

Division Data Summary

Research and Training Details

Number of Faculty	7
Number of Support Personnel	9
Direct Annual Grant Support	\$1,422,897
Peer Reviewed Publications	15

Clinical Activities and Training

Number of Clinical Staff	1
Number of Clinical Fellows	2
Inpatient Encounters	2413
Outpatient Encounters	3930

Division Photo



Row 1: D Pruitt
Row 2: J Vargus-Adams, L Michaud, M McMahon
Row 3: B Kurowski, S Wade, D Kinnett

Significant Publications

Wade SL, Walz NC, et al. A randomized trial of teen online problem solving for improving executive function deficits following pediatric traumatic brain injury. *J Head Trauma Rehabil.* 25(6): 409-415. 2010.

This paper reports findings from one of only a handful of clinical trials of interventions to reduce the behavioral consequences of TBI in children and adolescents. The results support the feasibility of web-based Teen Online Problem Solving (TOPS) for adolescents with severe brain injuries and its utility in improving executive functioning, a persistent and pervasive problem in this population.

Division Collaboration

Orthopaedics; Plastic Surgery; Physical Medicine and Rehabilitation » Charles Mehlman, DO, MPH; Mohab Foad, MD; Roger Cornwall, MD; Kevin Little, MD; Kevin Yakuboff, MD; Ann Schwentker, MD; Linda Michaud, MD
Brachial Plexus Center:

A multi-disciplinary program for the treatment of pediatric brachial plexus injury. The Brachial Plexus Center is actively involved in clinical research to advance the quality and effectiveness of care of children with brachial plexus injuries.

Orthopaedics; Physical Medicine and Rehabilitation » James McCarthy, MD; Douglas Kinnett, MD; Jilda Vargus-Adams, MD

Cerebral Palsy Program:

A multidisciplinary program for the comprehensive treatment of cerebral palsy. The Cerebral Palsy Program is actively involved in clinical research to evaluate the effectiveness of care of children with cerebral palsy.

Neurology; Physical Medicine and Rehabilitation » Brenda Wong, MD; Mary McMahon, MD

Comprehensive Neuromuscular Center:

A multi-disciplinary clinic providing comprehensive treatment for children with neuromuscular disorders.

Hematology/Oncology; Physical Medicine and Rehabilitation » John Perentesis, MD; David Pruitt, MD

Neuro-Oncology Clinic:

A multi-disciplinary program providing comprehensive treatment for children with neurological tumors.

Neurology; Physical Medicine and Rehabilitation » Marielle Kabbouche, MD; Jilda Vargus-Adams, MD

Stroke Clinic:

A multi-disciplinary program that provides comprehensive treatment for children with stroke.

Orthopaedics; Physical Medicine and Rehabilitation » Alvin Crawford, MD; Douglas Kinnett, MD

Spine Center:

A multi-disciplinary program that provides comprehensive treatment for children with congenital and acquired abnormalities of the spine.

DDBP; Physical Medicine and Rehabilitation » Sonya Oppenheimer, MD; Mary McMahon, MD

Myelomeningocele Clinic:

A multi-disciplinary clinic which deals with the treatment of children with myelomeningocele.

Orthopaedics; Physical Medicine and Rehabilitation » Charles Mehlman, DO, MPH; Linda Michaud, MD

Limb Reconstruction Clinic:

A multi-disciplinary clinic which deals with the treatment of children with congenital limb deficiencies and acquired amputations.

Rheumatology; Physical Medicine and Rehabilitation » Esi Morgan Dewitt, MD; Susmita Kashikar-Zuk, MD; Jilda Vargus-Adams, MD

A U01 grant evaluating a patient reported outcome measure for use in pediatric pain, rheumatology, and rehabilitation research.

Behavioral Medicine and Psychology; Physical Medicine and Rehabilitation » Nicolay Chertkoff Walz, PhD; Shari Wade, PhD

Dr. Walz has received mentoring from Dr. Wade and is currently co-investigator on Dr. Wade's competing continuation project examining long-term functional outcomes of early childhood TBI and her Rehabilitation Research and Training Grant for Pediatric TBI Interventions.

Neuroimaging Research Consortium; Physical Medicine and Rehabilitation » Scott Holland, PhD; Kim Cecil, PhD; Weihong Yuan, PhD; Shari Wade, PhD

Completing analyses and write up of grants from the Ohio Emergency Medical Services and the UC Interdisciplinary Research Grants.

Emergency Medicine; Physical Medicine and Rehabilitation » Lynn Babcock Cimpello, MD; Mike Gittleman, MD; Wendy Pomerantz, MD; Shari Wade, PhD

Dr. Wade is primary mentor for Dr. Babcock Cimpello's KL2 award investigating predictors of recovery from mild TBI.

Emergency Medicine; Trauma Services; Physical Medicine and Rehabilitation » Mike Gittleman, MD; Wendy Pomerantz, MD; Richard Falcone, MD; Shari Wade, PhD

Dr. Wade is part of the steering committee for the Cincinnati Children's Comprehensive Injury Center.

Bioinformatics; Physical Medicine and Rehabilitation » Keith Marsolo, PhD; Shari Wade, PhD

Dr. Marsolo is a collaborating investigator on the 5-year RRTC grant for pediatric TBI interventions.

Faculty Members

Linda Michaud, MD, Associate Professor

Division Director

Aaron W. Perlman Professor

Co-Director, Cincinnati Children's Brachial Plexus Center

Research Interests Outcomes and effectiveness of interventions after pediatric neurotrauma - birth brachial plexus palsy, brain injury.

Douglas Kinnett, MD, Associate Professor

Director, Spasticity Management Program

Clinical Director, Cerebral Palsy Center

Research Interests Outcomes and effectiveness of interventions for spasticity in cerebral palsy, use of electrodiagnosis in management in birth brachial plexus palsy.

Brad Kurowski, MD, Instructor

Research Interests Genetic influence on cognitive and behavioral recovery after mild pediatric traumatic brain injury.

Mary McMahon, MD, Associate Professor

Director, Residency Training Program, UC Dept. of PM&R

Director, Medical Student Education, UC Dept. of PM&R

Research Interests Outcomes and effectiveness of interventions in muscular dystrophy.

David Pruitt, MD, Assistant Professor

Director, A4Rehab

Director, Pediatric Rehabilitation Medicine Fellowship

Research Interests Functional outcomes in children with brain tumors.

Jilda Vargus-Adams, MD, Assistant Professor

Research Director, Cerebral Palsy Center

Research Interests Outcome measurement and effectiveness of interventions for cerebral palsy.

Shari Wade, PhD, Professor

Director of Research

Research Interests Outcomes and effectiveness of interventions after pediatric traumatic brain injury.

Clinical Staff Members

- Lainie Holman, MD

Trainees

- Michael Dichiaro , MD, PGY-6, University of Colorado
- Marisa Osorio, DO, PGY-5, University of Cincinnati
- Phoebe Scott-Wyard , DO, PGY-5, Western University of Health Sciences
- Tobias Tsai, MD, PGY-5, Johns Hopkins University
- Kimberly Hartman, MD, PGY-4, Wayne State University
- Ashlee Brown, MD, PGY-2, University of Missouri - Columbia
- Nathan Evanson, MD, PGY-1, University of Cincinnati
- Erin Swanson, MD, PGY-1, Medical College of Wisconsin

Significant Accomplishments

Improved Care for Cerebral Palsy Patients

The Cerebral Palsy Program is planning to expand services for children and their families, exploring avenues for better service delivery and initiation of research endeavors and building a diverse and comprehensive team of professionals. Developments include interdisciplinary clinics, planning of a motion laboratory for gait analysis, provision of selective dorsal rhizotomy surgery, and planning to implement research into novel combinations of robotic gait therapy and functional electrical stimulation.

Jilda Vargus-Adams, MD, and Doug Kinnett, MD, lead the working group that is formulating the plan and budget for the next five years to make this a world-class program in the management of children with cerebral palsy. In collaboration with the Perlman Center, Occupational and Physical Therapy, Orthopaedics, Neurosurgery and the Anderson Center and with input from families, planning is being implemented for a comprehensive healthcare delivery system providing the best possible care while seeking out and applying discoveries through research and compassion for improving the quality of life of children with CP.

This coming year will see the introduction of team members at the annual Aaron Perlman Conference for Cerebral Palsy at Cincinnati Children's, approval of a budget to support and expand this program and expansion of clinic availability to patients and families.

Division Publications

1. Ganesalingam K, Yeates KO, Taylor HG, Walz NC, Stancin T, Wade S. **Executive functions and social competence in young children 6 months following traumatic brain injury.** *Neuropsychology*. 2011; 25:466-76.
2. Kaulfers AM, Backeljauw PF, Reifschneider K, Blum S, Michaud L, Weiss M, Rose SR. **Endocrine dysfunction following traumatic brain injury in children.** *J Pediatr*. 2010; 157:894-9.
3. Kinnett D. **Guilain-Barre Syndrome.** *Rehabilitation Medicine Quick Reference: Pediatrics*. New York: Demos; 2011.
4. Mehlman CT, DeVoe WB, Lippert WC, Michaud LJ, Allgier AJ, Foad SL. **Arthroscopically assisted Sever-L'Episcopo procedure improves clinical and radiographic outcomes in neonatal brachial plexus palsy patients.** *J Pediatr Orthop*. 2011; 31:341-51.
5. Pruitt DW, McMahon MA, Reid SR, Apkon SA, Michaud LJ. **Rehabilitation of the Child with Cancer.** *Principles and Practice of Pediatric Oncology*. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins Health; 2011: 1305-1321. .
6. Talbert RJ, Michaud LJ, Mehlman CT, Kinnett DG, Laor T, Foad SL, Schnell B, Salisbury S. **EMG and MRI are independently related to shoulder external rotation function in neonatal brachial plexus palsy.** *J Pediatr Orthop*. 2011; 31:194-204.
7. Tilton A, Vargus-Adams J, Delgado MR. **Pharmacologic treatment of spasticity in children.** *Semin Pediatr Neurol*. 2010; 17:261-7.
8. Tlustos SJ, Chiu CY, Walz NC, Holland SK, Bernard L, Wade SL. **Neural correlates of interference control in adolescents with traumatic brain injury: functional magnetic resonance imaging study of the counting stroop task.** *J Int Neuropsychol Soc*. 2011; 17:181-9.
9. Vargus-Adams JN, Martin LK. **Domains of importance for parents, medical professionals and youth with cerebral palsy considering treatment outcomes.** *Child Care Health Dev*. 2011; 37:276-81.
10. Vargus-Adams JN, Martin LK, Maignan SH, Klein AC, Salisbury S. **The GMFM, PEDI, and CP-QOL and perspectives on functioning from children with CP, parents, and medical professionals.** *Journal of pediatric rehabilitation medicine*. 2011; 4:3-12.

11. Wade SL, Cassedy A, Walz NC, Taylor HG, Stancin T, Yeates KO. **The relationship of parental warm responsiveness and negativity to emerging behavior problems following traumatic brain injury in young children.** *Dev Psychol.* 2011; 47:119-33.
12. Wade SL, Walz NC, Carey J, Williams KM, Cass J, Herren L, Mark E, Yeates KO. **A randomized trial of teen online problem solving for improving executive function deficits following pediatric traumatic brain injury.** *J Head Trauma Rehabil.* 2010; 25:409-15.
13. Wade SL, Walz NC, Cassedy A, Taylor HG, Stancin T, Yeates KO. **Caregiver functioning following early childhood TBI: do moms and dads respond differently?.** *NeuroRehabilitation.* 2010; 27:63-72.
14. Walz NC, Yeates KO, Taylor HG, Stancin T, Wade SL. **Theory of mind skills 1 year after traumatic brain injury in 6- to 8-year-old children.** *J Neuropsychol.* 2010; 4:181-95.
15. Xin B, Jones S, Puffenberger EG, Hinze C, Bright A, Tan H, Zhou A, Wu G, Vargus-Adams J, Agamanolis D, Wang H. **Homozygous mutation in SAMHD1 gene causes cerebral vasculopathy and early onset stroke.** *Proceedings of the National Academy of Sciences of the United States of America.* 2011; 108:5372-7.

Grants, Contracts, and Industry Agreements

Grant and Contract Awards		Annual Direct / Project Period Direct
KUROWSKI, B		
Genetic Influence on Cognitive and Behavioral Recovery After Mild Pediatric Traumatic Brain Injury		
National Institutes of Health(University of Pittsburgh)		
K12 HD 001097	07/01/10-06/30/13	\$106,000
VARGUS-ADAMS, J		
Towards Improved Clinical Trials in Cerebral Palsy		
National Institutes of Health		
K23 HD 049552	09/29/06-08/31/11	\$118,000
Combined FES and Robotic Gait Training in Childhood CP		
Cerebral Palsy International Research Foundation		
	09/01/10-08/31/12	\$43,478
WADE, S		
Long Term Functional Outcomes of Early TBI		
National Institutes of Health		
R01 HD 042729	09/01/09-08/31/14	\$459,842
Rehabilitation Research and Training Center for Traumatic Brain Injury		
US Department of Education		
H133B090010	10/01/2009-9/30/2014	\$695,577
Current Year Direct		\$1,422,897