

**2017-2018**

**Department of Occupational Therapy**

*Building Knowledge Through Innovative  
Research & Scholarship*

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## **Mission Statement**

### ***“Reimagining Health through Occupation”***

Thomas Jefferson University’s Department of Occupational Therapy promotes the health and well-being of people through their participation in occupation. Our mission is accomplished by developing practitioners who are dynamically responsive to changing demands in health care, community and educational environments; engaging in service, practice, advocacy, leadership, scholarship and conducting research.



## Autism

Roseann C. Schaaf, PhD, OTR/L, FAOTA  
Zoe Mailloux, OTD, OTR/L, FAOTA  
Laura Krisa, PhD  
Marie-Christine Potvin, PhD, OTR/L

### **Mission**

To enhance successful and meaningful participation in daily living, educational, social and leisure activities for individuals with autism spectrum disorder (ASD) and their families by investigating the factors that impact participation, the occupational therapy interventions (OT) which aim to foster participation, and the types of physical and social environmental adaptations which lead to the best outcomes

### **General Laboratory Description**

This laboratory investigates important issues for occupational therapy in the area of Autism. Areas of inquiry are listed below.

- Factors that Impact Participation in ASD
  - Sensory features in ASD (brain mechanisms and behavioral features)
  - Developing and applying measures of sensory features
- Evaluating Occupational Therapy Interventions for ASD to promote participation
  - Investigating the effectiveness of Ayres Sensory Integration intervention
  - Evaluating recreational activities in relation to quality of life in persons with ASD (EuREKA Project)
  - Studying the impact of Coaching in Context for College Success (C+C Project)
  - Developing and studying the impact of caregiver education programs
- Identifying Supportive Characteristics of Physical and social Environments
  - Environments to enhance quality of life in individuals with ASD
  - Impact of trauma on participation and for those living with ASD
  - Reconsidering the classroom for children with ASD through projects such as Innovative Design for Engaged Attention and Learning (IDEAL) – listed in environments lab

### **Current Projects**

#### **1. Testing Outcomes of Occupational therapy using Ayres Sensory Integration in Comparison to Intervention to Improve Functional Skills in Children with Autism**

This research focuses on testing the implementation of an evidence-based program of occupational therapy using sensory integration principles. Outcomes include measures of multisensory integration (via ERP), behavior, activity and participation.

*Roseann Schaaf, PhD, OTR/L, FAOTA, Sophie Molholm, John Foxe, Liz Ridgeway, and Zoe Mailloux, OTD, OTR/L, FAOTA; Research Assistant Rachel Dumont*

#### **2. Changes in Brain Function Following Sensory Integration Intervention**

This research will test the feasibility of examining neuroplastic changes in connectivity and brain functions via diffusion tensor imaging and fMRI following a 30-minute intervention designed to improve sensory integration. Our hypothesis is that children with autism (ages 5-9) will show improved resting state connectivity (whole brain) and more integrated connectivity in the somatosensory cortex and the

salience network; and these will be related to measurable changes in functional skills and individualized goals.

*Roseann Schaaf, PhD, OTR/L, FAOTA Laura Krisa, Andrew Newberg, Feroze Mohammed and Chris Conklin; Research Assistant Kathryn Dent)*

### **3. Greater Opportunity for Academic Learning (GOAL2)**

A growing number of young adults with high functioning autism spectrum disorder and other disabilities are attending college. These young adults are often experiencing challenges with the social and academic aspects of college life. The coaching in context approach designed for the EuREKA Project is used with young adults attending college to achieve their own academic and social integration goals.

*Marie-Christine Potvin, PhD, OTR/L*

### **4. Sensory Aware and Friendly Environments (SAFE)**

We all want to feel comfortable, focused and at ease in all the environments in which we live, work, learn and socialize. Everyone has preferences for the various sensory experiences such as color, sound, scents, texture and the options available for movement and activity. For some individuals, these preferences are more extreme to the point that certain sensations can actually be painful, distracting and confusing. SAFE is a program under development to assist businesses and organizations in making their facilities and services more sensory aware and friendly.

*Zoe Mailloux, OTD, OTR/L, FAOTA*

### **5. Expanding Recreational Engagement in Kids with Autism Spectrum Disorder (EuREKA Project)**

Individuals with autism spectrum disorders (ASD) have restricted patterns of participation in recreational activities. They participate in fewer activities, with a narrower range than other people, and closer to home than their same-aged peers. Thus, participation in recreational activities is often compromised in individuals with ASD and may impact quality of life (QoL). The EuREKA Project investigates the effect of an inter-professional approach that combines parent coaching and context therapy (coaching in context) to increase the recreational participation of children with ASD. This manualized, parent-mediated, culturally responsive intervention draws from current empirical evidence across a number of health professions.

*Marie-Christine Potvin, PhD, OTR/L*

### **6. Innovative Design for Engaged Attention and Learning (IDEAL)**

Children are spending more and more time in sedentary activities, with increased hours in front of computer, television and hand-held screens. At the same time, academic expectations are increasing and options for physical activity at parks, playgrounds and recess spaces are diminishing. While these societal trends make it harder for children to engage in the active play their brains and bodies need to grow and develop, we also expect them to sit in stable, 4-legged chairs that are often the wrong size for their bodies. What if they could sit in chairs that adjusted to the correct height and that provided the types of motion and flexibility most adults expect and enjoy in their work furniture? What if classrooms were designed and arranged to support learning needs? Isn't it time that we all aim for classrooms that support basic sensory and ergonomic considerations for children?

*Zoe Mailloux, OTD, OTR/L, FAOTA*



## Jefferson Elder Care

Catherine Verrier Piersol, PhD, OTR/L, FAOTA  
E. Adel Herge, OTD, OTR/L, FAOTA  
Tracey Vause Earland, PhD, OTR/L  
Lori Eckert, MS, OTR/L

### **Mission**

To improve the lives of older adults and caregivers through the knowledge translation and best practices grounded in evidence and real-world experience.

### **General Laboratory Description**

Researchers, educators, and practitioners of Jefferson Elder Care collaborate with community partners and professional organizations to *deliver* clinical services, training, and consultation, and *engage* in scholarship and research activities that optimize performance and participation of people as they age and build skills of caregivers.

### **Current Projects:**

#### **1. Service Delivery**

- Home-based Dementia Services for Elders and their Caregivers and Family Caregiver Workshops, programs supported by the Pew Charitable Trust
- Family Caregiver Workshop Series for those caring for someone with dementia, program supported by the Hassel Foundation

*Catherine Verrier Piersol, PhD, OTR/L, FAOTA, Lori Eckert, MS, OTR/L*

#### **2. Training**

- Certification training in Skills2Care® for occupational therapists, an evidence-based program for caregivers of people with dementia <http://www.jefferson.edu/content/dam/university/health-professions/elderCare/JCHP-Skills2Care-Brochure.pdf>
- Best Practice in Dementia training program for staff working with people with dementia. [http://www.jefferson.edu/content/dam/university/health-professions/elderCare/16-1134%20Dementia%20Care%20brochure%20Final\\_4-16.pdf](http://www.jefferson.edu/content/dam/university/health-professions/elderCare/16-1134%20Dementia%20Care%20brochure%20Final_4-16.pdf)

*Catherine Verrier Piersol, PhD, OTR/L, FAOTA, E. Adel Herge, OTD, OTR/L, FAOTA*

#### **3. Consultation**

- Philadelphia Coordinated Health Care collaboration to develop residency experience for entry-level occupational therapy doctoral students <https://www.pchc.org/>

*Catherine Verrier Piersol, PhD, OTR/L, FAOTA, E. Adel Herge, OTD, OTR/L, FAOTA*

- Jefferson Geriatrics collaboration to provide services for older adults and develop residency experience for entry-level occupational therapy doctoral students

*Catherine Verrier Piersol, PhD, OTR/L, FAOTA, Tracey Vause Earland, PhD, OTR/L*

#### **4. Scholarship and Research**

- National Task Group on Intellectual Disabilities (ID) and Dementia Practices, collaboration to develop guidelines for care and services and evaluate impact of national training workshops on services for adults with ID and their caregivers <http://aadmd.org/NTG>

*E. Adel Herge, OTD, OTR/L, FAOTA*

- Developing an Evidence Based Program to Support Adults with Intellectual Disability and Dementia, funded by Jefferson College of Health Professions Dean's Award. Translating the Skills2Care® for individuals with ID and dementia.

*Catherine Verrier Piersol, PhD, OTR/L, FAOTA, E. Adel Herge, OTD, OTR/L, FAOTA*



## Measurement and Outcomes Research Laboratory

MJ Mulcahey, PhD, OTR/L  
Namrata Grampurohit, PhD, OTR/L  
Philippa H. Campbell, PhD, OTR/L, FAOTA  
Stephen B. Kern, PhD, OTR/L, FAOTA  
Laura Krisa, PhD  
Daniel Graves, PhD  
Feroze Mohamed, PhD  
Ralph Marino, MD  
Catherine V. Piersol, PhD, OTR/L, FAOTA  
Rebecca Sinko, OTD, OTR/L  
Christina Thielen, MSPT

### **Mission**

The mission is twofold. First, to develop and validate measurement methods and outcome instruments that generate reliable data that are meaningful and precise, inform occupational therapy treatment, and engage clients in shared decision-making; and secondly, to utilize valid instruments in outcomes research to build evidence in support of practice.

### **General Laboratory Description**

Understanding what intervention(s) work, from whom, how and why is predicated on the use of psychometrically sound and precise measurement instruments. Projects in this laboratory focus on development, validation and implementation of measures of impairment, activity performance, participation, health-related quality of life, quality of life, and environment, with a focus on novel and contemporary measurement methodologies. The projects are intended to build evidence in support of interventions and programs that are aimed at improving and sustaining everyday living.

### **Current Projects:**

1. **Knowledge translation of the Spinal Cord Injury Functional Index (SCI-FI), the Pediatric Spinal Cord Injury Activity Measure (PEDI-SCI AM) and Pediatric Measure of Participation (PMoP).** *MJ Mulcahey (PI), in collaboration with Drs. Mary Slavin (Boston University) and Ms. Christina Thielen.*  
The purpose of this project is to utilize methodologies aligned with implementation science to transform research prototypes of the Spinal Cord Injury Functional Index (SCI-FI), the Pediatric Spinal Cord Injury Activity Measure (PEDI-SCI AM) and Pediatric Measure of Participation (PMoP) into outcome measures that are feasible to administer at the clinical point of care, and that are considered useful by end-users (practitioners and consumers). Students have the opportunity to assist with transcription and interpretation of focus groups, developing and validating score reports, revising users' manuals for selection, administration and scoring the instruments. Funded by the Craig H. Neilsen Foundation.
2. **Staging and Replenishment of the Pediatric Measure of Participation (PMoP)** *MJ Mulcahey (PI) in collaboration with Drs. Wendy Coster and Jessica Krammer (Boston University), and Ms. Christina Thielen.*  
This study is designed to 1/. Validate the theoretical model of participation that is used for the PMoP, 2/. create functional stages for score reports for the PMoP, and 3/. to replenish a large item bank of participation for children and youth with cerebral palsy and arthrogryposis. Students have the opportunity to engage in focus groups, and to transcribe and assist with analysis of cognitive interviews and interviews using photo elicitation. Current Student Project: "Non-Injury Related Predictors of Participation Among Youth with Spinal Cord Injury" (Lindsey Siska, candidate for MPH, Jefferson College of Population Health). Funded by the Shriners Hospitals for Children.

3. **Diffusion Tensor Imaging as a Biomarker for Pediatric Spinal Cord Injury.** *MJ Mulcahey and Feroze Mohamed (Co-PI) in collaboration with Dr. Laura Krisa.*  
 Determining the location and severity of spinal cord injury, and evaluating the neurological consequence of spinal cord injury in children using the International Standards for Neurological Classification of Spinal Cord Injury is not feasible in children younger than six, and difficult in children as old as 10. This study is focused on developing and validating novel imaging methods to evaluate pediatric SCI. Students have the opportunity to observe the neurological examination of children and youth with SCI, and assist with recording of data collection in real-time. Students will be part of a multi-disciplinary research team, and learn about novel methodologies used to assess neurological consequence of SCI. Funded by the National Institutes of Neurological Diseases and Stroke (NINDS).
  
5. **Development and Validation of the Bowel Version 2.0, Caregiver, Education, and Activity and Participation International Basic Data Sets for Children and Youth.** *MJ Mulcahey (PI).*  
 This is an international effort that engages pediatric and adult spinal cord injury content experts, including caregivers of persons with SCI and those living with SCI. The purpose of the work is to develop and validate a basic set of highly relevant information that should be recorded at the time of clinical visits. The goal is to standardize the collection and recording of the information so that data can be pooled to facilitate comparisons across practice environments, and to inform best practice. Students have the opportunity to learn survey methodology such as the Modified Delphi Technique, to engage in small consensus building work groups, and to implement validation protocols. Funded by the Rick Hansen Institute.
  
6. **Feasibility of Coaching Mothers of Children with Spinal Cord Injury for Participation Outcomes for Themselves and Their Children.** *MJ Mulcahey (PI) in collaboration with Drs. Campbell, and Christina Thielen.*  
 This project is intended to determine 1/. If mothers of children with SCI can engage in coaching intervention, including identifying and describing participation goals for themselves and their children, 2/. If practitioners can implement coaching interventions, with fidelity, 3/. The number of coaching sessions required to reach desired participation outcomes, and 4/. If differences exist between outcomes when coaching is delivered face-to-face versus skype. Students will have the opportunity to receive formal coaching training, implement coaching interventions, and assess treatment fidelity. Funded by the Craig H. Neilsen Foundation.
  
7. **Scoping Review of the Literature Activity Based Therapy Interventions for the Neurological Impaired Upper Limb.** *Ralph J. Marino (PI) in collaboration with Drs. Mulcahey and Grampurohit.*  
 This project is stage one of a five year project for the SCI Models Systems Program (housed at Jefferson). The purpose of the project is to conduct a scoping of the literature to inform the development of upper extremity intervention that align to the principles of activity based rehabilitation. Students have the opportunity to learn how to interface with Covidence, which is a software designed to support scoping and systematic reviews. Current Student Project: "Conceptual Mapping of the Scoping Review Literature on Activity Based Rehabilitation" (Eron Bozec, OTDPP student, Jefferson University, Center City Campus). Funded by the National Institute on Disability, Independent Living and Rehabilitation Research.
  
8. **Scoping Review of the Literature on Interventions that Support Transition from School to Gainful Employment in Young People with Intellectual Disability.** *Taryn Rosner (cOTD) with mentorship from MJ Mulcahey.*  
 This doctoral project involves a scoping review of the literature on interventions that support transition from school to gainful employment for young people with intellectual disabilities. Current Students: Madelyn Adams, OTD student (Center City Campus) and Allyson Psillos, MS OT student (center city campus).

**9. Systematic Review of the Literature on Psychometric Properties and Clinical Utility of Upper Extremity Function Measures in Neurological Conditions**

This project is in collaboration with University of Washington and housed at Jefferson University. This project examines the reliability and validity of the upper extremity function measures identified through a systematic search of databases in a two-step search process. Step 1 was identification of the measures and step 2 was identification of studies reporting psychometric properties. Students will have the opportunity to participate in data extraction and synthesis of results. *(Namrata Grampurohit)*

**10. Development and validation of an Upper Extremity Function Measure with Combined Self-reported and Performance-based items in Neurological Conditions.**

This project will be conducted at Jefferson for 3 years for a pilot study to examine the psychometric properties and examine items for continued development in paper-based and online formats. This study will begin data collection in the coming months. Students will have the opportunity to collect data under supervision, record, analyze and synthesize. *(Namrata Grampurohit)*

**11. Eye-gaze Technology and its Feasibility to Improve Outcomes in Preschool-age Children with Disabilities**

This project is a collaboration with Easterseals of Pennsylvania and Linköping University (Sweden) mainly conducted at Easterseals. A new protocol for training using eye-gaze technology for children with and without intellectual disabilities is being investigated for its feasibility in improving outcomes in pre-school age children and to determine selection criteria appropriate for trial of eye-gaze technology for therapists working with the children. Students will have the opportunity to analyze retrospective data and engage in dissemination with a highly specialized group of clinicians. *(Namrata Grampurohit)*

**12. Rehab Measures Database Task Force**

This project involves developing instrument summaries for the Rehab Measures database at Shirley Ryan Ability Lab. Another related project is the linking of common data elements with outcome measures. Students will have the opportunity to get involved in developing instrument summaries *(Namrata Grampurohit)*.

**13. Online Teaching and Learning Evidence to Inform Course Development**

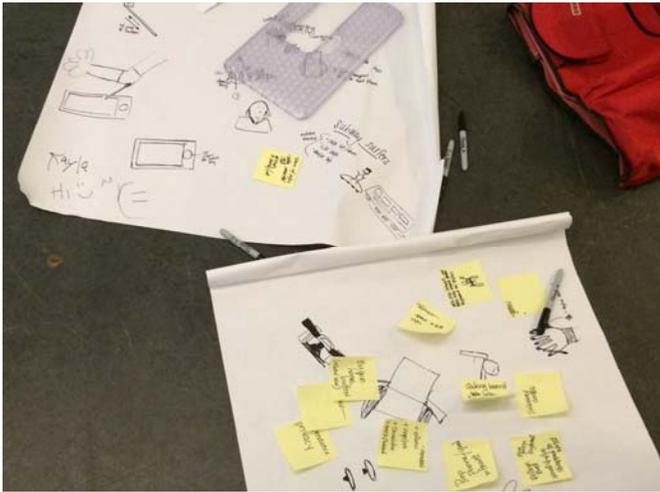
This project involves a scoping review of literature to determine the current evidence to support online teaching and learning. Students will have the opportunity to examine a subgroup of literature related to curriculum or technology within occupational therapy online teaching *(Namrata Grampurohit)*.

**14. Effectiveness of virtual reality intervention in people with neurological conditions.**

This project is conducted by a virtual rehabilitation company Bright Cloud International Corp. funded through small business innovation grant from NIH with Dr. Grampurohit consulting on studying the effectiveness of virtual reality in chronic stroke, traumatic brain injury, Parkinson disease, and pain. Students will have the opportunity to participate in the Parkinson disease study planned for Center City Campus pending funding decisions *(Namrata Grampurohit)*.

**15. Developing item response theory (IRT) based performance measures using existing calibrated item banks of patient reported outcomes (PRO).**

This project involves developing the conceptual foundations for this novel approach using IRT methods in performance-based measures to develop state-of-the-art outcomes measures in rehabilitation. *(Drs. Grampurohit and Mulcahey)*



## Natural & Built Environments and Design

Stephen B. Kern, PhD, OTR/L, FAOTA  
Kimberly S. Mollo, OTD, OTR/L  
Audrey L. Zapletal, OTD, OTR/L, CLA

### East Falls Design Partners

Mikael Avery, MS, OTR/L, MArch  
Maribeth Kradel-Weitzel (Graphic Design, East Falls)  
Tod Corlett (Industrial Design, East Falls)

### **Mission**

To study the environmental influences on participation in meaningful occupations and health promotion.

### **General Laboratory Description**

This lab explores the dynamic interaction between the human and nonhuman environments to promote occupation, health and participation. The environmental and contextual factors including the physical, social, cultural, political, economic, and virtual aspects are studied. Projects focus on improving individual client and/or patient-centered healthcare outcomes as well as health professions education, and health policy via intervention and design in the physical, social, cultural, political, economic and virtual environment. Populations studied include underserved persons with chronic health conditions, children and adults with a variety of chronic health conditions and multiple disabilities, and newly arrived refugees to Philadelphia. Design is explored through research, prototype development, testing, and evaluation of client-centered products that utilize universal design principles, promote increased environmental access, and improve participation in meaningful activities for all, including individuals and families living with disability.

### **Current Projects:**

#### **1. Nationalities Services Center**

The aim of this project is to understand the environmental supports and barriers to resettlement and successful integration into the US culture.

*Stephen B. Kern, PhD, OTR/L, FAOTA*

#### **2. 3D Printing at Magee Rehabilitation**

#### **3. Pharmaceutical Packaging Project**

#### **4. Design and Healthcare Collaboration**

The aim of these projects is to foster interdisciplinary design collaborations between occupational therapists, industrial designers, graphic designers, medical students and other health professionals to develop client-centered products to enhance end-user occupational performance and participation for various populations throughout the lifespan.

*Kimberly S. Mollo, OTD, OTR/L, Mikael Avery, MS, OTR/L, MArch, Maribeth Kradel-Weitzel*

#### **5. Camp Dreamstreet**

The aim of this project is to promote environmental strategies to enhance participation in overnight camping experiences for children with physical disabilities.

*Audrey L. Zapletal, OTD, OTR/L, CLA*



## Sensory Integration

Roseann C. Schaaf, PhD, OTR/L, FAOTA  
Zoe Mailloux, OTD, OTR/L, FAOTA  
Rachel Dumont, OTR/L  
Laura Krisa, PhD

### **Mission**

Mission of this lab is to investigate how processing and integration of sensory information impacts function, performance and participation in daily living, educational, social, and leisure activities.

### **General Laboratory Description**

This laboratory investigates the neural mechanisms of sensory perception, sensory reactivity and sensory integration, as well as studies occupational therapy interventions designed to address sensory difficulties. The lab also includes the development of assessments of sensory functions, and other aspects related to sensation, participation and occupational therapy.

### **Current Projects**

#### **1. Testing Outcomes of Occupational therapy using Ayres Sensory Integration in Comparison to Behavioral Intervention to Improve Functional Skills in Children with Autism**

This research focuses on testing the implementation of an evidence-based program of occupational therapy using sensory integration principles. Outcomes include measures of multisensory integration (via ERP), behavior, activity, and participation and is in collaboration with Albert Einstein Medical Center in Bronx, New York.

*Roseann Schaaf, PhD, OTR/L, FAOTA and Zoe Mailloux, OTD, OTR/L, FAOTA*

#### **2. Understanding Sensory Features in Autism**

The goal of the program is to understand the neural mechanisms of sensory integration and its impact on function and participation. This research aims to characterize and measure sensory reactivity, sensory perception, multisensory integration and praxis using psychophysiological measurement, imaging, multisensory integration-evoked related potentials, and behavioral measures. Students will work in the sensory integration laboratory to participate in ongoing studies, manage data, and participate in data analysis and interpretation.

*Roseann Schaaf, PhD, OTR/L, FAOTA and Laura Krisa, PhD*

#### **3. Evaluation in Ayres Sensory Integration (EASI)**

Comprehensive assessment is a critical link between understanding an individual's participation challenges and choosing an intervention that will be effective in supporting that individual toward successful and meaningful engagement in occupations. The EASI aims to be a comprehensive assessment for understanding the ways in which sensory integrative function and dysfunction are supporting or hindering participation in children.

*Zoe Mailloux, OTD, OTR/L, FAOTA and Roseann Schaaf, PhD, OTR/L, FAOTA*

#### **4. Sensory Aware and Friendly Environments (SAFE)**

We all want to feel comfortable, focused and at ease in all the environments in which we live, work, learn and socialize. Everyone has preferences for the various sensory experiences such as color, sound, scents, textures, and the options available for movement and activity. For some individuals, these preferences are more extreme to the point that certain sensations can be painful, distracting and confusing. SAFE is a program under development to assist businesses and organizations in making their facilities and services more sensory aware and friendly.

*Zoe Mailloux, OTD, OTR/L, FAOTA*

#### **5. Innovative Design for Engaged Attention and Learning (IDEAL)**

Children are spending more time in sedentary activities, with increased hours in front of computer, television, and hand-held screens. At the same time, academic expectations are increasing and options for physical activity at parks, playgrounds and recess spaces are diminishing. While these societal trends make it harder for children to engage in the active play their brains and bodies need to grow and develop, we also expect them to sit in stable, 4-legged chairs that are often the wrong size for their bodies. What if they could sit in chairs that adjusted to the correct height and that provided the types of motion and flexibility most adults expect and enjoy in their work furniture? What if classrooms were designed and arranged to support learning needs? Isn't it time that we all aim for classrooms that support basic sensory and ergonomic considerations for children?

*Zoe Mailloux, OTD, OTR/L, FAOTA*



## Faculty Professional Development

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Susan Toth-Cohen, PhD, OTR/L  
Tracey Vause Earland, PhD, OTR/L  
Rebecca Sinko, OTD, OTR/L  
Audrey Zapletal, OTD, OTR/L, CLA

### **Mission**

To identify current and innovative, evidence-based methodologies and practices that support and enhance professional development among health professions, faculty and students.

### **General Laboratory Description:**

The Professional Development Laboratory focuses on methods for developing higher-level understanding of professional practice, including skills for professional development and building capacity to engage in educational research

### **Current Projects**

#### **1. Occupation based hand therapy**

The aim of this project, a descriptive study using qualitative analysis, is to explore therapists' perceptions of occupation-based practices in hand therapy rehabilitation and the practice patterns of typical clinicians.

*Kim Henrichon, MS, OTR/L, OTD (C) and Susan Toth-Cohen, PhD, OTR/L*

#### **2. Professional Behaviors and Fieldwork: A Curriculum Based Model in Occupational Therapy or maybe this should go into Fieldwork Education and Doctoral Residency? Or rename?**

The aim of this study is to examine past occupational therapy students' scores on the Fieldwork Performance Evaluation (FWPE), focusing on those questions that address communication and professional behaviors (Section VI and VII, #32-42) (AOTA, 2002). Data from 2 years of the FWPE were analyzed to determine the areas of lowest student performance. These topics were then used to create a curricular based model for occupational therapy students including a level I fieldwork seminar, multiple self and faculty completed assessments and remediation plans.

*Gabrielle Giannetti, OTD, OTR/L and Susan Toth-Cohen, PhD, OTR/L*

#### **3. Understanding the impact of integrating Universal Design Learning principles into professional training, including science-based courses**

The aim of this study is to understand how learned-centered instruction combined with principles of Universal Design for Learning can enhance the learning environment. These methods are being systematically implemented into science-based and OT intervention courses. Data pertaining to students' and instructors' perception and student performance are being collected and analyzed.

*Audrey L. Zapletal, OTD, OTR/L, CLA, Rebecca Sinko, OTD, OTR/L, and Mary Gozza-Cohen PhD*

**4. Describing the needs of teaching adjuncts in order to facilitate OT students' learning**

The purpose of this pilot study is to understand the needs of adjunct clinical lab instructors' knowledge and skills related to teaching in an academic environment.

*Rebecca Sinko, OTD, OTR/L and Audrey Zapletal, OTD, OTR/L, CLA*



## Doctoral Residencies (OTD) and Fieldwork Education

Lydia Navarro-Walker, OTD, OTR/L, CLA  
Caryn Johnson, MS, OTR/L, FAOTA

### **Mission**

To enhance the quality of fieldwork education and the doctoral residencies by studying and responding to the needs of occupational therapy students, programs, fieldwork educators, faculty mentors, on-site mentors, and existing and emerging practice environments.

### **General Laboratory Descriptions**

This laboratory focuses on the study of the fieldwork process, fieldwork students, fieldwork educators, and fieldwork environments.

### **Residencies:**

Partners for the Residency/Capstone experiences include but are not limited to:

#### **1. Artz Philadelphia**

The aim of this residency is for students to have the opportunity to participate in advocacy, research and program development. Students will experience ARTZ Philadelphia programming (with participants living with dementia and their care partners) and collect and analyze data to assess the effectiveness of programming (may include retrospective analysis as well) and link effectiveness to future funding for the programs. Students will take an active role in efforts to decrease the stigma of dementia in society and potentially impact expansion of programming.

*Lydia S. Navarro-Walker, OTD, OTR/L, CLA*

#### **2. Design: Thomas Jefferson University (Center City and East Falls Collaboration)**

The aim of this residency is to foster interdisciplinary design collaborations between occupational therapists, industrial designers, graphic designers, medical students, and other health professionals to develop client-centered products to enhance end-user occupational performance and participation for various populations throughout the lifespan.

*Lydia S. Navarro-Walker, OTD, OTR/L, CLA*

#### **3. Jefferson Primary Care**

The aim of this residency is to collaborate with the Department of Family and Community Medicine team in improving wellness and community participation for older adults, to promote OT services in the care of older adults and restore or develop initiatives aimed at promoting aging in place.

*Lydia S. Navarro-Walker, OTD, OTR/L, CLA*

#### **4. Philadelphia Coordinated Healthcare**

The aim of this residency is to foster collaboration with a diverse team in addressing the health needs of adults with intellectual disabilities and/or autism. Collaboration may take the form of research

projects, develop or expand programming to assist families in navigating the healthcare system, addressing health literacy needs for this population, and securing access to resources.

*Lydia S. Navarro-Walker, OTD, OTR/L, CLA*

#### **5. Playsense**

The aim of this residency is to foster leadership skills, research skills, administrative skills and in-depth clinical skill development. With a focus on Ayres Sensory Integration, students will have the opportunity to participate in test development, piloting programming and collecting data, assessing the impact of SI on social participation and the family unit, and programming/research that focuses on determining the "proper" dosage of SI interventions.

*Lydia S. Navarro-Walker, OTD, OTR/L, CLA*

#### **6. Project Home**

The aim of this residency is to foster collaboration with social workers and staff at several safe havens for the homeless population. Students will have the opportunity to refine clinical practice skills, develop training modules for staff, recommendation for environmental safety within the facility, participate in research related to outcomes for individuals with dual diagnoses, and provide trauma-informed care. Ultimately, the goal is to prepare individuals in transitioning from safe havens to permanent housing by delivering service/training that includes but is not limited to: coping mechanisms, activities of daily living, home management, budgetary management, etc.

*Lydia S. Navarro-Walker, OTD, OTR/L, CLA*

#### **7. Thomas Jefferson University, Department of Occupational Therapy**

The aim of this residency is to engage students in the Scholarship of Teaching and Learning, where they will gain fundamental knowledge on how individuals learn and will engage in teaching (either in the classroom or through development of modules or revising content), and will have the opportunity to be embedded in three classes over two semesters. The final projects will be self-directed and related to innovation in teaching and learning and/or faculty research.

*Lydia S. Navarro-Walker, OTD, OTR/L, CLA*

#### **8. Spinal Cord Injury: The Lived Experience**

The aim of this residency is tri-fold; to train students in the use of occupational performance coaching and assess its feasibility for use in caregiver training; to promote best practice and outcomes in occupational therapy research, and to gain an improved understanding of the lived experience of individuals with spinal cord injuries.

*Lydia S. Navarro-Walker, OTD, OTR/L, CLA*

#### **9. UUH Outreach**

The aim of this residency is to foster collaboration amongst the staff, OTA students, and OTD students in order to provide evidence-based program development, interventions, and environmental safety to promote aging in place within the community. Collaboration also includes data collection and measuring outcomes related to health and wellness programming and fall prevention.

*Lydia S. Navarro-Walker, OTD, OTR/L, CLA*

#### **10. A doctoral experiential focused on the scholarship of teaching and learning**

This project aims to provide entry-level doctoral students with expertise in the advanced areas of teaching and advocacy.

*Susan Toth-Cohen, PhD, OTR/L, Rebecca Sinko, OTD, OTR/L, Audrey Zapletal, OTD, OTR/L, CLA*

## **Fieldwork Current Projects:**

### **1. The Collaborative Model of Fieldwork Education**

The aim of this project is to promote the use of the Collaborative Model of Fieldwork Education by providing training to fieldwork educators locally and nationally through publications and presentations.

*Caryn Johnson, MS, OTR/L, FAOTA*

### **2. The Fieldwork Educator Certificate Course**

The aim of this project is to evaluate the value and/or effectiveness of the Fieldwork Educator Certificate Course. Current research focuses on comparing methods used to prepare occupational therapy practitioners to be fieldwork educators, and the perceived effectiveness of the course.

*Caryn Johnson, MS, OTR/L, FAOTA*

### **3. Preparation of Fieldwork Educators**

The aim of this study was to identify the methods in which current Level II fieldwork educators engaged to prepare for the role of fieldwork educator and to explore the perceptions of preparedness of current Level II fieldwork educators.

*Caryn Johnson, MS, OTR/L, FAOTA*

### **4. Developing Learning Contracts with Measurable Goals for Students who are at Risk for Failing Fieldwork**

The aim of this project is to disseminate information that will help Academic Fieldwork Coordinators and Fieldwork Educators who are working with students struggling to successfully complete level II fieldwork. The use of a systematic approach and measurable goals illustrates best practice in this area.

*Caryn Johnson, MS, OTR/L, FAOTA*

### **5. Students as Change Agents**

The aim of this project is to examine how students support the integration of evidence into their fieldwork sites, and influence behavioral change in their fieldwork educators by serving as knowledge brokers and models for best practice.

*Audrey Zapletal, OTD, OTR/L, CLA and Caryn Johnson, MS, OTR/L, FAOTA*



## Implementing High Fidelity Simulations in OT Education

Tina DeAngelis, EdD, OTR/L  
E. Adel Herge, OTD, OTR/L, FAOTA  
Tracey Vause Earland, PhD, OTR/L  
Audrey Zapletal, OTD, OTR/L, CLA

### **Mission**

To study the effectiveness and impact of using robust simulation training methods in occupational therapy education.

### **General Laboratory Description**

The high fidelity simulation laboratory focuses on the ongoing development, implementation, and evaluation of simulation methodology as a compliment to other learning activities in the curriculum. This includes discipline specific and interprofessional simulations.

### **Current Projects**

#### **1. Understanding how Standardized Patient Encounters enhances OT training.**

High fidelity simulation is a novel instructional method in OT education. Currently, students experience at least seven (7) high fidelity simulation encounters which include the use of standardized patients. Standardized Patients (SPs) are actors who are training by faculty to depict specific behaviors and movements under standardized conditions. Evidence from other health professions that use SPs can help facilitate students' communication and technical skills. Faculty is currently assessing student's perceptions of their competence, confidence, and comfort of specific skills.

*Audrey Zapletal, OTD, OTR/L, CLA, Tracey Vause Earland, PhD, OTR/L, E. Adel Herge, OTD, OTR/L, FAOTA*

#### **2. Developing Cultural Competence: Integrating Sexual and Gender Minorities Education through Standardized Patient Encounters.**

Health professionals need to be culturally competent in order to deliver good client-centered treatment. Evidence has shown that students learn best from being exposed to different populations from themselves in order to understand the challenges of specific populations. There are significant health disparities for individuals who identify within the sexual and gender minority communities as a result of a myriad of factors, including health professions who are not equipped with fundamental knowledge such as understanding the different groups within these communities. The purpose of this project is to provide foundational training for OT students and an opportunity to interact with Standardized Patients who identify as transgender during a simulated OT treatment session. Data being collected includes the student's perceptions of their performance, knowledge and comfort with their ability to work with the SP.

*Audrey Zapletal, OTD, OTR/L, CLA, Tracey Vause Earland, PhD, OTR/L*

### **3. Development of Training Modules to Implement Use of the Peer Assessment Debriefing Instrument (PADI)**

This project develops the infrastructure to establish more rigorous psychometrics of the PADI. The project includes development of two components: 1) training materials in the use of the PADI to distribute to academic research partners and 2) repository for data collection from partner institutions.

Dean's Research Award: July 1, 2017-June 30, 2018, \$1,500. *Principle Investigators: E. Adel Herge, OTD, OTR/L, FAOTA, Jennifer Saylor, RN, PhD (University of Delaware), Susan Wainwright, PT, PhD*



## Interprofessional Education

E. Adel Herge, OTD, OTR/L, FAOTA  
Mary Muhlenhaupt, OTD, OTR/L, FAOTA  
Susan Toth-Cohen, PhD, OTR/L  
Tracey Vause Earland, PhD, OTR/L  
Audrey Zapletal, OTD, OTR/L, CLA

### ***Mission***

To create, study and advance innovative learning opportunities that promote collaborative interprofessional practice and excellence in healthcare delivery and education.

### ***General Laboratory Description***

The interprofessional education laboratory focuses on the ongoing study of methods to develop collaboration that crosses borders between disciplines and geographic areas to facilitate collaborative practice.

### ***Current Projects***

#### **1. Enhancing Services for Homeless Populations**

The aims of the project are to:

- a) Apply results from previously collected pilot data from the Enhancing Services for Homeless Populations program (ESHP, 2016) to develop an enhanced training program that uses virtual simulation and real world collaborative practice experience to teach strategies for working effectively with homeless and formerly homeless persons
- b) Implement the revised and enhanced program with 18 graduate students to provide optimal simulated and real world practice experiences that will serve as a foundation for future work with homeless and formerly homeless populations.
- c) Enable graduate students to strengthen their capacity to work effectively in interprofessional teams and to provide care for complex patients that is both person- and population centered.

*Susan Toth-Cohen, PhD, OTR/L*

#### **2. Alzheimer's Virtual Interprofessional Training (AVIT)**

The aim of this project is to develop, implement, evaluate and disseminate an innovative virtual training platform to teach interprofessional students about providing evidence-based, coordinated, empathic care for patients and families affected by Alzheimer's disease.

*Susan Toth-Cohen, PhD, OTR/L and Tracey Vause Earland, PhD, OTR/L*

#### **3. Jefferson Student Interprofessional Hotspotting Program**

The aims of this project are to:

- a) Facilitate and measure the learning of interprofessional student teams about the challenges faced by complex patients during their interactions with the current healthcare system.
- b) Enable students from different health professions to work together and learn how to identify "super-utilizers" and deepen their understanding of the factors that lead to high healthcare utilization and multiple readmissions.
- c) Assess how students assist "super-utilizing" patients with care coordination and navigation.

- d) Track how interprofessional teams advocate for their patients' needs with providers and local social services.

*Tracey Vause Earland, PhD, OTR/L*

#### **4. Jefferson Health Mentors Program**

The Jefferson Health Mentors Program (HMP) is a longitudinal interprofessional education program involving first- and second-year students from medicine, nursing, **occupational therapy**, physical therapy, pharmacy, couple and family therapy, physician assistants, medical laboratory sciences and genetic counseling.

The aims of this project are to implement a robust curriculum, measure, and analyze the program outcomes:

- a) Students will appreciate how a person's environment (social & physical) interacts with health and wellbeing.
- b) Students will understand and value person-centered care.
- c) Students will identify the attributes of successful teams and demonstrate the responsibilities and practices of effective team member(s).
- d) Students will value and respect the varied and changing roles and contributions of the members of the interprofessional healthcare team.

*Tracey Vause Earland, PhD, OTR/L*



## **PrEMO: Promoting Environments that Measure Outcomes**

Amy Carroll, OTD, OTR/L  
Alison Bell, OTD, OTR/L  
Tina DeAngelis, EdD, OTR/L  
E. Adel Herge, OTD, OTR/L, FAOTA  
Caryn Johnson MS, OTR/L, FAOTA  
Stephen B. Kern, PhD, OTR/L, FAOTA  
Kimberly Mollo, OTD, OTR/L  
MJ Mulcahey, PhD, OTR/L  
Lydia Navarro-Walker, OTD, OTR/L, CBIS  
Roseann Schaaf, PhD, OTR/L, FAOTA  
Susan Toth-Cohen, PhD, OTR/L  
Catherine Verrier Piersol, PhD, OTR/L, FAOTA

### ***Mission***

To build sustainable partnerships between select organizations and the Department of Occupational Therapy at Thomas Jefferson University and to establish and study an innovative model that fosters the practice. PrEMO serves as a training ground for students, fosters partnerships with clinicians and generates new knowledge through clinical research.

### ***General Laboratory Description***

Jefferson students join Jefferson faculty and fieldwork educators to develop the specialized knowledge and skill needed to provide model practice that is specific to the population and setting. Students develop skill in Data-Driven Decision Making as they mentor with the PrEMO team to produce client-specific case reports, participate in program development and/or engage in clinical research activities.

### ***Current PrEMO Sites:***

**AIM Academy** is a Research-to-Practice School that is continually pioneering the technology and techniques proven to benefit children with language-based learning differences. Aim is uniquely positioned to be on the forefront of cutting edge advances in education children who learn differently. Upon graduation, AIM students are considered prepared for the challenges, complexities and choices available to them at university and beyond.

**Pioneer Autism Sensory Center** is a public educational center for individuals with Autism Spectrum Disorder. This program maintains a focus on communication, socialization, and functional living skills. A variety of theoretical approaches and evidence-based interventions have been applied within this setting such as: Sensory-Based Interventions, Applied Behavioral Analysis, and Social Learning Theory to support each student's individual goals.

**Children's Specialized Hospital - Mountainside** is an outpatient center that provides treatment for children with various impairments; striving to reach each child's full potential through the use of innovative therapies and intervention.

**Children's Specialized Hospital (Tom's River - Steven's Road)** is a pediatric facility offering children outpatient or long term care. This setting offers families a full array of medical and therapy services across to reach each child's full potential through the use of innovative therapies and intervention.

The mission of the **Nationalities Service Center** is to "prepare and empower immigrants and refugees in the Philadelphia region to transcend challenging circumstances by providing comprehensive client-centered services to build a solid foundation for a self-sustaining and dignified future".

**Newgrange School** is a school for children with learning disabilities that strives to find effective and sustainable learning strategies in areas of reading, language arts, social skills, science, math and social studies for individuals to utilize long term.

**Dan Aaron Parkinson's Rehabilitation Center** provides specialized therapy services to individuals with movement disorders and their families.

**PlaySense, Inc.** is a pediatric outpatient clinic that promotes participation in everyday activities through the use of sensory integration, enhancing motor and cognitive skills, and promoting independence in life skills.