December 12, 2016

ACAPT Board of Directors American Council of Academic Physical Therapy APTA 1111 North Fairfax Street Alexandria, VA 22314

Dear Board of Directors:

As part of the accreditation process physical therapist educational programs are required to identify expected outcomes for their graduates. Expected outcomes are defined as "competencies that the program expects students to have achieved at completion of the program." There are, however, no uniform and consistent guidelines for setting expected outcomes for graduates. According to accreditation guidelines, expected graduate outcomes are meant to reflect the mission of the program which, in turn, must be consistent with the institutional mission. Therefore, expected outcomes currently vary across programs.

On October 2, 2015, ACAPT membership approved the motion that: "ACAPT implement a task force to explore the possibility of a common, standardized set of expected graduate outcomes to be adopted by all programs." Given that professions are derived from society's recognition of their special status, unique knowledge and the right to practice-autonomy of its members, there is an underlying duty for professionals to meet certain obligations. It seems reasonable to assume that these obligations would not differ significantly among physical therapists or be conditional on the educational program from which one graduated. It may be possible, therefore, to identify a 'core' set of graduate expectations that are common to all physical therapist educational programs, with each program potentially also having mission-specific graduate outcomes. (Task Force on Standardized Graduate Outcomes ACAPT Call for Participants)

As a result a five person Task Force on Standardized Graduate Outcomes was formed with the following members: Lisa Dorsey, PT, MBA, PhD, Nannette Hyland, PT, PhD, Terry Nordstrom, PT, EdD, FNAP, FAPTA, Shari Rone-Adams, PT, MHSA, DBA, and Yasser Salem, PT, PhD, NCS, PCS. The charge for the task force was to explore the feasibility of identifying a common, standardized set of expected graduate outcomes

that has the potential to be adopted by all programs. Furthermore, the Task Force will recommend to the ACAPT Board of Directors one of the following task force outcomes:

- to develop of a common set of graduate outcomes for physical therapy education and extend the charge of the task force to formulate a common set of graduate outcomes
- to discontinue this initiative

The task force was convened on June 13, 2016 and held nine conference call meetings over six months. During those meetings, the task force members reviewed, and discussed relevant, current APTA documents, CAPTE documents, and the health professions educational literature and practice among the following professions: physical therapy, medicine, pharmacy, nursing, athletic training, health sciences, veterinary medicine, psychology, occupational therapy, physician assistant, social work, public health and higher education.

After a thorough review of 99 documents (Appendix A) and deliberation, the Task Force on Standardized Graduate Outcomes **recommends that a common set of graduate outcomes for physical therapy education be developed and to extend the charge of the task force to formulate a common set of graduate outcomes**. Furthermore, the Task Force strongly recommends that this effort be an integrated initiative guided by a comprehensive framework encompassing all levels of professional education, residencies, and fellowships. The Task Force recommendations align well with and are supported by a number of the documents reviewed including, motion V13 (passed) put forth by the Professional Affairs Unit as noted in the November 2015 American Physical Therapy Association Board of Directors Minutes:

"That the adoption of a system of standardized performance-based assessments that measure student outcomes and establish benchmarks be developed and promoted."

"Furthermore, these standardized performance-based assessments would decrease unwarranted variation in physical therapist education and practice. Theses assessments would be progressive from the pre-admission process to graduation."

In addition, in 2014, the APTA adopted a new Vision - "Transforming society by optimizing movement to improve the human experience". The November 2015 Excellence in Physical Therapist Education Task Force Minutes highlighted the *scope of the problem,* based on historical frameworks, to achieve the new vision relative to RC 13-14 Best Practice for Physical Therapist Clinical Education:

"...Historically, the evolution of physical therapist education has been marked by a fragmented approach; numerous groups within APTA have made attempts to advance physical therapist education, often in divergent directions. Despite successful transition to the doctoral degree we have encountered variation in admissions criteria, curricular design, clinical education, student and faculty preparation and outcomes. These variations, combined with a marked shortage of qualified faculty and lack of benchmark data for program assessment, pose a tremendous challenge to the physical therapy profession: how to efficiently and effectively respond to the education needs demanded by an ever-changing healthcare environment."

In the 2015 Excellence in Physical Therapist Education Task Force report to the APTA Board of Directors, several challenges in pursuing excellence in education were identified, including: (excerpted):

- there are widespread concerns that students are not optimally prepared for clinical education, practice, and the evolving healthcare environment;
- accreditation for physical therapist education programs promotes minimum standards that neither drive excellence nor distinguish between developing and established quality programs;
- the physical therapist profession lacks a current, comprehensive, centralized, and accessible repository of education; related data to drive decision; making and evidence-based teaching;
- there is unwarranted variation in student qualifications, readiness, and performance across the professional educational continuum that impacts academic and clinical faculty's ability to plan and implement a quality educational experience that will optimize patient outcomes;
- research and evidence to support best practices, innovation, and excellence in physical therapist education is very limited;
- ineffective communication of initiatives and resources across stakeholders discourages sharing and inhibits transparency, progress, and collaboration in the pursuit of excellence in physical therapist education.

Additionally, the Excellence in Physical Therapist Education Task Force report to the APTA Board of Directors went on to advise that when developing a common set of graduate outcomes it will be imperative to align the common outcomes with other initiatives in physical therapist education and practice, such as residencies, to avoid the unsuccessful "fragmented approach" physical therapist education has taken in the past. Presently there are several groups that are exploring a common set of competencies including, the Clinical Education Summit Strategic Initiatives: Updates and Ideas, The

American Board of Physical Therapy Residency and Fellowship Education (ABPTRFE), the ELP subgroup - Performance-Based Student Outcome Assessment, and the ACAPT Task Force on Graduate Outcomes. We strongly recommend a pause in these efforts to allow APTA, ACAPT, ABPTRFE, and ELP to arrive at a systematic, consolidated and coordinated effort because all of this work is deeply interrelated. We firmly believe not to do so will result in fragmented, incoherent outcomes and not provide the key stakeholders with the desired result.

Variations of physical therapist education exist secondary to the lack of a common set of outcomes which has led to difficulty in developing strong educational assessments and benchmarking. Despite these variations, Grignon et al. (2014) determined there were ten common themes that emerged across expected graduate outcomes in entrylevel physical therapist educational programs. They noted the common themes "reflected APTA core documents and were common to other health professions" (Grignon et al, 2014, p48). Furze et al. (2016) explored Physical Therapy Residency and Fellowship Education and identified a framework for seven common domains of competence across all programs. In 2016, ABPTRFE published a set of core physical therapy residency competencies established from a 2014 work group. This document outlines seven core competencies that have some areas of overlap with the competencies suggested by Furze et al. (2106). Each core competency is listed with multiple behaviors along with a draft evaluation instrument. These authors reached a similar observation as the APTA Excellence in Physical Therapist Education Task Force writing, numerous groups perform similar tasks trying to advance the profession but often go in divergent directions (2015). As Grignon et al, Fruze et al, the APTA Excellence in Physical Therapy Education Task Force, and now the members of this ACAPT Task Force are recommending, the process of developing common outcomes needs to occur across the continuum of professional physical therapist education and include assessment, to provide a clear alignment for the advancement of the profession to occur. Finally, it is essential that the development and assessment of graduate outcomes is a collaborative process inclusive of all stakeholders in professional and post-professional education and practice.

It is critical in the development of standardized outcomes that these outcomes are woven closely with other process aspects of the program including curriculum, learning strategies and learning opportunities. Christensen et al. (2007) concluded that, "separation of process and outcomes....is artificial and may distract educators from more in-depth integrated program development" (p. 672). Formulation of standardized outcomes must follow a "comprehensive line in curricular planning" (Christensen et al, 2007, (p. 672). Development of the outcomes without consideration for process may result in outcomes that are focused on assessment without regard for the learning

process, the development of new knowledge in the field or the performance of students and graduates in the clinical setting. Once measureable outcomes are established, a systematic, iterative approach must be established on both the national level and at the program level. On the national level a comprehensive approach must be developed to assist programs in integrating the standardized outcomes into the curricula process, measuring the outcomes, and using the data to make informed curricular decisions. Focus on the standardize outcomes and measurement of such has the potential to lead to reductionism if not linked back to the ultimate performance of students and graduates in the clinical setting. A comprehensive, systematic approach must be taken in the establishment of standardized outcomes and in the implementation process. (Christensen, et al. (2007).

Of all the professions we examined, medicine and pharmacy are the most comparable to physical therapist education and practice and furthest along in development of common outcomes. We believe that medicine provides the model for a comprehensive framework that not only accomplishes the primary recommendation of the task force, but also the second recommendation for an integrated, comprehensive continuum of outcomes in professional and post-professional education. In 2013, the Association of American Medical Colleges (AAMC) initiated work on the professional activities that any resident should be able to perform on day one of residency (Englander et al, 2016). That work culminated in defined "entrustable professional activities" (EPA) that are linked to key competencies and milestones. The article by Englander describes the AAMC process, including the collaboration with medical schools and residency programs. That initial process took about two years. As an indication of the fruitfulness of that effort, medicine is now in a pilot phase developing curriculum, assessment and faculty development programs needed to enable graduates to meet those EPA. There is also work in the various medical specialties that integrates those EPAs into specialty practice, e.g. Carraccio et al (2016) in pediatrics. Medicine also published a comprehensive faculty and learner guide (AAMC, 2014a) and a curriculum developer guide (AAMC, 2014b) to assist medical schools and residency programs with implementation. As an additional benefit, this work is enabling extensive education research in that profession, a key goal for physical therapist education as well (Jensen et al. 2016).

Similar to medicine, the Center for the Advancement of Pharmacy Education (CAPE) panel generated the CAPE 2013 Educational outcomes, which became the Accreditation Council for Pharmacy Education (ACPE) standards in 2016 (CAPE Educational Outcomes, 2013). These educational outcome requirements are a clear direction for pharmacy education and the practice of pharmacy. Colleges and schools have developed curricula that are based on the outcomes.

Likewise, as the Association of American Medical College (AAMC) released a set of "entrustable professional activities" (EPAs) to guide the medical association, the American Association of College of Pharmacy (AACP) charged AACP Academic Affair Standing Committee to identify the EPAs for pharmacy graduates as they transition from completion of Advanced Pharmacy Practice Experiences into practice and post-graduate opportunities such as residency training. The committee identified a total of 51 statements that were classified into one of two categories 1) Essential EPA (all pharmacists must be able to carry out this function/task/activity); or 2) Supporting EPA/Task (closely associated with an essential EPA; a task or activity that is typically done in order to accomplish an essential EPA) (AACP Academic Affairs Standing Committee report, 2015-2016).

On a broader scale, the American Association of Colleges and Universities (AAC&U), through a multi-year project, identified *The Essential Learning Outcomes* to prepare students with a skill set necessary to meet the challenges of the 21st Century. These Outcomes include Knowledge of Human Cultures and the Physical and Natural World, Intellectual and Practical Skills, Personal and Social Responsibility, and Integrative and Applied Learning (https://www.aacu.org/leap/essential-learning-outcomes). They have been recognized as an alternative assessment of student learning in ways other than the traditional higher education metrics of enrollment, persistence, and degree attainment. National Leadership Council for Liberal Education and America's Promise (LEAP) encourages that the outcomes be adopted by all institutions and all majors. There is no need for a "one-size-fits-all" curriculum, but instead integrate the outcomes into specific areas of study to enhance and strengthen current programming (The LEAP Vision for Learning Outcomes, Practices, Impact, and Employers' Views, AAC&U, 2011).

As outlined, the literature from AAC&U and the professions of medicine and pharmacy indicates that developing a set of clearly articulated shared student learning outcomes could assist all physical therapy stakeholders to better understand the purposes and connections of physical therapy education and the educational experiences and skills graduates need. Furthermore, establishing graduate physical therapy student learning outcomes nationally could provide a framework to develop and measure educational experiences which align with physical therapy core values. We believe an overarching learning outcomes framework can identify overall expectations of physical therapy graduates, while at the same time developing student characteristics that are consistent with individual program mission.

Lastly, the Task Force on Standardized Graduate Outcomes extends a few recommendations to be considered when developing the common set of graduate outcomes:

- In addition to V13, incorporate V10 (passed), "That a concise set of outcome competencies for physical therapist graduates be identified and adopted. These competencies should be: at the highest level possible, essential, and rigorous. The competencies also should be responsive and adaptive to current and future practice, and should not focus on profession-specific skills, but rather on skills necessary to function as members of the health care team" and V12 (passed), "That a comprehensive and progressive data management system for physical therapist education that is accessible to stakeholders and includes the following be established" in future action (November 2015 American Physical Therapy Association Board of Directors Minutes).
- Implement a clear, integrative graduate outcomes development, adoption and assessment process with a definitive timeline and communication plan. Including specifics with regard to how the outcomes will be developed, how the outcomes will be assessed, and by whom.
- Overall common outcomes would need to afford program's pedagogical autonomy (e.g., goals, objectives, delivery of education) and meet unique program, department, and/or institutional mission objectives. Morley et al. (2015) explored medical school mission statement alignment with graduate outcomes. One of their conclusions was that graduate outcomes reflective of medical school mission may result in greater alignment with workforce outcomes (Morley et al. (2015). That study provides evidence as to how standardized outcomes can support physical therapy's responsibilities to society while preserving the rich diversity in physical therapist education.

The extensive review this Task Force completed leads us to strongly recommend that this effort be integrated into a broader, comprehensive framework in professional and post-professional physical therapist education that identifies preparedness for clinical education experiences and residency and fellowship education. This integrated, comprehensive framework would create a cohesive continuum of outcomes from entry into initial through final clinical education experiences, entry into practice (graduate outcomes) and residency/fellowship education. We thank you for the opportunity to serve on the ACAPT Task Force on Standardized Graduate Outcomes and for the consideration of our recommendations. Respectfully submitted, The ACAPT Task Force on Standardized Graduate Outcomes

Lisa L. Dorsey, PT, MBA, PhD (Chair)

Assistant Professor Program in Physical Therapy Saint Louis University

Nannette Hyland, PT, PhD

Director and Associate Professor Program in Physical Therapy Mercy College

Terry Nordstrom, PT, EdD, FNAP, FAPTA

Vice-President of Enrollment and Student Services Associate Professor, Department of Physical Therapy Samuel Merritt University

Shari Rone-Adams, PT, MHSA, DBA

Chair and Associate Professor Physical Therapy Department Nova Southeastern University

Yasser Salem, PT, PhD, NCS, PCS

Professor and Interim Chair Department Program in Physical Therapy University of North Texas Health Science Center

APPENDIX A

ACAPT Task Force on Graduate Outcomes Literature and Resource Data Bibliography

APTA/CAPTE/CPI

- The Commission on Accreditation in Physical Therapy Education (CAPTE).
 "Aggregate program data 2014 5 physical therapist education programs fact sheets."
- American Physical Therapy Association (APTA). "American Board of Physical Therapy Residency & Fellowship Education: Core competencies of a physical therapist resident", 2016.
- 3. PT CPI Performance Criteria Matched with Elements for PT Programs, 2016.
- 4. CAPTE. "Standards and required elements for accreditation of physical therapist education programs, 2016.
- APTA. "Physical Therapist Clinical Performance Instrument (CPI) for students". 2006 (CPI PT Final Revision 11-30-2006).
- 6. APTA Board of Directors Meeting Minutes November 2015.
- 7. Excellence in Physical Therapist Education Task Force November 2015 Board Meeting.

Physical Therapy

- 8. Furze, J. A., et al. (2016). "Physical therapy residency and fellowship education: reflections on the past, present, and future". <u>Physical Therapy</u> 96(7): 1-13.
- Grignon, T. P., et al. (2014). "Expected graduate outcomes in US physical therapist education programs: A qualitative study." <u>Journal of Physical Therapy</u> <u>Education</u> 28(1): 48-57.
- 10. Gresham, B. B. (2013). "Program, institution and productivity characteristics as predictors of physical therapy education program graduation rates and licensure examination pass rates." Texas Woman's University. Ph.D.: 135.

Pharmacy

- 11. Center for Advancement in Pharmacy Education (CAPE) Educational Outcomes 2013.
- 12. Conway, S. E., et al. (2011). "Assessment of streams of knowledge, skill, and attitude development across the doctor of pharmacy curriculum." <u>American</u> <u>Journal of Pharmaceutical Education</u> 75(5): 1-6.
- Letassy, N. A., et al. (2015). "A progressive, collaborative process to improve a curriculum and define an assessment program." <u>American Journal of</u> <u>Pharmaceutical Education</u> 79(4): 1-5.

- 14. Stupans, I., et al. (2015). "Nationwide collaborative development of learning outcomes and exemplar standards for Australian pharmacy programmes." International Journal of Pharmacy Practice (23): 283–291.
- 15. Wright, E. A., et al. (2014). "Teaching and learning curriculum programs: Recommendations for postgraduate pharmacy experiences in education." <u>American Journal of Health-System Pharmacy</u> 71(15): 1292-1302.

Medicine

- Aschenbrener, C. A., et al. (2014). "CEPAER: Core Entrustable Professional Activities for Entering Residency-AAMC Spring Update". Association of American Medical Colleges (AAMC).
- Curriculum Core Entrustable Professional Activities (EPA) for Entering Residency -Curriculum Developers' Guide (2014). Association of American Medical Colleges (AAMC).
- Curriculum Core Entrustable Professional Activities (EPA) for Entering Residency -Faculty and Learner's Guide (2014). Association of American Medical Colleges (AAMC).
- 19. Englander, R., et al. "Toward defining the foundation of the MD degree: core entrustable professional activities for entering residency." <u>Academic Medicine</u> 91 (10): 1-7.
- 20. Englander, R., et al. (2013). "Toward a common taxonomy of competency domains for the health professions and competencies for physicians." <u>Academic Medicine</u> 88: 1088-1094.
- 21. Ten Cate, O. and S. Billett (2014). "Competency-based medical education: origins, perspectives and potentialities." <u>Medical Education</u> 48: 325–332.
- 22. Albanese, M. A., et al., (2008). "Defining characteristics of educational competencies." <u>Medical Education</u> 42: 248–255.
- 23. Carraccio, C., et al. (2016). "Building a framework of entrustable professional activities, supported by competencies and milestones, to bridge the educational continuum." <u>Academic Medicine</u> 91(12): 1-7.
- 24. Christensen, L., et al. (2007). "Process-outcome interrelationship and standard setting in medical education: the need for a comprehensive approach." <u>Medical</u> <u>Teacher</u> 29(7): 672-677.
- 25. Cox, T. M., et al. (2012). "The Cambridge Bachelor of Medicine (MB)/Doctor of Philosophy (PhD): graduate outcomes of the first MB/PhD programme in the UK." MB/PhD programme in the UK." <u>Clinical Medicine</u> 12(6): 530-534.
- 26. Durning, S. J., et al. (2007). "The structure of program evaluation: An approach for evaluating a course, clerkship, or components of a residency or fellowship training program." <u>Teaching and Learning in Medicine</u> 19(3): 308-318.

- 27. Ellaway, R. H., et al. (2014). "Curriculum inventory: Modeling, sharing and comparing medical education programs." <u>Medical Teacher</u> 36(3): 208-215 208p.
- 28. Frye, A. W. and P. A. Hemmer (2012). "Program evaluation models and related theories: AMEE Guide No. 67." <u>Medical Teacher</u> 34(5): e288-e299.
- 29. Gibson, K. A., et al. (2008). "Enhancing evaluation in an undergraduate medical education program." <u>Academic Medicine: Journal of The Association of American Medical Colleges</u> 83(8): 787-793.
- 30. Haji, F., et al. (2013). "Rethinking programme evaluation in health professions education: beyond 'did it work?" <u>Medical Education</u> 47(4): 342-351.
- Hautz, S. C., et al. (2015). "Comparability of outcome frameworks in medical education: Implications for framework development." <u>Medical Teacher</u> 37(11): 1051-1059.
- 32. Hudson, J. N., et al. (2015). "Medical school benchmarking from tools to programmes." <u>Medical Teacher</u> 37(2): 146-152.
- Hautz, S. C., et al. (2015). "Comparability of outcome frameworks in medical education: Implications for framework development." <u>Medical Teacher</u> 37(11): 1051-1059.
- Karpa, K. and C. S. Abendroth (2012). "How we conduct ongoing programmatic evaluation of our medical education curriculum." <u>Medical Teacher</u> 34(10): 783-786.
- 35. Kilmore, M. A., et al. (2006). "A departmental outcome assessment to evaluate educational achievement." <u>Journal of the American Podiatric Medical Association</u> 96(5): 448-454.
- 36. Larkins, S. L., et al. (2013). "Measuring social accountability in health professional education: Development and international pilot testing of an evaluation framework." <u>Medical Teacher</u> 35(1): 32-45.
- 37. Lypson, M. L., et al. (2016). "Optimizing the post-graduate institutional program evaluation process." <u>BMC Medical Education</u> 16(1): 1-6.
- 38. McNeil, H. P., et al. (2006). "An innovative outcomes-based medical education program built on adult learning principles." <u>Medical Teacher</u> 28(6): 527-534.
- Mellinger, J. D., et al. (2015). "Assessing the quality of graduate surgical training programs: Perception vs reality." <u>Journal of the American College of Surgeons</u> 220(5): 785-789.
- Morley, C. P., et al. (2015). "The social mission in medical school mission statements: associations with graduate outcomes." <u>Family Medicine</u> 47(6): 427-434.
- 41. Musick, D. W. (2006). "A conceptual model for program evaluation in graduate medical education." <u>Academic Medicine</u> 81(8): 759-765.
- 42. Norcini, J. J. and D. W. McKinley (2007). "Assessment methods in medical education." <u>Teaching & Teacher Education</u> 23(3): 239-250.

- 43. Peterson, L. E., et al. (2014). "Medical specialty boards can help measure graduate medical education outcomes." <u>Academic Medicine: Journal of The Association of American Medical Colleges</u> 89(6): 840-842.
- 44. Tackett, S., et al. (2016). "Designing an evaluation framework for WFME basic standards for medical education." <u>Medical Teacher</u> 38(3): 291-296.
- 45. Wilkinson, T. J., et al. (2015). "Medical school benchmarking From tools to programmes." <u>Medical Teacher</u> 37(2): 146-152.
- 46. Woolley, T., et al. (2015). "A successful longitudinal graduate tracking system for monitoring Australian medical school graduate outcomes." <u>Rural and Remote</u> <u>Health</u> 15(4): 3542-3542.

Nursing

- 47. Baldwin, A., et al. (2014). "Achieving graduate outcomes in undergraduate nursing education: following the Yellow Brick Road." <u>Nurse Education in Practice</u> 14(1): 9-11.
- 48. Brody, R. A., et al. (2009). "A review of characteristics of graduating in the allied health and nursing professions: entry-level and advanced practice." <u>Topics in</u> <u>Clinical Nutrition</u> 24(3): 181-192.
- 49. Brown, J. F. and B. L. Marshall (2008). "Continuous quality improvement: an effective strategy for improvement of program outcomes in a higher education setting." <u>Nursing Education Perspectives</u> 29(4): 205-211.
- 50. Davenport, N. C. (2007). "A comprehensive approach to NCLEX-RN success." Nursing Education Perspectives 28(1): 30-33.
- 51. Davis, B. W. (2011). "A conceptual model to support curriculum review, revision, and design in an associate degree nursing program." <u>Nursing Education</u> <u>Perspectives</u> 32(6): 389-394.
- 52. Diefenbeck, C. A., et al. (2011). "Student-centered outcomes evaluation of the Clinical Immersion Program: five years later." <u>The Journal of Nursing Education</u> 50(11): 628-635.
- 53. Dulski, L., et al. (2006). "Program outcome data: what do we measure? What does it mean? How does it lead to improvement?" <u>Quality Management in Health</u> <u>Care</u> 15(4): 296-299.
- 54. Duncan, K. and P. S. Schulz (2015). "Impact of change to a concept-based baccalaureate nursing curriculum on student and program outcomes." <u>Journal of Nursing Education</u> 54: S16-S20.
- 55. Friday, L., et al. (2015). "The effects of a prelicensure extern program and nurse residency program on new graduate outcomes and retention." <u>Journal for Nurses in Professional Development</u> 31(3): 151-157.
- 56. Frith, K. H., et al. (2006). "Best practices in NCLEX-RN readiness preparation for baccalaureate student success." <u>Nurse Educator</u> Suppl: 46S-53S.

- 57. Glennon, C. D. (2006). "Reconceptualizing program outcomes." <u>The Journal of</u> <u>Nursing Education</u> 45(2): 55-58.
- 58. Haleem, D. M., et al. (2010). "Program evaluation: how faculty addressed concerns about the nursing program." <u>Nurse Educator</u> 35(3): 118-121.
- 59. Karpa, K. and C. S. Abendroth (2012). "How we conduct ongoing programmatic evaluation of our medical education curriculum." <u>Medical Teacher</u> 34(10): 783-786.
- 60. Kaplan, L. and M.-A. Brown (2009). "Doctor of Nursing Practice program evaluation and beyond: capturing the profession's transition to the DNP." <u>Nursing Education Perspectives</u> 30(6): 362-366.
- 61. Keating, S. B. "The role of faculty in curriculum development and evaluation." <u>Curriculum development and evaluation in nursing (3rd ed.).</u> New York, NY: Springer Publishing Co., 2015. 49-60. Print.
- 62. Krugman, M., et al. (2006). "The national post-baccalaureate graduate nurse residency program: A model for excellence in transition to practice." <u>Journal for</u> <u>Nurses in Professional Development</u> 22(4): 196-205.
- 63. Lewallen, L. P. (2015). "Practical strategies for nursing education program evaluation." Journal of Professional Nursing 31(2): 133-140.
- 64. Lewis, L. S. (2014). "Outcomes of a concept-based curriculum." <u>Teaching & Learning in Nursing</u> 9(2): 75-79.
- 65. Matthiesen, V. and C. Wilhelm (2006). "Quality outcomes and program evaluation in nursing education: an overview of the journey." <u>Quality</u> <u>Management in Health Care</u> 15(4): 279-284.
- 66. McAllister, M. (2011). "STAR: A transformative learning framework for nurse educators." <u>Journal of Transformative Education</u> 9(1): 42-58.
- 67. Menix, K. D. (2007). "Evaluation of learning and program effectiveness." <u>Journal</u> of Continuing Education in Nursing 38(5): 201-231.
- 68. Musick, D. W. (2006). "A conceptual model for program evaluation in graduate medical education." <u>Academic Medicine</u> 81(8): 759-765.
- 69. Norcini, J. J. and D. W. McKinley (2007). "Assessment methods in medical education." <u>Teaching & Teacher Education</u> 23(3): 239-250.
- 70. Parchen, D., et al. (2007). "Development of outcomes for an oncology nurse internship program." <u>Oncology Nursing Forum</u> 34(2): 536-537.
- 71. Phillips, C., et al. (2015). "The theory of organisational socialisation and its potential for improving transition experiences for new graduate nurses." <u>Nurse</u> <u>Education Today</u> 35(1): 118-124.
- 72. Posey, L. J. and E. O. Egerton (2016). "Design with evaluation in mind: Assuring quality in a newly blended nursing program." <u>Journal of Nursing Education &</u> <u>Practice</u> 6(1): 9-15.

- 73. Rosenfeld, P., et al. (2015). "Evaluating the short- and long-term outcomes of a post-BSN residency program." Journal of Nursing Administration 45(6): 331-338.
- 74. Schroeder, J. (2013). "Improving NCLEX-RN pass rates by implementing a testing policy." Journal of Professional Nursing 29: S43-S47.
- 75. Sewell, J., et al. (2008). "Nursing program assessment and evaluation: evidencebased decision making improves outcomes." <u>CIN: Computers, Informatics,</u> <u>Nursing</u>: 98S-101S.
- 76. Shaffer, F. A., et al. (2016). "A new model for assessing entry-level education of internationally educated nurses: A retrospective perspective." <u>Journal of Nursing</u> <u>Regulation</u> 6(4): 51-57.
- 77. Stonecypher, K., et al. (2015). "Faculty experiences developing and implementing policies for exit exam testing." <u>Nurse Educator</u> 40(4): 189-193.
- 78. Story, L., et al. (2010). "Innovative strategies for nursing education program evaluation." <u>The Journal of Nursing Education</u> 49(6): 351-354.
- 79. Taylor, H., et al. (2014). "First-time NCLEX-RN pass rate: Measure of program quality or something else?" Journal of Nursing Education 53(6): 336-341.
- 80. Turner, C., et al. (2006). "Developing an innovative undergraduate curriculum-responding to the 2002 National Review of Nursing Education in Australia." <u>Collegian (Royal College of Nursing, Australia)</u> 13(2): 7-14.
- 81. Uyehara, J., et al. (2007). "Facilitating program and NCLEX-RN success in a generic BSN program." <u>Nursing Forum</u> 42(1): 31-38.
- 82. Walker, C., et al. (2008). "An innovative approach to accelerated baccalaureate education." <u>Nursing Education Perspectives</u> 29(6): 347-352.

Occupational Therapy

- 83.Mu, K., et al. (2006). "Graduate outcomes of first entry-level occupational therapy doctoral program in the United States." <u>Education Special Interest Section</u> <u>Quarterly</u> 16(1): 1-4.
- 84. Mu, K. and B. M. Coppard (2007). "The development of an entry level occupational therapy doctorate in the USA: A case illustration." <u>WFOT Bulletin</u> 56: 45-53.
- 85. Mu, K., et al. (2014). "Comparison of on-campus and hybrid student outcomes in occupational therapy doctoral education." <u>The American Journal of Occupational</u> <u>Therapy: Official Publication of The American Occupational Therapy Association</u> 68 Suppl 2: S51-S56.
- 86. Thomas, Y. and J. Judd (2015). "Establishing a community of practice for Occupational Therapy curriculum development: The value of a two-way process." <u>Australian Occupational Therapy Journal</u> 62(4): 238-245.

Health Sciences

- 87. Dijkstra, J., et al. (2010). "A new framework for designing programmes of assessment." <u>Advances In Health Sciences Education: Theory And Practice</u> 15(3): 379-393.
- 88. Michaels, D. C., et al. (2014). "Peer review for social accountability of health sciences education: a model from South Africa." <u>Education For Health</u> (<u>Abingdon, England</u>) 27(2): 127-131.

Athletic Training

89. Cavallario, J. M. and B. L. Van Lunen (2015). "Preparation of the professional athletic trainer: A descriptive study of undergraduate and graduate degree programs." Journal of Athletic Training (Allen Press) 50(7): 760-766.

Veterinary Medicine

- 90. Jaarsma, D. A. D. C., et al. (2009). "A retrospective analysis of veterinary medical curriculum development in The Netherlands." <u>Journal of Veterinary</u> <u>Medical Education</u> 36(2): 232-240.
- 91. Rogers, K. S., et al. (2016). "Preparing veterinary students for entry-level practice by identifying new graduate outcomes." <u>Journal of the American Veterinary</u> <u>Medical Association</u> 248(7): 751-753.

Physician Assistant

92. Essary, A. C. and P. M. Statler (2007). "Using a curriculum map to link the competencies for the PA profession with assessment tools in PA education." <u>Journal of Physician Assistant Education (Physician Assistant Education</u> <u>Association</u>) 18(1): 22-28.

Public Health

93. Faupel-Badger, J., et al. (2013). "Evaluating postgraduate public health and biomedical training program outcomes: : Lost opportunities and renewed interest." <u>Journal of Cancer Education: The Official Journal of The American</u> <u>Association For Cancer Education</u> 28(1): 18-26.

Social Work

94. Meyer-Adams, N., et al. (2011). "How to tackle the shift of educational assessment from learning outcomes to competencies: One program's transition. <u>Journal of Social Work Education</u> 47(3): 489-507.

Psychology

- 95. Dunn, S., et al. (2007). "Quality benchmarks in undergraduate psychology programs". <u>American Psychologist</u> 62(7): 650-670.
- 96. Stiers, W., et al. (2015). "Guidelines for competency development and measurement in rehabilitation psychology postdoctoral training." <u>Rehabilitation</u> <u>Psychology</u> 60(2): 111-122.
- 97. American Psychology Association (APA) Guidelines for the Undergraduate Psychology Major (2012).

Higher Education

- 98. Spronken-Smith, R., et al. (2015). "Evaluating engagement with graduate outcomes across higher education institutions in Aotearoa/New Zealand." <u>Higher</u> <u>Education Research & Development</u> 34(5): 1014-1030.
- 99. "The LEAP Vision for Learning Outcomes, Practices, Impact, and Employers' Views." American Association for Colleges and Universities (AAC&U), 2011.