

# PROMOTION OF DOCTORAL STUDIES (PODS) SCHOLARSHIPS I & II - Guidelines

---

---

## PREFACE

The mission of the Foundation for Physical Therapy is to fund physical therapy research supporting evidence-based practice, that enhances the quality of patient and client services and to develop the next generation of researchers.

Innovative research supported by the Foundation for Physical Therapy changes the face of health care by providing a society that thrives on mobility with the information needed to develop, restore, maintain, and enhance physical functioning.

---

## SCHOLARSHIP PROGRAM OBJECTIVES AND FUNDING PRIORITIES

### Statement of Intent for Funding

The Foundation, like the physical therapy profession, is dedicated to the goal of improving the quality and delivery of patient care. One of the ways the Foundation accomplishes this goal is by providing support to physical therapists and physical therapist assistants during their development of research careers pursuing scientifically based and clinically relevant research that demonstrates the clinical effectiveness and functional outcomes of physical therapy practice.

**The Foundation supports only those intervention studies in which the interventions are provided by physical therapists, or selected components of the interventions are provided by physical therapist assistants under the direction and supervision of physical therapists.**

**Post-professional Doctoral Scholarships:** The purpose of the Foundation's post-professional Promotion of Doctoral Studies (PODS) program is to fund post-professional doctoral students preparing for research careers, who are PhD students in a program relevant to physical therapy. Specific eligibility requirements and criteria for review and selection are contained in these guidelines.

The total amount of funding may vary from year to year (depending on available resources) and **all money awarded could be considered taxable income depending on the use of proceeds.** Award recipients are responsible for the determination of potential tax of award. All guidelines are subject to change as the needs of the physical therapy profession change.

**Scientific Review Committee (SRC):** Guidelines for distribution of funds and criteria for selecting recipients are established by the Foundation's Board of Trustees (BOT) and implemented by the SRC. Selected by the Foundation's BOT, the SRC is comprised of physical therapist researchers and others with experience preparing students for research careers. The SRC reviews applications and makes funding recommendations to the Foundation's BOT for final approval.

## PROMOTION OF DOCTORAL STUDIES (PODS) SCHOLARSHIPS I & II - Guidelines

---

### Objective

The intent of the Foundation is to fund the most highly qualified post-professional doctoral students within the applicant pool and to ensure that the physical therapy profession benefits from the commitment, scholarship, and teaching of these individuals. These scholarships will help develop a supply of post-professional, doctorally prepared researchers who will add to or refine the body of evidence on which physical therapist practice is based.

Proposed projects should begin to address the most critical questions regarding clinical research and explain how the project(s) will contribute to the needs of the physical therapy profession, including implications for physical therapy theory and practice, and its relationship, if any, to the Research Agenda (RA). If a proposed project does not directly address a question or question(s) in the RA, the applicant must explain how the project will enable him/her to directly address the RA in the future. The RA is provided as a guide to identification of the critical research questions in physical therapy.

### Priorities

Priority will be given to applicants who meet the following criteria:

- Students who have demonstrated continuous progress toward completion of degree requirements in a timely fashion;
- Students who have demonstrated a commitment to a career as an academic researcher and an educator in a fully accredited physical therapy education program;
- Preference will be given to applicants whose research is directly related to the RA and to the goals and objectives of the Foundation.

## GENERAL INFORMATION

### Scholarship Categories/Amount

Two scholarship categories within the Promotion of Doctoral Studies (PODS) program have been established for two distinct phases of education and training:

**PODS I** – \$7,500 in support of the coursework phase of post-professional doctoral studies prior to candidacy (as defined by the applicant’s institution). A PODS I scholarship is competitively renewable for a maximum of one additional year (new application required each year). See pages 3 & 4 for eligibility requirements.

**PODS II** – Up to \$15,000 in support of the post-candidacy phase of post-professional doctoral studies (as defined by the applicant’s institution). A PODS II scholarship is competitively renewable for a maximum of one additional year (new application required each year). See pages 3 & 4 for eligibility requirements.

### Maximum Aggregate Amount

Maximum aggregate amount per applicant for all PODS I & PODS II post-professional doctoral scholarships is \$45,000.

### Scholarship Year

The scholarship year begins September 1, of the year of application, and ends August 31 of the following year. Students may competitively re-apply for support for up to the maximum specified in each award program and each level. Students may be competitively awarded consecutive PODS I and II scholarships for a total of four years of funding in the PODS program.



## PROMOTION OF DOCTORAL STUDIES (PODS) SCHOLARSHIPS I & II - Guidelines

---

### PODS I

- The applicant must have been accepted into a PhD program relevant to physical therapy prior to the start of the scholarship year, September 1, for which the proceeds will be used.
- The applicant will be ineligible for a PODS I scholarship if candidacy status (as defined by his/her institution) is achieved prior to the start of the scholarship year, September 1.
- An application submitted as a PODS I will NOT, under any circumstances, be reviewed as a PODS II in the event it is determined that the applicant will achieve candidacy status (as defined by her/her institution) prior to the start of the scholarship year, September 1.

### PODS II

- The applicant must have achieved candidacy status (as defined by his/her institution) prior to the start of the scholarship year, September 1.
- An application submitted as a PODS II will NOT, under any circumstances, be reviewed as a PODS I in the event that the SRC determines that the criteria for a PODS II are not met.
- Confirmation of candidacy status must be confirmed in the online application by the mentor/advisor. If candidacy will be achieved after the due date of the online application and before the start of the scholarship year, September 1, written confirmation from the institution must be provided to the Foundation by August 1. If candidacy is not achieved by the start of the scholarship year, funding for the applicant will be withdrawn.

**If the applicant is a current or prior Foundation for Physical Therapy funding recipient, he/she must be considered in GOOD STANDING with the Foundation in order to be eligible to apply.** Please see sections on Reporting and Requests for Approval of Changes within TERMS AND CONDITIONS OF FELLOWSHIP for more information about this.

**There can be no overlap between funding mechanism periods of performance.**

### **PTA Applicants, please note:**

- The Foundation supports only those intervention studies in which the interventions are provided by physical therapists, or selected components of the interventions are provided by PTAs under the direction and supervision of physical therapists.

## PROMOTION OF DOCTORAL STUDIES (PODS) SCHOLARSHIPS I & II - Guidelines

---

### Non-Compliance

Failure of the PODS recipient to comply with the policies governing this scholarship may be grounds for early termination of the scholarship and/or denial of any future consideration by the Foundation for any of its programs. Failure to comply with the policies governing this award will result in the PODS recipient NOT to be considered in GOOD STANDING with the Foundation. **If the PODS recipient is NOT considered in GOOD STANDING with the Foundation, the PODS recipient is NOT eligible to apply for any other Foundation funding mechanism.**

During the course of post-professional doctoral studies, should the PODS recipient encounter problems related to academic progress or other matters related to the scholarship, the Foundation may request additional information from which a decision to continue or to terminate the scholarship can be made. **Should an early termination be warranted, the PODS recipient will receive a 60 day notice from the Foundation.**

### Research Integrity

The Foundation expects that the highest ethical standards and compliance with public laws and regulations will be adhered to by all PODS recipients when undertaking any type of research supported by Foundation funds. It is expected that PODS recipients will:

- Be intellectually honest in proposing, performing, and reporting research
- Be accurate in representing contribution in research proposals and reports
- Be fair in peer reviews
- Be collegial in scientific interactions, including communications and sharing of resources
- Be transparent in conflicts of interest or potential conflicts of interest
- Ensure the protection of human subjects in the conduct of research in compliance with the Department of Health and Human Services' regulations governing the protection of human subjects
- Ensure humane care of animals in the conduct of research in compliance with Public Health Service's policy on humane care and treatment of laboratory animals
- Adhere to the mutual responsibilities between investigators and their research teams.

### Obligations/Service

#### **PODS I recipients shall agree to:**

- (1) maintain student status during the years in which the scholarship proceeds will be used;
- (2) attain candidacy status within four years or refund the scholarship(s) in full;
- (3) register with ORCID and provide the Scientific Program Administrator with their ORCID Identifier;
- (4) acknowledge the Foundation's support in all publications, including dissertation, and conference presentations as such: ***This work was supported in part by a Promotion of Doctoral Studies (PODS) – Level I Scholarship from the Foundation for Physical Therapy.***

## PROMOTION OF DOCTORAL STUDIES (PODS) SCHOLARSHIPS I & II - Guidelines

---

- (5) participate in any evaluation and/or outcome studies, or surveys, related to the scholarship program sponsored by the Foundation.

### **PODS II recipients shall agree to:**

- (1) maintain student status during the years in which the scholarship(s) proceeds will be used;
- (2) satisfactorily defend their dissertation within three years after admission to candidacy or refund all post-coursework scholarship(s) in full;
- (3) register with ORCID and provide the Scientific Program Administrator with their ORCID Identifier;
- (4) acknowledge the Foundation's support in all publication, including dissertation, and conference presentations as such: ***This work was supported in part by a Promotion of Doctoral Studies (PODS) – Level II Scholarship from the Foundation for Physical Therapy;***
- (3) participate in any evaluation and/or outcome studies, or surveys, related to the scholarship program sponsored by the Foundation.

In addition, upon successful completion of post-professional doctoral studies and the awarding of the degree, recipients of either a PODS I or PODS II award will:

- (1) engage in one year of research or teaching in an academic physical therapy practice or education program of their choice for each year of support within one year after graduation or refund the scholarship(s) in full;
- (2) provide an acknowledgment of the Foundation support in the dissertation;
- (3) provide the Foundation with an electronic copy of the abstract of the dissertation;
- (4) show evidence of having submitted or presented material related to the dissertation research to APTA's Annual Conference for a poster or platform presentation within two years of graduation; and
- (5) participate in any studies of scholarship recipients sponsored by the Foundation.

PODS recipients, either I or II, who cannot comply with any of these obligations and/or requirements must notify the Foundation in writing and request an extension of the requirements (see page 7, Request for Approval of Changes). **Failure to meet these obligations and/or requirements could make the PODS recipient NOT to be in GOOD STANDING with the Foundation and could make the PODS recipient ineligible to apply for any other Foundation funding mechanism.**

### **Reporting**

PODS recipients shall provide acceptable reports, online, to the Foundation in the format and following the timeline outlined below.

**Progress Report:** All current PODS recipients applying for another PODS award must submit, as part of their PODS application, a detailed Progress Report. The Progress Report shall include:

## PROMOTION OF DOCTORAL STUDIES (PODS) SCHOLARSHIPS I & II - Guidelines

---

- (1) a brief summary of work completed during the Scholarship Year;
- (2) a discussion of any major problems encountered to-date;
- (3) objectives accomplished as compared to the original time line;
- (4) an explanation of and justification for any deviation from the original plan of action; and
- (5) an explanation of any proposed changes to the plan.

**Final Report:** All PODS recipients are required to submit a Final Report, online, to the Foundation within 30 days of completion of their funded PODS program. The Final Report must be filed separately from any application to the Foundation for continuing or new funds. **Failure to submit a Final Report will bar a recipient from any future Foundation funding as the recipient will NOT be considered in GOOD STANDING with the Foundation.** Further, any PENDING funding award from the Foundation will be contingent upon the submission of an approved PODS Final Report if there is overlap between the PODS Scholarship Period and the other funding mechanism application deadline.

The content of the Final Report may reiterate the details of any Progress Report, but should be complete up to the last day of the award period. The Final Report must be labeled with the recipient's name, the type of award received, and the period of performance of the award. The Final Report must also include, in clearly defined sections:

1. a summary description of the overall program, work completed, and the results of the dissertation study, if completed;
2. an abstract of any research projects undertaken during the period of support (suitable for reprint by the Foundation);
3. a list of publications or manuscripts submitted for publication as a result of work supported fully or in part by the Foundation; and
4. a financial report detailing expenditures supported by the scholarship.

**Additional Final Report Requirement for PODS II recipients:** Within 30 days of completion of the doctorate, PODS II recipients must submit a copy of the abstract of his/her Foundation-supported doctoral dissertation research project to the Foundation.

**Dissertation:** The recipient shall submit to the Foundation an electronic copy of his/her dissertation abstract as soon as possible following successful defense of the dissertation and awarding of the degree with confirmation that it has been successfully defended (a scanned PDF of the signed cover page is sufficient).

## PROMOTION OF DOCTORAL STUDIES (PODS) SCHOLARSHIPS I & II - Guidelines

---

**Publications:** A copy of each published manuscript based on research supported fully or in part by the Foundation shall, upon publication, be submitted to the Foundation.

**Acknowledgement:** Acknowledgement of Foundation support for each published manuscript must be stated as such: ***This work was supported in full/part by a Promotional of Doctoral Studies scholarship from the Foundation for Physical Therapy.***

### Request for Approval of Changes

**Changes to the Plan:** The PODS recipient must obtain written approval from the Foundation before making any substantive changes in the plan of study (e.g., timetable for completion). Requests for changes to the plan must be made in writing. **The Foundation will have 30 days to review such requests and respond in writing to the PODS recipient.**

**Extension of Study:** A written request for extension of reporting deadlines with no additional funding must outline in detail the reasons for the request. **Such a request must be received by the Foundation 30 days prior to the expiration of the original term of the scholarship.** In general, it is the policy of the Foundation to consider granting no-cost extensions to scholarships, fellowships and research projects only under the following conditions:

1. All reports have been filed with the Foundation in a timely fashion as specified in the Letter of Agreement.
2. The Foundation has been notified of the need for an extension at least 30 days in advance of the award's termination.
  - When the reason for the request is a change or pending change in the status of the scholarship, fellowship, or grant recipient that prevents the accomplishment of the goals and objectives for which the award was made, **the awardee shall have notified the Foundation of such change or pending change within five days of the awardee's becoming aware of such change or pending change.**

If the Foundation, in its sole discretion, believes that its interests are best protected by allowing the PODS recipient to use all or some of the funds awarded to complete an education program, a research project or portion of a research project, a no-cost extension may be granted as determined by the Foundation's Executive Director and Scientific Program Administrator.

**In the event that a no-cost extension is granted, no PENDING applications for another Foundation funding mechanism from the PODS recipient will be considered until the term of the extension has expired.**



**Changes in Status of PODS Recipient:** The PODS recipient must notify the Foundation upon becoming aware of material change or pending change (e.g., change of major advisor) that may prevent accomplishment of the goals and objectives of the program. **Such notification must be received by the Foundation within five days of the PODS recipient's becoming aware of such change or pending change.** The Foundation, in its sole discretion, shall determine whether such a change in advising or coursework jeopardizes the PODS recipient's ability to complete the program. The PODS recipient must notify the Foundation of any change in status (e.g., change in area of study or institution).

***If the PODS recipient fails to notify the Foundation at all or not within the specified time-period, they will NOT be considered in GOOD STANDING with the Foundation, and will NOT be eligible to apply for any other Foundation funding mechanism.***

---

### CRITERIA FOR EVALUATION OF APPLICATION

---

Recommendation for funding will be based on the comprehensiveness of the application and the educational qualifications of the applicant with regard to potential for research and teaching in physical therapy. Selection will be based on the following criteria.

#### **Applicant**

Is the applicant's academic record of high quality? A summary of the applicant's professional background, future goals, publications and presentations will be considered. Does the applicant demonstrate a commitment to research and teaching in the field of physical therapy? Does the applicant have the potential to develop as an independent and productive researcher?

#### **Mentors, Advisors, Facilities**

Are the research qualifications (including successful completion of funded research) and track record of mentoring PhD students appropriate for the field? Are the research interests of the applicant and mentor compatible? Does the mentor have adequate understanding of the applicant's research training needs? Does the mentor demonstrate the ability and commitment to assist in meeting the training needs?

#### **Objectives and Plan of Study**

Does the applicant outline appropriate objectives of graduate study that will enable him or her to become an independent investigator? Does the proposed plan of study address the applicant's objectives and stage of the degree program in which the applicant is currently studying? Will the plan of study provide the applicant with experiences that will develop research skills needed for his/her independent and productive research career? Is the likely research direction of the applicant consistent with the APTA's Research Agenda? Does the applicant describe the potential significance and feasibility of the research plan?

### **Progress and Potential**

Does the program and proposed plan of study have the potential to provide the applicant with requisite individualized and supervised experiences that will develop his/her research skills? Does the program and proposed plan of study have the potential to serve as a sound foundation that will lead the applicant to an independent and productive researcher? Is the applicant demonstrative continued progression, through examination of transcripts of required coursework, completion of comprehensive exams, approval of dissertation proposal, and time dedicated to dissertation work, towards completion of doctoral programs?

### **Institutional Environment and Commitment to Training**

Are the facilities, resources, (e.g., equipment, lab space, computer time, subject populations) and training opportunities appropriate to develop a researcher who is capable of designing and implementing high quality research? Is there appropriate institutional commitment to fostering the applicant's education and training as an independent and productive researcher?

### **Additional Considerations**

Reviewers may address other considerations such as format, cohesiveness, and completeness of applications.

### Research Agenda

Adopted and promulgated by APTA's Board of Directors (BOD), the Clinical Research Agenda (CRA) was the result of a series of conferences and editorial review processes in which large numbers of physical therapists participated. The Agenda was published in May 2000 (Clinical Research Agenda for Physical Therapy. *Phys Ther.* 2000; 80:499–513).

The CRA underwent extensive review and revision based upon input from all APTA Sections to produce the new Research Agenda, published in March 2011. The term "clinical" was removed from the title in recognition of a "more comprehensive perspective of physical therapy research than the manner in which the Clinical Research Agenda was perceived" (Goldstein et al., 2011, p. 1). The new Research Agenda reflects the changes in rehabilitation practices as well as expands upon the scope of rehabilitation research (Goldstein et al., 2011, p. 5).

APTA supports research that is conducted across all points on the continuum of health-related research. The BOD recognizes that the domains along this continuum should not be perceived as mutually exclusive areas of knowledge and that research across the continuum is vital to the profession of physical therapy. In March 2005, the BOD passed P03-05-18-49, Continuum of Research in Physical Therapy:

The profession of physical therapy is committed to understanding and participating in basic science, mechanistic, translational, clinical, and health services research, in order to provide patients/clients with the most current, appropriate, and effective management. The American Physical Therapy Association (APTA) has an obligation to foster leadership and participation in all research efforts related to the science of physical therapist practice. The science is inherently transdisciplinary and encompasses a seamless continuum of research from basic underlying mechanisms and theory to clinical application. The key questions confronting physical therapy require employment of the full range of methodological designs and approaches.

The CRA, and now the Research Agenda, should be read in this context. Additional specific questions, including basic and applied scientific inquiries, also could provide new knowledge that would enhance physical therapist practice. If the answers to additional research questions can be applied to clinical practice, those questions would then be consistent with the intent of the Research Agenda and can be legitimately included as part of the Research Agenda.

More information regarding the review and revision of the Research Agenda may be found at:

Goldstein MS, Scalzitti DA, Craik RL, Dunn SL, Irion JM, Irrgang J, Kolobe THA, McDonough CM, Shields RK. The Revised Research Agenda for Physical Therapy. *Phys Ther.* 2011;91(2):1-10.

#### **I. Basic Science Research**

1. Identify how genetic, anatomical, biomechanical, physiological, or environmental factors contribute to excessive stress, injury, or abnormal development of body tissues and systems.
2. Determine if modifiable genetic, anatomical, biomechanical, physiological, or environmental factors can decrease risk of excessive stress, injury, or abnormal development of body tissues and systems.
3. Examine the effects of physical therapy interventions that are provided independently or in combination on cellular structural properties and physiological responses of healthy, injured, or diseased body tissues.
4. Investigate the factors that modify the response to physical therapy intervention and positive tissue adaptation (e.g., genetic, functional, structural, psychosocial, and physiological factors).
5. Determine the optimal dose of physical therapy interventions (frequency, duration, intensity) to achieve optimal cellular and physiological adaptation/response of body tissues and systems.
6. Examine skill acquisition and motor development in individuals with movement disorders.
7. Examine the relationship between biomarkers and impairments in body structure and function, limitations in activity, and restrictions in participation. (Biomarkers are any tools used to identify and quantify biologic responses).

## **PROMOTION OF DOCTORAL STUDIES (PODS) SCHOLARSHIPS I & II - Guidelines**

---

8. Define the role for physical therapy in the maturation and modeling of genetically engineered tissues.
9. Determine the mechanisms by which physical therapy interventions modify disease and age-related or injury induced changes in normal cellular structure and function using appropriate human and animal models.
10. Develop new physical therapy interventions to promote tissue growth and adaptation.

### **II. Clinical Research**

1. Determine the relationships among levels of functioning and disability, health conditions, and contextual factors for conditions commonly managed by physical therapists (e.g., *Classification of Functioning, Disability, and Health*).
2. Develop and evaluate models of health and disability to guide the investigation, prevention, and treatment of health conditions relevant to physical therapy.
3. Identify factors that predict the risks of, or protections from, health conditions (injury, disorders, and disease).
4. Examine the impact of health promotion interventions that include the involvement of physical therapists on activity and participation of individuals with movement disorders.
5. Evaluate or develop effective interventions to prevent or reduce the risk of disability associated with common health conditions.
6. Determine the effects of interventions provided by physical therapists to address secondary prevention in patients/clients with chronic diseases (e.g., diabetes, obesity, arthritis, neurological, other disorders).
7. Determine the physical therapist's role and impact in contemporary delivery models on prevention of diseases and their secondary side effects.
8. Identify technologies to assist physical therapists in developing prevention approaches that optimize outcome.
9. Develop and evaluate effective patient/client classification methods to optimize clinical decision making for physical therapist management of patients/clients.
10. Identify criteria for progression in levels of care, activity, or participation of the patient/client.
11. Identify thresholds for adequate physical function to optimize outcomes and prevent injury.
12. Identify contextual factors (e.g., personal and environmental) that affect prognosis.
13. Identify technologies to assist physical therapists in determining patient/client classification.
14. Determine predictors of recovery from adverse effects associated with medical or surgical treatment.
15. Determine the effectiveness and efficacy of interventions provided by physical therapists across relevant domains of health.
16. Determine interactions among interventions provided by physical therapists.
17. Determine the effectiveness and efficacy of interventions provided by physical therapists delivered in combination with other interventions (e.g., medical, surgical, or biobehavioral interventions).
18. Determine the effects of frequency, durations, intensity, and timing of interventions provided by the physical therapist.
19. Develop and test the effectiveness of physical therapist interventions for primary and secondary conditions or disability.
20. Develop and test the effectiveness of physical therapist interventions to optimize treatment outcomes for specific subgroups of patients/clients.

## **PROMOTION OF DOCTORAL STUDIES (PODS) SCHOLARSHIPS I & II - Guidelines**

---

21. Develop and test the effectiveness of decision support tools to facilitate evidence-based physical therapist decision making.
22. Develop and test the effectiveness of methods to improve patient/client adherence to the plan of care and self-management.

### **III. Education/Professional Development**

1. Evaluate the effect of physical therapist post-professional specialty training on clinical decision making and patient/client outcomes.
2. Determine the best methods to foster career development and leadership in physical therapy.
3. Determine the optimal criteria for board certification.
4. Evaluate the effect of clinical education models on clinical outcomes, passing rates on the National Physical Therapy Examination, and employment settings after graduation.
5. Determine the impact of professional-level physical therapist education on professional behaviors.
6. Assess the effectiveness of models of professional education on clinical performance.
7. Determine the relationship between student cultural competency and clinical decision making.
8. Evaluate the effectiveness of different methods used to improve cultural competence.
9. Develop and evaluate the most effective methods for facilitating physical therapist acquisition and use of available information resources for evidence-based practice.
10. Evaluate the skills needed by practitioners to provide optimal patient/client care, patient/client advocacy, and cost-effective care.

### **IV. Epidemiology**

1. Examine the incidence, prevalence, and natural course of health conditions (disorders, diseases, and injuries) commonly managed by physical therapists.
2. Examine the incidence, prevalence, and natural course of impairments of body functions and structure, activity limitations, and participation restrictions associated with health conditions commonly managed by physical therapists.
3. Investigate the effects of contextual factors (e.g., personal and environmental) on the effectiveness of interventions provided by physical therapists.

### **V. Health Services Research/Policy**

1. Perform economic evaluate of specific physical therapy interventions.
2. Evaluate the effect of physical therapy service delivery models on economic and patient/client outcomes and consumer choice.
3. Determine the relationship between documentation and payment.
4. Evaluate the comparative cost and/or cost-effectiveness of specific physical therapy interventions compared with or in combination with other interventions.
5. Investigate factors that influence patient/client choices when selecting a health care provider or making treatment decisions.
6. Develop and evaluate new methods for incorporating patient/client values and expectations into the decision-making process.

## **PROMOTION OF DOCTORAL STUDIES (PODS) SCHOLARSHIPS I & II - Guidelines**

---

7. Evaluate the effectiveness of shared clinical decision-making schemes between the patient/client and therapist on clinical outcomes and costs.
8. Establish the extent to which physical therapists deliver services in accordance with recommended guidelines for specific conditions and its impact on outcomes.
9. Determine disparities in the access, culture, and health literacy on physical therapy outcomes.
10. Examine the interaction among access, culture, and health literacy on physical therapist outcomes.
11. Examine the cultural competence of physical therapists and physical therapist assistants and its impact on intervention.
12. Develop innovative medical informatics applications for physical therapy and assess their impact on clinical decision making.
13. Investigate the influence of health policies on practice patterns and outcomes.
14. Evaluate methods to enhance adherence to recommended practice guidelines.
15. Assess the impact of continuity of physical therapy services on outcomes.
16. Describe patterns of physical therapy use and identify factors that contribute to variation in utilization.

### **VI. Workforce**

1. Examine the effects of staffing patterns on the outcomes of physical therapy.
2. Assess productivity of physical therapists in various settings and identify factors (e.g., use of extenders, mandates) that contribute to variations in productivity.
3. Identify and test the best methods to assess past, current, and future demand and unmet needs for physical therapy.
4. Identify the demand for services among populations underserved by physical therapists.
5. Determine factors that contribute to the retention of physical therapists across various settings and geographic regions.
6. Determine factors that contribute to the retention of physical therapists across various settings and geographic regions.
7. Determine the effectiveness of recruitment and retention initiatives in reducing the gap between supply and demand in various practice settings.
8. Identify variables that influence the decision of whether or not to enter the physical therapy profession.
9. Assess the impact of expanded scope of practice on supply and demand.
10. Investigate the relationship between the distribution of physical therapists and population health outcomes.
11. Examine the effects of workforce issues on career pathways (e.g., participation in residency, fellowship, research training).
12. Examine the effects of participation in extended clinical training experiences on workforce.

### **VII. Measurement Development and Validation**

1. Develop or adapt measures of effectiveness and impact of physical therapy at the community level.
2. Develop new tools or refine existing tools to measure the impact of physical therapy on activity, participation, and quality of life.
3. Provide evidence to guide selection and interpretation of measurement tools for specific purposes, conditions, and populations.

## **PROMOTION OF DOCTORAL STUDIES (PODS) SCHOLARSHIPS I & II - Guidelines**

---

4. Develop and test a minimum set of measures to evaluate the process and clinical outcomes for specific conditions and populations.
5. Develop reliable and valid measures of cultural competence of physical therapy providers and students.
6. Determine how contemporary technology (e.g., ultrasound, gene array, magnetic resonance) can be used to measure the effects of injury/disease and physical therapy intervention on body structure and function.
7. Determine optimal measurement methods to enhance clinical decision making specific conditions and populations.