

Supplemental Guide:

Developmental-Behavioral

Pediatrics

April 2023

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**Milestones Supplemental Guide**

This document provides additional guidance and examples for the Developmental-Behavioral Pediatrics Milestones. This is not designed to indicate any specific requirements for each level, but to provide insight into the thinking of the Milestone Work Group.

Included in this document is the intent of each Milestone and examples of what a Clinical Competency Committee (CCC) might expect to be observed/assessed at each level. Also included are suggested assessment models and tools for each subcompetency, references, and other useful information.

Review this guide with the CCC and faculty members. As the program develops a shared mental model of the Milestones, consider creating an individualized guide (Supplemental Guide Template available) with institution/program-specific examples, assessment tools used by the program, and curricular components.

Additional tools and references, including the Milestones Guidebook, Clinical Competency Committee Guidebook, and Milestones Guidebook for Residents and Fellows, are available at the end of this document as well as on the [Resources](https://www.acgme.org/What-We-Do/Accreditation/Milestones/Resources) page of the Milestones section of the ACGME website.

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| **Patient Care 1: Developmental-Behavioral History**  **Overall Intent:** To efficiently obtain, communicate, and document a history that addresses the developmental and/or behavioral question | |
| **Milestones** | **Examples** |
| **Level 1** *Uses a template to obtain, communicate, and document a history, including perinatal, developmental, and family components* | Strictly adheres and follows a template to obtain a comprehensive history  Obtains general pediatric history without adapting based on developmental age and chief complaint  Makes errors of omission due to strict adherence to a template  Obtains family medical history without including that caregivers received special education services and have experienced difficulty maintaining employment |
| **Level 2** *Obtains, communicates, and documents a relevant history, eliciting patient’s and patient’s family’s contributions based on cognitive level and cultural norms* | Adapts template to some degree relative to cognitive level and cultural norms  Describes caregiver concerns, but does not incorporate concerns described within school reports  Lacks adequate history in order to obtain an appropriate differential diagnosis  Gives a National Institute for Children’s Health Quality (NICHQ) Vanderbilt Assessment Scale in a family’s primary language |
| **Level 3** *Incorporates supplemental data from external sources into the history to filter, prioritize, and synthesize a differential diagnosis for straightforward presentations* | Presents a history that a faculty member can follow, and does not skip around in the history  Writes complete, organized, and clear clinic notes; does not need the faculty member to edit them   * Uses an organized and descriptive approach to discuss a school-age child with inattentiveness with the faculty member; takes a focused history to distinguish between likely diagnoses * Incorporates a summary of a previous psychoeducational evaluation and teacher behavior rating scales from school into documentation   Incorporates some social determinants of health or other social screening questions when performing history |
| **Level 4** *Reconciles information from conflicting sources or sources that are difficult to access into the history, and uses the history to develop a differential diagnosis for complex presentations* | Presents at a case conference using an organized and descriptive approach when discussing a school-age child with inattentiveness and cognitive impairment  Interprets, weighs, and synthesizes historical information and previous evaluations to develop differential diagnoses and/or comorbid conditions  Calls the patient’s classroom teacher to obtain further history  Incorporates a detailed but related social history, including social determinants of health and other factors that could be contributing to the patient’s presentation |
| **Level 5** *Recognizes and probes subtle clues from patients and their families; efficiently distinguishes nuances among diagnoses* | Is flexible in obtaining further history when recognizing subtle diagnostic clues in the history  Elicits a history to distinguish among attention-deficit/hyperactivity disorder (ADHD) with anxiety, versus reactive attachment, versus autism in a patient |
| Assessment Models or Tools | Case presentation  Direct observation  Medical record audit |
| Curriculum Mapping |  |
| Notes or Resources | * The American Board of Pediatrics (ABP). “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022.   ABP. “Entrustable Professional Activities.” Entrustable Professional Activity (EPA) 3 for Developmental-Behavioral Pediatrics. <https://www.abp.org/sites/public/files/pdf/epa-dbeh-3.pdf>. Accessed 2022. |

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| **Patient Care 2: Developmental-Behavioral Physical Exam**  **Overall Intent:** To gather objective information, recognizing normal and abnormal physical findings while engaging the patient/family using appropriate behavioral and developmental techniques, and considering information gleaned from patient history | |
| **Milestones** | **Examples** |
| **Level 1** *Performs general pediatric physical examination* | * Begins with a head-to-toe exam of a two-year-old with chief complaint of social communication deficits * Performs a complete physical examination without deviation from the template, regardless of the chief complaint |
| **Level 2** *Performs physical exam, including assessment of developmental status and behavioral characteristics* | * Conducts a comprehensive general pediatrics exam, including documentation of behavioral observations * Documents eye contact and use of communicative gestures in a two-year-old presenting with social communication deficits |
| **Level 3** *Performs developmentally appropriate physical examination and interprets normal variants and abnormal findings for straightforward presentations* | * Focuses and/or adapts physical exam, including pertinent assessment while limiting patient distress * Eliminates the genital exam in the two-year-old with a chief complaint of social communication deficits * Initiates the exam while the two-year-old is comfortable on the caregiver’s lap * Appreciates evident abnormalities in tone in a child with cerebral palsy |
| **Level 4** *Consistently performs developmentally appropriate physical examination and interprets normal variants and abnormal findings for complex presentations* | * Focuses and/or adapts physical exam, including pertinent assessment while limiting patient distress and documenting the nuanced exam features * Recognizes two-year-old female with a chief complaint of social communication deficits that demonstrates hand wringing on exam |
| **Level 5** *Detects, pursues, and integrates key physical examination findings to distinguish nuances among competing, often similar diagnoses* | * Conducts a physical exam informed by established patterns of dysmorphology * Examines for hepatosplenomegaly in a child with coarse facial features |
| Assessment Models or Tools | * Chart/medical record audit * Direct observation * Multisource (caregiver) feedback * Reflection |
| Curriculum Mapping |  |
| Notes or Resources | * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022. * Schumacher, Daniel J., Robert Englander, Patricia J. Hicks, Carol Carraccio, and Susan Guralnick. 2014. “Domain of Competence: Patient Care.” *Academic Pediatrics* 14(2) Supp: S13-S35. <https://pubmed.ncbi.nlm.nih.gov/24602619/>. |

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| **Patient Care 3: Screening and Assessment**  **Overall Intent:** To correctly select, administer, and interpret appropriate screening and assessment measures | |
| **Milestones** | **Examples** |
| **Level 1** *Interprets caregiver and/or self-reported developmental-behavioral screening and assessment tools* | * Interprets Modified Checklist for Autism in Toddlers, NICHQ Vanderbilt Assessment Scale, Behavior Assessment System for Children, and Screen for Child Anxiety Related Disorders |
| **Level 2** *Reviews previous testing results and administers and interprets developmental-behavioral assessment tools, with support* | * Reviews results of psychoeducational evaluation completed by a school district and administers and interprets Mullen Scales of Early Learning with guidance and oversight of faculty member or senior fellow |
| **Level 3** *Evaluates previous testing results and administers and interprets developmental-behavioral assessment tools for straightforward presentations* | Interprets results of psychoeducational evaluation completed by a school district to identify gaps in the evaluation and select appropriate assessment tools to clarify the potential diagnosis of autism spectrum disorder in a school-age child |
| **Level 4** *Evaluates previous testing results and effectively selects, administers, and interprets developmental-behavioral assessment tools for complex presentations* | * Interprets results of psychoeducational evaluation completed by a school district to identify gaps in the evaluation and select appropriate assessment tools to clarify the potential diagnosis of autism spectrum disorder in a school-age child with vision impairment |
| **Level 5** *Demonstrates flexibility and efficiency in selection, prioritization, administration, and interpretation of developmental-behavioral assessment tools for complex presentations* | Recognizes when external factors may limit the ability to administer a full assessment battery and tailors the assessment to provide necessary clinical data without compromising the quality of the evaluation or patient care |
| Assessment Models or Tools | * Direct observation * Case presentations (primarily for testing results review and choice of assessment) |
| Curriculum Mapping |  |
| Notes or Resources | * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 3 for Developmental-Behavioral Pediatrics. <https://www.abp.org/sites/public/files/pdf/epa-dbeh-3.pdf>. Accessed 2022. |

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| **Patient Care 4: Clinical Reasoning**  **Overall Intent:** To integrate collected data (e.g., history including social determinants of health, physical exam findings, laboratory/diagnostic if available) to make an informed and appropriately broad differential diagnosis | |
| **Milestones** | **Examples** |
| **Level 1** *Generates an unfocused differential diagnosis based on the clinical facts* | * Suggests extensive evaluations as a proxy for a differential, saying, “I saw a four-year-old who is not sleeping through the night and plan to order a complete blood cell count (CBC), ferritin level, and sleep study.” On further questioning, does not know what time child is falling asleep and waking up, if the child is sleeping with caregivers or in own bed, watching an iPad to fall asleep, or the answer to other basic questions related to the sleep environment or routine. |
| **Level 2** *Organizes clinical facts to compare and contrast diagnoses being considered, resulting in a prioritized differential diagnosis* | * Makes the following note: “A four-year-old child presents with sleep concerns. He falls asleep on the couch around 8:00 p.m. with his caregivers nearby. Once asleep, his caregivers move him to his own room. He wakes at some point during the night and moves to his caregivers’ bed. He then sleeps until 7:00 a.m. He seems rested in the morning. I believe the sleep problem is most likely due to behavioral insomnia of childhood, sleep association type, but I also plan to obtain a CBC and ferritin level to screen for possible impact of restless leg syndrome.” * Develops an informed differential diagnosis that considers clinical patterns based on previous learning/experience in conjunction with a succinct summary of findings * Considers contribution of socioeconomic or cultural factors (housing insecurity, cultural views of co-sleeping) when developing a differential diagnosis |
| **Level 3** *Integrates clinical facts into diagnostic conclusions; reappraises in real time to avoid diagnostic error in straightforward cases* | * Revisits and adjusts diagnosis to avoid diagnostic error as patient status changes or new information becomes available * Comfortably compares and contrasts several diagnoses and uses supporting evidence to determine which is the most likely for a given patient |
| **Level 4** *Efficiently integrates clinical facts into diagnostic conclusions; reappraises in real time to avoid diagnostic error in complex cases* | * After obtaining detailed sleep history and determining that the sleep concern is most likely due to behavioral insomnia of childhood, sleep association type, provides caregivers with education and behavioral guidance regarding the impact of sleep associations on sleep maintenance; expands the differential diagnosis to include post-traumatic stress disorder and alters behavioral recommendations to provide a more gradual process to encourage independent sleep initiation when the caregivers provide additional information regarding significant history of trauma exposure |
| **Level 5** *Role models the organization of clinical facts to develop a prioritized differential diagnosis for complex clinical presentations* | * Articulates clinical reasoning in a way that allows insight into an expert’s clinical decision making * Plans a workshop at a national conference on the topic of identification and clinical management of sleep concerns in children with trauma exposure |
| Assessment Models or Tools | * Case presentation * Direct observation * Multisource feedback |
| Curriculum Mapping |  |
| Notes or Resources | * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 3 for Developmental-Behavioral Pediatrics. <https://www.abp.org/sites/public/files/pdf/epa-dbeh-3.pdf>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 5 for Developmental-Behavioral Pediatrics. <https://www.abp.org/sites/public/files/pdf/epa-dbeh-5.pdf>. Accessed 2022. |

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| **Patient Care 5: Patient Management**  **Overall Intent:** To lead the health care team in the creation of a comprehensive, patient-centered management plan based on multiple patient factors, including social factors and varied patient backgrounds, regardless of complexity | |
| **Milestones** | **Examples** |
| **Level 1** *Participates in the creation of management plans* | * Selects medication for school-age child with ADHD from those recommended by the faculty member * Repeats faculty member’s written medication recommendations verbatim |
| **Level 2** *Develops management plan for common diagnoses* | * Recommends stimulant for treatment of ADHD but does not recommend evaluation for learning disabilities, anxiety, or individualized education program (IEP)/504 plan development * Needs support to guide follow-up management after stimulant initiation |
| **Level 3** *Develops prioritized management plans for common diagnoses* | * Recommends stimulant for treatment of ADHD and recommends evaluation for learning disabilities, anxiety, or IEP/504 plan development * Creates appropriate plan for follow-up after stimulant initiation * Considers prenatal influences and family history to recommend additional studies and evaluations * Recognizes side effects of stimulant medication, and recommends alternative treatment plan |
| **Level 4** *Develops prioritized management plans for complex diagnoses, with the ability to modify plans as necessary* | * Recognizes that concurrent diagnoses may be present and organizes treatment for co-occurring conditions * Recognizes side effects of polypharmacy, and recommends alternative treatment plan * Designs treatment plans by involving patients and their family members in shared decision making * Realizing a patient’s caregiver is unable to read, labels the patient’s prescriptions in a way the caregiver understands and elicits teach-back to gauge understanding |
| **Level 5** *Serves as a role model for development and prioritization of management plans for complex diagnoses, with the ability to modify plans as necessary* | * Guides other learners in the development of treatment plans by considering the major therapeutic interventions and the evidence for and against each modality * Shares an error of clinical reasoning to correct treatment plan and educate peers |
| Assessment Models or Tools | * Case-based discussion * Direct observation * Multisource feedback |
| Curriculum Mapping |  |
| Notes or Resources | * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 3 for Developmental-Behavioral Pediatrics. <https://www.abp.org/sites/public/files/pdf/epa-dbeh-3.pdf>. Accessed 2022. * Cook, David A., Steven J. Durning, Jonathan Sherbino, and Larry D. Gruppen. 2019. “Management Reasoning: Implications for Health Professions Educators and a Research Agenda.” *Academic Medicine* 94(9):1310–1316. doi: 10.1097/ACM.0000000000002768. * Physicians draw upon other skills and knowledge sets to create management plans. This milestone may overlap with other milestones (e.g., Systems-Based Practice 3, Practice-Based Learning and Improvement 1, Medical Knowledge 2). The primary focus is the ability to create a management plan to address a variety of diagnoses and in a variety of settings. It may be useful to consider these themes that guide management decisions: * Involving patients and their families in the decision-making process * Integrating competing priorities (e.g., risks, benefits) and preferences * Tolerating uncertainty * Monitoring treatment response and adjusting treatment as needed |

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| **Medical Knowledge 1: Development and Behavior**  **Overall Intent:** To demonstrate sufficient knowledge to counsel families regarding common disorders of motor, emotional, cognitive, and behavioral development | |
| **Milestones** | **Examples** |
| **Level 1** *Lists developmental and behavioral norms across domains* | Discusses that by age two, children can typically combine two words and have a minimum of 50 words in their vocabulary  Recognizes that children growing up in a bilingual household should not experience delayed language acquisition |
| **Level 2** *Identifies and interprets patterns of abnormalities across domains of development and/or behavior* | Recognizes that social-emotional, play, and language delays often co-occur in child development |
| **Level 3** *Analyzes developmental and/or behavioral disorders based on common patterns of abnormalities* | Recognizes that a two-year-old child who is not combining words, not pointing or consistently responding to name, and who displays repetitive motor movements fits a broader pattern of symptoms consistent with autism spectrum disorder (ASD) |
| **Level 4** *Analyzes developmental and/or behavioral disorders based on common and uncommon patterns of abnormalities* | Recognizes that a female toddler with language regression and hand wringing fits a broader pattern of symptoms that may be consistent with a diagnosis of Rett syndrome |
| **Level 5** *Investigates new influences on common and uncommon disorders of development and/or behavior* | Collaborates on authoring case report on an atypical presentation of a child with Rett Syndrome |
| Assessment Models or Tools | Direct observation  Case-based discussion  Multisource feedback  Simulations  Subspecialty In-Training Examination (SITE) |
| Curriculum Mapping |  |
| Notes or Resources | * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 4 for Developmental-Behavioral Pediatrics. <https://www.abp.org/sites/public/files/pdf/epa-dbeh-4.pdf>. Accessed 2022.   American Psychiatric Association. 2013. *Desk Reference to the Diagnostic Criteria from DSM-5 (R).* Arlington, TX: American Psychiatric Association Publishing.  Neul, Jeffrey L., Walter E. Kaufmann, Daniel G. Glaze, John Christodoulou, Angus J. Clarke, Nadia Bahi-Buisson, Helen Leonard, et al. 2010. “Rett Syndrome: Revised Diagnostic Criteria and Nomenclature.” *Annals of Neurology* 68(6): 944-50. doi: 10.1002/ana.22124. PMID: 21154482; PMCID: PMC3058521.  Voigt, Robert G. 2018. “Developmental-Behavioral Pediatric Diagnosis.” In *Rudolph’s Pediatrics*, 23rd Ed., edited by Mark W. Kline. McGraw Hill. <https://accesspediatrics.mhmedical.com/content.aspx?bookid=2126&sectionid=165072706>.  Zubler, Jennifer M., Lisa D. Wiggins, Michelle M. Macias, Toni M. Whitaker, Judith S. Shaw, Janke K. Squires, Julie A. Pajek, Rebecca B. Wolf, Karnesha S. Slaughter, Amer S. Broughton, et al. 2022. “Evidence-Informed Milestones for Developmental Surveillance Tools.” *Pediatrics* 149(3): e2021052138. doi: 10.1542/peds.2021-052138. PMID: 35132439. |

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| **Medical Knowledge 2: Etiology**  **Overall Intent:** To demonstrate sufficient knowledge to explore the etiologic explanations for common disorders of motor, emotional, cognitive, and behavioral development | |
| **Milestones** | **Examples** |
| **Level 1** *Demonstrates basic knowledge of physiology, genetics, and environmental influences pertaining to general pediatrics* | * Recognizes potential correlation between recurrent acute otitis media and language delay * Recognizes need for audiology evaluation in a child with language delay |
| **Level 2** *Demonstrates basic knowledge of physiologic, genetic, and environmental influences related to developmental-behavioral disorders* | * Recognizes that language development is the domain most affected by environmental stimulation * Recognizes the importance of genetic testing for fragile X syndrome for a new patient with autism spectrum disorder |
| **Level 3** *Demonstrates in-depth knowledge of physiologic, genetic, and environmental influences on developmental-behavioral disorders* | * Recognizes that a former premature infant with bronchopulmonary dysplasia who received long-term treatment with diuretics is at risk for hearing loss * Recognizes an X-linked pattern of developmental disability in family history |
| **Level 4** *Correlates knowledge of physiology, genetics, and environmental influences underlying developmental-behavioral disorders into evidence-based treatment planning* | * Describes the evidence base behind behavioral interventions for autism spectrum disorder * Recognizes need for genetic testing for Klinefelter syndrome in a male with language impairment |
| **Level 5** *Investigates and disseminates knowledge of physiologic, genetic, and environmental influences on developmental-behavioral disorders* | * Publishes a case report of a child who presented with language delay and Klinefelter syndrome * Contributes to the national guidelines on the medical evaluation for a child with language delay |
| Assessment Models or Tools | * SITE * Direct observation * Case conference |
| Curriculum Mapping |  |
| Notes or Resources | * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 1 for All Pediatrics Subspecialities. <https://www.abp.org/sites/abp/files/pdf/epa-all-subs-1.pdf>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 5 for Developmental-Behavioral Pediatrics. <https://www.abp.org/sites/public/files/pdf/epa-dbeh-5.pdf>. Accessed 2022. |

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| **Medical Knowledge 3: Diagnostic Investigation**  **Overall Intent:** To implement a targeted, cost-effective plan for diagnostic testing in patients with developmental-behavioral concerns | |
| **Milestones** | **Examples** |
| **Level 1** *Discusses general diagnostic approach appropriate to clinical presentation* | Determines that a 24-month-old patient who is not walking should be evaluated for gross motor delay |
| **Level 2** *Lists indications, contraindications, risks, and benefits of diagnostic testing* | Describes that magnetic resonance imaging (MRI) of the brain may be indicated in a patient with gross motor delay and asymmetric deep tendon reflexes  Recognizes that the risk involved for MRI of the brain does not outweigh the benefits for a child with autism spectrum disorder and normal neurologic exam  Orders a serum creatine kinase (CK) level in a child with delayed gross motor skills and hypotonia  Recommends genetic testing for a child with global developmental delay |
| **Level 3** *Prioritizes and interprets diagnostic tests appropriate to clinical urgency and complexity* | Recognizes clinical presentation of infantile spasms and facilitates urgent neurology consultation/evaluation  Uses a stepwise diagnostic approach in the evaluation of a child with global developmental delay or intellectual disability  Informs families of possible results of genetic testing, including positive findings, negative findings, variants of uncertain significance, and potential unintended findings (other genetic abnormalities such as those predisposing to cancer risk, non-paternity, and consanguinity) |
| **Level 4** *Uses complex diagnostic approaches that have the highest diagnostic yield and cost effectiveness* | Recognizes the importance of PTEN gene sequencing in a child with autism spectrum disorder and macrocephaly in addition to chromosome microarray and fragile X testing  Recognizes physical/cognitive features of a specific genetic syndrome and orders targeted testing for that syndrome instead of broad-spectrum genetic studies |
| **Level 5** *Demonstrates sophisticated knowledge of diagnostic testing and controversies* | Directs other team members in diagnostic testing of complex cases  Guides colleagues regarding nuanced selection of genetic studies |
| Assessment Models or Tools | Direct observation  Clinical documentation  SITE |
| Curriculum Mapping |  |
| Notes or Resources | Adam, Margaret P., David B. Everman, Ghayda M. Mirzaa, Roberta A. Pagon, Stephanie E. Wallace, Lora J.H. Bean, Karen W. Gripp, and Anne Amemiya, eds. 2022. *Gene Reviews*. Seattle, WA: University of Washington. <https://www.ncbi.nlm.nih.gov/books/NBK1116/>. Accessed 2022.   * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022.   ABP. “Entrustable Professional Activities.” EPA 5 for Developmental-Behavioral Pediatrics. <https://www.abp.org/sites/public/files/pdf/epa-dbeh-5.pdf>. Accessed 2022.  du Plessis, André J., Catherine Limperopoulos, and Joseph J. Volpe. 2017. “Cerebellar Development.” In: *Volpe’s* *Neurology of the Newborn*. 6th ed., by Joseph J. Volpe et al. Philadelphia, PA: Elsevier; 73-99.  Gifford, D.R., B.S. Mittman, B.G. Vickrey. 1996. “Diagnostic Reasoning in Neurology.” *Neurologic Clinics.* 14(1): 223-238. <https://pubmed.ncbi.nlm.nih.gov/8676845/>.  Preston, David, and Barbara Shapiro. 2020. *Electromyography and Neuromuscular Disorders: Clinical-Electrophysiologic Correlations.* 4th ed. Philadelphia, PA: Elsevier. ISBN:978-1455726721. |

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| **Medical Knowledge 4: Pharmacologic and Developmental and/or Behavioral Interventions**  **Overall Intent:** To demonstrate knowledge of pharmacology and therapeutic interventions | |
| **Milestones** | **Examples** |
| **Level 1** *Demonstrates knowledge of common pharmacologic and developmental and/or behavioral interventions* | * Presents to other fellows at journal club the evidence-based medications and behavioral treatments for ADHD * Lists stimulant medication options for treatment of ADHD in a school-age child |
| **Level 2** *Identifies the risks and benefits of common pharmacologic and developmental and/or behavioral interventions* | * Understands risks and benefits of first-line ADHD treatment options, which can be used in shared decision making |
| **Level 3** *Monitors and adjusts the choice and dosing of common pharmacologic and developmental and/or behavioral interventions* | * Evaluates the triage vital signs of a school-age child treated with a stimulant medication, and adjusts dosing based on vital signs, school reports, and side effects * Recommends behavioral parent training for caregivers of a preschooler with ADHD |
| **Level 4** *Monitors and adjusts pharmacologic and developmental and/or behavioral interventions in complex situations* | * Applies an understanding of the interactions of selective serotonin reuptake inhibitors (SSRIs) and stimulant medications to appropriately adjust dosing in the treatment of co-occurring anxiety and ADHD in a teenager |
| **Level 5** *Investigates and disseminates knowledge of novel pharmacologic and developmental and/or behavioral intervention options* | * Contributes to treatment guidelines for complex ADHD as part of a national subspecialty workgroup |
| Assessment Models or Tools | * Case-based discussion * Formal presentation * SITE exam |
| Curriculum Mapping |  |
| Notes or Resources | * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022.   ABP. “Entrustable Professional Activities.” EPA 5 for Developmental-Behavioral Pediatrics. <https://www.abp.org/sites/public/files/pdf/epa-dbeh-5.pdf>. Accessed 2022.   * Micromedex: <https://www.micromedexsolutions.com>. Accessed 2022 * Riddle, Mark A. 2021. *Pediatric Psychopharmacology for Primary Care*, 3rd ed. American Academy of Pediatrics. 2021. <https://shop.aap.org/pediatric-psychopharmacology-for-primary-care-3rd-edition-paperback/>. |

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| **Systems-Based Practice 1: Patient Safety**  **Overall Intent:** To engage in the analysis and management of patient safety events, including relevant communication with patients, patients’ families, and health care professionals | |
| **Milestones** | **Examples** |
| **Level 1** *Demonstrates knowledge of common patient safety events*  *Demonstrates knowledge of how to report patient safety events* | * Lists common patient safety events such as patient misidentification or medication errors * Lists “patient safety reporting system” or “patient safety hotline” as ways to report safety events |
| **Level 2** *Identifies system factors that lead to patient safety events*  *Reports patient safety events through institutional reporting systems (simulated or actual)* | * Identifies that electronic health record (EHR) default prescription of clonidine is three times a day * Reports default prescription of clonidine error using the appropriate reporting mechanism |
| **Level 3** *Participates in analysis of patient safety events (simulated or actual)*  *Participates in disclosure of patient safety events to patients and families (simulated or actual)* | * Participates in root cause analyses (mock or actual) * Participates in a quality improvement project aimed at reducing system errors * With the support of an attending or risk management team member, participates in the disclosure of a medication order error to a patient’s family |
| **Level 4** *Conducts analysis of patient safety events and offers error prevention strategies (simulated or actual)*  *Discloses patient safety events to patients and families (simulated or actual)* | * Leads a simulated or actual root cause analysis related to a prescribing error and develops an action plan * Following consultation with risk management and other team members, independently discloses a medication error to a patient’s family |
| **Level 5** *Actively engages teams and processes to modify systems to prevent patient safety events*  *Role models or mentors others in the disclosure of patient safety events* | * Leads amultidisciplinary team to work on improved medication reconciliation processes to prevent medication errors and considers biases amongst team members * Conducts a simulation demonstrating techniques and approaches for disclosing patient safety events |
| Assessment Models or Tools | * Case-based discussion * Direct observation * E-module multiple choice tests * Guided reflection * Medical record (chart) audit * Multisource feedback * Portfolio * Simulation |
| Curriculum Mapping |  |
| Notes or Resources | * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 1 for Developmental-Behavioral Pediatrics. <https://www.abp.org/sites/public/files/pdf/epa-dbeh-1.pdf>. Accessed 2022. * Institute for Healthcare Improvement. <http://www.ihi.org/Pages/default.aspx>. Accessed 2020. * Singh, Ranjit, Bruce Naughton, John S. Taylor, Marlon R. Koenigsberg, Diana R. Anderson, Linda L. McCausland, Robert G. Wahler, Amanda Robinson, and Gurdev Singh. 2005. “A Comprehensive Collaborative Patient Safety Residency Curriculum to Address the ACGME Core Competencies. *Medical Education* 39(12): 1195-204. <https://pubmed.ncbi.nlm.nih.gov/16313578/>. |

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| **Systems-Based Practice 2: Quality Improvement**  **Overall Intent:** To understand and implement quality improvement methodologies to improve patient care | |
| **Milestones** | **Examples** |
| **Level 1** *Demonstrates knowledge of basic quality improvement methodologies and metrics* | * Describes fishbone diagram * Describes components of a “Plan-Do-Study-Act” cycle |
| **Level 2** *Describes local quality improvement initiatives* | * Describes clinic initiative to increase frequency of medication side effect monitoring * Describes clinic initiative to standardize and abbreviate intake processes |
| **Level 3** *Participates in local quality improvement initiatives* | * Participates in an ongoing interdisciplinary project to increase frequency of medication reconciliation * Collaborates on a project to accelerate patient access to early intervention services |
| **Level 4** *Demonstrates the skills required to identify, develop, implement, and analyze a quality improvement project* | * Develops a quality improvement project to improve consistency of blood pressure monitoring within a practice site that includes engaging the office team, assessing the problem, articulating a broad goal, developing a SMART (Specific, Measurable, Attainable, Realistic, Time-bound) aim, collecting and analyzing data, and monitoring progress and challenges * In developing a quality improvement project, considers team bias and social determinants of health in patient population |
| **Level 5** *Creates, implements, and assesses quality improvement initiatives at the institutional or community level* | * Initiates and completes a quality improvement project to install county-wide evidence-based developmental screening protocols in collaboration with the county health department and shares results through a formal presentation to the community leaders * Looks for opportunities to increase developmental screening rates across a health care system |
| Assessment Models or Tools | * Direct observation * Portfolio * Poster or other presentation * Team evaluations |
| Curriculum Mapping |  |
| Notes or Resources | * American Academy of Pediatrics (AAP). “Bright Futures.” <https://www.aap.org/en/practice-management/bright-futures>. Accessed 2022. * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 2 for Developmental-Behavioral Pediatrics. <https://www.abp.org/sites/public/files/pdf/epa-dbeh-2.pdf>. Accessed 2022. * Institute for Healthcare Improvement. <http://www.ihi.org/Pages/default.aspx>. Accessed 2020. * Murtagh Kurowski, Eileen, Amanda C. Schondelmeyer, Courtney Brown, Christopher E. Dandoy, Samuel J. Hanke, and Heather L. Tubbs Cooley. 2015. “A Practical Guide to Conducting Quality Improvement in the Health Care Setting.” *Current Treatment Options in Pediatrics*. 1:380-392. <https://doi.org/10.1007/s40746-015-0027-3>. |

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| **Systems-Based Practice 3: System Navigation for Patient-Centered Care – Coordination of Care**  **Overall Intent:** To effectively navigate the health care system, including coordination with interdisciplinary teams and other clinicians/professionals; to adapt care to a specific patient population to ensure high-quality patient outcomes | |
| **Milestones** | **Examples** |
| **Level 1** *Lists the various interprofessional individuals involved in the patient’s care coordination* | * Identifies the members of the interprofessional diagnostic team, and the roles of each team member, for a child presenting for evaluation of possible autism spectrum disorder * Identifies access to care and insurance coverage as social determinants of health |
| **Level 2** *Coordinates care of patients in routine clinical situations, incorporating interprofessional teams with consideration of patient and family needs* | * Recognizes that early intervention professionals, therapists (physical therapist, occupational therapist, speech/language, behavioral interventionists, etc.), and teachers are important members of developmental-behavioral health care team for a child with global developmental delay and autism spectrum disorder, and provides guidance to caregivers regarding methods to access these professionals/services * Recognizes implicit bias as a contributor to health care disparities |
| **Level 3** *Coordinates care of patients in complex clinical situations, effectively utilizing the roles of interprofessional teams, and incorporating patient and family needs and goals* | * Works with the social worker to coordinate outpatient care and ensure appropriate clinic follow-up for a patient with global developmental delay and autism spectrum disorder who resides in a rural area with limited family transportation options * Refers patients to a local pharmacy that offers a sliding fee scale and provides pharmacy coupons for patients in need * Recognizes when patients/families may have additional barriers to accessing medical/developmental care and the need to involve a social worker or case manager in identification of community resources |
| **Level 4** *Coordinates interprofessional, patient-centered care among different disciplines and specialties, actively assisting families in navigating the health care system* | * Advocates for and coordinates rescheduling a patient who was “fired” from a subspecialty clinic for missing appointments due to underlying socioeconomic issues * Recognizes the need for and coordinates a multidisciplinary team/family meeting to include appropriate subspecialists, physical therapist/occupational therapist, nutrition, child life, mental health resources, chaplain services, primary care physician, etc. |
| **Level 5** *Coaches others in interprofessional, patient-centered care coordination* | * Leads an initiative to educate residents about the importance of a team-based approach between medical, developmental intervention, and education professionals for children with developmental-behavioral conditions, ensuring inclusion of discussion on health care disparities * Coaches colleagues through a multidisciplinary team meeting to coordinate care for a child with complex developmental-behavioral needs |
| Assessment Models or Tools | * Direct observation * Multisource feedback |
| Curriculum Mapping |  |
| Notes or Resources | * AAP. <https://www.aap.org/en-us/Pages/Default.aspx>. Accessed 2020. * AAP. Pediatric Care Coordination Resources. <https://www.aap.org/en/practice-management/care-delivery-approaches/care-coordination-resources/>. Accessed 2022. * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 5 for Developmental-Behavioral Pediatrics. <https://www.abp.org/sites/public/files/pdf/epa-dbeh-5.pdf>. Accessed 2022. * Skochelak, Susan E., Maya M. Hammond, Kimberly D. Lomis, Jeffrey M. Borkan, Jed. D. Gonzalo, Luan E. Lawson, and Stephanie R. Starr. 2020. *AMA Education Consortium: Health Systems Science*, 2nd ed. Elsevier. * Starr, Stephanie R., Neera Agrwal, Michael J. Bryan, Yuna Buhrman, Jack Gilbert, Jill M. Huber, Andrea N. Leep Hunderfund, et al. 2017. “Science of Health Care Delivery: An Innovation in Undergraduate Medical Education to Meet Society’s Needs.” [*Mayo Clinic Proceedings: Innovations, Quality & Outcomes*](https://www.sciencedirect.com/science/journal/25424548). 1(2): 117-129. <https://www.sciencedirect.com/science/article/pii/S2542454817300395>. |

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| **Systems-Based Practice 4: System Navigation for Patient-Centered Care – Transitions in Care**  **Overall Intent:** To effectively navigate the health care delivery system during transitions of care to ensure high-quality patient outcomes | |
| **Milestones** | **Examples** |
| **Level 1** *Uses a standard template for transitions of care/hand-offs* | * When transitioning a school-age patient with complex ADHD back to her general pediatrician, documents history on a standard template, but is not appropriately specific to the patient, and does not provide contingency plans |
| **Level 2** *Adapts a standard template, recognizing key elements for safe and effective transitions of care/hand-offs in routine clinical situations* | * Routinely uses a standardized template for transitioning a school-age patient with complex ADHD, verbalizes a basic understanding of active problems, and provides basic contingency plans related to medication adverse effects |
| **Level 3** *Performs safe and effective transitions of care/hand-offs in complex clinical situations, and ensures closed-loop communication* | * Routinely uses a standardized template when transitioning a patient back to the primary care practitioner with direct communication of clinical reasoning, potential problems that would warrant a higher level of care, and status of completed/planned interventions; confirms/uses specific resources and timeline for re-consultation |
| **Level 4** *Performs and advocates for safe and effective transitions of care/hand-offs within and across health care delivery systems, including transitions to adult care* | * Before going on vacation, proactively seeks out on-call colleague to follow up on test results that are still pending and expected back during that week, with specific instructions and contingency plans for a follow-up patient visit |
| **Level 5** *Coaches others in improving transitions of care within and across health care delivery systems to optimize patient outcomes* | * Develops and implements a process for fellowship continuity clinics to facilitate the transition from pediatrics to adult medicine |
| Assessment Models or Tools | * Portfolio assessment * Direct observation * Multisource feedback |
| Curriculum Mapping |  |
| Notes or Resources | * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 1 for Developmental-Behavioral Pediatrics. <https://www.abp.org/sites/public/files/pdf/epa-dbeh-1.pdf>. Accessed 2022. * Got Transition. “Clinician Education and Resources.” <https://www.gottransition.org/resources-and-research/clinician-education-resources.cfm>. Accessed 2020. * Starmer, Amy J., Nancy D. Spector, Rajendu Srivastava, April D. Allen, Christopher P. Landrigan, Theodore C. Sectish, and I-PASS Study Group. 2012. “I-Pass, A Mnemonic to Standardize Verbal Handoffs.” Pediatrics 129(2), 201–204. https://doi.org/10.1542/peds.2011-2966.Matern, Lukas H., Jeanne M. Farnan, Kristen W. Hirsch, Melissa Cappaert, Ellen S. Byrne, and Vineet M. Arora. 2018. “A Standardized Handoff Simulation Promotes Recovery from Auditory Distractions in Resident Physicians.” *Simulation in Healthcare*. 13(4): 233-238. DOI: 10.1097/SIH.0000000000000322. * Society for Adolescent Health and Medicine. 2020. “Transition to Adulthood for Youth with Chronic Conditions and Special Health Care Needs.” *Journal of Adolescent Health* 66(5): P631-634. <https://www.jahonline.org/article/S1054-139X(20)30075-6/fulltext>. * Starmer, Amy J., Nancy D. Spector, Rajendu Srivastava, Daniel C. West, Glenn Rosenbluth, April D. Allen, Elizabeth L. Noble, et al. “Changes in Medical Errors after Implementation of a Handoff Program.” *New England Journal of Medicine*. 371:1803-1812. DOI: 10.1056/NEJMsa1405556. |

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| **Systems-Based Practice 5: Population and Community Health**  **Overall Intent:** To promote and improve health across communities and populations through patient care and advocacy, including public education and elimination of structural racism | |
| **Milestones** | **Examples** |
| **Level 1** *Demonstrates awareness of population and community health needs and disparities* | * Identifies social determinants of health, such as poverty and structural racism * Identifies adverse childhood experiences |
| **Level 2** *Identifies specific population and community health needs and disparities; identifies local resources* | * Screens patients for adverse childhood experiences and acknowledges social determinants of health and the impact of structural racism for individual patients * Discusses health disparities and identifies the nearest Women, Infants, and Children (WIC) office |
| **Level 3** *Uses local resources effectively to meet the needs and reduce health disparities of a patient population and community* | * Consistently refers patients to WIC program and early intervention services as needed * Promotes to patients the local resources and programs aimed at eliminating structural racism and improving health disparities |
| **Level 4** *Adapts practice to provide for the needs of and reduce health disparities of a specific population* | * Participates in an advocacy project to improve health care access and/or decrease practices that perpetuate structural racism * Organizes mental health resources for patients who screen positive for multiple adverse childhood experiences |
| **Level 5** *Advocates at the local, regional, or national level for populations and communities with health care disparities* | * Engages in a project to open a WIC location * Participates in longitudinal discussions with local, state, or national government policy makers to reduce health disparities |
| Assessment Models or Tools | * Analysis of process and outcomes measures based on social determinants of health and resultant disparities * Direct observation * Medical record (chart) audit * Multisource feedback * Portfolio assessment * Reflection |
| Curriculum Mapping |  |
| Notes or Resources | * AAP. “Bright Futures: Practice Management.” <https://www.aap.org/en/practice-management/bright-futures>. Accessed 2022. * AAP. “Advocacy.” <https://services.aap.org/en/advocacy/>. Accessed 2020. * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 3 for Developmental-Behavioral Pediatrics. <https://www.abp.org/sites/public/files/pdf/epa-dbeh-3.pdf>. Accessed 2022. * Centers for Disease Control and Prevention (CDC). “Fast Facts: Preventing Adverse Childhood Experiences.” <https://www.cdc.gov/violenceprevention/aces/fastfact.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Facestudy%2Ffastfact.html>. Accessed 2020. * CommonHealth ACTION. 2016. “Leveraging the Social Determinants to Build a Culture of Health.” <https://healthequity.globalpolicysolutions.org/wp-content/uploads/2016/12/RWJF_SDOH_Final_Report-002.pdf>. Accessed 2020. * DallaPiazza, Michelle, Mercedes Padilla-Register, Megana Dwarakanath, Elyon Obamedo, James Hill, and Maria L. Soto-Greene. 2018. “Exploring Racism and Health: An Intensive Interactive Session for Medical Students.” *MedEdPORTAL*. 14:10783. <https://doi.org/10.15766/mep_2374-8265.10783>. * Johnson, Tiffani J. 2020. “Intersection of Bias, Structural Racism, and Social Determinants with Health Care Inequities.” *Pediatrics*. 146(2): e2020003657. <https://doi.org/10.1542/peds.2020-003657>. * MedEdPORTAL. “Anti-Racism in Medicine Collection.” <https://www.mededportal.org/anti-racism>. Accessed 2020. * Trent, Maria, Danielle G. Dooley, Jacqueline Dougé, Section on Adolescent Health, Council on Community Pediatrics, Committee on Adolescence, Robert M. Cavanaugh, et al. 2019. “The Impact of Racism on Child and Adolescent Health.” *Pediatrics*. 144(2):e20191765. <https://doi.org/10.1542/peds.2019-1765>. |

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| **Systems-Based Practice 6: Physician Role in Health Care Systems**  **Overall Intent:** To understand the physician’s role in health systems science to optimize patient care delivery, including cost-conscious care | |
| **Milestones** | **Examples** |
| **Level 1** *Engages with patients and other providers in discussions about cost-conscious care and key components of the health care delivery system* | * Considers the differences in cost for a patient in the hospital versus being closely followed as an outpatient * Articulates the impact of patients coming to continuity clinic for non-emergent acute visits instead of seeking care in the emergency department * Considers that insurance coverage, or lack of coverage, can affect prescription drug availability/cost for individual patients * Identifies that one’s own implicit biases contribute to disparities and less-than-optimal care |
| **Level 2** *Identifies the relationships between the delivery system and cost-conscious care and the impact on the patient care* | * Considers the patient’s prescription drug coverage when choosing a stimulant medication for treatment of ADHD * Ensures that a patient who has been seen in consultation for complex ADHD has a detailed management and recommendations plan that is provided to the primary care practitioner for ongoing care |
| **Level 3** *Discusses the need for changes in clinical approaches based on evidence, outcomes, and cost-effectiveness to improve care for patients and families* | * Accepts an appropriate level of uncertainty when balancing cost-conscious care (e.g., not ordering a brain MRI when MRI results will not change management) * Discusses risks and benefits of pursuing sedated MRI in the setting of a diagnosis of global developmental delay and normal neurological examination in light of costs to patient’s family and health system   Considers health care disparities in pursuit of evidence-based care |
| **Level 4** *Advocates for the promotion of safe, quality, and high-value care* | * Works collaboratively with the caregiver and other practitioners to identify additional services for a patient with autism spectrum disorder and ADHD and limited resources * Asks social worker to suggest accessible psychological therapy for patients |
| **Level 5** *Coaches others to promote safe, quality, and high-value care across health care systems* | * Raises awareness at a systems level to promote cost-conscious care (e.g., development of a local evidence-based guideline) * Educates colleagues on local gaps in mental health care for children with disabilities and coordinates activity to address the need (e.g., develops a local community workgroup) |
| Assessment Models or Tools | * Direct observation * Patient satisfaction data * Patient safety conference * Portfolio * Review and guided reflection on costs accrued for individual patients or patient populations with a given diagnosis |
| Curriculum Mapping |  |
| Notes and Resources | * Agency for Healthcare Research and Quality (AHRQ). Measuring the Quality of Physician Care. <https://www.ahrq.gov/talkingquality/measures/setting/physician/index.html>. Accessed 2022. * AAP. Practice Management. <https://www.aap.org/en/practice-management/>. Accessed 2022. * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 2 for All Pediatrics Subspecialities. <https://www.abp.org/sites/abp/files/pdf/epa-all-subs-2.pdf>. Accessed 2022. * American College of Physicians. “Newly Revised: Curriculum for Educators and Residents (Version 4.0).” <https://www.acponline.org/clinical-information/high-value-care/medical-educators-resources/newly-revised-curriculum-for-educators-and-residents-version-40>. Accessed 2020. * The Commonwealth Fund.“State Health Data Center.”<http://datacenter.commonwealthfund.org/?_ga=2.110888517.1505146611.1495417431-1811932185.1495417431#ind=1/sc=1>. Accessed 2020. * Crowe, Byron, Sami G. Tahhan, Curtis Lacy, Jule Grzankowski, and Juan N. Lessing. 2020. “Things We Do for No Reason™: Routine Correction of Elevated INR and Thrombocytopenia Prior to Paracentesis in Patients with Cirrhosis.” *Journal of Hospital Medicine*. 16(2): 102-104. <https://doi.org/10.12788/jhm.3458>. * Dzau, Victor J., Mark McClellan, Sheila Burke, Molly J. Coye, Thomas A. Daschle, Angela Diaz, William H. Frist, et al. 2017. “Vital Directions for Health and Health Care: Priorities from a National Academy of Medicine Initiative.” *NAM Perspectives*. Discussion Paper, National Academy of Medicine, Washington, DC. <https://doi.org/10.31478/201703e>. * Solutions for Patient Safety. “Hospital Resources.” <https://www.solutionsforpatientsafety.org/for-hospitals/hospital-resources/>. Accessed 2022. |

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| **Practice-Based Learning and Improvement 1: Evidence-Based and Informed Practice**  **Overall Intent:** To incorporate evidence and apply it to individual patients and patient populations | |
| **Milestones** | **Examples** |
| **Level 1** *Develops an answerable clinical question and demonstrates how to access available evidence, with guidance* | * Identifies a question such as, “What is the appropriate treatment for this patient with ADHD?” but needs guidance to focus it into a searchable question * Uses general medical resources (i.e., background information) such as UpToDate or DynaMed to search for answers * Accesses available evidence using unfiltered resources, retrieving a broad array of related information |
| **Level 2** *Independently articulates clinical question and accesses available evidence* | * Asks, “What are the most common adverse reactions of stimulant medications among preschoolers with ADHD?” * Uses PubMed to search for the answer to a clinical question and appropriately filters results |
| **Level 3** *Locates and applies the evidence, integrated with patient preference, to the care of patients* | * Obtains, appraises, and applies evidence to guide treatment of ADHD in preschoolers * Efficiently searches and filters key databases, retrieving information that is specific to the clinical question * Recognizes that not all literature is generalizable because of potential bias * Includes the family of a preschooler with ADHD in the discussion and decision-making process for treatment planning |
| **Level 4** *Critically appraises and applies evidence, even in the face of uncertainty and conflicting evidence to guide care tailored to the individual patient* | * Routinely seeks out and applies evidence to the care of individual patients or populations to change (or re-evaluate) own clinical practice * Adds to library of resources with updated primary literature or clinical guidelines with new revisions * Weighs primary and secondary outcomes to enhance specificity to individual patients * Elicits patient’s prior experiences in the health care system to start conversations about optimal management and patient preference * Explores, evaluates, and incorporates new resources into search strategies * Discusses with a patient’s family whether alternative medications may be reasonable, after considering family experience of an older sibling with adverse reaction to stimulants * Uses levels of evidence to weigh the primary treatment options that apply to the care of individual patients |
| **Level 5** *Coaches others to critically appraise and apply evidence for complex patients* | * Provides feedback to other learners on their ability to formulate questions, search for the best available evidence, appraise evidence, and apply that information to the care of patients * Participates in the development of clinical guidelines/pathways * Role models and coaches others in creating efficient and effective search strategies to answer clinical questions * As part of a team, develops an evidence-based clinical pathway in the EHR for treatment of ADHD in preschoolers |
| Assessment Models or Tools | * Direct observation * Presentation evaluation * Research portfolio * SITE |
| Curriculum Mapping |  |
| Notes or Resources | * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 3 for All Pediatric Subspecialties. <https://www.abp.org/sites/public/files/pdf/epa-all-subs-3.pdf>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 6 for All Pediatric Subspecialties. <https://www.abp.org/sites/abp/files/pdf/epa-all-subs-6.pdf>. Accessed 2022. * Duke University. “Evidence-Based Practice.” <https://guides.mclibrary.duke.edu/ebm/home>. Accessed 2020. * Guyatt, Gordon, Drummond Rennie, Maureen O. Meade, and Deborah Cook. 2015. *Users’ Guides to the Medical Literature: A Manual for Evidence-Based Clinical Practice*, 3rd ed. USA: McGraw-Hill Education. <https://jamaevidence.mhmedical.com/Book.aspx?bookId=847>. Accessed 2020. * US National Library of Medicine. “PubMed® Online Training.” <https://www.nlm.nih.gov/bsd/disted/pubmedtutorial/cover.html>. Accessed 2020. |

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| **Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth**  **Overall Intent:** Tocontinuously improve patient care based on self-evaluation and lifelong learning | |
| **Milestones** | **Examples** |
| **Level 1** *Participates in feedback sessions*  *Develops personal and professional goals, with assistance* | * Creates an individualized learning plan with much guidance and attends scheduled feedback sessions with program director * Develops a plan with faculty member to assess own frequency of using a Patient Health Questionnaire-9 (PHQ-9) to screen for depressive symptoms in adolescent patients * Completes an implicit bias survey, at the direction of a supervisor |
| **Level 2** *Demonstrates openness to feedback and performance data*  *Designs a learning plan based on established goals, feedback, and performance data, with assistance* | * Acknowledges others’ concerns about timely note completion and works with clinic preceptor to develop goals for improvement * After reviewing the use of PHQ-9 in the clinic during an annual review, integrates feedback into individual learning plan * Incorporates results of implicit bias survey into the individual learning plan |
| **Level 3** *Seeks and incorporates feedback and performance data episodically*  *Designs and implements a learning plan by analyzing and reflecting on the factors which contribute to gap(s) between performance expectations and actual performance* | * Creates goals from periodic feedback requested and actively pursues improvement in those areas * Evaluates use of the PHQ-9 in own continuity clinic patients to ensure care is consistent with current guidelines * Recognizes own implicit biases that affected care for a transgender male with positive depression screen and takes steps to mitigate bias |
| **Level 4** *Seeks and incorporates feedback and performance data consistently*  *Adapts a learning plan using long-term professional goals, self-reflection, and performance data to measure its effectiveness* | * Initiates a quarterly chart audit to ensure appropriate depression screen for all scheduled adolescent patients * Adapts learning plan to improve knowledge of depression screening in at-risk patients based on personal reflection, feedback, and patient data * Actively seeks out institutional workshops to learn about anti-racism and bystander culture |
| **Level 5** *Role models and coaches others in seeking and incorporating feedback and performance data*  *Demonstrates continuous self-reflection and coaching of others on reflective practice* | * Plans and leads clinic discussions on opportunities to improve depression screen implementation for all patients cared for by the clinic * Actively seeks out regional and national conferences to learn about anti-racism and bystander culture * Meets with learners to review practice habits and develop their learning goals |
| Assessment Models or Tools | * Direct observation * Medical record (chart) audit * Review of individual learning plan |
| Curriculum Mapping |  |
| Notes or Resources | * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 3 for All Pediatric Subspecialties. <https://www.abp.org/sites/public/files/pdf/epa-all-subs-3.pdf>. Accessed 2022. * Burke, Anne E., Bradley Benson, Robert Englander, Carol Carraccio, and Patricia J. Hicks. 2014. “Domain of Competence: Practice-Based Learning and Improvement.” *Academic Pediatrics.* 14(2): S38-S54. DOI: <https://doi.org/10.1016/j.acap.2013.11.018>. * Lockspeiser, Tai M., Su-Ting T. Li, Ann E. Burke, Adam A. Rosenberg, Alston E. Dunbar 3rd, Kimberly A. Gifford, Gregory H. Gorman, et al. 2016. “In Pursuit of Meaningful Use of Learning Goals in Residency: A Qualitative Study of Pediatric Residents.” *Academic Medicine*. 91(6):839-846. DOI: [10.1097/ACM.0000000000001015](https://doi.org/10.1097/acm.0000000000001015). * Lockspeiser, Tai M., Patricia A. Schmitter, J. Lindsey Lane, Janice L. Hanson, Adam A. Rosenberg, and Yoon Soo Park. 2013. “Assessing Residents’ Written Learning Goals and Goal Writing Skill: Validity Evidence for the Learning Goal Scoring Rubric.” *Academic Medicine*. 88(10):1558-1563. DOI: 10.1097/ACM.0b013e3182a352e6. |

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| **Professionalism 1: Professional Behavior**  **Overall Intent:** To demonstrate ethical and professional behaviors and promote these behaviors in others, and to use appropriate resources to manage professional dilemmas | |
| **Milestones** | **Examples** |
| **Level 1** *Identifies expected professional behaviors and potential triggers for lapses*  *Identifies the value and role of developmental-behavioral pediatrics as a vocation/career* | * Asks a senior fellow for feedback to improve interactions with nurses and clinic staff members after a curt interaction that occurred during a busy clinic day * Acknowledges the role of developmental-behavioral pediatricians in informing the public about the importance of early intervention for developmental delay |
| **Level 2** *Demonstrates professional behavior with occasional lapses*  *Demonstrates accountability for patient care as a developmental-behavioral pediatrician, with guidance* | * Arrives to clinic without necessary developmental testing materials, identifies this lapse, and immediately apologizes to faculty members and attempts to borrow materials from a peer * Sees that a patient’s genetic testing returns with a variant of uncertain significance and refers to genetics in the EHR; requires faculty member reminder to call the caregiver and inform of the result |
| **Level 3** *Maintains professional behavior in increasingly complex or stressful situations*  *Fully engages in patient care and holds oneself accountable* | * Demonstrates caring and compassionate behaviors with patients, caregivers, colleagues, and staff members despite heavy clinical load * Advocates for an individual patient’s needs in a humanistic and professional manner regarding need for care coordination with a case manager and insurance approval for therapy or medication * Continues to work to provide optimal patient care, despite the patient’s difficult and demanding psychosocial situation |
| **Level 4** *Recognizes situations that may trigger professionalism lapses and intervenes to prevent lapses in self and others*  *Exhibits a sense of duty to patient care and professional responsibilities* | * Models respect and compassion for patients and promotes the same from colleagues by actively identifying positive professional behavior * Without prompting, assists colleagues with patient care tasks when the clinic is busy * Speaks up in the moment when observing racist/sexist behavior within the health care team and uses reporting mechanisms to address it |
| **Level 5** *Models professional behavior and coaches others when their behavior fails to meet professional expectations*  *Extends the role of the developmental-behavioral pediatrician beyond the care of patients by engaging with the community, specialty, and medical profession as a whole* | * Discusses the need to be on time with a chronically late junior fellow and assists the fellow in making a plan to address the underlying causes for the fellow’s tardiness * Advocates for process improvement to help a cohort of patients, takes on larger projects to remedy a system issue that is affecting patients, and sees the opportunity to improve care as a responsibility * Develops education and/or modules on microaggressions and bias |
| Assessment Models or Tools | * Direct observation * Global/360 evaluation * Multisource feedback * Oral or written self-reflection |
| Curriculum Mapping |  |
| Notes or Resources | * AbdelHameid, Duaa. 2020. “Professionalism 101 for Black Physicians.” New England Journal of Medicine. 383(5): e34. doi:10.1056/NEJMpv2022773. * American Academy of Pediatrics. “Residency Curriculum: Mental Health Education Resources.” <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Mental-Health/Pages/Residency-Curriculum.aspx>. Accessed 2020. * American Board of Internal Medicine Foundation, ACP-ASIM Foundation, and European Federation of Internal Medicine. 2002. “Medical Professionalism in the New Millennium: A Physician Charter.” *Annals of Internal Medicine* 136: 243-246. <https://doi.org/10.7326/0003-4819-136-3-200202050-00012>. * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 3 for All Pediatric Subspecialties. <https://www.abp.org/sites/public/files/pdf/epa-all-subs-3.pdf>. Accessed 2022. * ABP. “Medical Professionalism.” <https://www.abp.org/content/medical-professionalism>. Accessed 2020. * ABP. “Teaching, Promoting, and Assessing Professionalism Across the Continuum: A Medical Educator’s Guide.” <https://www.abp.org/professionalism-guide>. Accessed 2020. * American Medical Association. “Ethics.” <https://www.ama-assn.org/delivering-care/ama-code-medical-ethics>. 2020. * Bynny, Richard L., Douglas S. Paauw, Maxine Papadakis, and Sheryl Pfeil. 2017. *Medical Professionalism Best Practices: Professionalism in the Modern Era*. Aurora, CO: Alpha Omega Alpha Medical Society. <https://www.alphaomegaalpha.org/wp-content/uploads/2022/01/Monograph2018.pdf>. ISBN: 978-1-5323-6516-4. * Domen, Ronald E., Kristen Johnson, Richard Michael Conran, Robert D. Hoffman, Miriam D. Post, Jacob J. Steinberg, Mark D. Brissette, et al. 2016. “Professionalism in Pathology: A Case-Based Approach as a Potential Educational Tool.” *Archives of Pathology and Laboratory Medicine* 141: 215-219. <https://doi.org/10.5858/arpa.2016-0217-CP>. * Levinson, Wendy, Shiphra Ginsburg, Frederic W. Hafferty, and Catherine R. Lucey. 2014. *Understanding Medical Professionalism*. New York, NY: McGraw-Hill Education. https://accessmedicine.mhmedical.com/book.aspx?bookID=1058. * Osseo-Asare, Aba, Lilanthi Balasuriya, Stephen J. Huot, et al. 2018. “Minority Resident Physicians' Views on the Role of Race/Ethnicity in Their Training Experiences in the Workplace.” *JAMA Network Open*. 1(5): e182723. doi:10.1001/jamanetworkopen.2018.2723. * Paul, Dereck W. Jr., Kelly R. Knight, Andre Campbell, and Louise Aronson. 2020. “Beyond a Moment - Reckoning with Our History and Embracing Antiracism in Medicine.” *New England Journal of Medicine.* 383: 1404-1406. doi:10.1056/NEJMp2021812 <https://www.nejm.org/doi/full/10.1056/NEJMp2021812>. |

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| **Professionalism 2: Ethical Principles**  **Overall Intent:** To recognize and address or resolve common and complex ethical dilemmas or situations | |
| **Milestones** | **Examples** |
| **Level 1** *Demonstrates knowledge of the ethical principles underlying informed consent, surrogate decision making, advance directives, confidentiality, error disclosure, stewardship of limited resources, and related topics* | * Identifies that consent to treat and exchange health information is necessary prior to providing care for a child who presents for evaluation with a non-parental adult |
| **Level 2** *Applies ethical principles in common situations* | * Articulates how the principle of “do no harm” applies to a patient who may not require developmental testing even though it could provide a learning opportunity for a resident or fellow |
| **Level 3** *Analyzes complex situations using ethical principles to address conflict/controversy; seeks help when needed to manage and resolve complex ethical situations* | * Discusses options for obtaining access to special education services for a child with intellectual disability for whom caregivers prefer to provide education in a homeschool setting |
| **Level 4** *Manages and seeks to resolve ethical dilemmas using appropriate resources (e.g., ethics consultations, literature review, risk management/legal consultation)* | * Appropriately uses ethics resources and the clinic social worker to obtain guidance regarding placing a child protective services report for a teen with Down syndrome after the primary caregiver experiences a significant traumatic brain injury and can no longer provide adequate supervision of the teen * Uses institutional resources, including medical-legal partnership, when counseling caregivers regarding transition to adulthood and potential need to apply for guardianship or durable power of attorney for a child under kinship placement |
| **Level 5** *Called upon by others to consult in cases of complex ethical dilemmas; identifies and seeks to address system-level factors that induce or exacerbate* | * Participates as a member of the ethics consult service, providing guidance for complex cases |
| Assessment Models or Tools | * Direct observation * Multisource feedback * Oral or written self-reflection |
| Curriculum Mapping |  |
| Notes or Resources | * American Board of Internal Medicine Foundation, ACP-ASIM Foundation, and European Federation of Internal Medicine. 2002. “Medical Professionalism in the New Millennium: A Physician Charter.” *Annals of Internal Medicine* 136: 243-246. <https://doi.org/10.7326/0003-4819-136-3-200202050-00012>. * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 2 for All Pediatric Subspecialties. <https://www.abp.org/sites/abp/files/pdf/epa-all-subs-2.pdf>. Accessed 2022. * American Medical Association. “Ethics.” <https://www.ama-assn.org/delivering-care/ama-code-medical-ethics>. Accessed 2020. * Bynny, Richard L., Douglas S. Paauw, Maxine Papadakis, and Sheryl Pfeil. 2017. *Medical Professionalism Best Practices: Professionalism in the Modern Era*. Aurora, CO: Alpha Omega Alpha Medical Society. <https://www.alphaomegaalpha.org/wp-content/uploads/2022/01/Monograph2018.pdf>. ISBN: 978-1-5323-6516-4. * Domen, Ronald E., Kristen Johnson, Richard Michael Conran, Robert D. Hoffman, Miriam D. Post, Jacob J. Steinberg, Mark D. Brissette, et al. 2016. “Professionalism in Pathology: A Case-Based Approach as a Potential Educational Tool.” *Archives of Pathology and Laboratory Medicine* 141: 215-219. <https://doi.org/10.5858/arpa.2016-0217-CP>. * Levinson, Wendy, Shiphra Ginsburg, Frederic W. Hafferty, and Catherine R. Lucey. 2014. *Understanding Medical Professionalism*. New York, NY: McGraw-Hill Education. <https://accessmedicine.mhmedical.com/book.aspx?bookID=1058>. |

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| **Professionalism 3: Accountability/Conscientiousness**  **Overall Intent:** To take responsibility for one’s own actions and the impact on patients and other members of the health care team | |
| **Milestones** | **Examples** |
| **Level 1** *Performs tasks and responsibilities, with prompting* | * Responds to reminders from program administrator to complete surveys, trainings, etc. * After being informed by the program director that too many conferences have been missed, changes habits to meet the minimum attendance requirement * Completes patient care tasks (e.g., callbacks, orders) after prompting from a supervisor |
| **Level 2** *Performs tasks and responsibilities in a timely manner in routine situations* | * Completes administrative tasks (e.g., licensing requirements) by specified due date * Completes routine patient care tasks as assigned * Answers emails and staff messages in the EHR promptly with rare need for reminders |
| **Level 3** *Performs tasks and responsibilities in a thorough and timely manner in complex or stressful situations* | * Identifies multiple competing demands when caring for patients, appropriately triages tasks, and appropriately seeks help from other team members |
| **Level 4** *Coaches others to ensure tasks and responsibilities are completed in a thorough and timely manner in complex or stressful situations* | * Reminds junior fellow to complete required administrative tasks and provides advice regarding task prioritization * Supervises junior fellow or residents in a busy clinic, delegating tasks appropriately, and ensuring that all tasks are completed for safe and thorough patient care |
| **Level 5** *Creates strategies to enhance others’ ability to efficiently complete tasks and responsibilities* | * Meets with multidisciplinary team (e.g., nurses, social worker, case manager) to streamline patient care |
| Assessment Models or Tools | * Compliance with deadlines and timelines * Direct observation * Multisource feedback * Self-evaluations and reflective tools |
| Curriculum Mapping |  |
| Notes or Resources | * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 2 for All Pediatric Subspecialties. <https://www.abp.org/sites/abp/files/pdf/epa-all-subs-2.pdf>. Accessed 2022. * American Medical Association. “Ethics.” <https://www.ama-assn.org/delivering-care/ama-code-medical-ethics>. Accessed 2020. * Code of conduct from fellow/resident institutional manual * Expectations of residency program regarding accountability and professionalism |

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| **Professionalism 4: Well-Being**  **Overall Intent:** To identify resources to manage and improve well-being | |
| **Milestones** | **Examples** |
| **Level 1** *Recognizes the importance of addressing personal and professional well-being* | * Acknowledges how individual response to participating in a difficult clinical encounter affects well-being and also may affect the approach to patients seen later the same day * Recognizes the impact of well-being in burnout |
| **Level 2** *Describes institutional resources that are meant to promote well-being* | * Identifies well-being resources, such as access to mental health professionals, that are available for learners through the program and institution * Meets with program director to discuss Family Medical Leave Act options when expecting a child |
| **Level 3** *Recognizes institutional and personal factors that impact well-being* | * Identifies how working with children with developmental and behavioral concerns may be stressful and impact well-being * Describes the tension between and importance of maintaining balance for professional and personal responsibilities * Recognizes the need to include a social worker or nurse in a patient visit to provide support when a caregiver has previously been inappropriate |
| **Level 4** *Describes interactions between institutional and personal factors that impact well-being* | * Discusses a plan with the program director to mitigate the tension between a busy schedule and time with family * Recognizes how microaggressions from coworkers and/or faculty members are impacting performance or engagement in patient care * Recognizes the need, and ability, to transfer a patient’s care to another practitioner if personal well-being is impacted by the patient or caregiver |
| **Level 5** *Coaches and supports colleagues to optimize well-being at the team, program, or institutional level* | * Leads organizational efforts to address clinician well-being * Leads a team debrief after a stressful clinical encounter; shares personal impact of the encounter and plans to decompress * Develops an affinity group to provide support for self and others to explore impact of and mitigation strategies for microaggressions and biases |
| Assessment Models or Tools | * Direct observation * Institutional online training modules * Multisource feedback * Self-assessment and personal learning plan |
| Curriculum Mapping |  |
| Notes or Resources | * This subcompetency is not intended to evaluate a fellow’s well-being, but to ensure each fellow has the fundamental knowledge of factors that impact well-being, the mechanisms by which those factors impact well-being, and available resources and tools to improve well-being. * ACGME. “Well-Being Tools and Resources.” <https://dl.acgme.org/pages/well-being-tools-resources>. Accessed 2022. * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 4 for All Pediatric Subspecialties. <https://www.abp.org/sites/abp/files/pdf/epa-all-subs-4.pdf>. Accessed 2022. * Hicks, Patricia J., Daniel Schumacher, Susan Guralnick, Carol Carraccio, and Ann E. Burke. 2014. “Domain of Competence: Personal and Professional Development.” *Academic Pediatrics* 14(2 Suppl): S80-97. <https://www.sciencedirect.com/science/article/abs/pii/S187628591300332X>. * Local resources, including employee assistance programs |

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| **Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication**  **Overall Intent:** To establish a therapeutic relationship with patients and their families, tailor communication to the needs of patients and caregivers, and effectively navigate difficult/sensitive conversations | |
| **Milestones** | **Examples** |
| **Level 1** *Demonstrates respect and attempts to establish rapport*    *Attempts to adjust communication strategies based upon patient/family expectations* | * Introduces self and faculty member, identifies patient and others in the room, and engages all parties in health care discussion * Attempts to initiate sensitive conversations * Uses a trained interpreter when indicated |
| **Level 2** *Establishes a therapeutic relationship in straightforward encounters*  *Adjusts communication strategies as needed to mitigate barriers and meet patient/family expectations* | * Prioritizes and sets an agenda based on concerns of caregivers at the beginning of a visit with a child with developmental delay * Uses nonjudgmental language to discuss sensitive topics |
| **Level 3** *Establishes a culturally competent and therapeutic relationship in most encounters*    *Communicates with sensitivity and compassion, elicits patient/family values, and acknowledges uncertainty and conflict* | * Prioritizes and sets an agenda based on concerns of caregivers at the beginning of a visit with a child with developmental delay and disruptive behaviors * Discusses sensitive topics while promoting trust, respect, and understanding * Recognizes that mispronouncing a patient’s name, especially one of a different ethnicity, might be experienced as a microaggression; apologizes to the patient and corrects the mistake |
| **Level 4** *Establishes a therapeutic relationship in straightforward and complex encounters, including those with ambiguity and/or conflict*  *Uses shared decision making with patient/family to make a personalized care plan* | * Facilitates sensitive discussions with patient/caregiver and interdisciplinary team * Asks questions in ways that validate patient identifiers and promote an inclusive environment * Continues to engage caregivers who use hyperbaric oxygen treatment, addressing misinformation and reviewing risks/benefits to assuage these concerns in a manner that engages rather than alienates the patient’s family |
| **Level 5** *Mentors others to develop positive therapeutic relationships*    *Models and coaches others in patient- and family-centered communication* | * Acts as a mentor for junior fellow disclosing a new diagnosis of intellectual disability to a patient and the patient’s caregiver * Models and coaches the spectrum of difficult communication * Develops a curriculum on patient- and family-centered communication, including navigating difficult conversations using shared decision making |
| Assessment Models or Tools | * Direct observation * Skills practice * Multisource feedback |
| Curriculum Mapping |  |
| Notes or Resources | * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 2 for Developmental-Behavioral Pediatrics. <https://www.abp.org/sites/public/files/pdf/epa-dbeh-2.pdf>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 3 for Developmental-Behavioral Pediatrics. <https://www.abp.org/sites/public/files/pdf/epa-dbeh-3.pdf>. Accessed 2022. * Benson, Bradley J. 2014. “Domain of Competence: Interpersonal and Communication Skills.” *Academic Pediatrics* 14(2 Suppl): S55-S65. <https://doi.org/10.1016/j.acap.2013.11.016>. Accessed 2020. * Laidlaw, Anita, and Jo Hart. 2011. “Communication Skills: An Essential Component of Medical Curricula. Part I: Assessment of Clinical Communication: AMEE Guide No. 51.” *Medical Teacher*. 33(1): 6-8. <https://doi.org/10.3109/0142159X.2011.531170>. * Makoul, Gregory. 2001. “Essential Elements of Communication in Medical Encounters: the Kalamazoo Consensus Statement.” *Academic Medicine*. 76(4): 390-393. <https://journals.lww.com/academicmedicine/Fulltext/2001/04000/Essential_Elements_of_Communication_in_Medical.21.aspx#pdf-link>. * Makoul, Gregory. 2001. “The SEGUE Framework for Teaching and Assessing Communication Skills.” *Patient Education and Counseling*. 45(1): 23-34. <https://doi.org/10.1016/S0738-3991(01)00136-7>. * MedEdPORTAL. “Anti-Racism in Medicine Collection.” <https://www.mededportal.org/anti-racism>. Accessed 2020. |

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| **Interpersonal and Communication Skills 2: Interprofessional and Team Communication**  **Overall Intent:** To communicate effectively with the health care team, including consultants | |
| **Milestones** | **Examples** |
| **Level 1** *Respectfully requests a consultation, with guidance*  *Identifies the members of the interprofessional team* | * When asking for a genetics consultation for a patient with dysmorphic features and an intellectual disability diagnosis, respectfully relays the diagnosis and requests for the genetics team (i.e., geneticist, genetics counselor) to evaluate the patient * Acknowledges the contribution of each member of the developmental-behavioral pediatrics multidisciplinary team (e.g., attending physician, psychologist, nurse coordinator) to the patient |
| **Level 2** *Clearly and concisely requests consultation by communicating patient information*  *Participates within the interprofessional team* | * When requesting consultation from the genetics team, clearly and concisely describes the physical examination findings and relevant family history of a new seven-year-old patient with known intellectual disability and no previous work-up for etiology * Sends an EHR message to the nurse coordinator for an established patient with autism to discuss need for new applied behavioral analysis (ABA) practitioner |
| **Level 3** *Formulates a specific question for consultation and tailors communication strategy*  *Uses bi-directional communication within the interprofessional team* | * After a consultation with genetics team has been completed, communicates with the patient’s family and primary care practitioner to verify they have received and understand the recommendations * Contacts the nurse coordinator to retrieve list of ABA practitioners in the patient’s community, double checks insurance program, completes the prescription for ABA, and sends the prescription to the patient’s family |
| **Level 4** *Coordinates consultant recommendations to optimize patient care*  *Facilitates interprofessional team communication* | * Initiates a multidisciplinary meeting to develop shared care plan for a patient who has recently identified fragile X syndrome and who has multiple affected family members * Explains to the rest of the team, as well as the caregivers, the current availability of ABA services in the local community and larger county; leads the monthly interdisciplinary clinical case conference and uses this conference to share current scientific evidence supporting the use of ABA in intellectual disability as well as autism |
| **Level 5** *Maintains a collaborative relationship with referring providers that maximizes adherence to practice recommendations*  *Coaches others in effective communication within the interprofessional team* | * Talks with team about the importance of regular, professional interactions with the genetics team, who provide care for their complex developmental-behavioral pediatrics patients * Mediates a heated disagreement between different members of the health care team regarding responsibility for identifying and ensuring access to services |
| Assessment Models or Tools | * Direct observation * Medical record (chart) audit * Multi-source feedback |
| Curriculum Mapping |  |
| Notes or Resources | * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 2 for Developmental-Behavioral Pediatrics. <https://www.abp.org/sites/public/files/pdf/epa-dbeh-2.pdf>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 5 for Developmental-Behavioral Pediatrics. <https://www.abp.org/sites/public/files/pdf/epa-dbeh-5.pdf>. Accessed 2022. * ACAPT. “NIPEC Assessment Resources and Tools.” <https://acapt.org/about/consortium/national-interprofessional-education-consortium-(nipec)/nipec-assessment-resources-and-tools>. Accessed 2020. * Dehon, Erin, Kimberly Simpson, David Fowler, and Alan Jones. 2015. “Development of the Faculty 360.” *MedEdPORTAL*. 11:10174. <http://doi.org/10.15766/mep_2374-8265.10174>. * Fay, David, Michael Mazzone, Linda Douglas, and Bruce Ambuel. 2007. “A Validated, Behavior-Based Evaluation Instrument for Family Medicine Residents.” *MedEdPORTAL*. <https://doi.org/10.15766/mep_2374-8265.622>. * [François](https://pubmed.ncbi.nlm.nih.gov/?term=Fran%C3%A7ois%20J%5BAuthor%5D), José. 2011. “Tool to Assess the Quality of Consultation and Referral Request Letters in Family Medicine.” *Canadian Family Physician.* 57(5): 574-575. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3093595/>. * Green, Matt, Teresa Parrott, and Graham Cook. 2012. “Improving Your Communication Skills.” *BMJ*. 344:e357. https://doi.org/10.1136/bmj.e357. * Henry, Stephen G., Eric S. Holmboe, and Richard M. Frankel. 2013. “Evidence-Based Competencies for Improving Communication Skills in Graduate Medical Education: A Review with Suggestions for Implementation.” *Medical Teacher*. 35(5):395-403. <https://doi.org/10.3109/0142159X.2013.769677>. * Interprofessional Education Collaborative Expert Panel. 2011. “Core Competencies for Interprofessional Collaborative Practice: Report of an Expert Panel.” Washington, D.C.: Interprofessional Education Collaborative. <https://www.aacom.org/docs/default-source/insideome/ccrpt05-10-11.pdf?sfvrsn=77937f97_2>. * Roth, Christine G., Karen W. Eldin, Vijayalakshmi Padmanabhan, and Ellen M. Freidman. 2018. “Twelve Tips for the Introduction of Emotional Intelligence in Medical Education.” *Medical Teacher* 41(7): 1-4. <https://doi.org/10.1080/0142159X.2018.1481499>. |

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| **Interpersonal and Communication Skills 3: Communication within Health Care Systems**  **Overall Intent:** To effectively communicate using a variety of tools and methods | |
| **Milestones** | **Examples** |
| **Level 1** *Records accurate information in the patient record*  *Identifies the importance of and responds to multiple forms of communication (e.g., in-person, electronic health record (EHR), telephone, email)* | * Corrects progress note after attending identifies outdated plan * If using copy/paste/forward in the EHR, goes back to make changes to note after doing so * Identifies team, departmental, and institutional communication tools, methods, and hierarchies for patient care needs, concerns, and safety issues |
| **Level 2** *Records accurate and timely information in the patient record*  *Selects appropriate method of communication, with prompting* | * Provides organized and accurate documentation that supports the treatment plan and limits extraneous information * Avoids biased or stigmatized language in notes (e.g., “denies use of marijuana” instead of “doesn’t use marijuana”) * Calls nurse to discuss titration of stimulant medication based on caregiver report |
| **Level 3** *Concisely documents updated, prioritized, diagnostic and therapeutic reasoning in the patient record*  *Aligns type of communication with message to be delivered (e.g., direct and indirect) based on urgency and complexity* | * Produces documentation that reflects complex clinical thinking and planning and is concise, but may not contain contingency planning (i.e., if/then statements) * Contacts neurology subspecialty practitioner directly by phone when a child in clinic is identified as having serologic and clinical findings suggestive of Duchenne muscular dystrophy * Electronic messages patient's cardiologist with non-urgent question regarding initiation of stimulant medication in child with family history of cardiac arrythmia rather than paging cardiologist on call |
| **Level 4** *Documents diagnostic and therapeutic reasoning, including anticipatory guidance*  *Demonstrates exemplary written and verbal communication* | * Produces documentation that is consistently accurate, organized, and concise; reflects complex clinical reasoning and frequently incorporates contingency planning * Communicates proactively with neuromuscular practitioners to ensure timely follow up for patient with concern for Duchenne muscular dystrophy, and ensures that neuromuscular practitioners have the documentation and testing results they need to see the patient in clinic * Communicates with patient’s primary care practitioner regarding plan to collaborate on treatment of child’s ADHD, including frequency of follow up in both clinical settings as well as the best method of communication between practitioners |
| **Level 5** *Models and coaches others in documenting diagnostic and therapeutic reasoning*  *Coaches others in written and verbal communication* | * Leads teams by modeling a range of effective tools and methods of communication that fit the context of a broad variety of clinical encounters * Designs and facilitates the improvement of EHR systems that integrates effective communication among teams, departments, and institutions in the identification and care of children with Duchenne muscular dystrophy |
| Assessment Models or Tools | * Direct observation * Multisource feedback * Simulation |
| Curriculum Mapping |  |
| Notes or Resources | * ABP. “Entrustable Professional Activities for Subspecialties: Developmental-Behavioral Pediatrics.” <https://www.abp.org/content/entrustable-professional-activities-subspecialties>. Accessed 2022. * ABP. “Entrustable Professional Activities.” EPA 4 for Developmental-Behavioral Pediatrics. <https://www.abp.org/sites/public/files/pdf/epa-dbeh-4.pdf>. Accessed 2022. * Benson, Bradley J. 2014. “Domain of Competence: Interpersonal and Communication Skills.” *Academic Pediatrics* 14(2 Suppl): S55-S65. <https://doi.org/10.1016/j.acap.2013.11.016>. Accessed 2022. * Bierman, Jennifer A., Kathryn Kinner Hufmeyer, David T. Liss, A. Charlotta Weaver, and Heather L. Heiman. 2017. “Promoting Responsible Electronic Documentation: Validity Evidence for a Checklist to Assess Progress Notes in the Electronic Health Record.” *Teaching and Learning in Medicine.* 29(4): 420-432. <https://doi.org/10.1080/10401334.2017.1303385>. * Haig, Kathleen M., Staci Sutton, and John Whittington. 2006. “SBAR: A Shared Mental Model for Improving Communications Between Clinicians.” *Joint Commission Journal on Quality and Patient Safety.* 32(3):167-75. <https://doi.org/10.1016/s1553-7250(06)32022-3>. * Starmer, Amy J., Nancy D. Spector, Rajendu Srivastava, April D. Allen, Christopher P. Landrigan, Theodore Sectish, and I-PASS Study Group. 2012. “I-Pass, a Mnemonic to Standardize Verbal Handoffs.” *Pediatrics* 129.2:201-204. <https://doi.org/10.1542/peds.2011-2966>. |

To help programs transition to the new version of the Milestones, the ACGME has mapped the original Milestones 1.0 to the new Milestones 2.0. Indicated below are the subcompetencies that are similar between versions. These are not exact matches, but are areas that include similar elements. Not all subcompetencies map between versions. Inclusion or exclusion of any subcompetency does not change the educational value or impact on curriculum or assessment.

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| **Milestones 1.0** | **Milestones 2.0** |
| PC1: Provide transfer of care that ensures seamless transitions | SBP4: System Navigation for Patient-Centered Care – Transitions in Care |
| PC2: Make informed diagnostic and therapeutic decisions that result in optimal clinical judgement | PC1: Developmental-Behavioral History  PC2: Developmental-Behavioral Physical Exam  PC4: Clinical Reasoning  MK3: Diagnostic Investigation |
| PC3: Develop and carry out management plans | PC5: Patient Management  ICS1: Patient- and Family-Centered Communication |
| PC4: Provide appropriate role modeling | PBLI2: Reflective Practice and Commitment to Personal Growth |
|  | PC3: Screening and Assessment |
| MK1: Locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems | MK1: Development and Behavior  MK2: Etiology  PBLI1: Evidence Based and Informed Practice |
|  | MK4: Pharmacologic and Developmental and/or Behavioral Interventions |
| SBP1: Work effectively in various health care delivery settings and systems relevant to their clinical specialty | SBP3: System Navigation for Patient Cantered Care – Coordination of Cre  SBP6: Physician Role in Health Care Systems |
| SBP2: Coordinate patient care within the health care system relevant to their clinical specialty | SBP3: System Navigation for Patient Centered Care – Coordination of Care  SBP4: System Navigation for Patient-Centered Care – Transitions in Care  SBP5: Population and Community Health  ICS1: Patient- and Family-Centered Communications  ICS2: Interprofessional and Team Communication |
| SBP3: Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate | SBP5: Population and Community Health  SBP6: Physician Role in Health Care Systems |
| SBP4: Work in inter-professional teams to enhance patient safety and improve patient care quality | SBP1: Patient Safety  ICS2: Interprofessional and Team Communication |
| SBP5: Participate in identifying system errors and implementing potential systems solutions | SBP1: Patient Safety  SBP2: Quality Improvement |
| PBLI1: Identifying strengths, deficiencies, and limits to one’s knowledge and expertise | PBLI1: Evidence Based and Informed Practice  PBLI2: Reflective Practice and Commitment to Personal Growth |
| PBLI2: Systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement | SBP2: Quality Improvement  PBLI2: Reflective Practice and Commitment to Personal Growth |
| PBLI3: Use information technology to optimize learning and care delivery | PBLI1: Evidence Based and Informed Practice  PBLI2: Reflective Practice and Commitment to Personal Growth  ICS3: Communication within Health Care Systems |
| PBLI4: Participate in the education of patients, families, students, residents, fellows, and other health professionals | SBP5: Population and Community Health  PBLI1: Evidence Based and Informed Practice  ICS1: Patient- and Family-Centered Communications |
| PROF1: Professional Conduct: High standards of ethical behavior which includes maintaining appropriate professional boundaries | PROF1: Professional Behavior  PROF2: Ethical Principles |
| PROF2: Trustworthiness that makes colleagues feel secure when one is responsible for the care of patients | PBLI1: Evidence Based and Informed Practice  PROF1: Professional Behavior  PROF3: Accountability/Conscientiousness  ICS1: Patient- and Family-Centered Communications |
| PROF3: Provide leadership skills that enhance team functioning, the learning environment, and/or the health care delivery system/environment with the ultimate intent of improving care of patients | ICS2: Interprofessional and Team Communication  ICS3: Communication within Health Care Systems  PROF2: Ethical Principles  PROF3: Accountability/Conscientiousness |
| PROF4: The capacity to accept that ambiguity is part of clinical medicine and to recognize the need for and to utilize appropriate resources in dealing with uncertainty | PROF2: Ethical Principles  ICS1: Patient- and Family-Centered Communication  PBLI1: Evidence Based and Informed Practice |
|  | PROF4: Well-Being |
| ICS1: Communicate effectively with physicians, other health professionals, and health-related agencies | ICS2: Interprofessional and Team Communication  ICS3: Communication within Health Care Systems |
| ICS2: Work effectively as a member or leader of a health care team or other professional group | ICS2: Interprofessional and Team Communication  PBLI2: Reflective Practice and Commitment to Personal Growth  PROF3: Accountability/Conscientiousness |
| ICS3: Act in a consultative role to other physicians and health professionals | PC4: Clinical Reasoning  ICS2: Interprofessional and Team Communication  ICS3: Communication within Health Care Systems |

**Available Milestones Resources**

*Milestones 2.0: Assessment, Implementation, and Clinical Competency Committees Supplement,* 2021 - [*https://meridian.allenpress.com/jgme/issue/13/2s*](https://meridian.allenpress.com/jgme/issue/13/2s)

*Milestones Guidebooks:* [*https://www.acgme.org/milestones/resources/*](https://www.acgme.org/milestones/resources/)

* *Assessment Guidebook*
* *Clinical Competency Committee Guidebook*
* *Clinical Competency Committee Guidebook Executive Summaries*
* *Implementation Guidebook*
* *Milestones Guidebook*

*Milestones Guidebook for Residents and Fellows:* [*https://www.acgme.org/residents-and-fellows/the-acgme-for-residents-and-fellows/*](https://www.acgme.org/residents-and-fellows/the-acgme-for-residents-and-fellows/)

* Milestones Guidebook for Residents and Fellows
* Milestones Guidebook for Residents and Fellows Presentation
* Milestones 2.0 Guide Sheet for Residents and Fellows

Milestones Research and Reports: <https://www.acgme.org/milestones/research/>

* *Milestones National Report*, updated each fall
* *Milestones Predictive Probability Report,* updated each fall
* *Milestones Bibliography*, updated twice each year

*Developing Faculty Competencies in Assessment* courses - <https://www.acgme.org/meetings-and-educational-activities/courses-and-workshops/developing-faculty-competencies-in-assessment/>

Assessment Tool: Direct Observation of Clinical Care (DOCC) - <https://dl.acgme.org/pages/assessment>

Assessment Tool: Teamwork Effectiveness Assessment Module (TEAM) - [https://team.acgme.org/](https://team.acgme.org/     )

Improving Assessment Using Direct Observation Toolkit - <https://dl.acgme.org/pages/acgme-faculty-development-toolkit-improving-assessment-using-direct-observation>

Remediation Toolkit - <https://dl.acgme.org/courses/acgme-remediation-toolkit>

Learn at ACGME has several courses on Assessment and Milestones - <https://dl.acgme.org/>