Division of Pediatric Physical Medicine and Rehabilitation

DIVISION PROFILE	
Number of Faculty	6
Number of Support Personnel	9
Annual Total Grant Support (direct)	$712,198
Number of Peer Reviewed Publications	5
Patient Encounters	
Outpatient	3,284
Inpatient	2,579

FACULTY LISTING

Linda J. Michaud, MD, Associate Professor of Clinical PM&R and Pediatrics, Division Director; Aaron W. Perlman Professor

Douglas G. Kinnett, MD, Associate Professor of Clinical PM&R and Pediatrics, Director, Spasticity Management Program

Mary M. McMahon, MD, Assistant Professor of Clinical PM&R and Pediatrics, Director, Residency Training Program, UC Dept. of PM&R; Director, Medical Student Education, UC Dept. of PM&R

David W. Pruitt, MD, Assistant Professor of Clinical PM&R and Pediatrics

Jilda N. Vargus-Adams, MD, Assistant Professor of Clinical PM&R and Pediatrics

Shari L. Wade, PhD, Adjunct Professor of Clinical Pediatrics, Director of Research

Left to Right: M. McMahon, D. Kinnett, J. Vargus-Adams, L. Michaud, D. Pruitt, S. Wade

OVERVIEW

The mission of the Division of Pediatric Physical Medicine & Rehabilitation (PM&R) at CCHMC is to maximize activity and participation (minimize disability and handicap) for optimal quality of life for children with disabilities and their families. The faculty in the division includes five pediatric physiatrists, each of whom is

Board Certified/Eligible in both Pediatrics and PM&R, and a research associate in pediatric psychology. The clinical activities of the division include provision of inpatient and outpatient rehabilitative services for children with a wide range of conditions associated with childhood-onset disability, most of which are due to congenital and acquired disorders affecting the neurological and musculoskeletal systems. The Comprehensive Integrated Inpatient Medical Rehabilitation and Pediatric Family-Centered Medical Rehabilitation Programs are accredited by the Commission on the Accreditation of Rehabilitation Facilities (CARF), one of only three accredited pediatric rehabilitation programs in the State of Ohio and one of four in the tri-state area. Outpatient clinical activities include clinics in Pediatric Rehabilitation, Spasticity Management, Spinal Cord, and EMG, as well as participation in multidisciplinary clinics, including the Muscular Dystrophy Association Clinic, Wheelchair and Adaptive Seating Evaluation Clinic, Brachial Plexus Clinic, Cerebral Palsy Clinic, Myelomeningocele Clinic, Stroke Clinic, Limb Reconstruction Clinic, and Neuro-Oncology Clinic. Satellite clinics in Pediatric Rehabilitation are offered at CCHMC Mason and Outpatient Kentucky monthly and in Portsmouth, Ohio, quarterly. Training is provided for resident physicians in PM&R at the University of Cincinnati College of Medicine (UCCM), as well as for resident physicians in the combined residency training program in Pediatrics and PM&R at CCHMC and UCCM. The five-year combined residency training program in Pediatrics and PM&R is currently one of 3 combined programs in this specialty in the United States. Medical students rotate in pediatric rehabilitation on electives in rehabilitation in their third and fourth years, as part of the neurosciences selective in the fourth year, and as clinical research externs during the summer between the first and second years. Research activities are focused on pediatric brain injury (see below). Advocacy efforts in the division aim to facilitate community integration of children and youth with disabilities. Educational activities in this area have focused on brain injury awareness, with an annual conference on brain injury sponsored for the community. Services supported by the community through our division facilitate appropriate inclusion of children with brain injury in school environments.

HIGHLIGHTS

Continued clinical growth was experienced during this past year in the outpatient clinics, accompanied by development of further interdisciplinary collaborations. While 67% of the outpatient clinical activity of the division occurred in the Pediatric Rehabilitation Clinics, over 1,000 consultation and follow-up visits were provided for patients and families in the clinics of other Divisions during this past year. Rehabilitation services were provided in the Muscular Dystrophy Association (Drs. McMahon and Michaud, Co-Directors) and Stroke (Dr. Vargus-Adams) Clinics in Neurology, in the Cerebral Palsy (Dr. Vargus-Adams) and Myelomeningocele (Dr. McMahon) Clinics in Developmental Disabilities, in the Brachial Plexus (Dr. Michaud, Co-Director) and Limb Reconstruction (Dr. Michaud) Clinics in Orthopaedics, and in the Wheelchair and Adaptive Seating Evaluation Clinic (Drs. Michaud, McMahon) in the Department of Occupational Therapy and Physical Therapy. New clinical services developed during this past year through the initiative of David Pruitt, MD, include the Spinal Cord Program, with services across the inpatient-to-outpatient spectrum, including development of a new Spinal Cord Clinic. Dr. Pruitt also made significant progress expanding rehabilitation services in Oncology, in particular in the Neuro-oncology Clinic. Collaboration is underway with the Multidisciplinary Spine Center (Dr. Kinnett) in Orthopaedics. Finally, collaboration was initiated with the Shriner's Hospital for Children in Lexington, Kentucky, to provide rehabilitative services for children with cerebral palsy and service provision by Dr. Vargus-Adams begun in April 2006.

The focus of research in the division is on pediatric traumatic brain injury (TBI). TBI is the most common cause of acquired disability in childhood and the leading diagnosis resulting in admission to inpatient rehabilitation units in the US, including ours at CCHMC. Shari L. Wade, PhD, Research Director, is involved in multiple federally-funded research studies investigating child and family outcomes, parent-child interaction, and models of family intervention following pediatric TBI. One study funded by the NICHD comprehensively examines the effects of TBI on young children and their families, with emphasis on the interrelationship between social environmental factors and child recovery and subsequent development. A recently completed study, also funded by NICHD, had examined the efficacy of an online family problem-solving intervention to improve caregiver and child function following pediatric TBI. Overall findings of that randomized trial reflected significantly less distress, depression, and anxiety between baseline and 6-month follow-up among parents whose family received the online intervention versus those receiving usual care. The second current study, titled "A Trial of Two Online Interventions for Child Brain Injury", funded by the CDC, compares the successful on-line intervention from the previously completed study to an online discussion group in a multi-site randomized trial. When completed in October 2006, this project should shed light on the characteristics of

families who benefit from each of the interventions. Dr. Wade received a new field-initiated research award from NIDRR this year to adapt her online problem-solving intervention for teenagers with TBI. This 3-year project will culminate in a randomized clinical trial comparing the effects of Teen Online Problem Solving to an Internet Resource Comparison group. Dr. Mary McMahon is preparing for publication the results of a 4-year pilot study funded by NICHD and NINDS providing data on appropriate outcome measures of children in a minimally conscious state and on the pharmacokinetics of amantadine in children. Her results should be useful in designing future studies of the effectiveness of pharmacologic intervention in improving neurologic and functional outcomes following pediatric TBI. Dr. Jilda Vargus-Adams was awarded a K23 Mentored Patient-Oriented Research Career Development Award from the NCMRR entitled “Towards Improved Clinical Trials in Cerebral Palsy”. This represents the first Career Development Award granted to a pediatric physiatrist. Together, these projects reflect the division’s commitment to research that improves quality of life outcomes for children and their families.

Pediatric PM&R faculty provide training for residents in the largest combined residency program in this subspecialty in the country. During the current academic year, accreditation was obtained from the ACGME for a fellowship training program in Pediatric Rehabilitation Medicine. This will provide training in pediatric physiatry for either one year for physicians who have completed a combined residency program in Pediatrics and PM&R or two years for those physicians who have completed a residency training program in PM&R. We strive to foster future leaders and academicians in this field.

TRAINING

Matthew Mayer, MD	PGY-I	University of Cincinnati
Micah Baird, MD	PGY-II	Wright State University
Lainie Holman, MD	PGY-IV	Medical College of Ohio

GRANTS, CONTRACTS AND INDUSTRY AGREEMENTS

Grant and Contract Awards		Annual Direct/Project Period Direct
Wade, S		
Child and Family Sequelae of Preschool Brain Injury		
National Institutes of Health		
R01 HD 042729	09/10/02 – 08/31/07	$397,301/$1,954,799
A Trial of 2 Online Interventions for Child Brain Injury		
Centers for Disease Control		
R49 CCR 523224	09/30/03 – 09/29/06	$214,475/$741,352
Teen Online Problem Solving for Pediatric Brain Injury		
Department of Education		
H13 3G050239	10/01/05 – 09/29/08	$100,422/$300,626
	Current Year Direct	$712,198

Industry Contracts	
Current Year Direct Receipts	$0
TOTAL	$712,198

PUBLICATIONS

1. Michaud LJ, Ried SR, McMahon MA, Pruitt DW. Rehabilitation of the child with cancer. In: Pizzo PA, Poplack DG, editors. Principles and practice of pediatric oncology 5th ed. Philadelphia: Lippincott Williams & Wilkins; 2006. p. 1339-1413.

2. Wade SL, Carey J, Wolfe CR. An online family intervention to reduce parental distress following pediatric brain injury. J Consult Clin Psychol 2006;74(3):445-54.

3. Wade SL, Michaud L, Brown TM. Putting the pieces together: preliminary efficacy of a family problem-solving intervention for children with traumatic brain injury. J Head Trauma Rehabil 2006;21(1):57-67.

4. Wade SL, Wolfe C, Brown TM, Pestian JP. Putting the pieces together: preliminary efficacy of a web-based family intervention for children with traumatic brain injury. J Pediatr Psychol 2005;30(5):437-42.

5. Wade SL, Wolfe CR, Brown TM, Pestian JP. Can a web-based family problem-solving intervention work for children with traumatic brain injury? Rehabil Psychol 2005;50(4):337-345.

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