Developmental-Behavioral Pediatrics
Content Outline

In-Training, Certification, and
Maintenance of Certification Exams

Effective for all examinations administered January 1, 2025, and after

THE AMERICAN BOARD *of* PEDIATRICS

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Overview

This content outline was developed to serve as the blueprint for the developmental-behavioral pediatrics (DBP) in-training, initial certification, and maintenance of certification examinations. This outline identifies for all important stakeholders (eg, prospective candidates, diplomates, the public, training programs, professional associations) the knowledge areas being measured by these exams.

This outline takes effect on January 1, 2024. All DBP examinations administered after this date will adhere to the specifications within this outline.

Development of the Developmental-Behavioral Pediatrics Content Outline

The initial draft of this content outline was developed by a diverse, representative panel of 14 practicing developmental-behavioral pediatricians.

The panel started by reviewing the Entrustable Professional Activities (EPAs) that apply to developmental-behavioral pediatrics (DBP)[1]. EPAs are the activities that patients need from their physicians and, collectively, the EPAs define the practice of a given subspecialty. In this case, the panel reviewed and discussed 5 EPAs specific to DBP and 7 EPAs common across all pediatric subspecialties. Example EPAs include "*Perform comprehensive histories and physical and neurodevelopmental examinations to make accurate diagnoses for patients presenting with developmental-behavioral concerns from infancy through young adulthood*" (DBP specific) and "*Provide consultation to other health care providers caring for children and adolescents and refer patients requiring further consultation to other subspecialty providers if necessary*" (common across pediatric subspecialties). Because these EPAs were designed by the DBP community to reflect the activities needed for safe and effective practice, they served as a useful starting point in the development of the DBP Content Outline.

During their review of the EPAs, the panel discussed recent changes to practice, identified additional critical elements of practice, and developed a comprehensive list of the knowledge and skills needed for effective practice. From that comprehensive list, the panel discussed and selected those knowledge and skill areas that were deemed "testable" in a written exam format (ie, multiple-choice questions with a single correct answer supported by literature). Those testable knowledge areas were organized into content domains and subdomains and served as the draft content outline. The panel also referenced the previous DBP Content Outline to help ensure all important knowledge areas were captured in the new draft. All board certified developmental-behavioral pediatricians (N = 736) were then invited to provide feedback via an online survey. A total of 193 developmental-behavioral pediatricians completed the survey, which included rating the relevance of the content domains and subdomains. Respondents were also able to provide open-ended comments to identify any important content areas that were not included in the draft.

The survey results were used to make final revisions to the outline and to establish the exam weights (ie, the percentage of exam questions associated with each content domain – see page 6). The content domains that were rated as highly relevant have been weighted more heavily than domains rated as less relevant. Establishing the exam weights in this manner helps to ensure that ABP's DBP exams are measuring the full breadth of knowledge required for practice, while also placing an appropriate amount of emphasis on those knowledge areas that were identified by practicing developmental-behavioral pediatricians as being most relevant for practice.

Content Domains and Subdomains

The knowledge for safe and effective practice as a developmental-behavioral pediatricians has been categorized into 21 content domains, presented in the table below. Within each domain, a set of subdomains has been identified that provides a more detailed breakdown of the knowledge areas that may be assessed (see page 7). Each exam question included on a DBP exam (in-training, initial certification, and maintenance of certification) is classified according to the content domain and subdomain to which it is most closely aligned. If an exam question does not align with one of the content subdomains within this outline, it is removed from the question pool and is not included on an exam.

Developmental-Behavioral Pediatrics Content Domains	
Foundational knowledge	
1.	Typical development
2.	Major theoretical models and frameworks
3.	Biological mechanisms in development and behavior
4.	Family, societal, and social factors that impact development
5.	Assessment principles and interpretation
6.	Management principles, laws, and guidelines

[1] For more information about EPAs and their purpose, please visit the ABP website at https://www.abp.org/content/entrustable-professional-activities-subspecialties.

Developmental-Behavioral Pediatrics Content Domains
Developmental-behavioral conditions
7. Autism spectrum disorder/social communication disorder
8. Attention deficit hyperactivity disorder
9. Intellectual disability/global developmental delay
10. Communication disorders
11. Genetic disorders
12. Academic achievement differences
13. Neurologic, neuromuscular, and medical complexity
14. Mental and emotional health disorders
15. Conditions associated with social and environmental factors
16. Regulatory and behavioral disorders
17. Sexuality in individuals with developmental disability
18. Sensory impairments
Non-clinical knowledge
19. Teaching and education
20. Advocacy and leadership
21. Scholarly activities and quality improvement

Universal Tasks (Applied to Domains 10 – 18)

In addition to identifying domains and subdomains (described above), the panel also identified a set of three categories referred to as *Universal Tasks* that reflect the primary ways in which DBP knowledge can be applied in clinical practice. The three Universal Task categories are:

1. **Core science, natural history, and etiologies** - Recognizing typical development, applying knowledge of anatomy, embryology, physiology, and pathophysiology to the care of children with DBP conditions, and understanding other important variables such as risk factors, risk stratification, natural history, and the impact of other conditions on neurodevelopmental and behavioral outcomes

2. **Assessment and diagnosis** - Using information obtained from patient histories, interviews, observations, screening tools, and other assessments to formulate and refine a diagnostic impression

3. **Management and treatment** - Formulating a comprehensive and culturally informed treatment and/or management plan, including appropriate use of effective behavior management strategies, pharmacology, consultation, co-management, care coordination, anticipatory guidance, reevaluation, and transition to adult care

It is important to note that the Universal Tasks categories are inherently captured within Domains 7 (autism spectrum disorder/social communication disorder), 8 (attention deficit hyperactivity disorder), and 9 (intellectual disability/global developmental delay). In fact, because these three domains were identified as being especially critical to the practice of DBP, the subdomains within those domains reflect a more detailed and descriptive breakdown of those important concepts. For example, subdomains 7.F (evidence-based non-pharmacologic interventions), 7.G (integrative, complementary, and alternative therapies), and 7.H (psychopharmacology for co-occurring conditions) are all specific aspects of care that would fall under "Management and treatment" (Universal Task 3).

The Universal Task categories apply to Domains 10 through 18 in a slightly different manner. To keep the content outline relatively concise, Domains 10 through 18 simply categorize the remaining diseases, disorders, and conditions that are encountered in DBP practice, and the Universal Task categories are not explicitly reflected by the subdomains within these content areas. However, to ensure the clinical relevance of the questions within these domains, each exam question that falls within Domains 10 through 18 is also classified according to the Universal Task category to which it is most closely aligned.

The two sample questions on the following page help to illustrate the types of questions that may appear on an exam and how questions are classified. The first example question comes from Domain 8, where questions are classified to a domain and subdomain. The second example comes from Domain 13, where questions are classified both to a domain/subdomain and to a universal task category.

Sample Questions

Example #1:

A 6-year-old girl is diagnosed with ADHD, hyperactive-impulsive type. Her parents do not want to initiate a trial of stimulant medication, as both they and their adolescent daughter have had problems with amphetamine abuse. Which of the following medications is most appropriate to treat this child's ADHD?

A. Amitriptyline
*B. Clonidine, extended-release **
C. Dexmethylphenidate
D. Risperidone

Correct answer = B

Example question #1 would be classified as shown in the table below.

Item Classification	
Content Domain/ Subdomain	8. Attention deficit hyperactivity disorder H. Psychopharmacology

Note: Content domain/subdomain 8.H can be found on page 8 of this document.

Example #2:

The parents of a 7-year-old girl with cerebral palsy are evaluating various treatments for spasticity that have been suggested. As treatment options have different anticipated degrees of impact and side effects, a functional approach to spasticity treatment would support which of the following outcomes?

A. Greater range of motion during physical therapy sessions
B. Less need for spasticity management
*C. Maximized participation at school **
D. Less non-compliance with wearing orthotics

Correct answer = C

Example question #2 would be classified as shown in the table below.

Item Classification	
Content Domain/ Subdomain*	13. Neurologic, neuromuscular, and medical complexity C. Cerebral palsy and developmental coordination disorder
Universal Task	3. Management and Treatment

*Note: Content domain/subdomain 13.C can be found on page 9 of this document (within the detailed content outline section).

Development and Classification of Exam Questions

Although the field of DBP is continually changing, the content domains and subdomains within this outline should be viewed as broad categories of knowledge that are likely to remain relatively stable over time. The detailed knowledge within the content domains and subdomains, however, is likely to evolve as the field continues to advance. Because exam questions may assess a developmental-behavioral pediatrician's knowledge of a specific element within a content domain/subdomain, it is important to note that it is the responsibility of the test taker to ensure that their knowledge within each knowledge area is current and up to date.

To ensure the exam questions are current and up to date, the ABP follows a rigorous item development and approval process. Each exam question is written by a board-certified practitioner or academician who has received training on how to write high quality exam questions. Each question is classified according to the content domain/subdomain to which it is most closely aligned. Questions that do not align with a content domain/subdomain not included in the question pool and are not included on an exam.

Once a question has been written, it is then discussed and revised, if necessary, by the ABP's Developmental-Behavioral Pediatrics Subboard, a large, diverse panel of practicing developmental-behavioral pediatricians. During the revision process, each question is also reviewed multiple times by a medical editor to ensure accuracy and by staff editors who standardize question style, format, and terminology; correct grammar; and eliminate ambiguity and technical flaws, such as cues to the answer.

Once the DBP Subboard has approved a question, it is included in the question pool and is made available for future exams. All approved questions in the pool, including questions that have been used previously on an exam, are reviewed periodically for accuracy, currency, and relevance.

Exam Weights

The tables below indicate the exam weights (ie, the percentage of exam questions associated with each content domain) for the ABP's developmental-behavioral pediatrics exams. Please note that the weights reflect the content of a typical exam and are approximate; actual content may vary.

Content Domains	Exam Weight
Foundational knowledge *– Certified developmental-behavioral pediatricians are expected to understand the course of typical development, factors affecting development, and general principles pertaining to assessment and treatment.*	***27%***
1. Typical development	7%
2. Major theoretical models and frameworks	3%
3. Biological mechanisms in development and behavior	4%
4. Family, societal, and social factors that impact development	4%
5. Assessment principles and interpretation	5%
6. Management principles, laws, and guidelines	4%
Developmental-behavioral conditions *– Certified developmental-behavioral pediatricians are expected to have knowledge of common presentations, diagnostic criteria, evaluation strategies, and management guidelines pertaining to core DBP conditions (domains 7 – 9) and other conditions that are frequently encountered in DBP practice (domains 10 – 18).*	**65%**
7. Autism spectrum disorder/social communication disorder	8%
8. Attention deficit hyperactivity disorder	8%
9. Intellectual disability/global developmental delay	7%
10. Communication disorders	6%
11. Genetic disorders	5%
12. Academic achievement differences	3%
13. Neurologic, neuromuscular, and medical complexity	6%
14. Mental and emotional health disorders	6%
15. Conditions associated with social and environmental factors	5%
16. Regulatory and behavioral disorders	6%
17. Sexuality in individuals with developmental disability	2%
18. Sensory impairments	3%
Non-clinical knowledge *– In addition to the core clinical components of practice, certified developmental-behavioral pediatricians are expected to possess and apply knowledge pertaining to education, advocacy, policy development, and scholarly activities.*	***8%***
19. Teaching and education	2%
20. Advocacy and leadership	2%
21. Scholarly activities and quality improvement	4%
Total	**100%**

Detailed Content Outline

Foundational Knowledge – DBP diplomates are expected to understand the course of typical development, factors affecting development, and general principles pertaining to assessment and treatment.

Domain 1: Typical development

A. Motor
B. Speech
C. Language
D. Cognitive
E. Adaptive
F. Social-emotional and behavioral
G. Racial/ethnic identity
H. Sexuality and gender identity

Domain 2: Major theoretical models and frameworks

A. Cognitive development theory (Piaget)
B. Social-emotional development (Erikson)
C. Attachment theory (Mahler, Bowlby, Ainsworth)
D. Behavioral theory (Watson, Pavlov, Skinner)
E. Ecological theories of development (Vygotsky, Brofenbrenner, Kohlberg)
F. Temperament/individual variation (Chess, Thomas, Birch, Carey)
G. Theories of behavior change (Bandura, Prochoska)
H. Transactional model of development (Sameroff)
I. Racial/ethnic identity development models (Cross, Parhem & Helms, Phinney, Sellers, Quintana, Umana-Taylor, Cokely)
J. Family systems theory (Coleman)
K. Foundational/historically significant theories (eg, maturational theory, psychodynamic theory)

Domain 3: Biological mechanisms in development and behavior

A. Development of the central nervous system (early and late)
B. Functional organization of the central nervous system
C. Genetics and epigenetics
D. Biological risk factors to neurobiological development

Domain 4: Family, societal, and social factors that impact development

A. Health literacy
B. Structural determinants of health (eg, political, environmental, social, healthcare, biological/genetic, poverty)
C. Discrimination, disparities, and inequity (eg, racism, sexism, classism, ableism, homophobia, implicit biases, microaggressions)
D. Family and community influences (eg cultural practices, parenting styles and behaviors, spiritual beliefs, family mental health, school and teacher impact)
E. Immigrant and refugee health
F. Foster care and adoption (domestic, inter-country)

Domain 5: Assessment principles and interpretation

A. Developmental screening and surveillance
B. Standardized testing and assessment (eg, intelligence testing, achievement testing, speech and language assessments)
C. Physical and neurologic examination

Domain 6: Management principles and laws

A. Consent and assent
B. Motivational interviewing
C. Shared decision-making
D. Confidentiality (eg, individual and system-level considerations, mandated reporting)
E. Ethics and professional integrity
F. Special education laws, disability rights, guardianship, and conservatorship laws
G. Culturally informed care
H. Trauma-informed care
I. Value-based care
J. Disaster preparedness and response

Developmental-Behavioral Pediatric Conditions – DBP diplomates are expected to have knowledge of common presentations, diagnostic criteria, evaluation strategies, and management guidelines pertaining to core DBP conditions (domains 7 – 9) and other conditions that are frequently encountered in DBP practice (domains 10 – 18).

Domain 7: Autism spectrum disorder/social communication disorder

A. Risk and etiologic factors (eg, genetic, medical, environmental, socioeconomic status)
B. Diagnostic criteria, specifiers, and severity levels
C. Evaluation
D. Variations in presentation across sex and age
E. Differential diagnosis
F. Evidence-based non-pharmacologic interventions (eg, applied behavioral analysis, social skills training)
G. Integrative, complementary, and alternative therapies (evidence- and non-evidence based)
H. Psychopharmacology for co-occurring conditions
I. Co-occurring medical, mental health, and developmental conditions
J. Disparities in diagnosis and care
K. Transitioning to adulthood (eg, education, employment, legal protections)

Domain 8: Attention deficit hyperactivity disorder

A. Risk and etiologic factors (eg, genetic, medical, environmental, socioeconomic status)
B. Diagnostic criteria
C. Evaluation
D. Variations in presentation across sex and age
E. Differential diagnosis
F. Evidence-based non-pharmacologic interventions
G. Integrative, complementary, and alternative therapies (evidence- and non-evidence based)
H. Psychopharmacology
I. Complex ADHD (co-occurring medical, mental health, and developmental conditions)
J. Disparities in diagnosis and care
K. High-risk behaviors (eg, substance abuse, early sexual activity, motor vehicle accidents, school dropout)
L. Life course perspective and transitioning to adulthood (eg, education, employment)

Domain 9: Intellectual disability/global developmental delay

A. Risk factors and etiologic (eg, genetic, medical, environmental, socioeconomic status)
B. Diagnostic criteria and severity levels
C. Evaluation
D. Variations in presentation across sex and age
E. Differential diagnosis
F. Evidence-based non-pharmacologic interventions
G. Psychopharmacology for co-occurring conditions
H. Co-occurring medical, mental health, and developmental conditions
I. Disparities in diagnosis and care
J. Transitioning to adulthood (eg, education, employment, legal protections)

Domain 10: Communication disorders *

A. Language disorders
B. Speech disorders (eg, articulation and dysfluency disorders, childhood apraxia of speech)

Domain 11: Genetic disorders *

A. Chromosomal disorders, including sex chromosome abnormalities (eg, XO, XXY, and XXX)
B. Trisomy 21
C. Fragile X syndrome
D. Neurocutaneous syndromes (eg, Tuberous sclerosis, neurofibromatosis)
E. Genetic disorders with behavioral or neurodevelopmental phenotypes (eg, Prader Willi syndrome, Lesch Nyhan syndrome, Rett syndrome)
F. Metabolic and mitochondrial disorders resulting in developmental disability

Domain 12: Academic achievement differences *

A. Specific learning disorders (eg, mathematics, reading, written expression)
B. Other learning differences (eg, talent and giftedness, learning difficulty due to cognitive limitations)

Domain 13: Neurologic, neuromuscular, and medical complexity *

A. Altered mental status, epilepsy, and stroke
B. Acquired brain injury (eg, concussion, closed head injury)
C. Cerebral palsy and developmental coordination disorder
D. Inherited neuromuscular disorders (eg, Duchenne muscular dystrophy, spinal muscular atrophy)
E. Prematurity and perinatal conditions (eg, intraventricular hemorrhage, hypoxic-ischemic encephalopathy)
F. Tics and movement disorders
G. Congenital malformations of the brain and spine (eg, spina bifida, hydrocephalus)
H. Chronic illness and medical complexity

* All exam questions within Domains 10 - 18 are also classified to one of the Universal Task categories (see page 4)

Domain 14: Mental and emotional health disorders *

A. Anxiety disorders (eg, separation anxiety, social anxiety disorder, school avoidance)
B. Disruptive behavior disorders, aggression, and oppositional defiant disorder
C. Adjustment disorders
D. Mood disorders (eg, depression, disruptive mood dysregulation disorder, bipolar disorder)
E. Suicide and self-harm
F. Schizophrenia and thought disorders
G. Somatic symptoms and related disorders (eg, conversion disorder, factitious disorder, dissociative disorder)
H. OCD and repetitive behaviors (eg, hair pulling, nail biting)

Domain 15: Conditions associated with social and environmental factors *

A. Bullying, trauma, toxic stress, and stress disorders (eg, acute stress disorder, posttraumatic stress disorder, reactive attachment disorder, violence)
B. Adverse childhood experiences (abuse, neglect, household dysfunction)
C. Grief and bereavement
D. Nutritional disorders (eg, iron deficiency, folate deficiency), failure to thrive, and obesity
E. Prenatal teratogenic exposure
F. Environmental toxins (eg, air pollution, lead)
G. Congenital infections (eg, TORCH infections, cytomegalovirus, syphilis)

Domain 16: Regulatory and behavioral disorders *

A. Substance use/abuse
B. Toileting, encopresis, and enuresis
C. Sleep disorders
D. Feeding and eating disorders
E. Problematic electronic and media use (eg, video game addiction, social media use)

Domain 17: Sexuality in individuals with developmental disability *

A. Sexual health and development, including privacy, education, hygiene, puberty, accommodations, and reproductive rights
B. Sexual abuse and trauma
C. Gender dysphoria
D. Sexual orientation

Domain 18: Sensory impairments *

A. Deafness and hearing loss
B. Blindness and visual impairment

Non-clinical knowledge – In addition to the core clinical components of practice, DBP diplomates are expected to possess and apply knowledge pertaining to education, advocacy, policy development, and scholarly activities.

Domain 19: Teaching and education

A. Principles of adult learning theory
B. Teaching strategies for multiple types and levels of learners, including patients and caregivers
C. Principles of effective assessment and feedback
D. Principles of mentorship

* All exam questions within Domains 10 - 18 are also classified to one of the Universal Task categories (see page 4)

Domain 20: Advocacy and leadership

A. Advocacy principles and methods
B. Leadership styles and principles (eg, change management, conflict resolution, team management, signs and symptoms of psychological trauma and burnout, self-care)

Domain 21: Scholarly activities and quality improvement

A. Principles of biostatistics in research
B. Principles of epidemiology and research design
C. Principles of clinical guideline development and evaluation
D. Principles of evidence evaluation (eg, source and strength)
E. Ethics in research
F. Quality improvement and patient safety principles