

Children's Hospital Boston
Division of Developmental Medicine

Developmental-Behavioral Pediatrics Fellowship Program



Boston Children's Hospital
Until every child is well™



**HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL**

Developmental-Behavioral Pediatrics Fellowship

in the Division of Developmental Medicine

Children's Hospital Boston, dedicated to excellence in patient care, teaching and research, is the largest pediatric medical center in the United States and the major pediatric teaching facility for Harvard Medical School. Founded in 1869, the hospital is a comprehensive medical center for the care of patients from birth to adulthood.

Division of Developmental Medicine

Children's Hospital Boston

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About the Developmental Medicine Center In the Division of Developmental Medicine Children's Hospital Boston

The Developmental Medicine Center (DMC) is dedicated to improving the lives of individuals with developmental / behavioral difficulties and their families through integrated and collaborative clinical care and translational research. Training future leaders in the fields of Developmental-Behavioral Pediatrics, Cognitive Neuroscience and Child Psychology is critical to achieving our mission.

The Mission of the Division of Developmental Medicine is to improve the lives of infants, children, and adolescents who have developmental and behavioral problems, and to support their families throughout their child's life span. Our goal is to create new models of integrated and collaborative clinical service, training and research, which will lead to better diagnostic acumen, treatment, quality of life, and ultimately cures for developmental and behavioral challenges.

- **Clinical Practice:** We will provide interdisciplinary diagnosis, integrated treatment plans, and targeted follow-up across a full spectrum of patients, informed by the latest research findings and, in turn, informing the work of DMC researchers”.
- **Research:** We will advance the knowledge of normal development and developmental and behavioral problems to foster basic knowledge and innovative diagnostic tools, treatments and cures through interdisciplinary collaborations and a focus on translational research.
- **Teaching:** Through a program that combines cutting edge clinical and research components, we will attract an outstanding and diverse group of students, residents, fellows, and practitioners to the field of developmental medicine and related disciplines to create future leaders for the field.
- **Community engagement:** We will expand the capacity of health care providers, teachers and families as they support infants, children and adolescents into young adulthood.
- Provide excellent ongoing care for our patients and their families through collaboration with community providers in the fields of pediatrics, psychology and related disciplines

Developmental–Behavioral Pediatrics Fellowship

GOALS OF THE TRAINING PROGRAM:

1. To prepare fellows for academic leadership careers by providing them with the requisite skills to become outstanding clinicians, innovative translational researchers and inspiring teachers.
2. To provide fellows with a theoretical and practical framework for assessing challenges in child development, intellectual and social functioning and working with families to optimize children's development within family and community settings.
3. To provide fellows with a fundamental body of knowledge from neuroscience to behavioral pediatrics, including aspects of neurophysiology, neuroradiology, psychopharmacology and behavioral therapies.

The Developmental-Behavioral Pediatrics Fellowship program is a comprehensive 3 year ACGME accredited program that provides comprehensive clinical, didactic and research training in Developmental-Behavioral Pediatrics and associated fields including genetics, metabolism, neurology and psychiatry. The program is designed to provide outstanding clinical experiences coupled with mentored research opportunities tailored to each trainee's chosen area of concentration. All trainees develop expertise in the diagnosis and treatment of developmental disorders including attention problems, autism spectrum disorders, language disorders, learning disabilities, and intellectual disability along with elective areas of their choice

FELLOWSHIP TIMELINE:

The DBP fellowship program begins with a primarily clinical first year during which trainees learn about a range of developmental and behavioral pediatric conditions in both hospital and community settings. Fellows further refine their research project focus within the first year with support of a research mentor and then spend 2 months at the beginning of their second year participating in an intensive research experience in the clinical research program at the Harvard School of Public Health. Each fellow uses the final two years of the fellowship to develop an area of clinical expertise while conducting a mentored research project and gaining knowledge and skills in quality improvement.

CLINICAL EXPERIENCES

Fellows develop their clinical skills as members of multidisciplinary assessment teams and as pediatric consultants in both hospital based and community settings. Trainees work with their patients longitudinally in a weekly follow-up clinic as well as in specialty programs including the Autism Care Program and the ADHD Program. Elective experiences may include clinical rotations in the Adoption Program, Down Syndrome Program, Fragile X Clinic, Growth and Nutrition Clinic, Neurofibromatosis Program, Psychopharmacology Clinic, Sleep Clinic and a variety of other clinical programs at Children's Hospital. All fellows also participate in the Advocating Success for Kids (ASK) Program providing consultative DBP services in community health centers. Fellows also often act as developmental consultants for local school systems or private specialty schools with staff supervision.

RESEARCH PROGRAM

DBP fellows participate in weekly research seminars comprised of didactic sessions, journal club, and skills training in research design, methods and analysis. Each fellow will work directly with a research mentor to develop and implement a scholarly work project, and present their research quarterly to the Division during Works in Progress Sessions. Fellows may have an opportunity to pursue an MPH at the Harvard School of Public Health or pursue more intensive research experiences beginning the summer at the end of their first year of fellowship. Fellows progress toward completing their scholarly

work, culminating in presentation at regional and national meetings and preparing a manuscript for publication by the third year of their training. Each fellow's progress is monitored by the Scholarship Oversight Committee including two formal project presentations each year. Please see 'Research Opportunities' below for additional information.

FORMAL SEMINARS

Weekly seminars specifically geared to trainees in pediatrics and psychology address topics in developmental-behavioral pediatrics, behavioral neurology, child psychiatry, educational methodology for teaching, research methodology and professional development. Specific seminars in the Division address topics such as professional development, substance abuse, educational skills and advocacy. Optional additional coursework at the Harvard School of Public Health during the second and third year of training may provide fellows with preparation for research projects and culminates in a Master's of Public Health. For those applicants who already have completed an MPH program, alternative research and educational experiences are available.

Developmental Medicine Seminar: This comprehensive weekly seminar follows a rotating two year curriculum covering topics selected in accordance with the DBP content specifications for the board examination. The course covers developmental theories and normal development, attentional and learning disabilities, autism spectrum disorders, language disorders, cognitive impairment, toileting and sleep problems, basic principles of psychological and neurodevelopmental assessment, identifying pediatric mental health concerns, providing feedback to families, diagnostic coding and billing, and writing clinical reports. Additional topics include psychopharmacology, behavioral management, behavioral therapies for children with developmental disabilities, language and literacy, genetic syndromes, metabolic disorders, chronic illness, family functioning, cerebral palsy, spina bifida, sensory impairments, feeding problems, toxic exposures and outcomes, dental health, normal sexual behavior, sexual and physical abuse, substance use and abuse, special education law, and advocacy. The seminar includes 1-2 field trips per year where fellows visit community agencies, specialized schools or other clinical programs.

Principles of Behavioral Neurology for DBP: This weekly course covers topics such as development of the central nervous system; pediatric imaging of the central nervous system; key concepts in behavioral neurology; neuroscience for the clinician; and key diagnostic and therapeutic considerations in patients with epilepsy. It is taught by the Director of the Residency Training Program in Neurology.

Principles of Psychiatry for DBP: This weekly psychiatry skills seminar provides fellows with technical supervision for acquiring clinical skills critical in DBP practice, such as diagnostic interviewing, generating differential diagnosis, and parent/child guidance training. The course also includes training in identification and treatment of psychiatric disorders including mood disorders, anxiety disorders, eating disorders, psychotic disorders, trauma, suicidality, character pathology, disruptive behavior and conduct disorders. Fellows learn about therapeutic modalities including play therapy, cognitive-behavioral therapy and psychopharmacology. It is taught by the previous Director of the Psychiatry Residency Program.

Substance Abuse Seminar: This quarterly seminar focuses on interdisciplinary discussions of substance abuse including epidemiology; screening, assessment and interventions; and outcomes. The interaction of genes and environment as well as contextual considerations in treatment are also discussed.

Teaching Skills Seminar: This seminar provides an introduction to adult learning theory and guidance on specific skills development in lecture development and presentation, facilitation of case

discussion, one-to-one clinical teaching, curriculum development, development of a teaching portfolio and evaluation techniques such as giving feedback to trainees. Faculty and professional development is provided as fellows are guided to maintain a teaching log and to develop a teaching portfolio compatible with the Clinician-Educator academic track at Harvard Medical School.

Professional Development seminar: This seminar provides fellows with practical skills for managing professional careers especially in academics. Topics include professionalism, setting goals, time management, organizational skills, career-family balance, developing effective curriculum vitae, and job interviewing skills.

Quality Improvement Curriculum: Beginning in the second year, fellows will become active participants in the Division's robust Quality and Performance Program, which oversees all quality improvement activities. Fellows attend team leadership meetings and QI seminars, develop quality metrics for clinical outcomes and processes, review data for ongoing projects, and propose, implement, and present their own mentored QI project. Emphasis is on developing solid working knowledge of QI principles and strategies for rigorous and effective implementation.

ELIGIBILITY FOR DEVELOPMENTAL-BEHAVIORAL BOARD EXAMINATION:

All fellows completing our training program are eligible for subspecialty board examination in Developmental-Behavioral Pediatrics. Applicants to the fellowship must complete 3 years of pediatric training in an ACGME approved program prior to beginning the DBP fellowship program. Board Certification in General Pediatrics is expected prior to or during DBP fellowship.

Research Opportunities

Current research projects in the Developmental Medicine Center include a variety of topics encompassing topics and methods in basic science, translational, clinical and health services research.

Fellows participate in formal didactic sessions reviewing research design and basic statistical approaches. Fellows have access to methodologists and statisticians to assist in planning studies and analyses, and when appropriate, research assistants may be assigned to help them with aspects of their research. Research computers and standard statistical software are available for use by fellows in all the programs.

Examples of current research in the Division include:

- Developmental screening in primary care
- Genetics of autism
- Effects of early institutionalization on child development
- Neurobehavioral Research on Infants at Risk for Autism and Specific Language Impairment
- Electrophysiological, Metabolic and Behavioral Markers of Infants at Risk for Autism
- Neural Markers for the Transition from Risk for Attention Deficit/Hyperactive Disorders (ADHD) to Stable Diagnosis
- Evaluation of face processing in children with autism
- Neurocognitive outcomes of infants of diabetic mothers
- Linking Music, Language and Reading

- Catching Dyslexia in Pre-Readers
- Office management of adolescent substance abuse
- Long-term outcomes of Attention Deficit/Hyperactivity Disorder
- Parent, provider, and teacher perspectives on quality of ADHD care
- Quality of life in children with ADHD
- Cross-cultural quality metrics for ADHD care

Recent Developmental-Behavioral fellows' projects have included:

- Videogame use and ADHD
- Factors impacting parental choice with respect to adoption of a child
- Implementation of an autism-specific screening tool in continuity clinic
- Predictors of receipt of an IEP for children with an autism diagnosis
- Use of complementary and alternative medicine and quality of life in children with cerebral palsy
- Effect of requiring parental consent on adolescent participation in substance abuse research
- Teachers' perspectives on collaborating with parents and clinicians on caring for children with ADHD

Children's Hospital and Harvard Medical School

CHILDREN'S HOSPITAL

Children's Hospital was founded in 1869 as a 20-bed hospital. In 2008 there were over 23,000 discharges; almost 500,000 medical and surgical outpatient visits, and over 58,000 emergency room visits. The Department of Medicine (in which the Division of Developmental Medicine is located) accounts for nearly half of the inpatient beds.

There are more than 100 outpatient programs ranging from primary care services (such as the Children's Hospital Primary Care Center), to a wide variety of specialty programs. Many of these programs are offered in the Division of Developmental Medicine, and provide clinical experiences integral to fellowship training. The Division of Developmental Medicine's clinical programs share the 10th floor of the Fegan Outpatient Building with the Division of Genetics, therefore easily facilitating a learning and research collaboration with Genetics and Metabolism. The adjacent three floors of the Fegan Building house the Departments of Neurology, Division of Developmental Medicine, Division of Genetics and the Department of Psychiatry thus providing the structural infrastructure for training and clinical care for brain disorders.

The programs within the Division of Developmental Medicine include:

- Developmental Medicine Center
- Institute for Community Inclusion
- Adolescent Substance Abuse Program
- Center for Adolescent Substance Abuse Research
- Child Development Unit
- Laboratory of Cognitive Neuroscience
- Brazelton Touchpoints
- Brazelton Institute

HARVARD UNIVERSITY

Children's Hospital Boston is the primary pediatric teaching hospital for Harvard Medical School. Each faculty member at the Division of Developmental Medicine holds concurrent academic appointments at the medical school. Medical student teaching occurs in many of the Division's clinical settings. The hospital also has a close relationship with the Harvard School of Public Health, where the Division faculty, teach and hold academic appointments.

Fellows in the Division are appointed Clinical Fellows at Harvard, and participate in precepting medical students and housestaff at Children's Hospital Boston.

Information on courses at the Harvard School of Public Health is available from:

Registrar

Harvard School of Public Health

677 Huntington Avenue

Boston, MA 02115

617-432-1032 / 617-432-2009 (fax)

Core Division of Developmental Medicine Faculty

LEONARD RAPPAPORT, M.D., M.S.
Chief, Division of Developmental Medicine

WILLIAM BARBARESI, M.D.
Director, Developmental Medicine Center

CAROLYN BRIDGEMOHAN, M.D.
Director, Pediatric Trainee Education

EUGENA CHAN, M.D., M.P.H.
Director, Fellowship Quality Improvement Program

NADINE GAAB, Ph.D.
Director, Gaab Lab

STUART GOLDMAN, M.D.
Department of Psychiatry

DAVID HELM, PH.D.
Director, Interdisciplinary Training,
University Center on Developmental
Disabilities

NOELLE HUNTINGTON, PH.D.
Director, DBP Fellowship Research Program

JOHN KNIGHT, M.D.
Director, Center for Adolescent
Substance Abuse Research

ELAINE LECLAIR, PH.D
Director, Pediatric Psychology Program
Developmental Medicine Center

CHARLES NELSON III Ph.D.
Director of Research, Division of Developmental Medicine

LISA ALBERS PROCK, M.D., M.P.H.
Director, Clinical Fellowship Training

ALISON SCHONWALD, M.D.
Director, Developmental Behavioral Outreach

MARGARET SHERIDAN, Ph.D.
Director, Sheridan Lab

DAVID URION, M.D.
Department of Neurology

Developmental-Behavioral Fellowship Appointment and Application Information

Entry into the fellowship program is at the PL-4 level (fourth year post-M.D.) or later. Fellows receive a concurrent appointment of Clinical Fellow at Harvard Medical School as they participate in the teaching of medical students and housestaff.

Applications and inquiries from physicians seeking training are always welcome. The Division is particularly interested in applications from highly qualified minority pediatricians. A visit to the Division and its programs will usually provide a comprehensive picture of the Division's activities, clinical programs and an opportunity to meet with current fellows.

Applications should be submitted through the Electronic Residency Application Service, here (hyperlink to <https://www.aamc.org/services/eras/>) Applications should be completed as early as possible to allow time for interviews. We participate in the DBP fellowship match. For questions related to the match please contact Sandra Maislen 617-355-4218. Applications may be submitted prior to November 1st the year prior to the anticipated start date.

International candidates: International medical graduates may apply. However, our DBP fellowship is partially funded by the U.S. Federal government, and stipends are generally limited to U.S. citizens or permanent residents. Due to limitations on faculty resources, we cannot accommodate observational experiences; all fellows must be fully licensed and credentialed so that they can participate in patient care. International fellowship applicants must have passed the ECFMG examination and have a valid, current certificate as a prerequisite to any other visa or license application. In addition, international applicants must be fluent in both written and spoken English. Inquiries regarding specific individual circumstances may be directed to Sandra Maislen.

Inquiries can be made to:

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