



# Entrustable Professional Activities

## EPA 3 for Developmental-Behavioral Pediatrics

### EPA 3: Perform Comprehensive Histories and Physical and Neurodevelopmental Examinations to Make Accurate Diagnoses for Patients Presenting with Developmental-Behavioral Concerns from Infancy Through Young Adulthood

#### Supervision Scale for This EPA

1. Trusted to observe only
2. Trusted to execute with direct supervision and coaching
3. Trusted to execute with indirect supervision for most simple cases and some complex cases
4. Trusted to execute with indirect supervision but may require discussion at critical portions of history and/or exam for a few complex cases
5. Trusted to execute without supervision

#### Description of the Activity

Developmental-behavioral pediatricians (DBPs) care for a broad array of patients with a wide spectrum of developmental and behavioral challenges. These patients may also be involved in care with nonmedical providers such as early intervention, schools, and allied health professions. It is critical that DBPs be expert in obtaining thorough developmental-behavioral histories, including direct history elicitation from families and incorporation of information from additional sources as well as performing careful neurodevelopmental-neurobehavioral examinations in order to make appropriate and comprehensive developmental-behavioral diagnoses.

The specific functions which define this EPA include:

1. Demonstrating knowledge of typical and atypical child development
2. Recognizing patterns of developmental delay and risk factors for developmental-behavioral disorders
3. Performing subspecialty level developmental-behavioral histories, skilled observations, and neurodevelopmental examinations and linking the results of the developmental-behavioral assessment to treatment recommendations
4. Interpreting and integrating multidisciplinary evaluation results

#### Judicious Mapping to Domains of Competence

- Patient Care
- Medical Knowledge
- Practice-Based Learning and Improvement
- Interpersonal and Communication Skills
- Professionalism
- Systems-Based Practice
- Personal and Professional Development



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### Competencies Within Each Domain Critical to Entrustment Decisions

PC 4:	Interviewing families
PC 5:	Performing complete physical exams
PC 6:	Using optimal clinical judgment
PC 7:	Developing management plans
MK 1:	Demonstrating knowledge
ICS 1:	Communicating with patients/families
SBP 2:	Coordinating care
SBP 5:	Working in interprofessional teams

### Context for the EPA

**Rationale:** Unlike most other pediatrics subspecialties, biomedical markers for developmental-behavioral disorders are scarce and thus laboratory workup rarely leads to diagnosis. DBPs must develop expertise in obtaining a comprehensive history and performing a meticulous physical and neurodevelopmental/neurobehavioral examination to identify normal variations from pathologic findings.

**Scope of Practice:** DBPs provide medically based diagnostic services for patients with a broad spectrum of developmental-behavioral concerns from infancy through young adulthood. While DBPs must be competent in evaluating patients and making diagnoses independently, they also must be competent in working as a member of an interprofessional diagnostic team that may include psychologists, speech/language pathologists, special educators, social workers, physical therapists, occupational therapists, and audiologists. DBPs must have expertise in the diagnosis of the spectrum of developmental-behavioral disorders, from high prevalence, low morbidity conditions such as ADHD, learning disabilities, and motor incoordination to low prevalence, high morbidity conditions, such as autism spectrum disorders, intellectual disabilities, and cerebral palsy. Given the prevalence of developmental-behavioral problems and disorders in the general pediatric population, the limited number of board-certified DBPs, and the long waiting lists for developmental-behavioral consultation, DBPs must be competent in providing comprehensive consultative services for primary care physicians and must be confident in referring patients back to their primary care physicians, co-managing patients as necessary. Given the breadth of developmental-behavioral disorders, DBPs often also collaborate with other subspecialists, including medical geneticists, child neurologists, child psychiatrists, and pediatric physical medicine and rehabilitation (PM&R) specialists, and may also co-manage patients with these physicians.

### Curricular Components That Support the Functions of the EPA

1. Demonstrating knowledge of typical and atypical child development
  - Identifies major theories of human development (maturation/Gesell; psychoanalytic/Freud; psychosocial/Erikson; behaviorism/Skinner and social learning theory/Bandura; constructivist/Piaget; ecological systems/Bronfenbrenner)
  - Recognizes the wide spectrum of normal individual variation in child development and behavior
  - Defines the prevalence of developmental delays/disorders and behavioral problems in the pediatric population



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- Describes the normal stages and variations of child development and the typical sequence of developmental milestone acquisition across developmental streams (motor, cognitive, speech/language, social/emotional/behavioral)
  - Describes the processes that underlie problems in neurodevelopment: developmental delay, dissociation, and deviation
  - Traces the spectrum of developmental and behavioral concerns, from developmental-behavioral variation, to problem, to disorder
  - Describes the spectrum of developmental and behavioral disorders from mild to severe *within* each stream of development (motor, cognitive, speech/language, social/emotional/behavioral)
  - Demonstrates an understanding of the continuum of developmental and behavioral disorders *across* developmental streams and the importance of identifying associated developmental and/or behavioral comorbidities
  - Demonstrates knowledge of developmental disabilities including autism spectrum disorders, intellectual disabilities, ADHD, language and learning disorders, motor disabilities, and visual and hearing impairments
  - Discusses the effects of adaptations to general health problems and their treatments (acute illnesses, chronic illnesses, physical disabilities, hospitalization) on behavior and development
  - Recognizes the spectrum of normal behavioral variation and its relationship to underlying developmental level
  - Formulates comprehensive developmental-behavioral diagnoses (primary diagnosis and associated developmental-behavioral comorbidities)
2. Recognizing patterns of developmental delay and risk factors for developmental-behavioral disorders
- Recognizes the pattern of developmental delays (static, acute, or progressive)
  - Describes how the pattern of developmental delay (static, acute, or progressive) affects medical laboratory workup
  - Describes how the pattern of developmental delay (static, acute, or progressive) affects recommendations for habilitative or rehabilitative therapy
  - Identifies prenatal risk factors for developmental-behavioral disorders such as:
    - Genetic/metabolic disorders
    - Congenital anomalies
    - Structural brain anomalies
    - Prematurity
    - In utero teratogen exposure
    - Congenital infections
  - Identifies perinatal risk factors for developmental-behavioral disorders, such as:
    - Hypoxic-ischemic encephalopathy
  - Identifies postnatal risk factors for developmental-behavioral disorders, such as:
    - Hydrocephalus
    - Meningoencephalitis
    - Traumatic brain injury



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- Epilepsy
  - Sleep disorders
  - Malnutrition
  - Chronic medical conditions
- Describes the impact of environmental stimulation on brain development
  - Describes the impact of toxic stress on early brain development
  - Identifies adverse childhood events (ACES) and psychosocial adversity that constitute risk factors for developmental-behavioral disorders, such as:
    - Poverty
    - Parental depression/substance abuse/mental health issues
    - Child abuse and neglect, domestic violence
    - Family systems (divorce, single parents, teen parents, blended families, birth order, sibling/peer relationships)
    - Foster care and international adoption
    - Cultural and community factors (violence, quality of schools/day care, television/electronic media)
    - Lack of resilience factors
3. Performing subspecialty level developmental-behavioral histories, making expert clinical observations, and performing neurodevelopmental examinations, and linking the results of developmental-behavioral assessment to treatment recommendations
- Differentiates developmental surveillance, screening, and evaluation
  - Defines developmental surveillance, which emphasizes monitoring development and behavior over time and in the context of a child's overall well-being by eliciting developmental histories and parental concerns about development and behavior, making clinical observations, performing hands-on examinations, and obtaining family/environmental information
  - Defines developmental screening
  - Discusses the properties of and the standards for acceptable screening tests (reliability, validity, sensitivity, specificity), and how these affect the choice of screening instruments
  - Performs/interprets formal developmental screening using standardized instruments
  - Performs culturally sensitive developmental-behavioral histories through effective elicitation of the temporal pattern of milestone acquisition across developmental streams
  - Performs comprehensive neurodevelopmental examinations, combining the traditional neurologic examination with the use of standardized instruments available to DBP physicians to perform extended developmental testing and neurobehavioral status assessments
  - Links the results of the comprehensive developmental-behavioral assessment to treatment recommendations
4. Interpreting and integrating multidisciplinary evaluation results
- Discusses the rationale for multidisciplinary team assessments of children with developmental, behavioral, or learning concerns
  - Demonstrates a commitment to carrying our professional responsibilities in the context of a multidisciplinary assessments of children with developmental or behavioral disorders



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- Recognizes the role of other health-related professions (psychology, speech and language pathology, audiology, occupational therapy, physical therapy, medical social services, special education, etc.) and participates in the interprofessional assessment process of children with developmental disabilities or behavioral disorders
- Describes the most commonly used instruments for the assessment of cognitive, language, motor, adaptive, and academic abilities
- Interprets results from standardized instruments used by early intervention programs, schools, and allied health professionals (psychology, speech/language pathology, occupational therapy, physical therapy) in the assessment of cognitive, language, motor, adaptive, and academic abilities
- Integrates all information obtained from developmental and behavioral histories, results of standardized testing (from early intervention programs, schools, and allied health personnel) and neurodevelopmental examinations (including extended developmental testing and/or neurobehavioral status assessments) to formulate comprehensive developmental/behavioral diagnoses
- Links all information obtained from developmental and behavioral histories, results of standardized testing (from early intervention programs, schools, and allied health personnel) and neurodevelopmental examinations (including extended developmental testing and/or neurobehavioral status assessments) to formulate comprehensive treatment plans
- Demonstrates an understanding of the diagnoses that qualify children for special education services under federal law and how to advocate for children to receive appropriate remedial, therapeutic, and accommodative services at school
- Contributes to the development of early childhood special education-based Individualized Family Service Plans and special education-based Individualized Education Program plans

Problems that can be referred back to primary care physicians:

Given the prevalence of developmental-behavioral problems and disorders in the general pediatric population, the limited number of board-certified DBP's, and the long waiting lists for developmental-behavioral consultation, DBPs must be competent in providing comprehensive consultative services for primary care physicians and must be confident in referring patients back to their primary care physicians, co-managing patients as necessary. Problems that generally can be referred back to primary care:

- Behavior problems in typically developing children
- Enuresis
- Encopresis
- ADHD without significant comorbidity
- Developmental disabilities (such as language/learning disabilities, intellectual disabilities, autism spectrum disorders) once diagnostic workup has been completed and educational/therapeutic plan has been developed

Problems that generally require consultation:

Given the breadth of developmental-behavioral disorders, DBPs often also collaborate with other subspecialists, including medical geneticists, child neurologists, child psychiatrists, and pediatric physical medicine and rehabilitation specialists. DBP's may also co-manage patients with these physicians, although there is generally easier access to all of these other subspecialists compared to DBP's, and thus patients with the problems listed below should usually be managed by the consulting subspecialty resource. Of course, the list of problems that



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generally require consultation depends greatly on the context in which one practices. Those DBPs practicing in areas where access to these subspecialists is difficult will likely provide more of the care and may do so with telephone advice from a trusted subspecialist as needed. Problems that generally require consultation include:

- Genetic counseling (consultation with Genetics)
- Management of metabolic disorders (consultation with Genetics)
- Acute neurological problems, such as seizures (consultation with Neurology)
- Treatment for spasticity (consultation with PM&R)
- Management of moderate to severe sleep problems (consultation with Neurology/Sleep Medicine)
- Management of moderate to severe psychiatric disorders, including suicidality (consultation with psychiatry)
- Management of gastrostomy tubes and other surgical issues (consultation with surgery)
- Management of ventriculoperitoneal shunt malfunctions and other neurosurgical issues (consultation with neurosurgery)

### EPA Authors

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### Curricular Components Authors

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