## Developmental and Behavioral Pediatrics

### Research and Training Details

<table>
<thead>
<tr>
<th>Category</th>
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<tr>
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<td>Peer Reviewed Publications</td>
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### Clinical Activities and Training

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[Click to view members]
Research Highlights

Neurobehavioral Effects of Abrupt Methylphenidate Discontinuation

In a study funded by the National Institute of Mental Health (NIMH), Tanya Froehlich, MD, MS, and colleagues are evaluating changes in child behavior, academic performance and neuropsychological functioning when children with ADHD start and stop taking methylphenidate. Methylphenidate (MPH) is the most commonly prescribed psychoactive medication in children, and ADHD is the most prevalent neurobehavioral disorder. An abundance of studies attest to the efficacy of methylphenidate for attenuating inattentive, hyperactive, and impulsive symptoms in children with ADHD. Despite its efficacy, most children with ADHD who are prescribed methylphenidate have poor continuity of treatment for a variety of reasons, including forgetting to administer the medication and delays obtaining refills. In addition, it is an accepted clinical practice for physicians to omit methylphenidate for periods of time, such as during the summer or on weekends (i.e., drug holidays). However, data collected by Dr. Froehlich and colleagues suggest there may be adverse neurobehavioral consequences of abrupt methylphenidate discontinuation. To further study this issue, the study team are conducting a randomized, double-blind, placebo-controlled trial to delineate the neurobehavioral effects of methylphenidate treatment as well as sudden termination. Study findings have the potential to impact commonly-employed stimulant prescribing practices and to spur the development of evidence-based clinical protocols for MPH discontinuation.

Significant Publications


We examined the lives of 75 adults with Down syndrome over 20 years, to determine predictors and outcomes of residential transitions. After a 20-year period, half of the adults with Down syndrome in family settings lived with their adult siblings, highlighting the increasingly important role siblings play in caring for adults with intellectual disability later in life. Further, those who moved into independent settings did not show earlier advantages in self-care skills over adults who lived with relatives or in nursing home/hospital settings. These findings suggest that semi-independent or fully independent living settings may be feasible for adults with Down Syndrome with a broad range of self-care skills.


As prevalence of Autism Spectrum Disorders continues to rise, an improved understanding of how children are arriving at a diagnosis of ASD is critical. This paper addresses an all too common occurrence, that of older children being diagnosed with ASD, after an initial, comprehensive evaluation did not identify ASD. The authors also review potential reasons for a later diagnosis of ASD in children previously not diagnosed with ASD.


This nationally representative study found an association between pyrethroid pesticide exposure and ADHD, particularly in terms of hyperactivity and impulsivity rather than inattentiveness, and in boys rather than in girls. Boys with detectable urinary 3-PBA, a biomarker of exposure to pyrethroids, were three times as likely to have ADHD compared with those without detectable 3-PBA. Hyperactivity and impulsivity symptoms increased by 50 percent for every 10-fold increase in 3-PBA levels in boys. Biomarkers of pyrethroid exposure were not associated with increased odds of ADHD diagnosis or symptoms in girls.
Division Publications


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.

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.

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, Associate Professor
Leadership Associate Director, Fellowship
Research Interests ADHD; health care disparities; genetic and phenotypic predictors of ADHD medication response; contributions of environmental exposures to etiology of ADHD.

Kimberly Kroeger-Goepinger, 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, Fellowship; Director, Residency
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, University Center for Excellence in Developmental Disabilities (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.

Jennifer Smith, PsyD, BCBA-D, Assistant Professor
Leadership Director, Leadership Education in Neurodevelopmental and related Disabilities (LEND)
Research Interests Siblings of children with autism spectrum disorders; social play skills; organizational behavior management (staff training and performance feedback).

Pam Williams-Arya, MD, Assistant Professor
Research Interests The impact of sleep on behavior in teens.

Stephanie Weber, PsyD, Assistant Professor
Leadership Training Director, Leadership Education in Neurodevelopmental and related Disabilities (LEND)

Joint Appointment Faculty Members

Jason Woodward, MD, MS, Assistant Professor (Adolescent Medicine)
Research Interests Transition from pediatric to adult health care for youth with special health care needs.

Clinical Staff Members
- Robin Adams, PhD
- Jennifer Bekins, MA, CCC-SLP
- Nicole Bing, PsyD, DDBP Lead Psychologist
- Deborah Boyd, MD
- Lindsey Bucher, MA, CCC-SLP
- Jennifer Budde, CCC-SLP
- Meredith Burt, MA, CCC-SLP
- Jenny Burton, MA, CCC-SLP
- Kristn Currans, PsyD, TKOC Clinical and Psychologist Lead
- Patricia Eiler-Sims, PsyD
- Betty Fink, MEd
- Melissa Foti-Hoff, PsyD
- Colleen Furey, PsyD
- Carol Grasha, MA, CCC-SLP
- Sarah Greenwell, PsyD
Grants, Contracts, and Industry Agreements

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<td>Peer Victimization of Adolescents with ASD: Filling the Knowledge Gaps to Create Anti-Bullying Interventions</td>
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<td>Neurobehavioral Effects of Abrupt Methylphenidate Discontinuation</td>
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**Detailed Projects**

**Neurobehavioral Effects of Abrupt Methylphenidate Discontinuation**

- **Funding Agency:** National Institutes of Health
- **Grant Number:** R01 MH105425
- **Start Date:** 12/1/2014
- **End Date:** 11/30/2019
- **Funding Amount:** $453,959

**Autism Intervention Research Network on Physical Health**

- **Funding Agency:** Health Resources & Services Administration (Massachusetts General Hospital)
- **Grant Number:** UA3 MC11054
- **Start Date:** 9/1/2011
- **End Date:** 8/31/2015
- **Funding Amount:** $30,585

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

- **Funding Agency:** Centers for Disease Control and Prevention (Ohio State University)
- **Grant Number:** U59 DD0000931
- **Start Date:** 7/1/2012
- **End Date:** 6/30/2017
- **Funding Amount:** $37,301

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

- **Funding Agency:** Health Resources & Services Administration (University of Cincinnati)
- **Grant Number:** H84 MC28443
- **Start Date:** 7/1/2014
- **End Date:** 12/31/2014
- **Funding Amount:** $5,639
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Current Year Direct $1,906,436

Total $1,906,436
More Autistic Teens Need Early Intervention to Learn the Life Skills Needed for Adulthood

As more children with autism spectrum disorder (ASD) make the transition to adulthood, researchers in the Division of Developmental and Behavior Pediatrics are finding that many need early intervention strategies to facilitate a successful transition.

Researchers Amie Duncan, PhD, and Somer Bishop, PhD, studied the daily living skills (DLS) of 417 autistic teens ages 10-17 with average intelligence (IQ of 85 or higher). Daily living skills include activities such as taking a shower, getting dressed, cooking, doing laundry, managing finances, and navigating the community. The researchers were surprised to find that more than half of these high-functioning autistic teens exhibited DLS abilities that were “significantly below” expectations based on their intellectual abilities.

“There is clearly a need to address the substantial gap between cognitive ability and actual performance in activities of daily living,” says Duncan, whose study was published Dec. 15, 2014, in Autism. “Addressing these skills prior to the transition to adulthood is crucial if we expect young adults to have the necessary skills to live independently.”

Interestingly, being older and having more social-communication impairments accounted for only 10 percent of the DLS deficit — a finding that raiseshope that adolescents with high functioning ASD have the potential to acquire age-appropriate life skills regardless of the severity of their autism symptoms.

Duncan and Bishop theorize that other factors are involved in autistic teens’ abilities to acquire daily living skills; factors that include executive functioning or language capabilities, the number of siblings in the family, the emotional well-being of caregivers, socioeconomic status, race, availability of community and school support services, and involvement in extracurricular activities.

Interventions that support the development of critical daily living skills may increase the likelihood that individuals with ASD can achieve positive outcomes in postsecondary education, employment, and independent living.
This comparison of daily living skills (DLS) indicates that the ability of teens with autism to succeed independently at activities such as taking a shower, getting dressed, or managing their own finances declines with their intellectual ability (FSIQ scores). Surprisingly, less than half of teens in the highest IQ group demonstrated adequate DLS.

“There is clearly a need to address the substantial gap between cognitive ability and actual performance in activities of daily living.”

DAILY LIVING SKILLS

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