

Behavioral and Developmental Pediatrics

Description of Rotation:

Since pediatricians have the major responsibility for identifying and evaluating behavioral/developmental problems in children and are in an ideal position to help families prevent, anticipate, and alleviate common emotional/behavioral issues, the pediatric department place high priority and training in Behavioral and Developmental Pediatrics. It is seen as essential and integral to every interaction that a resident has with a family. The training is both integrated into the daily routine of residents and given special emphasis during a block rotation in the first or second year.

The training is integrated in the outpatient and inpatient setting. The residents observe general and subspecialty pediatricians addressing and managing psychosocial issues.

Integration of psychosocial issues is key in the ambulatory clinic. 'Bright Futures' from the AAP (www.brightfutures.aap.org) is incorporated into all well visits. Anticipatory guidance and support is adapted to the child's developmental stage and individual family's needs. A double board-certified pediatrician/child psychiatrist is present two mornings and one afternoon per week to supervise residents doing general pediatrics. This again models the importance of behavioral and developmental issues in doing general pediatrics and not isolating it as a specialty separated for the 'typical' pediatric encounter. The Boston University Healthy Step videos and CD-rom provide excellent material for these discussions. Residents are encouraged to bring cases for one-on-one supervision with a behavioral pediatrician on an informal basis.

Education during the block rotation includes office observation, hands on experiences, reading, individual tutorials, home visits and community experiences. Residents will have a number of other experiences working in multi-disciplinary settings and assessing community resources.

Developmental & Behavioral Pediatrics Rotation Expectations

This rotation is different from many other rotations because of "field trips" to other locations to visit various community sites/agencies. Through this rotation the resident should become familiar with typical and abnormal development in childhood, behavior management techniques, various aspects of developmental assessment, and referral sources/patterns in the community for children with developmental disabilities. Some of the experiences are to familiarize the resident with what happens after a child is referred for evaluation or services. The rotation has a variety of modalities to meet these goals: site visits, assessment observations, websites, case studies/modules, articles, books and tutorials.

Schedule: The resident will receive the rotation schedule through e-mail prior to the rotation. The first day of the rotation will begin at 9:00 AM at the School Solutions Center at 2915 Rear 3rd Avenue across from St. Mary's Hospital. After a brief orientation, the resident will have the opportunity to develop specific learning objectives, participate in a pre-test, read some key articles, find how to access important internet references and resources, and complete a number of learning modules on interviewing, developmental screening, toxic stress reactions and autism.

Any unexpected changes that need to be made to the pre-scheduled activities by the resident must first be discussed with the Director of the Behavior and Development Rotation and the rotation coordinator. This is to assist in rearranging visits if possible to ensure a standardized experience.

The resident is expected to attend regularly scheduled conferences and continuity clinic.

Professionalism: The scheduled site must be notified by the resident if the resident will be late for

any reason. Contact numbers will be provided to the resident prior to the start of the rotation.

Visits to the sites have been scheduled in advance so staff should be expecting the resident to be in attendance at the site. If a resident feels the staff at the site was unaware of them being scheduled or is treated with disrespect, inform the rotation Director or the rotation coordinator. The resident is fully expected to receive a positive experience at each site.

The resident is required to wear their identification name tag provided by the university at every site.

The resident must always act in a professional manner. (i.e. introduce themselves, be punctual, etc.)

Note:

The goals and objectives described in detail below are not meant to be completed in a single one month block rotation but are meant to be cumulative, culminating in a thorough and complete Behavioral and Developmental pediatric experience at the end of residency.

Behavioral and Developmental Rotation Goals, Requirements and Competencies

Behavioral and Developmental Pediatrics is a subspecialty of pediatrics that focuses on:

- Understanding the complex developmental processes of infants, children, adolescents and young adults in the context of their families and communities;
- Understanding the biological, psychological, and social influences on development in the emotional, social, motor, language, and cognitive domains;
- Mechanisms for preventions of disorders in behavior and development;
- Identification and treatment of disorders of behavior and development throughout childhood and adolescence.

Rotation Goal:

To provide understanding and foster optimal cognitive, social, and emotional functioning of the patients and their families achieved through the collaboration of several medical and non-medical disciplines through their own unique and complementary perspectives. Disciplines include, but are not limited to: child and adolescent psychiatry, neurology, physical medicine and rehabilitation, psychology, neurodevelopmental disabilities, occupational therapy, physical therapy, social work, speech and language pathology, audiology, education, and public health.

Rotation Requirements:

A program for graduate medical education in behavioral & developmental pediatrics provides instruction, scholarly opportunities, and clinical experience to enable residents to diagnose and treat patients with developmental-behavioral disorders. Educational experience includes responsibility for patient care, the development of clinical proficiency, involvement in community-based activities, and the development of skills in child advocacy. Residents participate in clinical training activities, including direct and indirect patient care activities, observations, teaching conferences, clinical supervision, and related activities.

Core Competencies:

Competencies should be met in six core areas: practice-based learning and improvement, system-based practice, patient care, medical knowledge, interpersonal and communication skills, and professionalism.

Practice-Based Learning and Improvement

Residents demonstrate the ability to investigate and evaluate the care of patients, appraise and assimilate scientific evidence, and continuously improve based on self-evaluation and life-long learning. Residents are expected to develop skills and habits to help them meet the following goals:

- identify strengths, deficiencies and limits in knowledge and expertise
- set learning and improvement goals
- identify and perform appropriate learning activities
- analyze practice using quality improvement methods and implement changes
- locate, appraise and assimilate evidence from scientific studies related to patient health problems
- use information technology to optimize learning
- participate in the education of patients, families, students, residents, and other health professionals

System-Based Practice

Residents need to acquire knowledge of, and have experience with, health-care systems, community resources, support services, and the structure and administration of educational programs for children with and without special educational needs. Program faculty provide instruction in child advocacy, and the legal and judicial systems for children and families, including child welfare/protection systems.

Patient Care

Residents must be able to provide patient care that is compassionate, appropriate and effective. Competencies in this area can be met through screening and surveillance techniques, patient and family interviews to ascertain history and function, and through understanding the major diagnostic classification schemas.

Medical Knowledge

Structured curriculum that yields a better understanding of the following topics:

- aspects of substance use/abuse
- assessment of behavioral adjustment and temperament
- attention disorders
- atypical behaviors
- Autism, Asperger Syndrome and Autism Spectrum Disorders
- biological mechanisms of behavior and development
- child abuse and neglect

- cognitive disabilities
- complementary and alternative approaches
- consultations and referrals
- developmental and behavioral adaptation to a variety of acute, chronic and physical illness
- early intervention and education
- elimination problems
- evidence-based interventions
- externalizing conditions
- family and social/cultural factors that contribute to development
- feeding/eating difficulties
- genetic abnormalities
- integration of evaluations from other disciplines
- internalizing behaviors
- issues from variations in family structure
- language and learning disorders
- major diagnostic classifications and schemas
- motor disabilities
- neurodevelopmental assessment
- psychosocial development styles
- sleep disorders
- somatoform conditions
- theories of the process of normal development from infancy to young adulthood

Interpersonal and Communication Skills

Residents are expected to develop skills that result in the effective exchange of information and collaboration with patients, families, and health care professionals such as:

- communicate with physicians, other health professionals, and health-related agencies
- communicate with patients, families, and the public appropriately across a broad range of socioeconomic and cultural backgrounds
- work effectively as a member or leader of a health care team or professional group
- maintain comprehensive, timely and legible medical records
- act in a consultative role to other physicians and professionals

Professionalism

Residents should demonstrate a commitment to carrying out professional responsibilities and ethical practices:

- compassion, integrity and respect
- responsiveness to patient needs that supersede self-interests
- respect for privacy and autonomy
- accountability
- sensitivity and responsiveness to diverse populations

Pre- and Post-Evaluation

Name:

PG Level:

Pre-Rotation	Post-Rotation
What questions about development and behavior do you come to this rotation with?	Answered? Unanswered?
What information or skills do you want to get from this rotation?	What did you get?
What are your expectations for this rotation?	Were they met?
How does this rotation fit in with your future plans pediatrics or med/peds?	Has this changed?
List at least one Learning Goal that you have for yourself for this month?	Was this met? How?
Other comments	

Post-Rotation Evaluation Comments

Marshall Development and Behavior Pediatric Rotation

First Day:

1. Review expectations, schedule and locations
 2. Complete contact information page and Pre-Rotation individual goals and expectations
 3. Review resources: 2 textbooks (Voight's Developmental and Behavioral Pediatrics and Batshaw's Children with Disabilities), 3 CDs (AAP ADHD Toolkit, AAP Mental Health Toolkit and Healthy Steps Guidelines) and list of on-line learning modules
 4. Read Batshaw chapter "Diagnosing Developmental Disabilities" pgs. 243-263
 5. Review growth and developmental milestone charts and learn (memorize) key facts of specific ages for board exams
 6. Complete sample 15 question multiple choice DBP assessment questionnaire (use referenced textbooks to check answers)
 7. Read AAP enclosed article "ADHD: Clinical Practice Guidelines."
 8. Review suggested patient history questions for ADHD evaluation
 9. Complete internet learning module on developmental screening:
www.childrenshospital.org/developmental-screening, click on INTRODUCTION in grey menu bar at top and complete items in left hand menu box, then click on SCREENING TOOLS and complete items in left hand menu box
 10. Internet learning modules to be completed during rotation (see enclosed list: CDC Autism Case Training (Identification, Diagnosis and Management) and Harvard Early Childhood Health Optimization module for Understanding Toxic Stress. The three certificates of completion for Autism Care Training must be turned in on the last day of the rotation.
-

This is a list of questions to ask at the first visit to help determine the diagnosis of ADHD.

Patient History Questions:

- How's school going?
 - So you have a nice teacher?
 - How are the kids at your school?
 - Who do you play with?
 - What is your favorite subject?
 - What is your most difficult subject?
 - What does the teacher do to make it easier for you to learn?
 - Does your teacher go a little too fast sometimes?
 - Do you rush through your work and make careless mistakes?
 - Is your class a little noisy which makes it difficult to concentrate and finish your work sometimes?
 - Can you get everything done at school or do you have to take home extra work sometimes?
 - Are you pretty organized or do you have problems losing things or forgetting to hand assignments in?
 - Is there a lot of homework?
 - Does it sometimes take a lot of time to finish your homework?
 - Do you get discouraged or frustrated or angry over your homework?
 - What are the rules at your school?
 - Do you have trouble with any of the rules?
 - What do they do at your school if you break the rules?
 - What are the rules at home?
 - What happens if you break the rules at home?
 - Who lives at home with you?
 - What do you like to do when you are not at home? (What do you do for fun?)
 - Do you play any sports like baseball or football?
 - Are you a dancer or gymnast?
 - Are you a healthy person?
 - Do you have any problems with headaches or stomachaches?
 - Do you have any trouble going to sleep at night or waking up in the morning?
 - Are you sleepy at school some days?
 - Are you someone who loses their temper easily and gets mad or are you a calm person?
 - What kind of things might make you angry?
 - Are you someone who worries a lot about things?
 - What kind of things might you worry about?
 - Do you get scared sometimes?
 - What kinds of things make you scared?
 - Do you have any pets?
 - What are their names?
 - What do you want to do when you grow up?
 - What is your biggest worry right now?
 - What is your most important wish?
 - What are you going to do to get things to be better?
-

Motor Milestones Gross Motor		Fine Motor
1 month	Head up, Prone to chin	Hands mostly fisted; grasp reflex
2 months	Head up, Prone to chest	Hands 50% open
3 months	Head up, Props to forearm	Hands 75% open; grasp reflex gone; voluntary grasp
4 months	Head up, props to wrist; roll prone to supine	100% un-fisted; manipulates fingers; holds toy > 15 seconds
5 months	Roll supine to prone; sits supported (tripod)	Pulls down ring; transfers; reaches for toy
6 months	Sits alone	Obtains cube; lifts cup; radial rake
7 months	Creep (combat crawl)	Attempts pellet; pulls out peg; finger feeds
8 months	Come to sit; quadruped crawl; pull to stand	Pulls ring by string; secure pellet
9 months	Cruise	3 finger grasp; bangs toys together
10 months		Fingers pegboard; pincer grasp
11 months	Stand alone; walk with one hand held	Mature pincer; takes covers off of boxes
12 months	Walk alone	Release cube; crayon mark
13 months		Climbs stair on hand and knees
15 months		Gets into standing without support
16 months	Walk upstairs with help, marking time	Scribbles in imitation
18 months	Beginning to jump; throws ball; seats self in chair	Scribbles spontaneously
20 months		Walks carrying large objects or pushing toy; runs stiffly; climbs
21 months	Walks upstairs alone, marking time; creeps down backwards; squats	Three cube tower; uses spoon well
24 months	Walks up and down stairs alone, marking time; walks backwards; runs; kicks ball	Unscrews lid; turns doorknobs; turns pages in book; strings large beads
30 months	Jumps w/both feet; walks on tiptoes; picks up object	Holds pencil in hand instead of fist; horizontal and vertical stroke with pencil
36 months	Upstairs alternating feet; downstairs marking time; gallops; tricycle; jumps from bottom step with feet together; stands on one foot for seconds	Closes fist and wiggles thumb; folds paper along dotted line; good wrist rotation; snips with scissors; copies circle; imitates cross

Developmental Pediatrics Resident Learning Modules

Learning Modules and Case Studies are used to cover important topics. Below each module listed you will find specific instructions for completion. You will have ample opportunity to complete all the modules required for the rotation.

ACT Early (Autism Case Training):

The CDC created **ACT Early**, a web-based continuing education course designed to help health care professionals gain knowledge and skills to improve early identification, diagnosis and care of children with Autism. Complete all three modules (identifying, diagnosis and managing) and complete the course evaluation to receive your certificate of completion. Provide a copy of the certificate to the rotation coordinator.

<http://www.cdc.gov/ncbddd/actearly/autism/index.html>

Developmental Screening Toolkit:

The **Developmental Screening Toolkit** is an interactive tool that explains different developmental screening tools and how they can be used in the primary care setting. Start exploring the tutorial at the "*Introduction*" tab, it will guide you through facts, information and self-assessments.

<http://www.developmentalscreening.org/>

Pedicasés:

The **Pedicasé website** is designed to provide quality case-based teaching materials to pediatric training programs. Access a Pedicasés through the Case Topics list. **Choose 2 of the following to complete:** Behavioral Pediatrics: Atypical Behaviors; Child Development: Down Syndrome, Language Delay or Global Delay; Growth in Children: Understanding Growth; School: School Readiness or Learning Disorders.

<http://www.pedicasés.org/home.phtml>

PEDS Test and PEDS:DM:

Access **PEDS and PEDS:DM** case studies by highlighting *See The Test* and selecting *Case Studies*. Here you can download case study handouts and learn how PEDS and PEDS:DM can be helpful when used as recommended.

<http://www.pedstest.com/>

Zero to Three:

Zero to Three has a *Find It Fast* drop down menu that can be used to find information, resources, and learning modules on a variety of topics pertaining to children from infancy to toddler. **Choose 3 topics** each day you are assigned to Zero to Three modules.

http://www.zerotothree.org/site/PageServer?pagename=prof_professionals

Pediatric Resources:

Go to **Early Childhood Health Optimization** and do the module for Understanding Toxic Stress.

http://cpeip.fsu.edu/mma/Module/FSU_Pediatricians/story.html

Development and Behavior Pediatric Rotation

Stanford Systems-Based Cases

Please go to the Stanford DB website at http://dbptraining.stanford.edu/8_case_study/cases.html and complete the three case studies. List your answers to the questions before going on to the next question and return the form to the coordinator after completion.

Case Study #1 Sophie

1. Based on Sophie's history, what referrals to community agencies would you make?

2. What other program referrals would you make?

3. What would you tell her?

4. Given Sophie's abnormal motor development and exam findings, what additional steps would you take?

Cast Study #2 Mark

1. List additional questions you would ask about Mark's school performance.

2. Based on your questions, Mark's parents ask for more information about his eligibility for services and interventions at school. What would you tell them?

3. Mark's parents would like to pursue the possibility of getting him extra help at school. What next steps would you take?

4. What next steps would you recommend?

5. What would you recommend?

Case Study #3 Alejandro

1. What would you tell Alejandro's parents about the impact of each the following on speech and language development?

a. Gender:

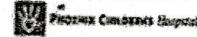
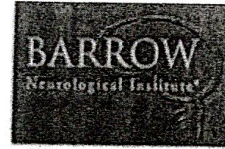
b. Presence of siblings:

c. Exposure to a bilingual environment:

2. Which agencies or community resources would you use?

3. How would your plan change if Alejandro were 36 months old?

4. What would be your next step?



Developmental-Behavioral Pediatrics Assessment Questionnaire

1. During the health supervision visit for an infant, her mother mentions that the child has been tolerating solid foods with no problem. When placed on her back to be examined, she brings her feet to her mouth. Her mother holds a small mirror to the child's face to distract her during your examination, and the baby reaches for the mirror and pats her image. Of the following, these developmental milestones are MOST typical for an infant whose age is
 - a. 2 months
 - b. 4 months
 - c. 6 months
 - d. 9 months
 - e. 12 months

2. A mother brings in her child for a health supervision visit. He is able to pull to a stand, take a few independent steps, and use two fingers to grasp pieces of cereal. Of the following, these developmental milestones are MOST typical for a child whose age is
 - a. 6 months
 - b. 9 months
 - c. 12 months
 - d. 15 months
 - e. 18 months

3. You observe a child entering the waiting room, accompanied by her mother. She looks at the receptionist and says, "Hi." While holding her doll, the child turns to her mother and says "juice". The mother gives her a cup of juice, and the child says "doll" and tries to give the doll a drink. The mother shakes her head, and the child says "no." The child then points to her own mouth, smiles, and says "mouth." The mother takes a tissue to clean the doll's face; the child says "me" and begins to imitate her mother's action with another wipe. The child looks at her mother, says "ma ma," and gives her mother a hug. Of the following, these developmental milestones are MOST typical for a child whose age is
 - a. 12 months
 - b. 15 months
 - c. 18 months
 - d. 24 months
 - e. 30 months

4. Pediatricians are thought to identify what percent of children with disabilities prior to kindergarten enrollment:
 - a. 5%
 - b. 15%
 - c. 30%
 - d. 60%
 - e. 90%

5. Screening tools using information from parents are
 - a. As accurate as other tools
 - b. More economical
 - c. No substitute for clinical opinion
 - d. Enhance provider-parent collaboration
 - e. Not useful for parents with limited education
 - f. All of the above
 - g. A, B, and D
 - h. B, D, and E

6. Tools relying almost exclusively on information from parents include
 - a. The Denver-II
 - b. The Brigance
 - c. The Battelle
 - d. Ages and Stages
 - e. Parent's Evaluation of Developmental Status
 - f. A and E
 - g. D and E

7. Developmental and behavioral conditions occur in approximately what percentage of children?
 - a. 0.15%
 - b. 1.5%
 - c. 15%
 - d. 50%
 - e. 80%

8. Common problems in using developmental screening tests include all of the following EXCEPT
 - a. Not administering the screen as it was intended.
 - b. An assumption that the screening test done at one point in time will discover all children with every type of developmental problem.
 - c. Screening tests can be time consuming for the clinician.
 - d. Children are not amenable to screening between birth and three years of age.
 - e. Training is necessary for the proper use of these tools.

9. When is the best age (out of the following suggestions) for a physician to administer a developmental screening tool?
 - a. 2 months
 - b. 2 years
 - c. 4 years
 - d. 6 years
 - e. 10 years

10. At what point do you refer a child to AZEIP (Arizona Early Intervention Program)?
 - a. 17 mo with suspected delays in gross motor development
 - b. 3 year old with no words
 - c. A child who needs glasses
 - d. 4 year old who has speech delay and poor fine motor skills

11. At what age does a hearing aid need to be placed in a hearing impaired child in order to maximize improvement in the child's language development and learning?
- 6 months
 - 9 months
 - 12 months
 - 18 months
 - 2 years
12. Which of the following children would be eligible for referral to DDD (Division of Developmental Disabilities)?
- Visual and hearing impairment in a 1 year old
 - 3 year old female with a feeding tube
 - Global developmental delay and seizures in a 5 year old
 - Significant speech delay in a 7 year old.
13. A 3 ½ year old female is in your office for a well child check. The PEDS tool was administered and shows and positive concern regarding language and self help skills. Of the following what is the most appropriate next step regarding evaluation?
- Refer to AZEIP.
 - Refer to DDD.
 - Refer to the local school district.
 - Reassess in 6 months.
14. What are the red flags to identify in a 2 year old child who may have autism?
- Speech and language delay
 - Gross motor delay
 - Self-help delay
 - Poor eye contact
 - Repetitive vocalizations
 - All of the above
 - A, b, and c
 - A, d, and e
15. A 2-year old child comes into the office and the parent's chief complaint is that she has tantrums every time they go to the mall. Further interview reveals that the child only says 10 words, prefers to watch her videos alone and hates crunchy foods.
- What is your next step (s) for evaluation?
- Denver II
 - Vanderbilt questionnaires
 - PEDS
 - PEDS and the M-CHAT
 - Tell the mother it's normal 2-year old behavior and you will see her again in 6 months.

Reading Articles:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4500647/>
<https://www.nejm.org/doi/10.1056/NEJMcp1307215>

Revised 2/2019