

2014 Research Annual Report

Developmental and Behavioral Pediatrics



Division Summary

RESEARCH AND TRAINING DETAILS

Number of Faculty	20
Number of Support Personnel	69
Direct Annual Grant Support	\$1,370,413
Peer Reviewed Publications	14

CLINICAL ACTIVITIES AND TRAINING

Number of Clinical Staff	45
Number of Staff Physicians	2
Number of Clinical Fellows	6
Number of Other Students	107
Outpatient Encounters	24,460

Division Photo



Row 1: L Kuan
Row 2: K Mason, I Riddle, K Kroeger-Geoppinger, S Wiley
Row 3: S Weber, J Bass, T Froehlich, R Adams, P Manning-Courtney, Julia Anixt

Significant Accomplishments

Collaboration with CVG to Improve Air Travel Experiences

The Starting Our Adventure Right (SOAR) program is a collaboration between our division, the Cincinnati/Kentucky International Airport (CVG) and The Autism Society of Greater Cincinnati. The SOAR program was originally developed to identify ways that CVG airport could support families and prepare individuals with Autism Spectrum Disorders (ASD) for the airport experience. The inaugural SOAR event was held in October 2013, during which children with autism, and their families, participated in all of the steps required for boarding an airplane, including boarding an actual airplane, with support from DDBP staff, who had also provided training to CVG and TSA staff. The next CVG SOAR event was scheduled for September 2014. Using the airport location as a model, the SOAR program is being expanded to other locations (e.g., Cincinnati Museum Center, Cincinnati Zoo, Newport Aquarium, grocery stores, libraries, restaurants, movie theaters, sports venues, and amusement parks) as well as other developmental disabilities beyond ASD. The SOAR program emphasizes the importance of working with community partners in innovative ways to promote safe, comfortable, and inclusive opportunities for individuals with developmental disabilities to participate and become more independent within their own communities.

Sharp Reductions in Wait Times

In the past year, DDBP has focused extensively on improving access to first visits for patients. Within the field of Developmental/Behavioral Pediatrics, long wait times for visits are well known, and place an

unacceptable burden on families. With support from the Anderson Center and technical support provided through the Autism Speaks-Autism Treatment Network, significant improvements in the time to first visit were made. For children under six years of age referred to DDBP, time from referral to first visit has improved from a high of 175 days (in April 2013) to 46 days, as of June 2014. For children over six years of age, time from referral to first visit has improved from over 400 days (April 2013) to 54 days as of June 2014. These types of improvements are rare at best in comparable programs around the country, and we plan to continue to improve access to better serve our families.

Contributions to New York Times Best-Selling Book About Boys

Staff and faculty from The Kelly O'Leary Center for Autism Spectrum Disorders (TKOC) worked closely with author Rosalind Wiseman on her best-selling book, *Masterminds and Wingmen: Helping our Boys Cope with Schoolyard Power, Locker-Room Tests, Girlfriends, and the New Rules of Boy World*. Ms. Wiseman, author of *Queen Bees and Wannabees*, spent several days at TKOC interviewing staff and patients for her chapter on boys with special needs. One TKOC patient was highlighted in the chapter and served as an editor for the book. *Masterminds and Wingmen* provides valuable information to parents and professionals about the unique social lives and struggles of boys. The collaboration was rewarding for all involved.

Research Highlights

Julia Anixt, MD

Parents of children with autism spectrum disorder (ASD) are frequently faced with complex treatment decisions for managing challenging behaviors. Dr. Julia Anixt has implemented a novel study on shared decision making for families of children with ASD who are considering or pursuing medication management for behavioral challenges. With funding from a Place Outcomes Research Award, her research team worked with the University of Cincinnati College of Design, Architecture, Art, and Planning (DAAP), to design a decision aid for parents and clinicians to use when considering medication treatment for children with ASD. Dr. Anixt is currently evaluating the impact on family readiness for implementing medication or behavioral interventions for their child's behavioral challenges, as well as helping providers develop stronger skills in shared decision making within clinical care.

Significant Publications

Chirdkiatgumchai V, Xiao H, Fredstrom BK, Adams RE, Epstein JN, Shah SS, Brinkman WB, Kahn RS, **Froehlich TE**. **National trends in psychotropic medication use in young children: 1994-2009**. *Pediatrics*. 2013 132(4):615-23.

This study was the first to evaluate trends over time and predictors of psychotropic medication use in preschool age children using a national dataset. This information provides a foundation for better understanding patterns of preschool psychotropic medication use, and identifies several areas of sociodemographic disparity in the treatment of preschoolers with behavioral concerns.

Froehlich TE, Antonini TN, Brinkman WB, Langberg JM, Simon JO, Adams R, Fredstrom B, Narad ME, Kingery KM, Ataye M, Matheson H, Tamm L, Epstein JN. **Mediators of methylphenidate effects on math performance in children with attention-deficit hyperactivity disorder**. *J Dev Behav Pediatr*. 2014 35(2):100-7.

This placebo-controlled, double-blind crossover trial examined methylphenidate (MPH) effects on math performance in over 90 children. A variety of theories have been proposed to explain the impact of MPH on academic performance. This study identified increased time-on-task behavior, rather than improvements in neurocognitive parameters such as inhibitory control or selective attention, as the mechanism supporting

improved math performance with MPH treatment.

Meinzen-Derr J, Wiley S, Bishop S, **Manning-Courtney P**, Choo DI, Murray D. **Autism spectrum disorders in 24 children who are deaf or hard of hearing**. *Int J Pediatr Otorhinolaryngol*. 2014 78(1):112-8.

As there is a substantial lack of information on children who are Deaf/Hard of Hearing who also have an autism spectrum disorder, this article was the largest cohort of children with the dual diagnosis described. The patterns of language development and cognitive profiles and the disparities in the age of identification of an ASD for these children were described. This study provides a foundation to forge future research in this under-represented population with ASD research.

Division Publications

1. Adams RE, Fredstrom BK, Duncan AW, Holleb LJ, Bishop SL. **Using self- and parent-reports to test the association between peer victimization and internalizing symptoms in verbally fluent adolescents with ASD**. *J Autism Dev Disord*. 2014; 44:861-72.
2. Brown S. **The use of interprofessional simulation among chronic pediatric populations: a review of the literature**. *Clinical Simulation in Nursing*. 2014; 10:e191-e197.
3. Chirdkiatgumchai V, Xiao H, Fredstrom BK, Adams RE, Epstein JN, Shah SS, Brinkman WB, Kahn RS, Froehlich TE. **National trends in psychotropic medication use in young children: 1994-2009**. *Pediatrics*. 2013; 132:615-23.
4. Esbensen AJ, Mailick MR, Silverman W. **Long-term impact of parental well-being on adult outcomes and dementia status in individuals with Down syndrome**. *Am J Intellect Dev Disabil*. 2013; 118:294-309.
5. Froehlich TE, Antonini TN, Brinkman WB, Langberg JM, Simon JO, Adams R, Fredstrom B, Narad ME, Kingery KM, Altaye M, Matheson H, Tamm L, Epstein JN. **Mediators of methylphenidate effects on math performance in children with attention-deficit hyperactivity disorder**. *J Dev Behav Pediatr*. 2014; 35:100-7.
6. Froehlich TE, Delgado SV, Anixt JS. **Expanding Medicaid options for pediatric ADHD**. *Current Psychiatry*. 2013; 12:20-29.
7. Lipkin PH, Anixt JS. (2014) **Attention Deficit/Hyperactivity Disorder (ADHD) module for American College of Physicians (ACP) Smart Medicine**. Philadelphia, ACP Smart Medicine. .
8. Meinzen-Derr J, Wiley S, Bishop S, Manning-Courtney P, Choo DI, Murray D. **Autism spectrum disorders in 24 children who are deaf or hard of hearing**. *Int J Pediatr Otorhinolaryngol*. 2014; 78:112-8.
9. Meinzen-Derr J, Wiley S, Grether S, Choo DI. **Functional performance among children with cochlear implants and additional disabilities**. *Cochlear Implants Int*. 2013; 14:181-9.
10. Meinzen-Derr J, Wiley S, Grether S, Phillips J, Choo D, Hibner J, Barnard H. **Functional communication of children who are deaf or hard-of-hearing**. *J Dev Behav Pediatr*. 2014; 35:197-206.
11. Phillips J, Wiley S, Barnard H, Meinzen-Derr J. **Comparison of two nonverbal intelligence tests among children who are deaf or hard-of-hearing**. *Res Dev Disabil*. 2014; 35:463-71.
12. Shaffer RC, Minshawi NF. **Training and Supporting Caregivers in Evidence-Based Practices**. In: J Tarbox, DR Dixon, P Sturmey, JL Matson, eds. *Handbook of Early Intervention for Autism Spectrum Disorders*. New York, NY: Springer; 2014:781-811.
13. Wiley S, Gustafson S, Rozniak J. **Needs of parents of children who are deaf/hard of hearing with autism spectrum disorder**. *J Deaf Stud Deaf Educ*. 2014; 19:40-9.
14. Wiley S, Schonfeld DJ, Fredstrom B, Huffman L. **Research training of Developmental-Behavioral Pediatrics fellows: a survey of fellowship directors by Developmental-Behavioral Pediatrics Research Network**. *J Dev Behav Pediatr*. 2013; 34:406-13.

Faculty, Staff, and Trainees

Faculty Members

Patricia Manning-Courtney, MD, Professor

Leadership Co-Division Director ; Medical Director, The Kelly O' Leary Center for Autism Spectrum Disorders; Thelma and Jack Rubinstein Chair

Research Interests Autism and Quality Improvement Access Services

Susan Wiley, MD, Professor

Leadership Co-Division Director; Sonya Oppenheimer Chair

Research Interests Children with dual sensory impairments, children who are deaf/hard of hearing with an additional disability, functional communication in young children who are deaf/hard of hearing

Sonya Oppenheimer, MD, Professor Emerita

Research Interests Spina Bifida; High-Risk Infants; Early Intervention; Down Syndrome

Ryan Adams, PhD, Assistant Professor

Research Interests Adolescent relationships (i.e. friendships, mother-child, romantic relationships); peer groups, peer victimization, peer experiences of obese adolescents and adolescents w/autism spectrum disorder

Julia Anixt, MD, Assistant Professor

Research Interests ADHD; the diagnosis and management of behavioral and mental health issues in primary care settings, access to care for underserved populations, shared decision-making for medication decisions

Holly Barnard, PhD, Assistant Professor

Research Interests Social interactions of children with ASDs, the impact of hearing loss on cognitive functioning and the role of environmental risk factors (e.g., maternal cotinine levels) on the manifestation of executive dysfunction.

Jennifer Bass, PsyD, BCBA-D, Assistant Professor

Leadership Director, LEND

Research Interests Siblings of children with autism spectrum disorders; social play skills; organizational behavior management (staff training and performance feedback)

Amie Duncan, PhD, Assistant Professor

Research Interests Identifying factors that may promote or impede an optimal outcome in adulthood for individuals with ASD, interventions to increase daily living skills and overall independence in adolescents with ASD

Karen Edwards, MD, MPH, Adjunct

Research Interests Leadership training; developmental disabilities in childhood; early identification of developmental disabilities

Jennifer Ehrhardt, MD, Assistant Professor

Research Interests Children in foster care who are at risk for developmental delay, timely access to intervention for young children with delays

Anna Esbensen, PhD, Assistant Professor

Research Interests Lifespan development and health care of individuals with Down Syndrome, with a

specific focus on behavioral outcomes, mental health of individuals with intellectual disability, Down Syndrome research registry collaborating across Ohio.

Tanya Froehlich, MD, Assistant Professor

Research Interests ADHD; Health Care Disparities, genetic and phenotypic predictors of ADHD medication response, contributions of environmental exposures to etiology of ADHD.

Kimberly Kroeger-Goeppinger, PsyD, Assistant Professor

Research Interests Autism interventions, including early intensive behavioral intervention; group interventions; social skills training

Lisa Kuan, MD, Assistant Professor

Research Interests Academic readiness in young children with cochlear implants, stability of autism spectrum disorder from very early childhood

Karen Mason, MD, Assistant Professor

Leadership Director of Residency Rotation

Research Interests Training residents in developmental and behavioral conditions

Donna Murray, PhD, Adjunct

Research Interests Face/Name recognition in children with ASD, joint attention and language in children with ASD

Ilka Riddle, PhD, Assistant Professor

Leadership Director, UCEDD

Research Interests Health disparities and health equity for individuals with disabilities; accessibility and inclusiveness of medical, health care and physical activity environments; health care transition of youth with special health care needs.

Rebecca Shaffer, PsyD, Assistant Professor

Research Interests Eye tracking; autism spectrum disorders; fragile X; Angelman syndrome; parent training; social skills training; applied behavioral analysis.

Pam Williams-Arya, MD, Assistant Professor

Research Interests The impact of sleep on behavior in teens

Stephanie Weber, PsyD, Assistant Professor

Research Interests Applied behavioral analysis and behavior treatment

Clinical Staff Members

- **Robin Adams, PhD**
- **Jennifer Bekins, MS,CCC-SLP**
- **Nicole Bing, PsyD**,
DDBP Lead Psychologist
- **Jennifer Brown, PhD, CCC-SLP**
- **Jennifer Budde, CCC-SLP**
- **Meredith Burt, MA, CCC-SLP**
- **Kristn Currans, PsyD**,
TKOC Clinical and Psychologist Lead
- **Patricia Eiler-Sims, PsyD**
- **Melissa Foti-Hoff, PsyD**

- **Carol Grasha, MA, CCC-SLP**
- **Sarah Greenwell, PsyD**
- **Sandra Grether, PhD, CCC-SLP,**
Coordinator, Speech Pathology
- **Andrea Hansen, MA, CCC-SLP**
- **Amy Hersh, MA, CCC-SLP**
- **Julie Hibner, MA, CCC-SLP**
- **Heather Johnson, PsyD**
- **Bridget Kent, MA, CCC-SLP**
- **Mike Lind, PhD**
- **Teri Messerschmidt, MA, CCC-SLP**
- **Stacey Morrison, PsyD**
- **Rebekah Ridgeway, PsyD,**
Psychology Training Lead
- **Christina Rogers, MA, CCC-SLP**
- **Kristen Smith, MA, CCC-SLP**
- **Rena Sorensen, PhD**
- **Meghan Stahlhut, MS, CCC-SLP**
- **Christina Stover, MA, CCC-SLP**

Division Collaboration

DDBP has actively collaborated with a number of divisions in clinical care models as well as within research. Clinically, DDBP is providing collaborative care with child psychiatry in outpatient management of children with developmental disabilities and severe behavioral challenges. DDBP providers participate actively in the Heart Institute's Neurodevelopmental congenital heart clinic. We also have strong partnerships with child neurology in the Rett Syndrome clinic and with providers from neurology who co-manage children with developmental disabilities and autism spectrum disorders. We have clinical collaborations with the Foster Care clinic as well.

In the areas of research collaborations, DDBP faculty collaborates with Craig Erickson and Logan Wink within Child Psychiatry in the areas of autism research, Jamie Capal in the Division of Neurology, and with Jareen Meinzen-Derr, Katherine Bowers, and Daniel Lin within the Division of Biostatistics and Epidemiology. Jennifer Ehrhardt collaborates with KJ Phelan in General and Community Pediatrics as well as with Mary Greiner in the Mayerson Center. Dean Beebe and Jeff Epstein have provided collaboration and mentorship related to projects on sleep in children with Down Syndrome. Stephanie Riddle, within neonatology has collaborated on a study related to children with Spina Bifida and ED utilization.

Our division recognized Jeff Epstein in Behavioral Medicine and Child Psychology in our Rubinstein Foundation awards for his research mentorship and collaborations. His guidance for those in the division have been instrumental in expanding the quality and impact of the research of DDBP faculty.

Behavioral Medicine and Child Psychology » Jeff Epstein, PhD and Dean Beebe, PhD, ABPP-Cn

Biostatistics and Epidemiology » Katherine Bowers, PhD, MPH, Jareen Meinzen-Derr, PhD, and Daniel Lin, MD, PhD

Heart Institute » Haleh Heydarian, MD

Mayerson Center » Mary Greiner, MD

Neonatology » Kurt Schibler, MD

Neurology » Jamie Capal, MD and Shannon Standridge, MPH, DO

Psychiatry » Craig Erickson, MD and Logan Wink, MD

Grants, Contracts, and Industry Agreements

Grant and Contract Awards Annual Direct

BASS, J

AIR-P Project: Addressing Misconceptions of Challenging Behaviors in Individuals with High-Functioning Autism Spectrum Disorders

Health Resources & Services Administration

07/01/13-09/30/13

\$4,500

Collaborative Quality Improvement Planning in LEND and DBP Programs

Association of University Centers on Disabilities

05/09/14-08/30/14

\$2,083

Leadership Education in Neurodevelopmental and Other Related Disabilities (LEND) Training Program

Health Resources & Services Administration (University of Cincinnati)

T73 MC 00032

07/01/11-06/30/16

\$559,553

DUNCAN, A

Evaluating The Time-Dependent Unfolding of Social Interactions in Children with Autism

National Institutes of Health (University of Cincinnati)

R21 MH 094659

08/06/12-05/31/14

\$65,241

Risk and Resiliency for Youth with Autism During the Transition to Adulthood

Vanderbilt University Medical Center

02/01/13-02/28/15

\$19,936

Training Outpatient Clinicians to Deliver Cognitive Behavior Therapy to Children

National Institutes of Health(University of Colorado)

R33 MH 089291

08/01/12-06/30/14

\$10,458

FROELICH, T

Partnerships That Promote Integrated, Multi-Disciplinary Training Models and Increase Healthcare Access for the Ohio Medicaid Population

The Ohio State University/Ohio Department of Medicaid(University of Cincinnati)

05/09/14-06/30/15

\$10,328

MANNING, P

Autism Intervention Research Network

Health Resources & Services Administration(Massachusetts General Hospital)

UA3 MC 1105

09/01/11-08/31/14

\$49,812

Autism Treatment Network

Autism Speaks Grant Administration

01/10/11-08/31/14

\$81,131

RIDDLE, I

Improving the Health of People with Disabilities through State Based Public Health Programs

Centers for Disease Control and Prevention(Ohio State University)

U59 DD 00931 07/01/12-06/30/15 \$37,302

University Centers for Excellence in Developmental Disabilities

Association of University Center on Disabilities (University of Cincinnati)

90DD0696/01 07/01/12-06/30/17 \$475,638

THOMAN, K

National Spina Bifida Registry Longitudinal Data Collection and Evaluation

Centers for Disease Control and Prevention

09/30/11-08/30/14 \$50,431

WEBER, S

Act Early Ambassadors: State, Territory, and Organizational Liaisons to CDC's "Learn the Signs. Act Early"

Association of University Center on Disabilities

06/01/14-05/31/16 \$4,000

Current Year Direct \$1,370,413

Total \$1,370,413