESSMENT

Clinical performance assessment	Clinical performance assessment encompasses formal and informal processes designed to appraise physical therapist student performance during clinical education experiences. Assessment may be formative or summative in nature and performed for the purposes of providing feedback, improving learning, revising learning experiences, and determining successful attainment of student performance expectations during clinical education experiences.[3,22,27,28]

Clinical performance evaluation tool	A valid, reliable, and multidimensional clinical performance assessment tool utilized to determine if, and how well, a student meets established behavioral objectives during clinical education experiences.[4,29,30,31]
Entry-level physical therapist clinical performance	Performance that demonstrates knowledge, skills, and behaviors consistent with effective, efficient, and safe patient/client management to achieve optimal outcomes.[22,28]
Supervision	The guidance and direction provided to a physical therapist student by the preceptor or clinical instructor. This varies based on the complexity of the patient or environment; jurisdiction and payer rules and regulations; and abilities of the physical therapist student.[4,22,27]

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Appendix B. Types of documents, methods of change

Section A lists the materials and documents that have language related to clinical education that would need to be changed to be consistent with the terminology recommended in this report. Section B provides the mechanism to achieve change.

A. Type of document/site	**B. Method for change**
APTA's House of Delegates (HOD) positions, standards, guidelines, policies, procedures	Propose revision to the HOD by a delegation (Chapter, Section, Board) to the House
APTA's Board of Directors (BOD) positions, standards, guidelines, policies, procedures	Request the BOD to consider revision
APTA documents/site	
CPI, CSIF, CCCE manual	Request the BOD to consider revision
APTA CCIP	Request the BOD to consider revision
APTA Website	Request the BOD to consider revision
	Would also need to be consistent with HOD policies
Education Section Website	Request the Section to consider revision
Clinical Educators SIG of the Section Form: Request for clinical sites	Request the Section/CESIG to consider revision
American Council on Academic Physical Therapy	
Website	ACAPT should make changes when new definitions adopted
ACAPT policy on Clin Ed	ACAPT should make changes when new definitions adopted
NCCE	ACAPT should make changes when new definitions adopted
Commission on Accreditation of Physical Therapy Education (CAPTE) Standards	Petition CAPTE as a major stakeholder for changes in Standards
Federation of State Boards of Physical Therapy (FSBPT) Model Practice Act and individual state practice acts	Work through FSBPT and individual state boards, in collaboration with APTA
Journal style manuals	PTJ should change with HOD policy, request others do so through information packet to journal editors and their supporting Sections
Chapters	
Materials for members	Request change through information packet
State Practice Acts	Request change through information packet, interact with FSBPT as well as individual boards
Sections/Academies	
Materials for members	Request change through information packet
Information to ABPTRFE, ABPTS	Request the BOD to direct any necessary changes
PTA community	Work through the Education Section PTASIG

INTEGRATED CLINICAL EDUCATION STRATEGIC INITIATIVE PANEL

Final Report

June 2017

BACKGROUND

The Summit recommendation related to integrated clinical education (ICE) was developed around the premise that ICE 'allows students to develop cognitive psychomotor, and affective behaviors for successful terminal experiences.' (Summit Report) The Summit participants recognized the variability in models and approaches to ICE in the physical therapist education curricula and thus identified value in establishment of baseline expectations for ICE. The charge for the Integrated Clinical Education panel addressed this Summit recommendation (Recommendation VII)

CHARGE

The specific charge to this work panel is to:

1. Define 'integrated clinical education.
2. Make recommendations for achieving consistent use of the term 'integrated clinical education' across ACAPT, APTA and CAPTE.
3. Define baseline expectations and parameters for quality integrated clinical education in physical therapist education.
4. Discern and describe models of integrated clinical education that currently exist within physical therapist curricula.
5. Develop guidelines for collaborative development and implementation of integrated clinical experiences.

Stakeholders involved

The Workgroup was purposefully selected to represent stakeholders from both the academic and clinical environments. Considerations in selecting the work panel members included: previous experience/knowledge of professional education programs where an integrated model of clinical education was used, academic or clinical position held, geographic location and type of institution represented (public/private). The intent was to select a diverse group that would be able to bring multiple perspectives to the conversation. The positions held of workgroup members included: academic program directors, directors of clinical education, and a center coordinator of clinical education/clinical instructor.

Individuals involved during data collection included academic and clinical faculty as well as current DPT students from across the country.

SUMMARY OF WORK

Phase 1: We embarked on 2 concurrent methods of data collection to establish a broad view of current educational practices involving clinical education delivered through the lens of an integrated curriculum perspective. The data collection methods included a systematic review of the literature and the development and distribution of a descriptive survey. Work-panel members volunteered to work in one of these two groups to gather and analyze the data.

Review of the literature. The first subgroup members were involved in a systematic review of the literature. The subgroup identified the following health profession disciplines for inclusion: medicine, nursing, physical therapy (PT), occupational therapy (OT) physician assistant (PA) and speech therapy

(SP). The literature was searched using standard databases known for publication of educational research of the health professions. These included MEDLINE and CINAHL. Additional databases were searched for medicine, however no further articles were identified therefore MEDLINE and CINAHL were the primary databases utilized to collect medicine literature.

The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines were selected to guide the process. A workgroup member was assigned to one of the six selected health professions. Each individual searched the literature from the selected health profession to narrow the literature by title and abstract review. Inclusion criteria for the broad initial search included the search terms "integrated clinical education" and the health profession (i.e. medicine, nursing, physical therapy, physician assistant, occupational therapy and speech-language pathology). This resulted in 3808 articles. Search terms were refined using key works and subject headings in either CINAHL or MEDLINE. Articles were screened for title and abstract by the subgroup members, which yielded 83 articles.

Two group members completed the task of full-text review of the 83 articles. Inclusion criteria was refined to include articles that included: a model description of a clinical education experience provided in an integrated manner, a clear purpose of the article, identified outcome measures that included at least one of the following: student outcomes, course outcomes or programmatic outcomes. The articles also were required to be written in English and accessible in full text. This process narrowed the selected articles to 19. Reference lists of these articles were reviewed which resulted in an additional 3 articles for inclusion. A total of 22 articles were included in the final review of the literature. These articles represent the best available evidence about the topic of integrated clinical education in health professions.

Survey research. The second subgroup utilized survey research to gather information about current program practices that were perceived as integrated clinical education experiences. A survey tool was developed and distributed to the ICE work-panel members using Survey Monkey (n-11). The survey consisted of two demographic questions, three global questions about the programs clinical education curriculum, and 10 questions related to each course considered as an integrated clinical education course-up to 5 courses. The questions included 1 open ended, and 9 closed questions with option to comment, for a maximum of potential 50 questions to be answered.

Analysis. The results of each of these data collection methods were thematically categorized independent from the other, followed by an aggregation of the categories for group discussion. Common categories were identified between the 2 groups of data. Group discussion ensued to determine if the identified categories were considered sound educational practices in terms of clinical education experiences offered in an integrated fashion within a professional education program. A group vote was taken on each identified category. The group agreed to use majority consensus as an indicator the category should be included as a primary parameter for describing an integrated clinical education experience.

Phase 2: Two series of focus groups were conducted to gain perspective from stakeholders involved in clinical education. The first focus group was an open invitation educational session titled "*Clinical Education Summit Strategic Initiatives: Updates and Ideas*" at the 2016 Educational Leadership Conference in Phoenix Arizona. Participants included both academic and clinical educators. During this 90-minute session, facilitators led small group discussions using pre-determined questions about issues

related to current perceptions of integrated clinical education. The results were transcribed onsite. The transcribed data was then collated thematically and analyzed for content.

The second series of focus groups was held with physical therapist students: the first at the 2016 National Student Conclave in Miami, Florida and the second was held virtually on November 16, 2016. A facilitator led a purposeful discussion with student leaders of the national student body. The facilitator took notes and collated the data prior to sending to the ICE work-panel.

After review of both sets of transcribed focus group data, it was determined a point of data saturation was achieved. No further data was sought from other academic or clinical faculty, or DPT students to develop the parameters. While collection of additional data may have provided the group with additional examples of clinical education experiences provided in an integrated fashion, it was determined the model descriptions identified in the literature were rich enough for the group to move forward.

Results. The final results of Phases 1 and 2 included identification of eight (8) categorical parameters that achieved 100% agreement by the 12 work-panel members. These parameters describe components required for integrated clinical education experiences.

Development of definition.

Once the 8 parameters were identified and approved, a subgroup of the work-panel reviewed the parameter descriptions and the literature to develop the definition of integrated clinical education. The developed definition was distributed to the 12-member work-panel, followed by group discussion and a period of revision. After revision, a group vote was taken. The group agreed to use majority consensus as an indicator the definition should be accepted for describing integrated clinical education. The definition of integrated clinical education was achieved by 100% agreement by the 12 work-panel members.

Development of descriptive models

The model descriptions were generated using a thematic analysis process from the 22 selected articles in the systematic review. A full review of the manuscripts were completed by members of the work-panel, with data extracted including: author(s), year of publication, discipline, placement of course(s) in respect to the entire educational curriculum, course or program objectives addresses in manuscript, frequency of the ICE experience, the type of course the ICE experience was offered (standalone course or embedded within a course), frequency of ICE experience, location of ICE experience, methods of assessment and outcomes of assessments, and coordinator/facilitator of the ICE experience. Data was synthesized by parameter to provide a qualitative description of each.

The work panel agreed that the descriptions of models present in the literature were rich enough to provide outcomes for Charge 4. The members recognize the variety of educational curricular models and designs present today within physical therapy education programs, and determined the collective description of *all* available models was outside the scope of our charge. The readers are encouraged to refer to each of the selected peer-reviewed articles and their references for a complete description of ICE model designs.

OUTCOMES

Charge 1: *Define 'integrated clinical education.'*

The following definition of 'integrated clinical education' was developed as a result of the work process described above.

> Integrated clinical education is a curriculum design model whereby clinical education experiences are purposively organized within a curriculum. In physical therapist education, these experiences are obtained through the exploration of authentic physical therapist roles, responsibilities and values that occur prior to the terminal full time clinical education experience.
>
> Integrated experiences are coordinated by the academic program and are driven by learning objectives that are synchronous with didactic content delivery across the curricular continuum. These experiences allow students to attain professional behaviors, knowledge and/or skills within a variety of environments. The supervised experiences also allow for exposure and acquisition across all domains of learning and include student performance assessment.
>
> For integrated clinical education experiences to qualify towards the minimum number of full-time clinical education weeks required by accreditation (CAPTE) standards, it must be full time and supervised by a physical therapist within a physical therapy workplace environment or practice setting.
>
> ICE=Integrated Clinical Education

Charge 2: *Make recommendations for achieving consistent use of the term 'integrated clinical education' across ACAPT, APTA and CAPTE*

The panel has provided recommendations related to achieving consistent use of these terms in the recommendations section of the report. These recommendations include adopting the term and definition, including it in the Physical Therapist Clinical Education Glossary, and engaging with the Education Leadership Partnership (ELP) to help disseminate information and educate stakeholders.

In addition, the term "*integrated clinical education"* will be defined in the systematic review manuscript in development for publication. Once published, the definition will be in print for future reference.

Charge 3: *Define baseline expectations and parameters for quality integrated clinical education in physical therapist education*

Based on the described work process, eight (8) parameters have been developed to define baseline expectations for integrated clinical education experiences. These include:

> 1. Integrated clinical education may occur in any academic term prior to the completion of the didactic coursework leading to the completion of a terminal full time clinical education experience.

2. Integrated clinical education experiences will have specific desired outcomes that correspond to course and/or programmatic objectives.

3. Integrated clinical education experiences may be represented as a component of a didactic course or a standalone course that occurs in a synchronous fashion with other didactic coursework.

4. Integrated clinical education experience time frames are developed by the academic program based upon the course and/or programmatic objectives. Integrated clinical education may include full time and/or part time experiences.

5. Integrated clinical education experiences may occur in a variety of learning environments including campus or community based clinical or non-clinical settings, based upon the course and/or programmatic objectives. Integrated full time clinical education experiences that qualify for a program's minimum number of clinical education weeks shall be completed in a physical therapy workplace environment or practice setting.

6. Integrated clinical education experiences shall include student assessments that are designed to link to the course or program objectives with expected student progression in professional behaviors, clinical knowledge, and/or skills.

7. Integrated clinical education experiences are coordinated by a faculty member of the academic program, in partnership with a coordinator from the clinical education site.

8. Integrated clinical education experiences are typically supervised by a course instructor and a preceptor. The preceptor may be an academic course faculty member, a clinical instructor, or other healthcare professional at the site the student is engaged in the experience, depending upon the course and/or programmatic objectives. Integrated full time clinical education experiences that qualify for a program's minimum number of clinical education weeks shall be supervised by a licensed physical therapist.

Charge 4: *Discern and describe models of integrated clinical education that currently exist within physical therapist curricula*

The eight (8) parameters required of integrated clinical education experiences (as listed in charge 3) are explained through model descriptions. These descriptions were developed from the articles selected during the systematic review of the literature. Refer to Table 1 for a description of program/course models.

1. Integrated clinical education may occur in any academic term prior to the completion of the didactic coursework leading to the completion of a terminal full time clinical education experience.

The placement and frequency of ICE within curricula is quite variable. Integrated clinical education has been reported to occur as early as the first or second semester of year one. While some programs incorporate ICE as late in a program as the third year, the majority of ICE models described experiences that occur in years one and two. In some programs, ICE is not an isolated experience, but rather one whereby students are afforded several opportunities to participate in over the course of a professional program.

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References: Coker, Doucet & Seale, 2010; Doucet & Seale, 2012; Faught, Gray, DiMeglio, Meadows & Menzies, 2013; Goldberg, Richburg & Wood, 2006; Hakim, Moffat & Becker et al, 2014; Ingram & Hanks, 2001; Mahendra et al 2013; Mai et al 2013; Mai et al, 2014; O'Neil, Rubertone & Villaneuva, 2007; Smith, Lutenbacher & McClure, 2015; Stern & Rone-Adams, 2006; Weddle & Sellheim, 2011; Wilson, 2006; Wilson & Collins, 2011; Yardley, Brosnan, Richardson & Hays 2014.

2. Integrated clinical education experiences will have specific desired outcomes that correspond to course and/or programmatic objectives.

Integrated clinical education (ICE) experiences are part of the physical therapy curriculum that are designed to contribute to specific, desired outcomes for course and/or program objectives. Theoretical knowledge that students gain in the classroom can be reinforced with concrete, experiences when ICE experiences are appropriately placed in the curriculum to augment the content being taught and designed to meet specific learning objectives. As the curriculum progresses, ICE experiences can be structured so that students demonstrate a greater breadth and complexity of clinical skills. PT students must apply all domains of learning (i.e. cognitive, affective and psychomotor) to be successful in clinical practice. The classroom setting does not always allow students to demonstrate skills in all the domains of learning, as they would be used in professional settings. ICE experiences afford students the opportunity to demonstrate these skills in situations that reflect the complexity of the health care delivery system. In these situations, students prioritize care, demonstrate critical thinking, and make decisions in an evidence-based manner. ICE experiences can also be designed to include service activities which have the potential to influence students' future behaviors related to the APTA Core Values and Code of Ethics.

Furthermore, ICE experiences may be designed as inter-professional activities so that students comprehend the role of other members of the health care team. It is important that academic institutions prepare student PTs to be clinical teachers, so ICE experiences can be designed in which students are given peer teaching and assessment opportunities to prepare them for future teaching roles. Other examples of practice in which students can gain experience during ICE is with the management of patients who have highly specialized diagnoses who are underserved are challenged with communication disorders, have mental health disorders and convey divergent cultural values.

References: Benson, Provident & Szucs, 2013; Doucet & Seale, 2012; Faught at al, 2013; Goldberg et al, 2006; Jensen, Mostrom, Gwyer, Hack & Nordstrom, 2015; Mai et al, 2013; Mehendra et al, 2013; O'Neil et al, 2007; Smith et al, 2015; Stern & Rone-Adams, 2006; Stuhlmiller & Tolchard, 2015; Weddle & Sellheim, 2011; Wilson, 2006.; Williams-Barnard, Sweatt, Harkness & DiNapoli, 2004.

3. Integrated clinical education experiences may be represented as a component of a didactic course or a standalone course that that occurs in a synchronous fashion with other didactic coursework.

6

Integrated clinical education has been found to occur both as part of a didactic content course or as a single or repeated stand-alone clinical education course(s). Most ICE experiences tended to be conducted part time although a couple of examples included full time experiences. In current physical therapy literature, the range of stand-alone courses within a curriculum has ranged from one up to three separate courses. Within a single didactic content course, the settings as well as the courses in which ICE was a component were quite variable with a range from neurological, geriatric, and business courses. One example threads integrated clinical experiences in a variety of community based settings that are components of a series of courses within the curriculum. Literature from other health care disciplines (including medicine, nursing, occupational therapy, and speech pathology reveal a slightly different picture in that most of the integrated experiences were part of a didactic content course. The similarity to the physical therapy literature was in the fact that the type of courses in which these experiences were housed were quite variable and included pediatrics, mental health, dysphagia, aging and dementia, community health, and a lifespan course.

References: Benson et al, 2013; Doucet & Seale, 2012; Faught et al, 2013; Goldberg et al, 2006; Ingram & Hanks, 2001; Mai at al, 2013; Mahendra et al, 2013; O'Neil et al, 2007; Reneker, Weems, & Scaia, 2016; Smith et al, 2015; Stern & Rone-Adams, 2006; Weddle & Sellheim, 2011; Williams-Barnard et al, 2004; Wilson & Collins, 2011.

4. Integrated clinical education experience time frames are developed by the academic program based upon the course and/or programmatic objectives. Integrated clinical education may include full time and/or part time experiences.

Similar to physical therapist education curricula, the time frames for ICE experiences are quite variable. The time frames associated with ICE tend to be selected based on the course and/or programmatic objectives as well as what is most feasible for the academic program and clinical site. Several academic programs have imbedded ICE into the curriculum as early as the first semester, while a large majority of experiences are embedded at the end of or following the first year of the program. Integrated clinical education experiences may also span consecutive semesters and are embedded as late in a curriculum as year two or year three. Such experiences can also be incorporated after a few weeks into a course or the last few weeks of a course.

Whether ICE experiences are embedded in a course or are a standalone course, there is also variability regarding the frequency and duration. The experiences range from a small number of hours that are primarily observation (example: 2 hours/week or total of 2 hours in a semester), to several weeks that occur throughout year 1, 2 and perhaps year 3, but all prior to the terminal full time terminal experiences. Integrated clinical education experiences can occur as infrequent as a quarter day/twice weekly one-half day/week or one full day/week and for longer durations of time such as part time for up to 8 weeks or full time for 1-4 weeks. The experiences do not need to occur on a regular basis however, as students can still benefit from opportunities to participate in ICE experiences that occur multiple times (6-16 sessions) over the course of a semester or several semesters.

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References: Benson et al, 2013; Coker, 2010; Goldberg et al, 2006; Hakim et al, 2014; Ingram & Hanks, 2001; Jensen et al, 2015; Mahendra et al, 2013; Mai et al, 2013; O'Neil et al, 2007; Reneker et al, 2016; Stern & Rone-Adams, 2006; Weddle & Sellheim, 2011; Wilson, 2006.

5. Integrated clinical education experiences may occur in a variety of learning environments including campus or community based clinical or non-clinical settings, based upon the course and/or programmatic objectives. Integrated full time clinical education experiences that qualify for a program's minimum number of clinical education weeks shall be completed in a physical therapy workplace environment or practice setting.

Integrated clinical education (ICE) can occur in a variety of clinical, non-clinical and community settings. Campus pro bono clinics, pro bono programs such as exercise wellness or kids' fitness, or more established campus facilities such as an outpatient clinic or primary care clinic) allow the integrated clinical experiences to be conducted in the convenience of the academic institution.

Other academic programs used off campus community settings to conduct ICE with a wide range of clinical settings including long term care, acute care, inpatient rehabilitation facilities, skilled nursing facilities, outpatient orthopedic clinics, Veterans Affairs Medical Center outpatient clinic, pediatric inpatient and outpatient facilities and community health care centers. Several ICE experiences used a combination of on and off campus settings as resources to meet their learning objectives. ICE is also conducted in what are typically considered non-clinical settings that include senior living/community retirement homes, child development centers or community based preschools, residential homeless assistance centers or shelters, community based programs such as family fitness and aquatic programs, or senior citizen programs/adult day care. The unifying factor with all of these locations is that the setting allows for human interactions.

*Reference*s: Benson et al, 2013; Coker, 2010; Ingram & Hanks, 2001; Mai et al, 2013;Mai et al, 2014; Reneker et al, 2016; O'Neil et al, 2007; Stern & Rone-Adams, 2006; Stuhlmiller & Tolchard, 2015; Weddle & Sellheim, 2009; Weddle & Sellheim, 2011; Wilson, 2006; Wilson & Collins, 2011.

6. Integrated clinical education experiences shall include student assessments that are designed to link to the program or course objectives with student progression in professional behaviors, clinical knowledge, and/or skills.

In order for ICE experiences to contribute to learning, assessment of the experience and student learning should be completed with direct and timely feedback. Formative assessment can be provided by peers or clinical faculty, but academic faculty should be primarily responsible for summative assessment and grading of students' clinical behaviors. Assessments are chosen to determine the progression of the student's learning; assessment and reflection can also serve as a catalyst for heightened engagement with the learning process.

8

When the objective of the ICE is to prepare students for future full time clinical education experiences, student assessment often included use of outcome measurement tools, such as the Clinical Performance Instrument (CPI), May's Professional Behavior/Generic Abilities, or a school tracking/assessment form or other selected standardized outcome measurement tool assessing clinical knowledge, skills or professional behaviors. For example, Mai et al (2013) selected the Interpersonal Communication Questionnaire and the Medical Communication Behavior Scale to assess student learning of communication abilities, while Weddle & Sellheim (2009) utilized a program developed online reporting form to track each ICE session.

Additional student assessment methods include faculty instructor led verbal debriefing and discussion sessions, whereby critical questions were asked and formal reflection papers assigned to determine the level of the student's critical thinking. Peer-assisted learning was also beneficial, whereby first year students are mentored by third year students during ICE experiences. Authors recommend that reflection journals or papers incorporate student self-assessment of critical factors to determine learning, and development of reflective practitioners.

When the ICE experience was more focused on a novel practice environment, student assessments were concentrated on the understanding of the healthcare maze, the ability to compare and contrast sites, identify clinical and social benefits, or demonstrate inter-professional skills.

When the experience was an experiential lab within a course or a focused clinical education experience with a specific patient population, such as patients with childhood disabilities or adults with dementia, student assessments included faculty review of student documentation including patient examinations, evidence-based treatment plans or onsite assessment of the treatment session, and evaluation of the therapeutic manner of student performance in establishing the relationship formed between the student and the patient.

In addition, some academic programs used student feedback and standardized assessment to determine if the curricular designed experience was the best approach to accomplish this learning.

References: Benson et al, 2013; Coker, 2010; Doucet & Seale, 2012; Faught et al, 2013; Goldberg et al, 2006; Faught et al, 2013; Hakim et al, 2014; Ingram & Hanks, 2001; Mai et al, 2013; Mahendra et al, 2013; O'Neil et al, 2007; Smith et al, 2015; Stern & Rone-Adams, 2006; Stuhlmiller & Tolchard, 2015; Weddle & Sellheim, 2009; Weddle & Sellheim, 2011; Williams-Barnard et al, 2004; Wilson, 2006; Wilson & Collins, 2011.

7. Integrated clinical education experiences are coordinated by a faculty member of the academic program, in partnership with a coordinator from the clinical education site.

Integrated clinical education experiences are coordinated by a faculty member of the academic program and an individual (s) from clinical/community based education sites. It has been suggested that the academic program be the responsible party for facilitating a partnership, building relationships, and sharing in the educative element. Several authors have described the

role of the academic faculty member or the directors of clinical education in developing and sustaining the clinical partnerships.

The academic program selects clinical education sites to partner based upon factors such as geographical proximity to the academic institution, the availability of the patient population desired, the availability of an onsite representative to organize onsite logistics and the availability of onsite staff supervision by a preceptor. Regardless of the locality of the ICE experience or the onsite supervisor identity, the academic faculty member is responsible for grading/assessment of student progress towards the course or program objectives.

References: Benson et al, 2013; Coker, 2010; Doucet & Seale, 2012; Faught et al, 2013; Goldberg et al, 2006; Hakim et al, 2014; Mahendra et al, 2013; Mai et al, 2013; Smith et al, 2015; Stuhmiller & Tolchard et al, 2015; Williams-Barnard et al, 2004; Wilson, 2006.

8. Integrated clinical education experiences are typically supervised by a course instructor and a preceptor. The preceptor may be an academic course faculty member, a clinical instructor, or other healthcare professional at the site the student is engaged in the experience, depending upon the course and/or programmatic objectives. Integrated full time clinical education experiences that qualify for a program's minimum number of clinical education weeks shall be supervised by a licensed physical therapist.

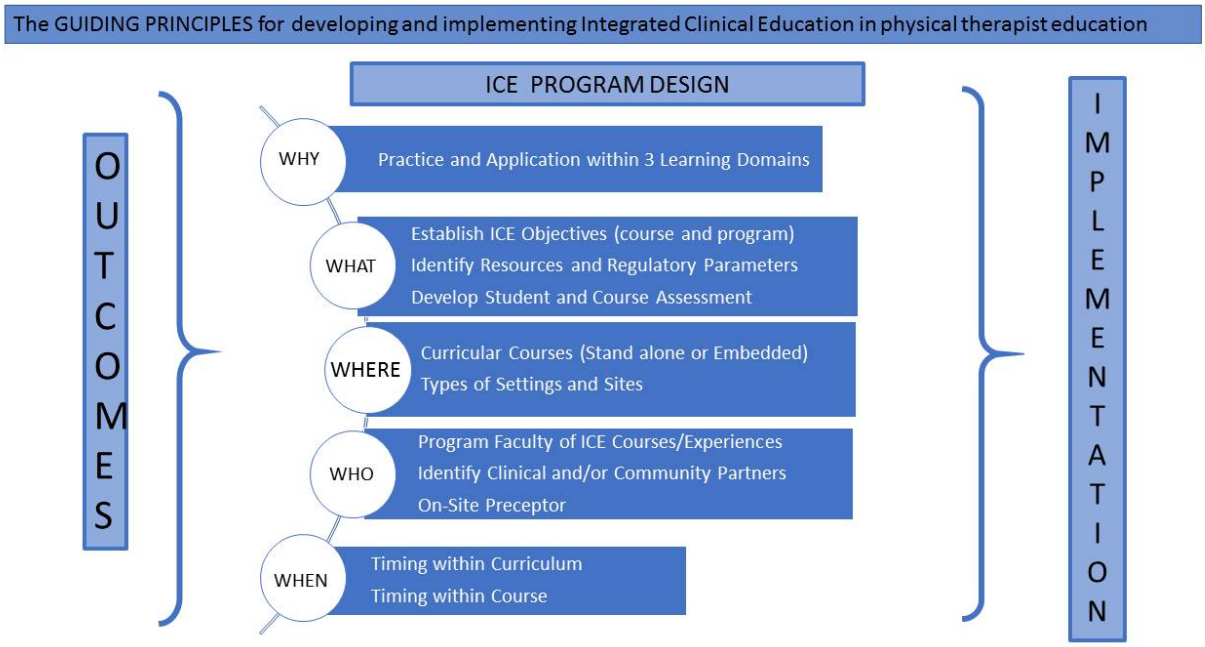
Students who participate in ICE must be supervised, at some level, dependent on the objective(s) of the experience. Three models of supervision were identified in the literature that highlight oversight of the experiences. Onsite supervision was provided either by: 1) an academic faculty member; 2) an academic faculty member plus a community based clinician or other representative or 3) a community based clinician or other healthcare professional. Many times, the course instructor also served as the clinical preceptor during the ICE experience. Regardless of who serves as the onsite preceptor, a faculty course instructor oversees the course management and grading of student outcomes.

References: Benson et al, 2013; Coker, 2010; Doucet & Seale, 2012; Goldberg et al, 2006; Ingram & Hanks, 2001; Jensen et al, 2015; Mai et al, 2013; O'Neil et al, 2007; Reneker et al, 2016; Stern & Rone-Adams, 2006; Stuhlmiller & Tolchard, 2015; Weddle & Sellehim, 2009; Williams-Barnard et al, 2004.

Charge 5. *Develop guidelines for collaborative development and implementation of integrated clinical education experiences.*

The ACAPT integrated clinical education work-panel was charged with developing guidelines to assist academic programs in the development and implementation of integrated clinical education learning experiences for students. To address this charge, the panel created guiding recommendations that are offered below in **bold text.** Provocative questions follow the guideline in *italics* for programs to consider and reflect on during a curricular review process. Finally, each guiding principle is summarized using the evidence behind the recommendation (bullets). The summary is inclusive of the literature reviewed, however should not be considered an exhaustive review of every potential piece of evidence that may lend support to the guiding principle. Figure 1 provides a framework for consideration in the development and implementation of integrated clinical education experiences.

Figure 1: Guiding Principles for Developing and Implementing Integrated Clinical Education



Overall Academic Program Design

Physical therapist education has historically included both a didactic component as well as a clinical education component in its curriculum design. Curricular models vary in educational patterns, including the overall curriculum design, as well as the time and length of clinical education prior to graduation (Jensen et al, 2016). While the clinical doctorate in physical therapy is the expected degree earned to enter the profession of physical therapy today in the United States, no standard design models guide the development of curriculum to include both the didactic and clinical education components (Engelhard & McCallum, 2015; Jensen et al, 2016).

While design models vary, there is a body of knowledge that supports student learning in authentic workplace environments. Scholars of educational philosophy have found that early, authentic

experiences enhance learning (Dewey, 1944; Shulman, 2004; Jensen et al, 2015; Weddle & Sellheim, 2009). These learning experiences provide students with a mechanism to attach a life experience with theoretical knowledge, resulting in more complex insight to basic concepts (Hakim et al, 2014). The inclusion of clinical education experiences throughout a student's academic program appears to provide an environment for transformative practice, where students can focus on live experiences during immersion activities (Benson et al, 2013). Real life experiences support the development of skills, reinforces academic knowledge, facilitates the clinical reasoning process and develops self-confidence with service delivery (Benson et al, 2013).

Designing a professional education curriculum is challenging to ensure students master the expected knowledge, skills and behaviors of the profession. It is an "educator's responsibility to provide students with learning opportunities that develop the ability to engage in complexities of client-centered practice" (Knetch-Sabres in Benson et al, 2013). It is even more challenging to design clinical education experiences that are integrated in a purposeful manner throughout an academic program because of the need for a flexible curricular design, the need for administrative support and the need to stay abreast of the dynamics of the healthcare environment (Jensen et al, 2015). Educators must attend to critical components of curriculum design to ensure effective learning opportunities for students. These critical components include: time spent designing the experience, conducting the application, evaluating the outcomes and providing feedback to students (Wolfe and Byrne in Benson et al, 2013). As a result, 10 key guidelines are offered for academic program consideration during the design, implementation and review of integrated clinical education experiences.

Guidelines

1. **An academic program should identify the programmatic outcomes that are expected when students participate in integrated clinical experiences.**

Question to consider: *Does my program have expected programmatic outcomes that could be or should be met by providing students integrated clinical education experiences?*

- Experiential learning should be intentional from a program level and not just a course level (Hakim et al, 2014). It is important, therefore, for educators to determine the rationale for, and identification of, the expected program outcomes expected to be achieved by participation in integration of clinical education experiences in one's academic curriculum.
- Opportunities should be provided for students to demonstrate knowledge, psychomotor and/or behavioral skills in actual clinical settings with patients who may present with physical, emotional and cognitive impairments, in an unpredictable environment. Some experiences could include:
  - 1) the communication and professional behavioral skills necessary for clinical practice;
  - 2) effective psychomotor skills on individuals other than healthy, unimpaired classmates; and
  - 3) an appreciation of the role inter-professional collaboration in the delivery of health care (Benson et al, 2013; Jenson et al, 2015; Mai et al, 2014).
- Programmatic consideration of integrated clinical education experiences could include:
  - Physical therapist student's demonstration of skills involving the domains of learning-i.e. cognitive, affective and psychomotor, as well as demonstration of clinical reasoning and

problem solving skills to successfully enter the profession. Students' expectations to develop an appreciation for ethical practice and the core values adopted by the profession.
    - Physical therapy practice is expanding into areas of wellness and other areas of health care where patients have been underserved. Student exposure to these activities in unique settings allow students to develop an expanded view of professional possibilities for practice and the needs of communities.
- Physical therapist students are educated to use evidence to support their practice. Application of evidence based practice in authentic settings allow students to apply all aspects of evidence based practice that is based on a combination of "patient values, clinical expertise and best research evidence (Sackett et al, 2000).

2. The academic program considers the intentional placement of integrated clinical education experiences within its curriculum.

Questions to consider: *Does my program consider the intentional placement of integrated clinical education experiences throughout the entirety of the program? Is there a sound rationale where integrated clinical education experiences are placed within the curriculum?*

- A variety of models could be considered for integrated clinical education within a program, addressing placement and type (Hakim et al, 2014; Jensen et al, 2015). Three time frames could be considered:
    - Year 1: Early ICE, in either Semester 1, 2 or 3;
    - Year 2: Mid Curricular ICE; in either Semester 1, 2 or 3 ;
    - Year 3: Late ICE; prior to the completion of a terminal full time clinical education experience.
- Types of experiences:
    - Full-time or part time models
    - Over a weeks' time or span multiple weeks
    - Offered one time only or dispersed throughout the curriculum plan
    - Decisions about placement and timeframes should be based upon program and course objectives and the decision of the faculty.
- Consideration should be given to the complexity of the experience with increasing levels of student performance with successive exposure to clinical environments throughout the didactic portion of the curriculum (Hakim et al, 2014).
- Consideration for peer learning may also be a component of intentional placement of integrated clinical education experiences within an academic program. Integrated clinical education experiences may be designed such that upper level students mentor lower level students to prepare them for roles as clinical instructors, or provide a structured environment for both sets of students to learn essential skills (Wilson, 2006).

3. The academic program identifies the course(s) where clinical education should be integrated within the program.

Question to consider: *Does my program have identified courses where integrated clinical education experiences are provided or could be offered in the future?*

- Integrated clinical education experiences may be offered as distinct, stand-alone courses that are credit bearing within the curriculum and/or experiences that are embedded within existing courses in the didactic curriculum.
    - Considerations to determine if integrated clinical education experiences should be embedded within a course or a stand-alone course should be given to the goals and objectives of the course and expected student outcomes. This may be particularly useful when course content is abstract and difficult for students to understand (e.g. Benson OT, 1 of- 3 interventions courses for Neurological and Sensorimotor Function)
    - It may be beneficial to design stand-alone integrated clinical education courses if the intended goal of the experience is to demonstrate skills and behaviors which span multiple content areas. This may actually promote students' clinical reasoning and integration of course material across the curriculum because students learn by creating their own understanding of information (Benson, 2013).

4. **The academic program, in collaboration with program faculty, develops the course specific objectives for student achievement within an integrated clinical education experience.**

Questions to consider: *Do each of the identified courses that offer an integrated clinical education experience have specific course objectives that are to be met through the experiential learning experience? Do the course objectives relate to the overall programmatic outcomes?*

- Course objectives or programmatic objectives should guide student learning in integrated clinical education experiences by clearly identifying the cognitive, psychomotor and/or affective domains of learning expected of students in order to maximize professional growth (Hakim et al, 2014; Jensen et al, 2015; Mai et al, 2013).
- Objectives for integrated clinical education experiences can guide:
    - the transfer, application and reinforcement of classroom learning to authentic patient/client situations (Hakim et al, 2014);
    - the development of communication skills, interpersonal communication skills collaboration and conflict management (Hakim et al, 2014; Jensen et al, 2015);
    - the application of evidence based practice skills (Mai et al, 2013);
    - the development of therapeutic relationships rather than solely an opportunity for learning interventions (Benson et al, 2013);
    - the exposure to emotional, psychological and social elements of patient/client management (Hakim et al, 2014);
    - the attainment of a professional identity among student physical therapists.

5. **The academic program, in collaboration with program faculty, identifies the timing and timeframes of when clinical education experiences should be integrated within course(s).**

Questions to consider: *Where should the integrated clinical education experiences be placed within a curriculum? Within a course? How much time should be allocated to integrated clinical education experiences to meet the desired outcomes?*

- The timing and timeframes of the integrated clinical education experiences are determined by the program faculty and the intended course goals and objectives as well as programmatic outcomes(Hakim et al, 2014).
    - Curricular flexibility is needed when designing integrated clinical education experiences within a curriculum to allow for modification of timing and structure to ensure student learning and course/program outcomes are being achieved. (Hakim et al, 2014; Jensen et al, 2015; Wilson, 2006)
- The academic program should determine a reasonable amount of time in which skills should be practiced creating a favorable learning environment. (Benson et al, 2013) Students may be involved in integrated clinical education experiences for time periods that range:
    - from 1-2 hours,
    - to half days,
    - to full days.
    - The frequency of these experiences may range from isolated days throughout a curriculum to regularly scheduled, frequent days throughout semesters.
- The exact timing and construction of these timeframes are highly variable but should be offered in a synchronous manner with other didactic programming (Benson et al, 2013).

6. The academic program, in collaboration with program faculty, identifies the individual or individuals who will oversee the integrated clinical education experiences.

Questions to consider*: Who should oversee the organization and delivery of integrated clinical education experiences? Should one or more individuals manage the course? Who is responsible for the onsite supervision of students during integrated clinical education experiences? What is a feasible preceptor to student ratio during an integrated clinical education experience to meet the desired outcomes?*

- Academic leadership is required to identify a course coordinator to oversee the integrated clinical education experience to ensure the critical components of design, application and evaluation of both student and course/program outcomes is achieved.
    - A faculty member, either academic or clinical, is needed to guide student learning to meet intended outcomes. It should be considered that experiences "that occur without either instructor guidance or adequate academic preparation on the part of the student may yield to little insight into the general processes taking place." (Benson et al, 2013).
    - The faculty member may or may not be the director of clinical education, as it depends on the organizational structure and needs of the academic program.
- The onsite supervision of physical therapist students may be provided by one or more of the following:
    - an academic faculty member;
    - an academic faculty member plus a community based clinician or other representative; or
    - a community based clinician or other healthcare professional (Benson et al, 2013; Coker, 2010; Doucet & Seale, 2012; Goldberg et al, 2006; Ingram & Hanks, 2001; Jensen et al, 2015; O'Neill et al, 2007; Reneker et al, 2016; Weddle & Sellheim, 2011; Williams-Barnard et al, 2004).
- Integrated full time clinical education experiences that qualify for a program's minimum number of clinical education weeks shall be supervised by a licensed physical therapist.

- Preceptor to student ratios can be configured based on course or program objectives with consideration for state and supervisory regulation (Wilson 2006).

7. **The academic program, in collaboration with program faculty, identifies the methods of student and course assessment to meet the intended course and/or program outcomes.**

Questions to consider: *How should student learning be assessed? What assessment methods would be best to evaluate the knowledge, psychomotor skills, or behaviors of student progress? What assessments methods should be considered to assess the overall design and the short/long term programmatic outcomes of integrated clinical education experiences?*

- Integrated clinical education experiences should have methods of assessment for both student achievement of learning as it relates to the desired course objectives, as well as course and/or program assessment to determine if the integrated clinical education component of the curriculum has achieved the academic program's desired outcomes.
- Student learning can be assessed at varies times throughout the student's clinical education experiences:
    - either during or after an experience embedded within a course,
    - during or at the end of a stand –alone course, or
    - at the end of a block of courses (Jensen et al, 2015).
- A variety of assessment methods could be used to meet the intended student learning outcome. These include:
    - reflective journals, papers, or portfolios;
    - standardized tests;
    - surveys;
    - debriefing sessions; discussion sessions;
    - check-off lists;
    - use of a clinical performance tool/form for clinical skill acquisition and generic abilities.
- Reflection on action, in action and for action are essential components of learning in integrated clinical education experiences (Schon, 1983; Wainwright et al, 2010).
- The stakeholders should include students, academic faculty, clinicians, and those receiving physical therapy services who can provide feedback and reflection to determine a student's achievement and success during the integrated clinical education component of the academic curriculum (Hakim et al, 2014; Mai et al, 2013; O'Neil et al, 2007; Wilson, 2006).
    - Assessments can be completed by the student, peers, peer mentors, clinicians/preceptors, and faculty. Faculty members are responsible for the final determination of the student's learning (Mai et al, 2013; Weddle & Sellheim, 2011; Smith et al, 2015; Stern & Rone-Adams, 2006; Wilson, 2006).
- Programmatic, longitudinal outcomes of integrated clinical education experiences should be assessed by student performance during subsequent affiliations or internships, by successful completion of licensing\ examinations, employers, and by future clinical performance and attitudes (Ingram and Hanks, 2001; Weddle & Sellheim, 2009; Weddle & Sellheim, 2011; Wilson, 2006).

8. The academic program identifies resources and legal/regulatory parameters that impacts delivery of integrated clinical education experiences within the program.

Question to consider: *What resource are needed to ensure successful design and implementation of integrated clinical education experiences? What are the legal or regulatory parameters that must be considered before implementation of integrated clinical education experiences?*

- Identification of resources is a critical requirement in the development, delivery and assessment of integrated clinical education. Resources must include, but are not limited to:
    - Dedicated program leadership with administration support (Jensen et al, 2015; Weddle & Sellheim, 2009).
    - Sound fiscal management (Jensen et al, 2015) with adequate financial resources available for faculty workload, which includes core and adjunct clinical faculty (Weddle & Sellheim, 2009).
    - Personnel and dedicated time necessary to develop and nurture relationships with clinicians, and community educators to administer and coordinate all activities involved with integrated clinical education experiences; (Hakim et al, 2014; Jensen et al, 2016; Stern & Rone-Adams, 2006)
    - Space and equipment, either on-campus or with local facilities, need to be secured.
- Negotiated affiliation-type agreements with liability insurance may be required for providing integrated clinical education experiences at sites external locations which may be used for educational purposes. These agreements often include, but are not limited to, requirements of health clearances and criminal background checks (Mai et al, 2013).
- Determination of general liability requirements should be reviewed by the program director and appropriate institutional administrative officials, for delivery of clinical education services on campus (Mai et al, 2013; Wilson, 2006).
- Consideration for government and state regulations should be investigated by the institution to ensure regulatory statutes are followed (Romig et al, 2017).
- Review of accreditation standards at the institutional and program level should occur to ensure compliance. Programs are afforded leeway in designing integrated clinical education in which the experiences should take place as outlined in the Commission on Accreditation of Physical Therapy Education evaluative criteria, however knowledge of standards are needed (Wilson, 2006).

9. The academic program, in collaboration with program faculty, selects the type of clinical or community sites required for integrated clinical education experiences.

Question to consider: *Where are the most appropriate settings/places considering the patient population most appropriate for students to achieve the intended course and/or programmatic objectives?*

- Clinical education sites that have the resources available to match the academic programs desired integrated clinical education course and program objectives outcomes should be selected in an effort to achieve desired outcomes.
    - A faculty clinical practice has the advantage of having the core faculty function as instructors in the classroom and mentors in the on-campus clinic, with some programs choosing to augment the experience by including physical therapists from the local

community. Another approach is to have the academic clinical faculty serve as mentors in a variety of community environments (Jensen et al, 2015; Stern & Rone-Adams, 2006; Wilson, 2006).
    - Another approach is to use clinical sites with mentors external to the university (Hakim et al, 2014; Jensen et al, 2015).
- The following should be considered when selecting clinical and community sites to assure a seamless collaboration between the academic and integrated clinical education setting:
    - A population of patients/clients appropriate for the particular integrated clinical education (musculoskeletal, neuromuscular, integumentary, other systems.) (Hakim et al, 2014; Weddle & Sellheim, 2011; Wilson, 2006)
    - Proximity to the campus or reasonable commute for the student(s) (Benson et al, 2013; Weddle & Sellheim, 2011).
    - Physical therapists and other professionals, as appropriate, with experience for the particular integrated clinical education experience. Consideration can be given to:
        - Years of experience, board certifications required or recommended and membership to professional organizations (Hakim et al, 2014; Weddle & Sellheim, 2011; Wilson, 2006);
        - Professionals with mentorship/teaching abilities (CI credentialing required or recommended) (Hakim et al, 2014; Weddle & Sellheim, 2011; Wilson, 2006);
        - Professionals with values that are congruent with university standards for best practice and philosophies of service delivery (Hakim et al, 2014; Jensen et al, 2015; Weddle & Sellheim, 2011).
    - Faculty clinical practices, pro bono clinics, service learning environments, health and wellness programs, and novel community centers have been used successfully for integrated clinical education experiences.
- Integrated full time clinical education experiences that qualify for a program's minimum number of full time clinical education weeks shall be completed in a physical therapy workplace environment or practice setting.

10. The academic program, in collaboration with program faculty, accept responsibility for the development of relationships with representatives of the clinical education site.

Question to consider: *What are the relationships required to develop and sustain integrated clinical education experiences within the community?*

- Academic programs that wish to develop and implement integrated clinical education experiences should facilitate a structure that supports a collaborative working relationship between the academic environment and the clinical education site. (Hakim et al, 2014; Jensen et al, 2015)
- If clinical sites and instructors are external to the academic institution, a bi-directional partnership should be developed to promote translation of didactic content into practice and thereby inform curricular strengths and weaknesses (Hakim et al, 2014).

RECOMMENDATION 1:

That the proposed definition of integrated clinical education (ICE) be adopted as the definition for use within the profession.

SS: Consistent and proper use of the term 'integrated clinical education' is essential to successful communication within the academic and clinical environments of physical therapist education. The panel, after extensive research, discussion, and debate has developed a definition that is clear and representative of the variety of settings and types of experiences that have developed within our profession. The definition also includes a reference to the CAPTE criteria for full-time clinical education, thus recognizing that ICE can take many forms, some of which meet the criteria set forth in accreditation standards.

RECOMMENDATION 2:

That the definition of integrated clinical education be added to the glossary developed by the Common Terminology panel.

SS: The work of the Common Terminology Panel and ICE Panel was coordinated to ensure consistency of terms. Because development of a definition for ICE was a component of this panel's charge, the definition is provided in the report and proposed for adoption. Once adopted, it should be included in the glossary of terms, ensuring consistent dissemination of the term and acronym.

RECOMMENDATION 3:

That the currently published definition of integrated clinical experience in the ACAPT policy entitled Terminology for Clinical Education Experiences (AC 2-13) be rescinded.

SS: A definition for integrated clinical experience was adopted by ACAPT in 2014. The work of the ICE panel has led to a recommendation that the appropriate term is integrated clinical education and that the experiences of ICE are referred to as ICE experiences. Once this new definition for integrated clinical education is adopted, the term and definition for 'integrated clinical experience' should be rescinded to ensure consistency in the use of terms and definitions.

RECOMMENDATION 4:

That the 8 parameters as presented as baseline expectations for integrated clinical education be adopted and disseminated for use by physical therapist educational programs.

SS: Participants in the Summit recognized both the value of ICE and the variability of ICE experiences within the educational programs. As a result, the participants agreed that the profession is best served by inclusion of ICE that is built on agreed upon standards for design and implementation. The 8 parameters developed by the ICE panel provide such guidance.

These parameters were developed after extensive review of the literature, engagement with stakeholders, discussion, and debate. Adoption of these parameters by ACAPT member institutions will ensure that ICE are developed using a standardized set of expectations yet continue to allow and encourage educational programs to involve their students in a wide variety of ICE experiences to meet unique needs or take advantage of unique situations. This guidance for ICE development will also assist faculty in ensuring that the experiences provided to students are based on sound educational practices.

RECOMMENDATION 5:

That the 10 guidelines for development of integrated clinical education experiences be disseminated to physical therapist educational programs.

SS: Distinct from the parameters described above, the panel was also asked to provide guidance to programs interested in developing ICE. The panel developed a list of 10 guidelines that address the intentional steps that faculty should use and consider in the process of developing ICE experiences. The panel believes that the combination of the parameters being used as quality standards along with the guidelines to help guide ICE development will ensure that physical therapist educational programs have the tools necessary to provide high quality and effective ICE to their physical therapist students.

RECOMMENDATION 6:

That the ACAPT Board of Directors share this document, once approved, with the members of the Educational Leadership Partnership (ELP) for discussion on how to move forward with consistent use of the term integrated clinical education within the physical therapist clinical education community.

SS: If we are to achieve consistent use of the term integrated clinical education, the term and its definition will need to be disseminated broadly. This term represents a change from the term previously adopted by ACAPT in the policy 'Terminology for Clinical Education Experiences' (AC 2-13) and thus the change will require a coordinated effort to educate educational programs and clinical faculty on the proper term and proper usage. ELP is well positioned to assist in this initiative.

RECOMMENDATION 7:

That ACAPT support educational research focused on programmatic outcomes of different models of integrated clinical education using standardized outcome measures.

SS: The panel was asked to discern and describe models of ICE that exist within physical therapist curricula. This portion of the charge was accomplished by a thorough review of the literature and the models were described as they relate to the 8 established parameters proposed by the panel.

Through this process the panel discovered that although models are described in the literature, there is little to no assessment of the outcomes of the various models described. In response to this finding, the panel is recommending that additional research be developed and supported. Findings from this

research can then be used by the physical therapy educational community to develop the most effective and efficient models of ICE, thus enhancing the education of the physical therapist students.

MEETING HISTORY

The Integrated Clinical Education (ICE) Work Group met 14 times, including 11 web conference calls and 3 onsite meetings (CSM 2016 and 2017 and ELC 2016) from February 2016-May 2017. Many additional subgroup meetings were held between the meetings of the whole.

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Table 1: Model descriptions of Integrated Clinical Education that currently exist in the literature: Organized by the 8 parameters

Author(s) Year Discipline	**Placement**	**Course/Program Objectives**	**Frequency**	**Type of course**	**Occurrence w/in course**	**Locality**	**Assessment and Outcomes**	**Coordination Supervision**
Benson, Provident & Szucs 2013 Occupational Therapy	4 intervention courses, experiential lab in all, ICE in first Neurological course	Course lab objectives: 1) selecting, administering and interpreting results of assessment instruments and techniques, for use with clients with performance, deficits related to neurological, sensory, motor, cognitive and perceptual dysfunction; 2) designing and implementing intervention plans to remediate and/or rehabilitate occupational performance deficits in the birth to adolescent population; 3) evaluating and utilizing current research in the design and implementation of intervention; and 4) producing appropriate documentation supporting evaluation findings and delineating intervention activities and plans and progress notes	Not clearly presented, first 4 weeks in classroom-then in community	Experiential learning lab within a course with pediatric content	First experiential lab occurred after week 4 of the course	Community site-Private school delivering services to children and adolescents; needed services not available in public school system	Observation of student performance, written and oral feedback of performance, review/assessment of/feedback about intervention plans, student choice of evidence and ability to apply to intervention plan, and patient evaluation report; final course assessment-mastery testing of clinical skills to ensure readiness for fieldwork	Course instructor; partnered with 5 OTs from school Instructor of course and/or community clinician

Coker 2010 Occupational Therapy	After first year in program-part of 2 year program	Course/program objectives not discussed	1 week (5 days, 6 hours day)	Stand-alone course	After first year in the program	1 week day-camp for children with CP	Use student feedback and standardized assessment using Self-Assessment of Clinical Reflection and Reasoning (SACRR) and California Critical Thinking Skills Test (CCTST) to determine if their designed experience is the best approach to accomplish this learning	OT faculty member; OT clinician at camp Licensed OT including the faculty who coordinated the experience
Doucet & Seale 2012 Physical Therapy and Occupational Therapy	Second or third year of PT/OT programs	Course/program objectives not discussed	1 week in length for clinic	Stand-alone course	Embedded in educational course	On campus clinic	Written questionnaire consisting of multiple questions with responses based on a 5-point Likert scale; Patients rated their perception of the student intern(s) assigned, the treatment given, and the organization of the clinic. Students rated their perception of the clinic experience, whether clinic prepared them for field work/clinical rotations, connection to didactic knowledge, and overall benefit. Supervisors rated student interns on their ability to interact with patients,	2 faculty members (one OT, one PT) Faculty and community clinicians (clinical instructors)

							demonstration of knowledge, and application of appropriate interventions, along with their overall perception of the effectiveness and organization of the clinic	
Faught, Gray, DiMeglio, Meadows & Menzies 2013 RN	Unsure	Goal that students could (1) gain skill in providing integrated physical and mental healthcare to their patients, (2) become aware of and possibly improve perceptions regarding mental health/mental illness, and (3) expand their understanding of the critical importance of the therapeutic nurse-patient relationship in caring for all patients	24 hours	Part of mental health course	Unsure	Inpatient healthcare unit	Quantitative end-of-semester evaluations of the clinical rotations, qualitative evaluations of the modified clinical experience (nothing specific identified)	Faculty members 2 clinicians with educator experience who were employed on inpatient medical units, had psychiatric nursing clinical expertise

Goldberg, Richburg & Wood 2006 SLP	Second year course	To facilitate reflective problem-based learning and decision-making, integration of theoretical and clinical knowledge, and student awareness of the importance of evidence-based practice in the area of dysphagia.	15 hours	Part of a dysphagia course	Second year course in spring semester (15 hours)	Community partners with dysphasia management program	Competencies on the students' analysis, synthesis, and evaluation of the following: ethical behavior; ASHA policies and guidelines and local, state, and national legislation; normal and disordered swallowing; effective prevention and assessment; research principles and evidence-based treatment; effective speaking and listening; and written reports, treatment plans, and professional correspondence, reflective journals	Faculty member places student with community supervisor (goal to be placed with externship partner) Community supervisor
Hakim, Moffat, Becker et al 2014 Physical Therapy	Early in curriculum (authentic early experiences)-year 1	Course/program objectives not discussed	Variety	Variety	Variety	Academic-community partnerships	Not described	Faculty led-placement providers (DCE) Clinical faculty; master clinicians
Ingram & Hanks 2001 Physical Therapy	First year of the program	Course/program objectives not discussed	Full time weeks; varying points in time during the first year	MPT students - stand-alone course; BS students - part of course	MPT students - 7 week course end of first year; BS students - integrated 7 weeks (1 week end of fall semester, 2 weeks end of spring semester, and 4 weeks	Variety of traditional PT clinics	Clinical Performance Instrument	Faculty coordinated Clinical faculty

					end of summer semester)			
Jensen, Mostrom, Gwyer, Hack & Nordstrom 2015 Physical Therapy	Variety-highlights early integrated	Course/program objectives not discussed	Variety	Variety (both stand alone and parts of courses)	Variety	Academic-community partners (faculty practice)	Variety - written pre-work, post debriefing	Faculty coordinated and supervised Variety (clinical faculty and academic faculty)
Mahendra, Fremont & Dionne 2013 SLP	Elective course over 2 years (SLP)	Learning outcomes for the course were derived from student self-reflections but the actual objectives were not described	Last 4 weeks of course	Part of a course	Last 4 weeks of course	Local dementia unit	Quiz on dementia, personal reflection prior to and after the service learning (SL), ethnographic interview, screening of individuals (for cognition, affect, hearing and vision), collaborative interpretation of results, research and development of a diagnosis plan, and actual participation in SL	Not explicitly stated--faculty and site personnel Not specified
Mai et al 2013 Physical Therapy	3 courses-successive semesters, starts first year	Specific course/program objectives not mentioned	Semester-long courses	Stand-alone courses	Begin in first year of DPT program - 2 hours twice weekly (Clarke University); winter semester of year 1 (Nova Southeastern U)	On campus wellness clinic: patients referred from community health clinics and local dialysis center; and senior living centers, community wellness centers or long term care centers	Generic abilities and CPI; group debriefings, service learning papers	Faculty coordinated and supervised Licensed PT faculty

Mai et al 2014 Physical Therapy	First year of program	Course/program objectives not discussed	Variety--2 hours two times per week and 40 hours/week	Stand-alone courses and integrated	First year	Community clinics, wellness activities	Interpersonal Communication Questionnaire (ICQ) and Medical Communication Behavior Scale (MCBS); standardized outcome tool for assessment	Course coordinator; other faculty as assigned, including DCE Community clinical supervisors
O'Neil, Rubertone & Villanueva 2007 Physical Therapy	Early, present at 3 different points throughout curriculum	Course objectives that create service learning experiences include engagement (a service component meeting community needs), reflection (a mechanism for students to link service experiences to course content), reciprocity (teacher and learner roles for all participants in the experience), and public dissemination (sharing outcomes among participants)	3 phases	Part of courses	See table 3 of article - variety of times dependent upon specific SL activity	Community workplaces	Outcomes are reported through class discussion, reflection exercises, and course evaluations	Faculty coordinated with community partners Faculty members, lab instructors, nursing assistant
Reneker, Weems & Scaia 2016 Physical Therapy	Second year of curriculum	Course/program objectives not discussed	8 weeks, one time per week	Part of a neuro course	Not specified - only that occurrence was for 8 weeks	Veterans Affairs outpatient clinic	Pre- and post-ICE student perceptions about the geriatric population	Faculty coordinated-PT supervised 2 licensed PTs
Smith, Lutenbacher & McClure 2015 RN	Unsure	Using guidelines from the American Association of Colleges of Nursing Public Health Recommended Baccalaureate Competencies and Curricular Guidelines for Public Health Nursing, the following objectives were determined: students were required to develop, implement,	3 semesters	Part of clinical community health course	Unsure	Transitional care environment	Peer evaluation tool, clinical performance evaluation tool was used to assess clinical competencies and interprofessional collaboration; students also wrote a weekly journal reflection about their experiences	ACP-academic-clinical partnerships developed before, during after courses Nursing faculty

		and evaluate an individualized plan based on their assessment of the patient and their community						
Stern & Rone-Adams 2006 Physical Therapy	First and second year of the program	Primary learning objectives for the first year students included evaluation, examination, assessment skills, and development of professional behaviors as defined by the Generic Abilities behaviors; learning objectives for second year students included cognitive, psychomotor, and affective skills practiced the first year of the program	One day per week every other week	Stand-alone course	Not specified - did begin during the second month of the curriculum and continued for 3 consecutive semesters	Clinical practices (SNF, Adult day care, homeless shelter, outpatient clinics)	Generic Abilities self-assessment, student - faculty clinical instructor self-assessment discussion with feedback, student reflective journal that was discussed at the end of each rotation	Clinical education team coordinated; faculty oversight in areas with prior experience Faculty clinical instructors
Stuhlmiller & Tolchard 2015 RN	Unsure	Course objective: effectively engage with the community, its leaders and other stakeholders in assessing and responding to health and social well-being needs, 2. increase provision of evidence-based integrated health help that promotes collaborative learning, self-determination and responsibility, and 3. demonstrate positive health outcomes as determined by standardized measures	Ongoing clinic-range of 80-120 hours attached to a unit of study	Not explicitly stated	Unsure	Student-led clinic (Australia)-partnered with an existing community clinic	None reported	Principal investigator from academic side partnered with community supervisors; supervisors onsite provided day to day supervision No reference to who provided specific supervision

Weddle & Sellheim 2009 Physical Therapy	Begins first semester, extends into the second semester of second year	Course/program objectives not discussed	1/2 day	Part of courses	Not specific, but second week of the curriculum until the second semester of year 2	Physical Therapist practice settings	Direct outcomes and measures related to ICE not reported, NPTE pass rates of students who participated in the new model were 94% and 100% over the two years discussed, one year graduate survey and alumni survey both indicated students and employers felt the new grad was well-prepared for practice	Faculty and clinical faculty coordinated Clinical faculty
Weddle & Sellheim 2011 Physical Therapy	First semester	Objectives of ICE are to have students practice components of patient/client management; begin to apply basic, medical, and behavioral sciences to clinical science; and to deepen their understanding of the breadth and complexities of physical therapist practice	75 hours prior to first FT experience	Part of courses	Not specific, but 2 experiences occur during first semester year one, and 6 experiences occur second semester year one	Physical Therapist practice settings	Learning activity check off form, skills competency - patient management - and documentation checks throughout model learning units, online reporting forms, once a semester professional behaviors meeting between student and faculty advisor to go over student self-assessment and performance, 10 item professional behaviors assessment of student by the clinical faculty	Faculty coordinated-clinical faculty supervised Clinical faculty

Williams-Barnard, Sweatt, Harkness & DiNapoli 2004 RN	Unsure	Vague objective: engage in health promotion and disease prevention strategies; 2 provide new avenues for secondary and tertiary care; and 3 offer innovative treatment approaches in the community setting to care for people throughout their lives	Part of a course	Part of parent child health and mental health course	Unsure	Community-based partners	Unsure, possibly focus groups to assess student perception of the experience	Faculty led-community supervisors Faculty and community supervisors
Wilson 2006 Physical Therapy	3 consecutive semesters in second/third year of curriculum	ICE I: Become familiar with clinic environment, Observe and assist with patient care, Practice documentation and interviewing skills, Prescribe exercise for a healthy population; ICE II: Develop patient-professional interaction skills, Develop documentation skills, Develop skill in patient handling and treatment interventions, Develop critical clinical reasoning and clinical decision-making skills; ICE III: Refine patient-professional interaction skills, Assume responsibility for all aspects of patient, management, Refine documentation skills, Refine clinical reasoning and clinical decision-making skills, Begin to develop peer mentoring and supervisory skills	One day per week	Stand-alone course	N/A as it is a stand-alone course; begins in the fall semester of year two for 3 consecutive semesters	Campus onsite clinic	ICE I: written evaluations of student performance from both peer mentors in the onsite clinic and from CIs in the exercise/wellness group; ICE II: written midterm and evaluations of the CI's assessment of the student's performance in the areas of safety, professional behavior, communication, examination and intervention skills, and clinical reasoning; ICE III: written midterm and final evaluations of the CIs assessment of the student's performance in the areas of safety, professional behavior, communication,	Faculty coordinated and supervised Core faculty and PT clinicians from the local community

							examination and intervention skills, and clinical reasoning	
Yardley, Brosnan, Richardson & Hays 2014 Medicine	Early in curriculum (authentic early experiences)-year 1	Learning outcomes for individual episodes were generic rather than context specific and related to the title of each experience	Part of a course	Incorporated into medical school activities	Incorporated into medical school activities	Workplaces (health, social, voluntary community services)	Reflective summaries within a portfolio which was graded for presentation of work, depth of reflection and self-awareness	Faculty led-placement providers Observational experiences with "some supervision"
Wilson & Collins 2011 Physical Therapy	First year of program	Leadership and management principles were primary focus	Part of a course-4 to 8 hours/week)	Clinical course coordinated with management course	Clinical course coordinated with management course	On campus and off campus	Student satisfaction, surveys, course evaluations, reflecti on discussions, graduate surveys 1 year post-graduation; Key themes: delegation, communication, giving and receiving feedback; role as manager; development of fundamental business skills	Course coordinator; other faculty as assigned, including DCE Course coordinator

Table 2: Select Outcome Measures and Data Collected in Integrated Clinical Education Models

Author(s)	Year	Discipline	Outcome Measure/ Assessment of Student Learning	Outcomes of Student Learning	Outcome Measure/ Assessment of ICE Model	Outcomes of ICE Model
Benson, Provident & Szucs	2013	Occupational Therapy	Student Surveys	Students valued the opportunity for experiential learning	Student Surveys	Instructor feedback and design of experience all above a 9 on 10 point scale
Coker	2010	Occupational Therapy	Self-Assessment of Clinical Reflection and Reasoning (SACRR) and California Critical Thinking Skills Test (CCTST)	Improvements in clinical protocols, clinical hypothesis, intervention strategies, decision making, judgement; critical thinking skills	None	n/a
Doucet & Seale	2012	Physical Therapy and Occupational Therapy	Self-developed questionnaire with items to assess student performance during clinic (un-validated): professional behaviors: multifactorial (patient evaluation of student) Faculty evaluation on student ability to interact with patients, knowledge and application of interventions	Student and client responses were all positive at the strongly agreed or agree level; instructor ratings of student performance were lower than of student assessment	Self-developed questionnaire with items to assess student and client perceptions of clinic experience;	Positive responses towards benefit of clinic from patient perspective- 100% strongly agreed or agreed to recommend or participate in clinic again; students assessed clinic as a valuable addition to curricula.
Faught, Gray, DiMeglio, Meadows & Menzies	2013	Registered Nurse	Pre-post test scores of Likert scale survey based on observational competencies Mean performance on 10 quizzes with open ended questions Reflective Journals	Significant difference in all 7 competencies Quiz scores varied Improvement in descriptions in journal entries noted from beginning to end	Course evaluations	Student satisfaction with course improved over 3-year timeframe Service learning (SL) inclusion improved student preparation for externships
Ingram & Hanks	2001	Physical Therapy	Clinical Performance Instrument (CPI) Multiple short term vs long term full	No significant differences in ICE curricular model in one program	None	n/a

			time Integrated Clinical Education (ICE)			
Jensen, Mostrom, Gwyer, Hack & Nordstrom	2015	Physical Therapy	Qualitative data	Three core themes: 1) organizational context, 2) people/expectations and 3) enacted curriculum	Qualitative data	Early, integrated clinical education experiences are a key component and an essential component for clinical authenticity of the curriculum
Mahedra, Fremont & Dionne	2013	Speech Language Pathology	Learning outcomes: informal course evaluations; student reflection papers	Student satisfaction was positive Negative comments reflected student anxiety and discomfort with the population	Formal university administration course evaluations	Negative comments about logistics of off campus experiences but rectified during course; overall course rating a 1.1 (highly satisfied); students appreciated the hands on learning component
Mai et el	2013	Physical Therapy	Clinical Performance Instrument (CPI) (used in Integrated Clinical Education (ICE) 1 and 2); progress in professional behaviors	No measurable outcomes reported on student progress	Group discussions about the ICE experiences; self-designed survey about ICE experiences	Outcomes of student perceptions about ICE experiences
Mai et el	2014	Physical Therapy	Interpersonal Communication Questionnaire (ICQ) and Medical Communication Behavior System (MCBS) MCBS is an observational assessment of performance observed.	No significant difference with ICQ between groups except for those with prior work experience in PT field as aide or technician; students with ICE prior to first full time CE performed better in some content and affective categories (student based) on MCBS-but statistical scores not reported in table (only %	None	Limitation was variation in 4 program curricular design-where 4 Clinical Education (CE) rotations were placed

				observed); other categories not significant Overall assessment: ICE prepared students self-perceived readiness in communication realm was higher than non-ICE trained group		
O'Neil, Rubertone & Villanueva	2007	Physical Therapy	Class discussions; reflection exercises	Themes: new level of knowledge and empathy when working with underserved populations; better understanding of physical and social environmental factors that are facilitators or barriers to adopting healthy lifestyles	Course evaluations Participant and community agency outcomes via self-designed questionnaires	Positive responses
Reneker, Weems & Scaia	2016	Physical Therapy	Survey instrument measuring student perception of geriatric physical therapy (adapted from medicine)	Students more likely to seek out employment with geriatric population as a result of the experience	Perceptions of geriatric education in course-based upon enjoyment	Students indicate more geriatric content needed
Smith, Lutenbacher & McClure	2015	Registered Nurse	Peer evaluation tool, Clinical Performance Evaluation tool, Weekly reflection journals	Positive feedback about the experience; Student projects completed reported	Lessons learned	Student participation voluntary because of time commitment exceeded course requirements; Student toolkit valuable addition to structure of experience
Stern and Rone-Adams	2006	Physical Therapy	None	n/a	Program outcomes presented	Curricular design; Benefits and challenges
Stuhlmiller& Tolchard	2015	Unsure	None	n/a	Program outcomes reported	Number of patients served, services provided; Inter-professional Clinical Education (IPE) exposure; cost savings to community

Weddle and Selheim	2009	Physical Therapy	None	n/a	Program outcomes	Curriculum design Description of clinical partnerships and clinical faculty responsibilities
Weddle and Selheim	2011	Physical Therapy	None	n/a	Program evaluation plan	Descriptive stats 7 cohorts of students in study outcomes Qualitative data and survey responses Student data: benefits of working with patients rather than with classmates Graduate data (prior to graduation) Clinical faculty data (positive and negative) Core faculty data
Williams-Barnard, Sweatt, Harkness & DiNapoli	2004	Registered Nurse	California Critical Thinking Skills Test (CCTST)	Loosely presented data Post scores have been above standardized mean with wider range of scores between pre and posttests Post scores have been above standardized mean with wider range of scores between pre and post tests	Integrated Clinical Education (ICE) program assessment	Arnett Stimulation Test (AST) and National League for Nursing (NLN) Baccalaureate Achievement Test (CNAT): variable results National Council Licensure Examination-Registered Nurse (NCLEX-RN) outcomes related to clinical care: upward trend during pilot with ICE

Wilson	2006	Physical Therapy	Student and Clinical Instructor (CI) (oral) debriefing and questionnaires	Positive feedback and enhanced student professional and clinical development	Student and CI (oral) debriefing CI advisory panel	Feedback results in changes to Integrated Clinical Education (ICE) experiences Feedback during full time Clinical Education (CE) (after ICE)-anecdotal evidence Graduate surveys=open ended qualitative data-provides a solid foundation to build confidence and professional development Number of patient visits
Wilson & Collins	2011	Physical Therapy	Student satisfaction surveys, reflective journaling, graduate surveys 1 year post graduation	Student learning objectives were met and often exceeded Students identified and managed challenges Development of success and professionalism	Course evaluations Role of Physical Therapists as manager End of semester feedback sessions Graduate surveys 1 year post	Program evaluation data presented: descriptive both quantitative and qualitative
Yardley, Bronan, Richardson & Hays	2014	Medicine	Learning outcomes for individual episodes of Authentic Early Experience (AEE)	Unless AEE is appropriately placed on each of the workplace spectra, then socio-cultural theories suggest that students will not be able to adequately engage in the processes of the educational spectra	Program evaluation	Qualitative data on expectations, processes and consequences of AEE

INTEGRATED CLINICAL EDUCATION FOR PHYSICAL THERAPIST STUDENTS
Definition, Parameters, and Guidelines

Educational literature suggests that integrated clinical education experiences, a form of experiential learning, can expose students to aspects of patient centered care during flexible clinical training periods throughout the curriculum. These experiences afford students an opportunity to facilitate development of their cognitive, affective, and psychomotor skills while concurrently allowing academic and/or clinical faculty to facilitate student development with respect to the transfer of didactic knowledge into clinical application. (Hakim et al, 2014) The definition, parameters, and guiding principles presented in this document are provided to assist programs in the development of integrated clinical education experiences.

Definition
The following is the definition of Integrated Clinical Education (ICE).

Integrated clinical education is a curriculum design model whereby clinical education experiences are purposively organized within a curriculum. In physical therapist education, these experiences are obtained through the exploration of authentic physical therapist roles, responsibilities and values that occur prior to the terminal full time clinical education experience.

Integrated experiences are coordinated by the academic program and are driven by learning objectives that are synchronous with didactic content delivery across the curricular continuum. These experiences allow students to attain professional behaviors, knowledge and/or skills within a variety of environments. The supervised experiences also allow for exposure and acquisition across all domains of learning and include student performance assessment.

For integrated clinical education experiences to qualify towards the minimum number of full-time clinical education weeks required by accreditation (CAPTE) standards, it must be full time and supervised by a physical therapist within a physical therapy workplace environment or practice setting.

ICE=Integrated Clinical Education

Parameters for Integrated Clinical Education
The following are the parameters and baseline expectations for ICE in physical therapist education. Please see the full report for the evidence supporting these parameters.

1. Integrated clinical education may occur in any academic term prior to the completion of the didactic coursework leading to the completion of a terminal full time clinical education experience.

2. Integrated clinical education experiences will have specific desired outcomes that correspond to course and/or programmatic objectives.

3. Integrated clinical education experiences may be represented as a component of a didactic course or a standalone course that occurs in a synchronous fashion with other didactic coursework.

4. Integrated clinical education experience time frames are developed by the academic program based upon the course and/or programmatic objectives. Integrated clinical education may include full time and/or part time experiences.

5. Integrated clinical education experiences may occur in a variety of learning environments including campus or community based clinical or non-clinical settings, based upon the course and/or programmatic objectives. Integrated full time clinical education experiences that qualify for a program's minimum number of clinical education weeks shall be completed in a physical therapy workplace environment or practice setting.

6. Integrated clinical education experiences shall include student assessments that are designed to link to the course or program objectives with expected student progression in professional behaviors, clinical knowledge, and/or skills.

7. Integrated clinical education experiences are coordinated by a faculty member of the academic program, in partnership with a coordinator from the clinical education site.

8. Integrated clinical education experiences are typically supervised by a course instructor and a preceptor. The preceptor may be an academic course faculty member, a clinical instructor, or other healthcare professional at the site the student is engaged in the experience, depending upon the course and/or programmatic objectives. Integrated full time clinical education experiences that qualify for a program's minimum number of clinical education weeks shall be supervised by a licensed physical therapist.

Guidelines for Development of ICE

The following are guidelines for collaborative development and implementation of integrated clinical education experiences. Please refer to the ICE Panel report for the provocative questions and evidence that accompany these guidelines.

The key to well-developed integrated clinical education experiences is intentionality. Intentional and targeted instruction encompasses planning with a purpose, cultivating the learning environment, instructing with intention, and assessing the impact that the model has on student learning which is what the guiding principles are attempting to direct (Fisher, Frey & Hite, 2016). The guiding principles provided focus on the key elements that programs should consider in developing or refining integrated clinical experiences. These include:

1. An academic program identifies the programmatic outcomes that are expected when students participate in integrated clinical experiences.

2. The academic program considers the intentional placement of integrated clinical education experiences within its curriculum.

3. The academic program identifies the course(s) where clinical education should be integrated within the program.

4. The academic program, in collaboration with program faculty develops the course specific objectives for student achievement within an integrated clinical education experience.

5. The academic program, in collaboration with program faculty, identifies the timing and timeframes of when clinical education experiences should be integrated within course(s).

6. The academic program, in collaboration with program faculty, identifies the individual or individuals who will oversee the integrated clinical education experiences.

7. The academic program, in collaboration with program faculty, identifies the methods of student and course assessment to meet the intended course and/or program outcomes.

8. The academic program identifies resources and legal/regulatory parameters that impacts delivery of integrated clinical education experiences within program.

9. The academic program, in collaboration with program faculty, selects the type of clinical or community sites required for integrated clinical education experiences.

10. The academic program, in collaboration with program faculty, accepts responsibility for the development of relationships with representatives of the clinical education site**.**

Current evidence outlines the intentionality of integrated clinical education experience placement, purpose, necessary resource allocation, and desired outcomes within physical therapist education at the program level. As such, integrated clinical education experiences may be embedded within a course or occur concurrent with other coursework depending on the desired programmatic and/or course objectives and desire outcomes. Intentionality also occurs in the design, resource necessities, and placement of objective driven collaborative learning experiences that adhere to pedagogically sound principles that are innovative and/or flexible (Fisher et al, 2016)

While much attention should be placed on the design and implementation of integrated clinical education, planning for and completing a well-rounded assessment is also required (Weddle & Sellheim, 2009). Outcome assessment of student learning, overall course success, and the integrated clinical education program design are three targeted areas for consideration. Selection of valid and reliable outcome measures that provide faculty and students summative and formative feedback to guide learning is imperative. Table 2 provides an example of outcome measures used and type of data collected that have guided academic programs. It is important to note that no attempts were made to compare models or outcome data; rather the data generated provided a thematic analysis of important concepts within the literature.

Despite the fact challenges in educational research exist (Jensen et al, 2016), it behooves our profession to continue researching outcomes of innovative curricular models, including integrated clinical education experiences, to continue to strive for excellence in physical therapist education. Therefore, further investigation into best practice for ICE experiences should continue in a collaborative manner between institutional administrators, academic physical therapy faculty, clinical faculty, patients, and students. It is hunger for improvement that pushes boundaries to promote excellence (Fullan, 2005).

STUDENT READINESS STRATEGIC INITIATIVE PANEL

Final Report

June 2017

BACKGROUND

Two of the Summit recommendations included aspects of ensuring consistent preparation of students for varying levels of clinical education. This consistency was described as 'a requisite core set of knowledge, skills, attitudes and professional behaviors' (Recommendation IX) and 'clinical core performance competencies' (Recommendation X) for each level of clinical experience, including early clinical experiences. A third related recommendation suggests the need for defining entry-level graduate competence which is contemporary and adaptable to a changing healthcare environment (Recommendation XI). The charge for the Student Readiness panel considered addressed recommendations IX and X.

CHARGE

The ACAPT Student Readiness Strategic Initiative Panel will identify and define a core set of competencies (knowledge, skills, attitudes and professional behaviors) that are to be demonstrated by students prior to entry into full-time clinical education.

For the period of October 2015 through October 2017 the ACAPT Board of Directors' determined the charge for the ACAPT Student Readiness Task Force as:

1. Investigate and describe models of competency assessment used across other health professions
2. Propose two format options for establishing competencies to the board membership
3. Collect broad-based, representative data on minimum competency s from the physical therapy practice community
4. Once a preferred model is selected and minimum competencies are identified, propose baseline expectations and criteria for minimum competencies (knowledge, skills, attitudes and professional behaviors) that must be met within the academic program by student prior to progressing into full-time clinical education experiences.
5. Develop guidelines for academic programs to implement these competency requirements within their curriculum.

A call for volunteers for this Student Readiness Strategic Initiative Panel was made in the fall of 2015 with members appointed in December of 2015. The Student Readiness Strategic Initiative Panel consists of a 12-member team with a wealth of information and experience. There are 4 Directors of Clinical Education, 2 Center Coordinators of Clinical Education, 2 Academic Faculty, 3 Program Directors, and 2 Associate Deans. The ACAPT Liaison to the group is Shawne Soper, PT, DPT, MBA.

SUMMARY OF WORK

The panel met at CSM 2016 and began reviewing literature from different health professions including medicine, pharmacy, nursing, speech, athletic training and occupational therapy. The panel investigated the varied competency expectations of the different professions as well as when and how they assessed students at various points along their continuum of learning. This information was collected and summarized to meet the following charge:

Charge 1: *Investigate and describe models of competency assessment used across other health professions.*

Competency based education training (CBET), which is defined as the ability to perform a task or activity successfully and efficiently, is learner-centered and began in the teacher education reform movement of the 1960s (Sullivan, 1995). According to Shah (2016), competency is "the ability of a health professional which can be observed. It encompasses various components such as knowledge, skills, values, and attitudes." A student applies these competencies in an actual setting and once they can they are considered competent. Competency-based education in the health care professions has become a prominent approach to postgraduate medical training in Canada, the Netherlands, the United Kingdom, the United States, and many other countries. Other health professions, such as nursing, have used competency frameworks for decades, while others, such as dentistry, have described the required competencies of their professions more recently. The nursing profession embraces a variety of educational programs and tracks their learners throughout a continuum including competency at the associate, bachelors (AACN, 2008), masters (AACN, 1996;AACN, 2011), and at the doctor of nursing practice (DNP) level (AACN, 2006).

For medical education, the Association of American Medical Colleges (AAMC) has published guidelines for medical schools to follow in designing their pre-clinical curriculum (AAMC, 2008). This document outlines 12 competency areas for medical students to achieve before embarking on clinical clerkships: professionalism, patient engagement and communication skills, application of biomedical knowledge, history-taking, patient examination, clinical testing, clinical procedures, information management, diagnosis, clinical intervention, prognosis, and personalizing patient care. The document provides a series of recommendations to guide medical schools in designing curricula that enable students to achieve these competencies.

Once medical students complete their clerkships and graduate from medical school, most progress to specialty residency programs. As a result of the Outcomes project in the late 1900s, the AAMC established 8 competency domains as well as Core Entrustable Professional Activities (EPAs) that medical school graduates should achieve prior to beginning a residency (AAMC, 2014). These EPAs focus on "activities" that encompass the day-to-day work of the resident physician rather than traditional competencies. The EPAs are generic in that they are not specific to any one medical specialty. For each of the 10 EPAs, the document includes descriptions and vignettes of learners who have either met or not met the expected level of performance. "EPAs are observable and measurable and therefore can function as a quantifiable outcome that can aid in the assessment of a student (Ten Cate, 2013)."

Physical Therapy Literature:

There are many established requirements and competencies for physical therapy students at various points along their continuum of learning. There are pre-requisites for students to enter the DPT program (AC-4-12 STANDARD PREREQUISITE COURSES FOR ADMISSION IN ENTRY-LEVEL PHYSICAL THERAPIST EDUCATION PROGRAMS). Setting- specific core competencies have also been established. For example, in pediatrics, a qualitative study using the Delphi method by Kenyon, Dole and Kelly (2013), looked at the perspectives of Academic faculty and Clinical Instructors on Entry-Level DPT Preparation for pediatric physical therapist practice. They found consensus on the knowledge, skills, and abilities required for pediatric PT practice at various points in the curriculum; before a pediatric clinical experience, following a pediatric clinical experience and prior to entrance into clinical practice. The authors also defined levels of proficiency pertaining to knowledge as well as skills and abilities at each of those points. This study brings forth the concept of various skills and abilities expected at various points of a pediatric specific curriculum.

A task force from the Section on Women' s Health developed guidelines to assist physical therapist education programs with identifying specific women's health content that should be included in entry level physical therapy programs (APTA: Women's Health Section, 2014). The study identified content

along with a level of competence the entry-level student is expected to achieve ranging from familiarity to mastery. This study provides a comprehensive framework for determining proficiency of various skill sets.

Gazsi (2011) explored expectations of physical therapy employers, and academic and clinical faculty regarding entry-level knowledge, skills, and behavior of physical therapist graduates in acute rehabilitation practice. The author found consensus on select entry-level characteristics and most of the participants reported that new DPT graduates are meeting expectations in the acute rehab practice setting. Other population and setting-specific core competencies for entrance into clinical practice exist, including integumentary, hand therapy, musculoskeletal, acute care, and research to name a few (Gazes, 2011; Gorman, 2010; APTA: Neurology Section, 2011; Rapport, 2014)

Entry-level expectations have been reported in the literature from a variety of viewpoints (Jette, 2007; Lopopolo, 2004; Mathwig, 2001; Schafer, 2007). A study by Jette et al (2007) surveyed physical therapy clinical instructors on what aspects of a student' s performance demonstrate that they meet entry-level expectations for the physical therapy practice. Participants identified seven attributes including: knowledge, clinical skills, safety, clinical decision-making, self-directed learning, interpersonal communication, and professional demeanor. The study described behaviors and characteristics that clinical instructors believe comprise entry-level performance along with a decision-making process by instructors that integrates characteristics into subjective perception of an entry-level clinician. The study did not identify the specific clinical skills needed for entry-level physical therapy performance.

Chipchase et al (2012) examined the characteristics of student preparedness for clinical learning from the perspective of clinical educators. The study identifies certain behaviors such as willingness, professionalism, and communication as being most important when entering a clinical experience. This study focuses on the student physical therapist as they enter clinical experiences, not on the behaviors required for entry-level practice. It identifies key behaviors and characteristics from the clinical educator' s perspective on readiness. However, it does not provide a consensus amongst other stakeholders including academic faculty and directors of clinical education, who are all integrally involved in clinical education. Nor does it provide levels of competence needed in the knowledge, skills and attitudes identified.

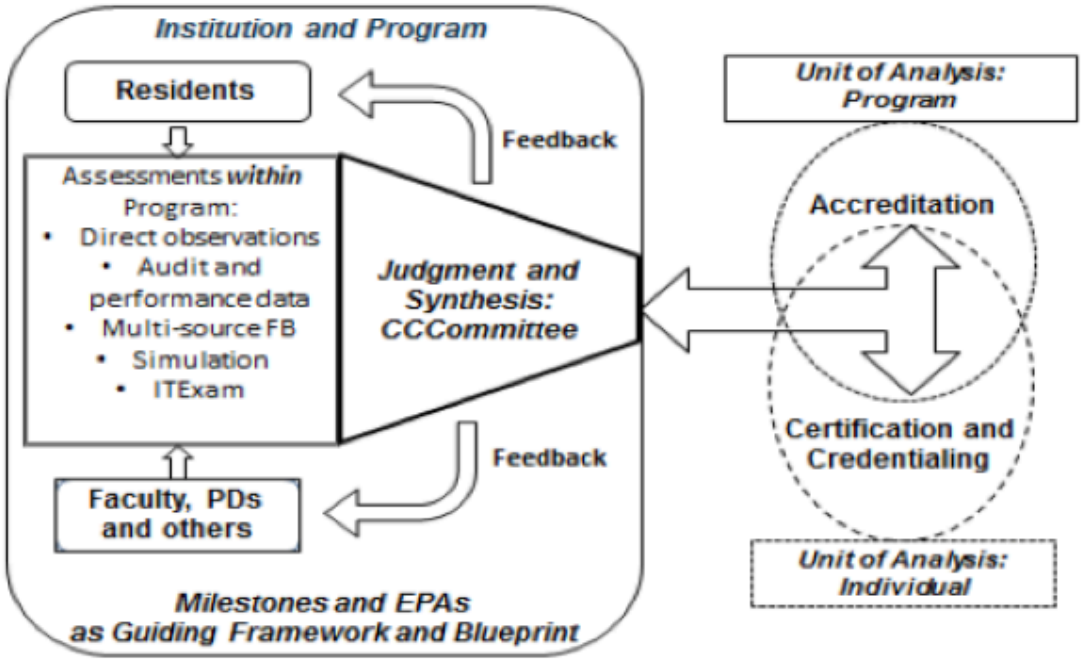
The American Physical Therapy Association has developed a framework identifying minimum required skills of physical therapist graduates at entry-level (APTA, 2005), however research still demonstrates that disparity exists in perceptions of what constitutes entry level performance. With the inception of the first residency and fellowship education programs in 2000, research has began to examine competence at the post-professional level. A recent publication by Furze et al (2016) looked at PT Residency and Fellowship Education: Reflections on the Past, Present, and Future. The authors proposed 7 domains of competence, similar to the 8 from medicine, which include: knowledge of practice, inquiry skills, clinical skills, clinical reasoning, systems-based approach, communication, and professionalism. These domains are thought to theoretically ground residency and fellowship programs and facilitate a more consistent approach to curricular development and assessment.

Studies from various health professions that have examined student readiness have included similar terms such as knowledge, skills or abilities, as well as those related to the affective domain including: attitudes, and professional behaviors. While the terms between the different studies are similar, to be clear moving forward we will call the totality of anything that is important for a student to demonstrate prior to a clinical experience as the KSAs. As healthcare professions begin to identify the essential KSAs that are required at various points in the educational process, the question of how to assess these components arise. The health professions literature demonstrates a variety of tools or assessment strategies that can be utilized for psychomotor and communication skills as well as knowledge and

professional behavior assessment (Peterson, Calhoun, and Rider, 2014; Zhu et al., 2017; Zarifsanaiey, Amini, and Saadat, 2016; May, 1995). In medicine, Competency-based medical education (CBME) serves as the foundation for the Next Accreditation System (NAS) (ACGME, 2016). This system includes the Milestones and Clinical Competency Committees (CCC), both of which are designed to monitor and continually improve educational outcomes, and therefore clinical outcomes, at the level of the individual learner and the program (ACGME, 2016).

A competency is achieved gradually, step–by-step. These steps are designated as milestones (Shah, 2016). Milestones describe performance levels residents and fellows are expected to demonstrate for skills, knowledge, and behaviors in the clinical competency domains (ACGME, 2016). They lay out a framework of observable behaviors and other attributes associated with a resident's or fellow's development as a physician. They are competency-based developmental outcomes that can be demonstrated progressively by residents and fellows from the beginning of their education through graduation to the unsupervised practice of their specialties. According to the Milestone Guidebook (2016), "Residents/fellows are assessed routinely through a combination of assessment tools. These include: direct observations; global evaluation; audits and review of clinical performance data; Case Logs; multisource feedback from team members, including peers, nurses, patients, and families; simulation; in-service training examinations (ITEs); self-assessment; and others." An overview of this system is depicted below in Figure 1.

Figure 1: Overview of Professional Self-Regulatory Assessment System in the U.S.



Physical therapy education literature has begun to identify evaluation techniques as well as specific rubrics that can be utilized for various knowledge, skills and behaviors (Kanada et al., 2016; Christensen et al., 2017; Anderson and Irwin, 2013; Furze et al., 2015). However, the reliability and validity of these tools must be considered when deciding on their use within individual PT programs. Before one can truly develop the appropriate assessment system, the minimal knowledge, skills, and abilities and at what level of proficiency must first be identified.

Competency based education and subsequent assessment is present throughout various health professions. The medical profession seems most evolved and can provide us with a structure and process that we might want to consider as such systems are developed for physical therapist education.

Charge 2: *Propose two format options for establishing competencies to the board membership.*

The panel discussed various possible options to establish competencies including obtaining consensus within our panel, focus groups, consensus conference, surveys, and a Delphi study. To achieve the aim of our panel, the group selected the Delphi method of consensus development. A Delphi study allows individuals with expertise and insight to provide information and to reach consensus on a particular topic. This method engages a group of participants or experts over multiple rounds of surveys to establish a consensus on the particular topic of interest (Keeney, 2011; Soma, 2009). The purpose of this Delphi study was to gain consensus on the pre-requisites for students entering a first full-time clinical education experience, specifically focusing on what attributes signaled readiness. This readiness for the first full-time clinical education experience would be relevant regardless of where it falls within a program's curriculum or the particular setting in which the experience takes place.

Given the variability of curriculum in CAPTE accredited physical therapy programs as well as the placement of clinical experiences within that curriculum, the panel thought it best to begin with a students entrance into the first full-time clinical education experience. The panel also felt that the early clinical experiences can be in any practice setting and are often the most challenging for DCEs/ACCEs to find student placements, as clinicians are reluctant to take on a student while on their first clinical experience. Starting with competencies for this experience would only be one point along the continuum of learning where students would be assessed but was an important place to start. A key feature to competency-based educational principles is the increased emphasis on assessment, especially ongoing, longitudinal assessment that enables the faculty to more accurately determine the developmental progress of the learner, as well as to help the learner through frequent feedback, coaching, and adjustments to learning plans (Holmboe, 2010; Kogan, 2013).The Delphi method was identified as the most practical method to gain consensus among the various members of the physical therapy practice community.

As previously mentioned, the panel chose the Delphi method as a means to obtain consensus on the knowledge skills, attitudes and professional behaviors for entrance into the first full time clinical education experience and to also address charges 3 and 4:

Charges 3 and 4: *Collect broad-based, representative data on minimum competency expectations from the physical therapy practice community*

Once a preferred model is selected and minimum competencies are identified, propose baseline expectations and criteria for minimum competencies (knowledge, skills, attitudes and professional behaviors) that must be met within the academic program by student prior to progressing into full-time clinical education experiences.

To obtain a group of expert participants, in November 2016 all ACAPT member institutions were contacted and asked to nominate 4 individuals who, based on their exposure and experience (defined below), would be able to reflect and provide their expert opinions and insights on student readiness. The program directors of ACAPT member institutions were asked to nominate:

- One Academic faculty member (5 years of experience as a Core Faculty member)
- One Director of Clinical Education or Academic Coordinator of Clinical Education (5 years of experience as a DCE/ACCE)
- One Recent Graduate (within the past 8 months, with successful passage of the licensure exam)

- One Clinician who serves (or who has served) as clinical instructor for DPT students (at least 5 first full-time experience students); this participant was nominated specifically by the program's DCE/ACCE.

Program directors were asked to forward an invitation email to these individuals and participants indicated their willingness to participate by responding to one of the researchers. Specific questions in the first round survey were designed to confirm that participants met the relevant inclusion criteria.

The survey first round survey was developed based on the input of an expert review panel that provided feedback and assistance on individual survey questions and instructions. This first round survey consisted of a series of demographic questions (based on the participants group) as well as open-ended questions which asked participants to think about their experiences with students as they began their first full-time clinical experience. Participants were asked to describe the student that they would consider ready for this clinical experience and list the items they considered requisite for a student on their first full time clinical experience. Participants were instructed to consider this readiness regardless of when the first full-time experience occurred within the student's academic curriculum or the setting in which that first experience took place.

Participants were also asked how they could know or make the determination that the student they described was ready for the clinical experience. In accordance with the Delphi method, surveys in subsequent rounds then built on the responses collected in previous rounds. The second round survey provided all of the unique responses to the questions from Round 1 with regard to readiness and gathered information about clarity and redundancy in the items provided. In order to create the second round survey, the researchers conducted content analysis of the first round responses and placed the results in broad categories to provide organization to the data in themes. Researchers worked in teams to analyze information from individual stakeholder groups first and then came together to complete the content analysis of the entire set of data from the first round. Responses to the second round survey were also analyzed by researchers in small teams in order to consolidate areas of redundancy and to improve on clarity based on participant feedback. Whenever there were disagreements, the group engaged in discussion and consensus on the final wording or method of consolidation of items.

The third round asked participants to rank their agreement with the remaining items (within 14 identified themes) using a 5-point Likert scale (strongly agree – strongly disagree). This process identifies areas of consensus on those items that are essential to student readiness for a first full time clinical experience. In the fourth round participants provided the level of proficiency, as defined in Table 5, they considered a student should be expected to achieve to demonstrate readiness on each item that achieved consensus in Round 3 (>80% agreement).

In each round, participants were invited to provide comments and feedback on items and themes. A final step in the fourth and final round was to indicate the types of assessments that would be appropriate for determining readiness for each theme identified. The list of available assessments provided for selection was generated from participant responses to questions from the first round survey on how to determine or assess for readiness.

Results:

Surveys were distributed to the 147 individuals who accepted the nomination (39 Academic faculty, 34 Directors of Clinical Education, 37 Clinical Instructors and 38 recent graduates). The total response rate for Round 1 was 88.4%, with 130 round-one surveys returned (Table 1). Respondents to the survey represented a broad group of stakeholders deeply interested in clinical education. They were affiliated with DPT programs across all regions of the United States (Table 2).

Respondents from all cohorts represented affiliations with DPT programs from across the country but focused primarily in urban and suburban areas. The typical program had four clinical education experiences, ranging from a total of 30 to 54 weeks of full time clinical experiences (average = 36 weeks). The majority of program affiliates reported their first full time clinical experience occurred at the end of the first year of the curriculum and 10 respondents indicated that their first full time clinical experience began following conclusion of all didactic education. Some questions were specific to a stakeholder group and therefore not all groups were queried. For example, the number of weeks on the 1st clinical experience was asked of recent graduates only. Those individuals with a preference of setting for the first full time clinical experience preferred outpatient orthopedic or acute care (Table 3).

Responses regarding elements of competency from each cohort were consolidated, duplicates eliminated, and grouped into twenty themes. Each theme had between one and 27 supporting elements (total = 193). All themes and elements were returned to 132 participants for consideration in Round 2. Recommended methods of assessing the elements were also consolidated across all groups and distilled down to eight, which represent a breadth of assessment in the DPT curriculum.

One hundred and five surveys were completed and returned during round two (79.55%). Responses were reviewed and clarifications and eliminations were executed by consensus of the research team. Round two resulted in consolidation of six themes and the consolidation or elimination of 54 elements due to similarity or redundancy. Themes and elements derived from each round of data analysis are reported in Table 4. The final remaining 14 themes and their 139 elements were returned to participants in the third round.

One hundred thirty-two surveys were distributed in round three and 104 (78.79%) were returned. All 14 themes achieved greater than 80% agreement along with 95 specific elements. The 44 elements that did not achieve 80% consensus were deemed less important or not essential by participants and were eliminated from the final list for round four. Appendix A contains the list of themes along with the levels of consensus achieved for the 95 surviving elements. Appendix B contains the 44 elements eliminated by theme and the percent consensus achieved.

In the final round of this Delphi survey, surveys were sent to the same 132 ongoing participants and 104 (78.79%) responses were received. Total responses by round are reported in Table 4. Based on group consensus as established by the 80% threshold, only 9 elements were identified as requiring proficiency prior to the first full- time clinical experience (Table 6). The majority of these elements fell in the area of professional behaviors while others surrounded successful academic performance. There was general agreement between stakeholders for elements determined to require proficiency prior to the first clinical experience (Appendix A). Only four elements that one of the stakeholder groups reported as requiring proficiency did not reach the level needed to reach achieve overall consensus. Two of these elements believed by experienced clinical instructors to be critical prior to the first clinical experience were related to work ethic and the familiarity and adherence to the core values of the APTA. Recent graduates valued two elements highly that didn't reach the level of overall consensus. These were related to the willingness to seek, and be receptive to, feedback.

Participants rated the vast majority of elements as requiring at least an Emerging level of mastery (ratings of Emerging or Proficient) prior to beginning the first full time clinical experience (Appendix A). There were, however, 34 elements that did not achieve the level of consensus required to indicate that they be more than Familiar to the student prior to the first full time clinical experience (Appendix A).

Assessment: Respondents identified their preferred method of assessing competence in each of the fourteen themes during round four (Table 7). Using the predetermined level of consensus of 80% there

were 1 to 3 methods of assessment that reached consensus for each theme. Themes representative of the cognitive domain were identified as best assessed through written exams or skills checks, while those in the affective domain were identified as best assessed through faculty and student assessment. Participants reached consensus on assessing psychomotor skills through practical examination performance.

Discussion:

As a result of this process the findings have confirmed those of previous studies (Roach, 2012;Kenyon, 2013;May, 1995) that highlight the importance early on, of skills within the affective domain. In particular, communication and professionalism.

The results were analyzed by each stakeholder group, as well as the numerical average across groups (combined stakeholders). There were 95 elements that the combined stakeholders agreed were appropriate for readiness for a first clinical experience. Nine elements were identified as requiring proficiency prior to the first full-time clinical experience (Table 7). Three of the nine were dichotomous choices (accomplished/present or not) which the combined stakeholders agreed should be present: students should have the minimum academic GPA, meet minimum expectations for academic practical examinations, and have resolved any and all safety concerns. The 6 additional elements fell in the area of professional behaviors also shown in Table 7: demonstration of polite, personable, engaging and friendly behaviors; introduction of one's self to CI, clinical staff, and patients; respect for patients, peers, healthcare professionals, and community; punctuality with all assignments; understanding of HIPAA regulations; and appropriate dress code. Thus, we had consensus on 9 elements as essential for readiness, with a need to be proficient prior to the first fulltime clinical experience.

When looking at the remaining 86 elements there were 4 elements that did not receive an overall consensus of 80% for a particular level of proficiency, but did achieve 80% proficiency in at least one stakeholder group. These include appropriate work ethic, which achieved threshold consensus in the clinical instructor and recent graduate groups; core values identified by the APTA, which achieved consensus in the clinical instructor group; being open and receptive, verbally and non-verbally, which achieved consensus in the recent graduate group; and seeking assistance when needed, also in the recent graduate group.

As seen in Appendix A, the results from emerging and proficient levels of proficiency were combined. By doing so we found that there are 58 items that participants felt that students, at a minimum, had to demonstrate at least an emerging level of proficiency. This information can be quite helpful for academic programs in that they may need to increase the amount of content coverage in this area so that students have a bit more depth. Just being familiar would not be sufficient.

Findings from this study can assist programs in their curricular development to strategically place courses that cover content that students will need to know prior to the first clinical experience.

RECOMMENDATION 1:

That the list of knowledge, skills, and abilities (KSAs), grouped into 14 themes, requiring students' demonstration of competence prior to entering their first full-time clinical experience as shown in Appendix C (First Full-time Clinical Experience KSAs) be adopted.

SS: Academic programs should be encouraged to provide students with the appropriate educational experiences/modules so that the student may achieve the level of proficiency indicated for the said items (Appendix A). This information would ensure consistent preparation prior to a student's first full-

time clinical experience. Given this information, clinical instructors can be confident that students would begin their clinical experience with competency in these items and can therefore develop and provide a more appropriate learning environment for a student to continue to grow. The format of the themes and elements may be starting points for the potential development of entrustable professional activities and competency milestones that would be applicable to all students in physical therapist education prior to entrance into their first full-time clinical experience.

RECOMMENDATION 2:

That ACAPT develop a plan, including an implementation timeline, to guide physical therapist educational programs in implementing the use of the First Full Time Clinical Education Experience KSAs. This plan shall also include guidance on communication to clinical partners.

SS: Adopting the identified KSAs is an important first step of this initiative. The participants in the Summit clearly identified a need for consistency in the level of competence of students entering their first full time clinical experience. This set of KSAs provides the minimal expectations for those students. In order for the educational programs and clinical partners to implement these KSAs, additional considerations to communication, assessment, expectations, and timelines need to be considered.

RECOMMENDATION 3:

That ACAPT encourage physical therapist educational programs to evaluate and make appropriate changes to their curriculum to enable students to achieve competency in the First Full-time Clinical Experience KSAs.

SS: As described above, the clinical sites are anxious for a standard set of competencies that all first full-time students have achieved prior to arriving in their clinics. One step in achieving this goal requires educational programs to assess their curriculum and determine if changes are needed to enable students to achieve the described levels of competence. Many programs likely have the components in place that enable students to meet these KSAs; other programs may need to make only small changes to achieve this goal; and still others may need to consider shift in the program design. In any case, being responsive to the Summit recommendations and thus the voice of our clinical partners, starts with an assessment of current state and necessary changes.

RECOMMENDATION 4:

That student readiness prior to entrance into the clinical practice (entry-level) be examined as the next step to achieving the Summit recommendations related to readiness and competency.

SS: This panel focused on student readiness for entrance into the first full-time clinical education experience. It represents one moment along a student's continuum of learning. The Summit participants identified the need for additional points of competence assessment.

The variability of number, length, and timing of clinical experiences within physical therapist curricula make standardization of competence expectations at several points along the student's education impossible. This realization led the Student Readiness panel to choose the point of entry into the first full-time clinical experience as a common point that was appropriate for standardization.

The other two points in time that lend themselves to standard competence assessment are prior to entry into the final full time clinical experience and just prior to entry into practice. Identifying standard elements of competence that should exist after completion of all didactic and clinical coursework will provide valuable information to clinical instructors and ensure a common level of preparation for students at that phase of their education.

RECOMMENDATION 5:

That ACAPT support the needed collaborative educational research to determine the most appropriate types of assessments of student readiness and a timeline for implementation.

SS: Participants indicated the various assessment methods that can be utilized for each item that achieved consensus in the Delphi study (Table 7). This list is not meant to be prescriptive but to provide options for academic programs. These items reflect current methods of assessment and may not be the most connected to what is used in CBME. Now that consensus has been achieved on the KSAs students must have or display and given the importance of assessment and evaluation in competency-based education, additional research to determine the best assessment methods is warranted. Best practice should be utilized to develop a continued and frequent assessment process to ensure physical therapist students achieve the milestones at the appropriate time in their continuum of learning.

Competency-based physical therapist clinical education (CBPTCE) necessitates a robust and multifaceted assessment system. The leadership within our profession must attend to the context of the multiple settings where clinical education occurs. CBPTCE, like CBME, further requires assessment processes that are more continuous and frequent, criterion-based, developmental, work-based where possible, use assessment methods and tools that meet minimum requirements for quality, use both quantitative and qualitative measures and methods, and involve the wisdom of group process in making judgments about student progress. In addition, a shift in thinking needs to occur from assessment <u>of</u> learning to assessment <u>for</u> learning. Research into the quality of assessment programs, how assessment influences learning and teaching, new psychometric models and the role of human judgment is much needed (Schuwirth & Van der Vleuten, 2011)

The Student Readiness Strategic Initiative Panel's recommendation compliments with the recommendation #5 by the Excellence in Physical Therapy Education Task Force (APTA, 2015). They note the profession should support the development of a standardized assessment for physical therapist students prior to entering their terminal clinical experience. The assessment would evaluate students' readiness for the clinical education and assist in improving relationships with clinical education sites by setting consistent standards for students before they begin these experiences. The assessment may also decrease unwarranted variation in student preparation, which would decrease the burden on clinical sites due to differences in curriculum across programs.

MEETING HISTORY

Face to face meetings were held at Combined Sections Meeting (2016 and 2017), as well as the Educational Leadership Conference.

The entire Panel held three-conference calls/month from February 2016 – June 2017. In addition, sub-groups met as needed during this time frame.

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TABLES

Table 1. Total Responses by Round

	Round 1	Round 2	Round 3	Round 4
Surveys Delivered	147	132	132	132
Return Rate	88.4%	79.55%	78.79%	78.79%
Clinical Instructor	20	20	23	24
Academic Faculty	34	32	30	32
DCE/ACCE	27	27	25	25
Recent Graduates	31	26	26	23

Table 2. Respondent Demographics

	Clinical Instructors	Academic Faculty	DCEs	Recent Graduates
Total Respondents:	20 6 male	34 10 male	27 2 male	31 9 male
Average Age:	38	54	52	26
Average Years of Experience:	11-15 (as a clinician)	16 (as a faculty)	11 (as a DCE / ACCE)	<1 year (as a clinician)
Entry-Level PT Degree:				
Certificate	0	3	0	0
BS	3	19	18	0
MPT	14	10	8	0
DPT	3	0	1	31
Practice Setting:				
Acute care	6	0	1	**7
Health System	4	0	0	0
Private Practice	8	0	0	17
SNF/ECF/ICF	1	0	0	3
Academic Institution	1	34	26	0
Home Health	0	0	0	1
Practice/Program Location:				
Urban				
Suburban	8	22	15	18
Rural	7	8	10	11
	5	3	2	2
Practice/ Program Region:				
S Atlantic				
Mid Atlantic	2	5	5	3
E. N. Central	1	4	3	4
W.N. Central	3	6	4	3
W.S. Central	6	3	5	8
New England	1	0	2	1
Pacific	1	5	2	5
E.S. Central	0	4	3	3
Mountain	3	3	1	2
	3	3	2	2
ABPTS Specialization:				
GCS	2	1	4	
OCS	2	8	4	NA
SCS	1	0	0	
NCS	0	6	3	
CVS	0	0	1	
PCS	0	0	3	
CI Certified: APTA	18	14	24	NA
Other	2	9	12	

DCE, Director of Clinical Education; ACCE. Academic Coordinator of Clinical Education;
ABPTS, American Board of Physical Therapy Specialties
*Presented as range of years
**Practice setting where recent graduates completed their first full-time clinical experience

Table 3. DPT Program Clinical Experience (CE) Information

	Academic Faculty	DCE/ACCEs	Recent Graduates
Average Number of CEs	4	4	4
Average total weeks of CE	37 (24-54)	36 (34-43)	36 (28-54)
Number of weeks in 1st CE	-	-	7
1st CE follows completion of all didactic coursework	9	1	Not asked
Timing of 1st CE:			
Middle of the 1st year	0	1	Not Asked
End of the 1st year	19	13	
Beginning of the 2nd year	5	5	
Middle of the 2nd year	4	2	
End of the 2nd year	3	4	
Beginning of the 3rd year	1	0	
Middle of the 3rd year	1	0	
End of the 3rd year	0	1	
Preferred Setting for 1st CE			
Acute Care	Not asked	4	7*
Outpatient		8	17*
Rehabilitation		3	0*
Pediatrics		1	3*
Home Care		2	1*

*New graduates reported on the setting where their 1st CE was completed.

Table 4. Themes and Elements Derived from Each Round of Data Analysis

	Retained Elements by Round			
Theme*	**Round 1**	**Round 2**	**Round 3**	**Round 4**
1. Students should have foundational knowledge to support application and synthesis in the following content areas:**	17	9	5	5
2. Students should meet the specific program identified and curricular requirements	6	6	4	3
3. Students should take initiative to apply evidence-based practice strategies	8	8	4	4
4. Students should engage in self-assessment	10	6	4	4
5. Students should utilize constructive feedback	3	3	3	3
6. Students should demonstrate effective communication abilities	4	3	3	3
7. Students should exhibit effective verbal, non-verbal and written communication abilities	15	14	10	10
8. Students should be prepared to engage in the learning process	17	17	14	14
9. Students should be familiar with electronic medical records	1	0	0	0
10. Students should complete documentation in a concise fashion	1	0	0	0
11. Students should complete documentation in a timely fashion	1	0	0	0
12. Students should develop the following elements including the documentation of	8	10	3	3
13. Students should gather relevant information from a chart review	1	0	0	0
14. Students should understand concepts related to billing	1	0	0	0
15. Students should recognize and address issues related to safe practice	19	8	8	8
16. Students should apply clinical reasoning and problem solving	6	0	0	0
17. Students should design examination, evaluation, intervention, plan of care and outcome assessment processes	10	10	6	6
18. Students should have the understanding and skill to perform the following examination skills:**	27	24	16	16
19. Students should have the understanding and skill to perform the following interventions:**	18	9	6	6
20. Students should recognize and follow specific professional standards	20	12	10	10
Total Retained Elements	193	139	95	95

*Themes are titled from the first round. Some themes may have been reworded, or items condensed or redistributed in future rounds.

**As elements are not listed, several themes may appear incomplete, as the listed elements are not provided here.

Table 5. Definitions of levels of proficiency

Level	Definition
Familiarity	The student has basic knowledge of the material/skill/behavior and will require guidance to apply it appropriately in the clinical setting.
Emerging	The student understands how to apply the material/skill/behavior safely and consistently in simple situations and will require guidance to apply the concept or perform the task in more complex situations.
Proficient	The student can integrate the knowledge/skill/behavior safely and independently in all (simple and complex) clinical situations. The student is able to identify the need for guidance appropriately.

Table 6. Elements achieving > 80% consensus requiring proficiency prior to the first full-time clinical experience

Element	Clinical Instructors	Academic Faculty	DCEs / ACCEs	Recent Graduates	Overall Percent Consensus
Achieve minimum GPA	N/A*				
Meet Minimum expectations for practical examinations					
Remediation of any and all safety concerns					
Demonstrate polite, personable, engaging and friendly behaviors	81.82	82.76	68.18	90.48	80.85
Introduce one's self to CI, clinical staff, and patients	73.73	93.10	90.91	76.19	84.04
Respect for patients, peers, healthcare professionals and community	80.95	75.86	77.27	90.00	80.43
Punctuality with all assignments	80.95	100.00	95.45	95.24	93.55
Understanding of HIPAA regulations	78.95	89.66	77.27	90.00	84.44
Appropriate dress code	84.21	93.10	100.00	95.00	93.33

*The first three items are marked N/A as they achieved >80% consensus that they are required prior to the first full-time clinical experience, but the dichotomous nature of these elements does not relate to a rating of level of proficiency.

Table 7. Consensus regarding assessment methods for themes*,**

Themes **The student should:**	Satisfactory academic performance	Written Examination	Practical Examination (skills check)	Simulated practice exam (OSCE)	Oral Exam	Successful ICE	Faculty assessment	Self-assessment
1. Have foundational knowledge to support application and synthesis in the following content areas…	**89.58**	**87.50**	**88.54**	62.50	28.13	45.83	53.13	40.63
2. Meet the specific program identified curricular requirements including: GPA, remediation of safety concerns, pass all practical exams								
3. Take initiative to apply evidence-based strategies…	**88.42**	77.89	70.53	58.95	33.68	53.68	47.37	40.00
4. Engage in self-assessment	67.37	22.11	26.32	38.95	20.00	49.47	**91.58**	**90.53**
5. Utilize constructive feedback	50.00	10.64	36.17	41.49	20.21	55.32	**91.49**	**88.30**
6. Demonstrate effective communication abilities within the following groups…	44.68	17.02	38.30	54.26	34.04	63.83	**79.79**	69.15
7. Exhibit effective verbal, non-verbal and written communication abilities to…	42.55	19.15	56.38	68.09	34.04	70.21	**90.43**	**80.85**
8. Be prepared to engage in learning through demonstrating…	47.78	18.89	42.22	52.22	22.22	65.56	**96.67**	**88.89**
9. Be able to document examination/re-examination (History, systems review, tests and measures, problem list, and daily interventions)	71.74	**80.43**	50.00	59.78	10.87	58.70	29.35	23.91
10. Recognize and address issues related to safe patient care including the ability to…	69.57	54.35	**93.48**	72.83	22.83	65.22	43.48	35.87
11. Demonstrate the following clinical reasoning skills for a non-complex patient	75.56	**84.44**	**84.44**	74.44	27.78	64.44	35.56	25.56

12. Have BOTH the understanding and skill to perform the following examination skills	75.56	**83.33**	**98.89**	76.67	23.33	57.78	30.00	23.33
13. Have the understanding and skill to perform the following interventions	71.91	74.16	**93.26**	74.16	23.60	61.80	33.71	24.72
14.Recognize and follow specific professional standards…	71.59	71.59	37.50	39.77	20.45	55.68	**82.95**	75.00

*Data presented at the overall percentage of respondents in agreement with the method of assessment for each theme.

**Data in bold indicated ≥80% agreement with the method of assessment for the given theme.

OSCE: Objective structured clinical examination; ICE: Integrated clinical experience

Appendix A: Elements reaching consensus by theme

	Overall Consensus*		Familiarity**	Emerging**	Proficient green fill is over 80	Emerging & Proficient boxes are in pink are over 80%
1. Students should have foundational knowledge to support application and synthesis in the following content areas:						
Anatomy (i.e. functional anatomy)	100	Overall	3.13	33.33	63.54	96.87
		Faculty	0	32.26	67.74	100
		DCE	13.64	36.36	50	86.36
		Clinicians	0	36.36	63.64	100
		New Grads	0	28.57	71.43	100
Common diagnoses related to systems review (e.g. medical, physical therapy	95.1	Overall	18.75	58.33	22.92	81.25
		Faculty	6.45	64.52	29.03	93.55
		DCE	36.36	45.45	18.18	63.63
		Clinicians	22.73	59.09	18.18	77.27
		New Grads	14.29	61.9	23.81	85.71
Kinesiology (i.e. biomechanics, exercise science, movement science)	99.02	Overall	9.38	54.17	36.46	90.63
		Faculty	0	54.84	45.16	100
		DCE	22.73	45.45	31.82	77.27
		Clinicians	18.18	54.55	27.27	81.82
		New Grads	0	61.9	38.1	100
Physiology / Pathophysiology (related to general systems review)	92.16	Overall	16.67	52.08	31.25	83.33
		Faculty	27.27	50	22.73	72.73
		DCE	9.68	48.39	41.94	90.33
		Clinicians	13.64	63.64	22.73	86.37
		New Grads	19.05	47.62	33.33	80.95
Tissue mechanics (e.g. stages of healing, use/disuse, load/overload)	92	Overall	15.63	41.67	42.71	84.38
		Faculty	3.23	38.71	58.06	96.77
		DCE	27.27	50	22.73	72.73
		Clinicians	31.82	40.91	27.27	68.18
		New Grads	9.52	47.62	42.86	90.48
2. Students should meet the specific program identified curricular requirements including:						
achieve minimum GPA	85.29	Overall	NA	NA	NA	
		Faculty				
		DCE				
		Clinicians				
		New Grads				
meet minimum expectations for practical examinations	98.04	Overall	NA	NA	NA	
		Faculty				
		DCE				
		Clinicians				
		New Grads				
remediation of any and all safety concerns		Overall	NA	NA	NA	
		Faculty				

	98.04	DCE Clinicians New Grads				
3. Students should take initiative to apply evidence-based strategies to:						
generate interventions ideas	88.35	Overall Faculty DCE Clinicians New Grads	25.26 6.67 36.36 40.91 23.81	70.53 86.67 59.09 59.09 71.43	4.21 6.67 4.55 0 4.76	74.74 93.34 63.64 59.09 76.19
guide decision-making	86.45	Overall Faculty DCE Clinicians New Grads	26.32 6.67 45.45 31.82 28.57	67.37 83.33 50 63.64 66.67	6.32 10 4.55 4.55 4.76	73.69 93.33 54.55 68.19 71.43
measure outcomes	88.35	Overall Faculty DCE Clinicians New Grads	28.42 13.33 40.91 40.91 23.81	58.95 73.33 54.55 45.45 57.14	12.63 13.33 4.55 13.64 19.05	71.58 86.66 59.1 59.09 76.19
research unfamiliar information or conditions	95.14	Overall Faculty DCE Clinicians New Grads	16.84 10 27.27 18.18 14.29	49.97 6045.45 54.55 33.33	33.68 30 27.27 27.27 52.38	83.15 90 72.72 81.82 85.71
4. Students should engage in self-assessment including:						
self-assessment of the impact of one's behaviors on others	95.1	Overall Faculty DCE Clinicians New Grads	7.37 6.67 9.09 4.55 9.52	53.68 50 72.73 45.45 47.62	38.95 43.33 9.09 50 42.86	92.63 93.33 81.82 95.45 90.48
the understanding of one's own thought processes (metacognition)	88.11	Overall Faculty DCE Clinicians New Grads	12.63 16.67 18.18 9.09 4.76	70.53 73.33 72.73 59.09 76.19	16.84 10 9.09 31.82 19.05	87.37 83.33 81.82 90.91 95.24
self-reflection and identification of areas of strength and those needing improvement, development of a plan to improve, and discussion of that plan with instructors	93.13	Overall Faculty DCE Clinicians New Grads	9.47 6.67 18.18 4.55 9.52	62.11 63.33 63.64 72.73 47.62	28.42 30 18.18 22.73 42.86	90.53 93.33 81.82 95.46 90.48
seeking out resources, including support from others when needed, to assist in implementation of the plan	96.08	Overall Faculty DCE Clinicians New Grads	7.37 6.67 13.64 4.55 9.52	55.79 50 68.18 63.64 42.86	36.84 43.33 18.18 31.82 52.38	92.63 93.33 86.36 95.46 95.24
5. Students should utilize constructive feedback by:						
being open and receptive,		Overall	0	31.91	68.09	100

verbally/non-verbally	99.03	Faculty	0	31.03	68.97	100
		DCE	0	45.45	54.55	100
		Clinicians	0	31.82	68.18	100
		New Grads	0	19.05	80.95	100
implementing actions to address issues promptly	99.03	Overall	2.15	52.69	45.16	97.85
		Faculty	0	58.62	41.38	100
		DCE	4.55	50	45.45	95.45
		Clinicians	0	50	50	100
		New Grads	5	50	45	95
reflecting on feedback provided	98.04	Overall	1.08	48.39	50.54	98.93
		Faculty	0	44.83	55.17	100
		DCE	4.55	68.18	27.27	95.45
		Clinicians	0	31.82	68.18	100
		New Grads	0	50	50	100
6. Students should demonstrate effective communication abilities within the following groups:						
diverse patient populations	80.39	Overall	31.91	58.51	9.57	68.08
		Faculty	24.24	68.97	6.9	75.87
		DCE	45.45	45.45	9.09	54.54
		Clinicians	31.82	54.55	13.64	68.19
		New Grads	28.57	61.9	9.52	71.42
families and other individuals important to the patients	82.35	Overall	29.79	57.45	12.77	70.22
		Faculty	17.24	75.86	6.9	82.76
		DCE	45.45	45.45	9.09	54.54
		Clinicians	40.91	45.45	13.64	59.09
		New Grads	19.05	57.14	23.81	80.95
healthcare professionals	83.34	Overall	29.79	62.77	7.45	70.22
		Faculty	17.24	79.31	3.45	82.76
		DCE	45.45	50	4.55	54.55
		Clinicians	31.82	59.09	9.09	68.18
		New Grads	28.57	57.14	23.81	80.95
7. Students should exhibit effective verbal, non-verbal and written communication abilities to:						
listen actively	99.03	Overall	0	42.55	57.45	100
		Faculty	0	55.17	44.83	100
		DCE	0	40.91	59.09	100
		Clinicians	0	40.91	59.09	100
		New Grads	0	28.57	71.43	100
demonstrate polite, personable, engaging and friendly behaviors	97.09	Overall	0	19.15	80.85	100
		Faculty	0	17.24	82.76	100
		DCE	0	31.82	68.18	100
		Clinicians	0	18.18	81.82	100
		New Grads	0	9.52	90.48	100
independently seek information from appropriate sources	83.49	Overall	7.45	60.64	31.91	92.55
		Faculty	3.45	51.72	44.83	96.55
		DCE	4.55	72.73	22.73	95.46
		Clinicians	13.64	59.09	27.27	86.36
		New Grads	9.52	61.9	28.57	90.47

build rapport		Overall	5.32	69.15	25.53	94.68
		Faculty	0	89.66	10.34	100
	94.18	DCE	9.09	54.55	36.36	90.91
		Clinicians	9.09	63.64	27.27	90.91
		New Grads	4.76	61.9	33.33	95.23
seek assistance when needed		Overall	1.06	26.6	72.34	98.94
		Faculty	3.45	24.14	72,41	96.55
	100	DCE	0	45.45	54.55	100
		Clinicians	0	22.73	77.27	100
		New Grads	0	14.29	85.71	100
engage in shared decision-making with patients		Overall	25.81	66.67	7.53	74.2
		Faculty	14.29	82.14	3.57	85.71
	82.35	DCE	50	40.91	9.09	50
		Clinicians	22.73	68.18	9.09	77.27
		New Grads	19.05	71.43	9.52	80.95
demonstrate a level of comfort and respect with patient handling		Overall	20.21	59.57	20.21	79.78
		Faculty	13.79	72.41	13.79	86.2
	82.52	DCE	18.18	54.55	27.27	81.82
		Clinicians	27.27	54.55	18.18	72.73
		New Grads	23.81	52.38	23.81	76.19
demonstrate empathy		Overall	1.06	48.94	50	98.94
		Faculty	0	65.52	34.48	100
	95.14	DCE	0	54.55	45.45	100
		Clinicians	0	50	50	100
		New Grads	4.76	19.05	76.19	95.24
use language and terminology appropriate for the audience		Overall	11.83	69.89	18.28	88.17
		Faculty	0	68.97	31.03	100
	90.29	DCE	19.05	61.9	19.05	80.95
		Clinicians	13.64	72.73	13.64	86.37
		New Grads	19.05	76.19	4.76	80.95
introduce one's self to CI, clinical staff, and patients		Overall	1.06	14.89	84.04	98.93
		Faculty	0	6.9	93.1	100
	97.09	DCE	0	9.09	90.91	100
		Clinicians	4.55	22.73	72.73	95.46
		New Grads	0	23.81	76.19	100
8. Students should be prepared to engage in learning through demonstrating:						
accountability for actions and behaviors		Overall	3.26	35.87	60.87	96.74
		Faculty	0	39.29	60.71	100
	98.05	DCE	0	50	50	100
		Clinicians	14.29	14.29	71.43	85.72
		New Grads	0	38.1	61.9	100
resilience/perseverance		Overall	11.83	46.24	41.94	88.18
		Faculty	6.9	48.28	44.83	93.11
	82.52	DCE	18.18	45.45	36.36	81.81
		Clinicians	19.05	42.86	38.1	80.96
		New Grads	4.76	47.62	47.62	95.24
cultural competence and sensitivity		Overall	16.3	54.35	29.35	83.7
		Faculty	10.34	72.41	17.24	89.65

	90.29	DCE	18.18	45.45	36.36	81.81
		Clinicians	25	45	30	75
		New Grads	14.29	47.62	38.1	85.72
an eager, optimistic and motivated attitude		Overall	3.23	21.51	75.27	96.78
		Faculty	0	20.69	79.31	100
	94.18	DCE	0	36.36	63.64	100
		Clinicians	4.76	19.05	76.19	95.24
		New Grads	9.52	9.52	80.95	90.47
respect for patients, peers, healthcare professionals and community		Overall	1.09	18.48	80.43	98.91
		Faculty	0	24.14	75.86	100
	98.05	DCE	0	22.73	77.27	100
		Clinicians	4.76	14.29	80.95	95.24
		New Grads	0	10	90	100
open-mindedness to alternative ideas		Overall	3.23	45.16	51.61	96.77
		Faculty	0	44.83	55.17	100
	94.17	DCE	9.09	40.91	50	90.91
		Clinicians	4.76	42.86	52.38	95.24
		New Grads	0	52.38	47.62	100
punctuality with all assignments		Overall	1.08	5.38	93.55	98.93
		Faculty	0	0	100	100
	98.06	DCE	0	4.55	95.45	100
		Clinicians	4.76	14.29	80.95	95.24
		New Grads	0	4.76	95.24	100
self-care to manage stress		Overall	9.68	58.06	32.26	90.32
		Faculty	0	68.97	31.03	100
	80.58	DCE	13.64	40.91	45.45	86.36
		Clinicians	14.29	57.14	28.57	85.71
		New Grads	14.29	61.9	23.81	85.71
responsibility for learning		Overall	2.15	27.96	69.89	97.85
		Faculty	0	24.14	75.86	100
	97.09	DCE	4.55	27.27	68.18	95.45
		Clinicians	4.76	23.81	71.43	95.24
		New Grads	0	38.1	61.9	100
self-organization		Overall	4.3	56.99	38.71	95.7
		Faculty	0	51.72	48.28	100
	89.32	DCE	4.55	54.55	40.91	95.46
		Clinicians	9.52	61.9	28.57	90.47
		New Grads	4.76	61.9	33.33	95.23
taking action to change when needed		Overall	9.78	45.65	44.57	90.22
		Faculty	0	57.14	42.86	100
	91.26	DCE	22.73	40.91	36.36	77.27
		Clinicians	9.52	33.33	57.14	90.47
		New Grads	9.52	47.62	42.86	90.48
willingness to adapt to new and changing situations		Overall	8.6	43.01	48.39	91.4
		Faculty	3.45	44.83	51.72	96.55
	93.14	DCE	13.64	40.91	45.45	86.36
		Clinicians	9.52	42.86	47.62	90.48
		New Grads	9.52	42.68	47.62	90.48
appropriate work ethic		Overall	1.08	21.51	77.42	98.93
		Faculty	0	27.59	72.41	100

	97.08	DCE	0	31.82	68.18	100
		Clinicians	4.76	9.52	85.71	95.23
		New Grads	0	14.29	85.71	100
maturity during difficult or awkward situations with patients, families and healthcare professionals	84.47	Overall	11.83	53.76	34.41	88.17
		Faculty	10.34	65.52	24.14	89.66
		DCE	13.64	59.09	27.07	86.16
		Clinicians	14.29	28.57	57.14	85.71
		New Grads	9.52	57.14	33.33	90.47
9. Students should develop the following elements including the documentation of:						
examination/re-examination (History, systems review, and tests and measures)	89.32	Overall	28.26	63.04	8.7	71.74
		Faculty	20.69	68.97	10.34	79.31
		DCE	31.82	54.55	13.64	68.19
		Clinicians	45	45	10	55
		New Grads	19.05	80.95	0	80.95
establish and document the problem list	84.46	Overall	30.43	59.78	9.78	69.56
		Faculty	20.69	68.97	10.34	79.31
		DCE	31.82	50	18.18	68.18
		Clinicians	45	50	5	55
		New Grads	28.57	66.67	4.76	71.43
daily interventions	93.13	Overall	26.09	57.61	16.3	73.91
		Faculty	17.24	65.52	17.24	82.76
		DCE	27.27	50	22.73	72.73
		Clinicians	45	40	15	55
		New Grads	19.05	71.43	9.52	80.95
10. Student should recognize and address issues related to safe patient care including the ability to:						
identify contraindications and precautions	98.06	Overall	13.04	45.65	41.3	86.95
		Faculty	0	62.07	37.93	100
		DCE	18.18	40.91	40.91	81.82
		Clinicians	309.52	30	47.62	70
		New Grads		42.86		90.48
assess and monitor vital signs	99.03	Overall	7.61	32.61	59.78	92.39
		Faculty	3.45	27.59	68.97	96.56
		DCE	4.55	36.36	59.09	95.45
		Clinicians	15	35	50	85
		New Grads	9.52	33.33	57.14	90.47
identify and respond to physiologic changes	95.14	Overall	20.65	60.87	18.48	79.35
		Faculty	6.9	75.86	17.24	93.1
		DCE	27.27	50	22.73	72.73
		Clinicians	35	60	5	65
		New Grads	19.05	52.38	28.57	80.95
assess the environment for safety, including lines, tubes, and other equipment	91.26	Overall	21.74	51.09	27.17	78.26
		Faculty	13.79	51.72	34.48	86.2
		DCE	22.73	59.09	18.18	77.27
		Clinicians	30	50	20	70
		New Grads	23.81	42.86	33.33	76.19
appropriately apply infection control		Overall	11.96	33.7	54.35	88.05

procedures including universal precautions	97.09	Faculty	6.9	27.59	65.52	93.11
		DCE	13.64	22.73	63.64	86.37
		Clinicians	10	45	45	90
		New Grads	19.05	42.86	38.1	80.96
provide assistance and guarding for patient safety	99.03	Overall	10.87	43.48	45.65	89.13
		Faculty	6.9	37.93	55.17	93.1
		DCE	13.64	36.36	50	86.36
		Clinicians	15	55	30	85
		New Grads	9.52	47.62	42.86	90.48
utilize appropriate body mechanics to avoid injury to self or patients	98.06	Overall	10.87	47.83	41.3	89.13
		Faculty	3.45	41.38	55.17	96.55
		DCE	13.64	45.45	40.91	86.36
		Clinicians	15	60	25	85
		New Grads	14.29	47.62	38.1	85.72
provide appropriate draping during patient care activities	99.03	Overall	8.7	29.35	61.96	91.31
		Faculty	6.9	20.69	72.41	93.1
		DCE	4.55	31.82	63.64	95.46
		Clinicians	15	30	55	85
		New Grads	9.52	38.1	52.38	90.48
11. Student should demonstrate the following clinical reasoning skills for a non-complex patient:						
utilize the elements of the patient-client management model including: address various body systems (cardiopulmonary, integumentary, musculoskeletal, neuromuscular) during the examination	88.35	Overall	27.47	63.74	8.79	72.53
		Faculty	24.14	65.52	10.34	75.86
		DCE	36.36	54.55	9.09	63.64
		Clinicians	35	65	0	65
		New Grads	15	70	15	85
articulate a clinical rationale in patient evaluation	84.46	Overall	35.16	59.34	5.49	64.83
		Faculty	20.69	72.41	6.9	79.31
		DCE	45.45	45.45	9.09	54.54
		Clinicians	50	50	0	5070
		New Grads	30	65	5	
develop goals that are linked to the patient's activity limitations and participation restrictions	82.53	Overall	32.22	62.22	5.56	67.78
		Faculty	24.14	68.97	6.9	75.87
		DCE	38.1	52.38	9.52	61.9
		Clinicians	50	50	0	50
		New Grads	20	75	5	80
determine appropriateness for therapy within scope of PT practice	82.36	Overall	27.47	59.34	13.91	72.53
		Faculty	17.24	65.52	17.24	82.76
		DCE	40.91	50	9.09	59.09
		Clinicians	40	50	10	60
		New Grads	15	70	15	85
interpret examination findings	82.52	Overall	29.67	65.93	4.4	70.33
		Faculty	20.69	75.86	3.45	79.31
		DCE	40.91	50	9.09	59.09
		Clinicians	40	60	0	60
		New Grads	20	75	5	80
screen to rule in/out conditions and		Overall	32.97	58.24	8.79	67.03

concerns	89.21	Faculty	24.14	65.52	10.34	75.86
		DCE	36.36	50	13.64	63.64
		Clinicians	50	45	5	50
		New Grads	25	70	5	75
12. Student should have BOTH the understanding and skill to perform the following examination skills:						
balance assessment	87.25	Overall	38.46	50.55	10.99	61.54
		Faculty	41.38	41.38	17.24	58.62
		DCE	45.45	45.45	9.09	54.54
		Clinicians	40	55	5	60
		New Grads	25	65	10	75
chart review to extract relevant history	93.2	Overall	26.37	52.75	20.88	73.63
		Faculty	13.79	58.62	27.59	86.21
		DCE	27.27	45.45	27.27	72.72
		Clinicians	30	55	15	70
		New Grads	40	50	10	60
dermatome screening	94.18	Overall	21.98	35.16	42.86	78.02
		Faculty	13.79	34.48	51.72	86.2
		DCE	22.73	36.36	40.91	77.27
		Clinicians	30	30	40	70
		New Grads	25	40	35	75
functional mobility assessment	100	Overall	27.47	52.75	19.78	72.53
		Faculty	27.59	44.83	27.59	72.42
		DCE	22.73	59.09	18.18	77.27
		Clinicians	35	50	15	65
		New Grads	25	60	15	75
gait assessment	92.23	Overall	29.67	54.95	15.38	70.33
		Faculty	24.14	51.72	24.24	75.86
		DCE	27.27	54.55	18.18	72.73
		Clinicians	40	50	10	60
		New Grads	30	65	5	70
goniometry	99.03	Overall	8.79	32.97	58.24	91.21
		Faculty	3.45	27.59	68.97	96.56
		DCE	18.18	31.82	50	81.82
		Clinicians	10	35	55	90
		New Grads	5	40	55	95
interview / history taking	98.06	Overall	15.38	60.44	24.18	84.62
		Faculty	6.9	65.52	27.59	93.11
		DCE	22.73	45.45	31.82	77.27
		Clinicians	20	7060	10	80
		New Grads	15		25	85
lower quadrant screening	87.38	Overall	21.98	46.15	31.87	78.02
		Faculty	20.69	37.93	41.38	79.31
		DCE	22.73	54.55	22.73	77.28
		Clinicians	20	45	35	80
		New Grads	25	50	25	75
manual muscle testing	98.06	Overall	8.79	39.56	51.65	91.21
		Faculty	3.45	41.38	55.17	96.55
		DCE	18.18	36.36	45.45	81.81

		Clinicians	10	40	50	90
		New Grads	5	40	55	95
muscle length testing		Overall	15.38	42.86	41.76	84.62
		Faculty	3.45	37.93	58.62	96.55
	88.24	DCE	18.18	40.91	40.91	81.82
		Clinicians	20	45	35	80
		New Grads	25	50	25	75
myotome screening		Overall	18.68	39.56	41.76	81.32
		Faculty	13.79	34.48	51.72	86.2
	92.23	DCE	18.18	40.91	40.91	81.82
		Clinicians	30	30	40	70
		New Grads	15	55	30	85
reflex testing		Overall	16.48	38.46	45.05	83.51
		Faculty	13.79	37.93	51.72	89.65
	84.47	DCE	18.18	45.45	36.36	81.81
		Clinicians	20	25	45	70
		New Grads	15	45	45	90
sensory examination		Overall	16.48	41.76	41.76	83.52
		Faculty	10.34	41.38	44.83	86.21
	97.06	DCE	18.18	45.45	36.36	81.81
		Clinicians	30	35	45	80
		New Grads	10	45	40	85
medical screening for red flags		Overall	20.88	47.25	31.87	79.12
		Faculty	20.69	51.72	27.59	79.31
	90.29	DCE	18.18	45.45	36.36	81.81
		Clinicians	20	45	35	80
		New Grads	25	45	30	75
systems review		Overall	24.18	47.25	28.57	75.82
		Faculty	20.69	51.72	27.59	79.31
	92.23	DCE	18.18	45.45	36.36	81.81
		Clinicians	30	40	30	70
		New Grads	30	50	20	70
upper quadrant screening		Overall	25.56	42.22	32.22	74.44
		Faculty	24.14	34.48	41.38	75.86
	85.44	DCE	23.81	52.38	23.81	76.19
		Clinicians	25	40	35	75
		New Grads	30	45	25	70
13. Student should have the understanding and skill to perform the following interventions:						
prescribe, fit, and instruct patients in proper use of assistive devices		Overall	27.78	48.89	23.33	72.22
		Faculty	20.69	55.17	24.14	79.31
	87.38	93.21DCE	27.27	31.82	40.91	72.73
		Clinicians	36.84	52.63	10.53	63.16
		New Grads	30	55	15	70
functional training (including bed mobility, transfers, and gait) with appropriate guarding and assistance		Overall	22.22	55.56	22.22	77.78
		Faculty	13.79	58.62	27.59	86.21
	93.21	DCE	31.82	36.36	31.82	68.18
		Clinicians	26.32	52.63	21.05	73.68
		New Grads	20	75	5	80

individualized patient education		Overall	30	57.78	12.22	70
		Faculty	13.79	62.07	24.14	86.21
	86.41	DCE	40.91	50	9.09	59.09
		Clinicians	47.37	47.37	5.26	52.63
		New Grads	25	70	5	75
therapeutic exercise: specifically strengthening		Overall	23.33	54.44	22.22	76.66
		Faculty	10.34	55.17	34.48	89.65
	95.14	DCE	31.82	45.45	22.73	68.18
		Clinicians	47.37	42.11	10.53	52.64
		New Grads	10	75	15	90
therapeutic exercise: specifically stretching		Overall	23.33	53.33	23.33	76.66
		Faculty	10.34	55.17	34.48	89.65
	94.18	DCE	31.82	45.45	22.73	28.18
		Clinicians	47.37	36.84	15.79	52.63
		New Grads	10	75	15	90
therapeutic exercise: specifically aerobic exercise		Overall	24.44	54.44	21.11	75.55
		Faculty	10.34	55.17	34.48	89.65
	89.32	DCE	31.82	45.45	22.73	68.18
		Clinicians	52.63	36.84	10.53	52.63
		New Grads	10	80	10	90
14. Student should recognize and follow specific professional standards, including:						
appropriate dress code		Overall	1.11	5.56	93.33	98.89
		Faculty	0	6.9	93.1	100
	100	DCE	0	0	100	100
		Clinicians	5.26	10.53	84.21	94.74
		New Grads	0	5	95	100
core values identified by the APTA as accountability, altruism, compassion/caring, excellence, integrity, professional duty, and social responsibility		Overall	4.49	32.58	62.92	95.5
		Faculty	3.45	41.38	55.17	96.55
	92.08	DCE	4.55	45.45	50	95.45
		Clinicians	5.56	11.11	83.33	94.44
		New Grads	5	25	70	95
clinical expectations specific to setting		Overall	8.89	37.78	53.33	91.11
		Faculty	6.9	37.93	55.17	93.1
	90.3	DCE	9.09	36.36	54.55	90.91
		Clinicians	15.79	15.79	68.42	84.21
		New Grads	5	60	35	95
HIPAA regulations		Overall	4.44	11.11	84.44	95.55
		Faculty	6.9	3.45	89.66	93.11
	98.06	DCE	0	22.73	77.27	100
		Clinicians	10.53	10.53	78.95	89.48
		New Grads	0	10	90	100
legal aspects related to patient care		Overall	13.33	45.56	41.11	86.67
		Faculty	10.34	55.17	34.48	89.65
	86.41	DCE	9.09	50	40.91	90.91
		Clinicians	15.79	26.32	57.89	84.21
		New Grads	20	45	35	80
obligations of the patient-provider relationship		Overall	14.44	40	45.56	85.56
		Faculty	10.34	55.17	34.48	89.65

	91.17	DCE	4.55	31.82	63.64	95.46
		Clinicians	21.05	15.79	63.16	78.95
		New Grads	20	30	50	80
passion for the profession		Overall	5.56	23.33	71.11	94.44
		Faculty	3.45	27.59	68.97	96.56
	87.38	DCE	4.55	31.82	63.64	95.46
		Clinicians	10.53	15.79	73.68	89.47
		New Grads	5	30	80	95
patient rights		Overall	6.67	41.11	52.22	93.33
		Faculty	3.45	55.17	41.38	96.55
	98.05	DCE	9.09	36.36	54.55	90.91
		Clinicians	0	10.53	73.68	84.21
		New Grads	0	55	45	100
maintaining professional boundaries		Overall	3.33	33.33	63.33	96.66
		Faculty	3.45	51.72	44.83	96.55
	93.2	DCE	9.09	31.82	59.09	90.91
		Clinicians	0	21.05	78.95	100
		New Grads	0	20	80	100
understanding physical therapy's role in the healthcare system		Overall	8.89	60	31.11	91.11
		Faculty	6.9	75.86	17.24	93.1
	92.23	DCE	9.09	63.64	27.27	90.91
		Clinicians	10.53	36.84	52.63	89.47
		New Grads	10	55	35	90

Appendix B: Elements not reaching consensus by theme:

Theme		Overall Consensus*
1.	**Students should have foundational knowledge to support application and synthesis in the following content areas:**	
	Pharmacology (e.g. common classifications, side effects, impact on treatment, polypharmacology)	78.66
2.	**Students should meet the specific program identified curricular requirements including:**	
	Participate, as a physical therapist student, in some clinical experience (including but not limited to: integrated clinical experiences, part-time clinical experiences) prior to the first full-time clinical experience	70.87
3.	**Students should take initiative to apply evidence-based strategies to:**	
	Determine relevance of evidence for specific patients	75.96
	Establish efficacy of interventions for patients, payers, other healthcare professionals	73.46
	Find, evaluate, and synthesize the literature	70.19
	Apply concepts related to health policy and health services	37.5
4.	**Students should engage in self-assessment including:**	
	Demonstration of confidence in learned material	79.41
	Demonstration of confidence working with relevant individuals	72.81
5.	**Students should utilize constructive feedback by:**	
	All elements reached Consensus	
6.	**Students should demonstrate effective communication abilities within the following groups:**	
	All elements reached Consensus	
7.	**Students should exhibit effective verbal, non-verbal and written communication abilities to:**	
	Apply Strategies to facilitate patient adherence	66.35
	Interpret patient cues that require a change in communication strategy	77.88
	Resolve conflict	70.19
8.	**Students should be prepared to engage in learning through demonstrating:**	
	Commitment to lifelong learning	74.04
	Effective time management /organization	70.19
9.	**Students should develop the following elements including the documentation of:**	
	Navigate and identify the relevant components of a medical record	72.11
	Document in a clear and concise fashion	63.46
	Complete documentation in a timely fashion	45.20
	Document evaluation/re-evaluation (interpretation of findings to determine diagnosis, prognosis, and plan of care)	72.11
	Establish and document objective and measurable goals	79.80
	Describe appropriate billing and coding practices relevant to the clinical setting	45.19
	Gather relevant information from medical records and other relevant	75.00

	sources	
10.	**Student should recognize and address issues related to safe patient care including the ability to:**	
	All elements reached Consensus	
11.	**Student should demonstrate the following clinical reasoning skills for a non-complex patient:**	
	Individualize the examination to the patient and practice setting	69.24
	Follow a logical sequence during the examination and intervention	65.38
	Develop a plan of care that is linked to the patients activity limitations and participation restrictions	76.93
	Connect assessment of outcomes to functional analysis	71.16
	Recognize the influence of personal and contextual factors	76.70
	Address the need to progress or change a current plan of care	65.05
12.	**Student should have BOTH the understanding and skill to perform the following examination skills:**	
	Anthropometric measurements	76.93
	Cranial nerves	67.31
	Functional performance tests	73.03
	Integument assessment	75.96
	Movement analysis	77.88
	Orthopedic special tests	66.34
13.	**Student should have the understanding and skill to perform the following interventions:**	
	Prescribe, fit, and instruct patients in proper use of adaptive equipment	49.04
	Manual therapy: specifically soft tissue massage	66.32
	Manual therapy: specifically joint mobilizations (I-IV)	53.85
	Manual therapy: specifically joint manipulations / thrust (V)	23.08
	Biophysical agents: specifically thermal	65.38
	Biophysical agents: specifically mechanical	59.61
	Biophysical agents: specifically electrical	57.69
	Progression of plan of care	77.86
	Therapeutic exercise: specifically neuromuscular re-education	77.89
14.	**Student should recognize and follow specific professional standards, including:**	
	Engage in professional service and community activities	46.16
	Interprofessional practice competencies- identified by the Interprofessional Education Collaborative (IPEC) as values/ethics for Interprofessional Practice, roles/responsibilities , interprofessional communication , teams and teamwork	65.39

Student Readiness for the First Full-Time Clinical Experience

The following table summarizes the minimal knowledge, skills and abilities (KSAs) in which physical therapist students must demonstrate competence prior to entry into the first full-time clinical experience. The KSAs are grouped into 14 themes, numbered and indicated in bold text with the corresponding KSAs listed below. Greater than 80% of participants in the Delphi study indicated that these items were necessary.

Student Readiness Themes and KSAs	
Theme 1	**Students should have foundational knowledge to support application and synthesis in the following content areas:**
1.1	Anatomy (i.e. functional anatomy)
1.2	Common diagnoses related to systems review (e.g. medical, physical therapy
1.3	Kinesiology (i.e. biomechanics, exercise science, movement science)
1.4	Physiology / Pathophysiology (related to general systems review)
1.5	Tissue mechanics (e.g. stages of healing, use/disuse, load/overload)
Theme 2	**Students should meet the specific program identified curricular requirements including:**
2.1	achieve minimum GPA
2.2	meet minimum expectations for practical examinations
2.3	remediation of any and all safety concerns
Theme 3	**Students should take initiative to apply evidence-based strategies to:**
3.1	generate interventions ideas
3.2	guide decision-making
3.3	measure outcomes
3.4	research unfamiliar information or conditions
Theme 4	**Students should engage in self-assessment including:**
4.1	self-assessment of the impact of one's behaviors on others
4.2	the understanding of one's own thought processes (metacognition)
4.3	self-reflection and identification of areas of strength and those needing improvement, development of a plan to improve, and discussion of that plan with instructors
4.4	seeking out resources, including support from others when needed, to assist in implementation of the plan
Theme 5	**Students should utilize constructive feedback by:**
5.1	being open and receptive, verbally/non-verbally
5.2	implementing actions to address issues promptly
5.3	reflecting on feedback provided
Theme 6	**Students should demonstrate effective communication abilities within the following groups:**
6.1	diverse patient populations
6.2	families and other individuals important to the patients
6.3	healthcare professionals
Theme 7	**Students should exhibit effective verbal, non-verbal and written communication abilities to:**
7.1	listen actively
7.2	demonstrate polite, personable, engaging and friendly behaviors
7.3	independently seek information from appropriate sources
7.4	build rapport

7.5	seek assistance when needed
7.6	engage in shared decision-making with patients
7.7	demonstrate a level of comfort and respect with patient handling
7.8	demonstrate empathy
7.9	use language and terminology appropriate for the audience
7.10	introduce one's self to CI, clinical staff, and patients
Theme 8	**Students should be prepared to engage in learning through demonstrating:**
8.1	accountability for actions and behaviors
8.2	resilience/perseverance
8.3	cultural competence and sensitivity
8.4	an eager, optimistic and motivated attitude
8.5	respect for patients, peers, healthcare professionals and community
8.6	open-mindedness to alternative ideas
8.7	punctuality with all assignments
8.8	self-care to manage stress
8.9	responsibility for learning
8.10	self-organization
8.11	taking action to change when needed
8.12	willingness to adapt to new and changing situations
8.13	appropriate work ethic
8.14	maturity during difficult or awkward situations with patients, families and healthcare professionals
Theme 9	**Students should develop the following elements including the documentation of:**
9.1	examination/re-examination (History, systems review, and tests and measures)
9.2	establish and document the problem list
9.3	daily interventions
Theme 10	**Student should recognize and address issues related to safe patient care including the ability to:**
10.1	identify contraindications and precautions
10.2	assess and monitor vital signs
10.3	identify and respond to physiologic changes
10.4	assess the environment for safety, including lines, tubes, and other equipment
10.5	appropriately apply infection control procedures including universal precautions
10.6	provide assistance and guarding for patient safety
10.7	utilize appropriate body mechanics to avoid injury to self or patients
10.8	provide appropriate draping during patient care activities
Theme 11	**Student should demonstrate the following clinical reasoning skills for a non-complex patient:**
11.1	utilize the elements of the patient-client management model including: address various body systems (cardiopulmonary, integumentary, musculoskeletal, neuromuscular) during the examination
11.2	articulate a clinical rationale in patient evaluation
11.3	develop goals that are linked to the patient's activity limitations and participation restrictions
11.4	determine appropriateness for therapy within scope of PT practice
11.5	interpret examination findings
11.6	screen to rule in/out conditions and concerns

Theme 12	**Student should have BOTH the understanding and skill to perform the following examination skills:**
12.1	balance assessment
12.2	chart review to extract relevant history
12.3	dermatome screening
12.4	functional mobility assessment
12.5	gait assessment
12.6	goniometry
12.7	interview / history taking
12.8	lower quadrant screening
12.9	manual muscle testing
12.10	muscle length testing
12.11	myotome screening
12.12	reflex testing
12.13	sensory examination
12.14	medical screening for red flags
12.15	systems review
12.16	upper quadrant screening
Theme 13	**Student should have the understanding and skill to perform the following interventions:**
13.1	prescribe, fit, and instruct patients in proper use of assistive devices
13.2	functional training (including bed mobility, transfers, and gait) with appropriate guarding and assistance
13.3	individualized patient education
13.4	therapeutic exercise: specifically strengthening
13.5	therapeutic exercise: specifically stretching
13.6	therapeutic exercise: specifically aerobic exercise
Theme 14	**Student should recognize and follow specific professional standards, including:**
14.1	appropriate dress code
14.2	core values identified by the APTA as accountability, altruism, compassion/caring, excellence, integrity, professional duty, and social responsibility
14.3	clinical expectations specific to setting
14.4	HIPAA regulations
14.5	legal aspects related to patient care
14.6	obligations of the patient-provider relationship
14.7	passion for the profession
14.8	patient rights
14.9	maintaining professional boundaries
14.10	understanding physical therapy's role in the healthcare system