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Important Points About "Entrustable Professional Activities (EPAs)"

From the work of ten Cate and Scheele, Competency-based postgraduate training: Can we bridge the gap between theory and clinical practice? Acad Med 2007;82:542-547.

- They describe the routine activities of a pediatrician (in this case a general pediatrician since we want to work backwards from desired outcome of training to define the training).
- We should be able to define the specialty by a limited number of EPAs therefore these are broad activities with other smaller ones nested within them (e.g., taking care of well patients in a medical home may be the EPA and then nested within that would be more narrow EPAs that address each of the pediatric age groups since the knowledge, skills and attitudes for each are different)
- EPAs can be mapped to competencies, sub-competencies and milestones but this should be judicious process of linking them only to those that are critical for making entrustment decisions
- EPAs offer a new method of assessment that focuses on the level of supervision needed to carry out the activity. The targeted question becomes "is this learner ready to be entrusted to perform this professional activity without direct supervision?" A tool that focuses on judgment about level of needed supervision would be a welcome addition to our toolbox.

Draft List of EPAs for Pediatrics

1. Provide consultation to other health care providers caring for children
2. Provide recommended pediatric health screening
3. Care for the well newborn
4. Manage patients with acute, common, single system diagnoses in an ambulatory, emergency, or inpatient setting.
5. Manage patients with acute complex multi-system disease in an ambulatory, emergency, or inpatient setting.
6. Provide a medical home for well children of all ages. (Entrustment decisions for this EPA may require stratification by age group)
7. Provide a medical home for patients with complex, chronic, or special health care needs. (Entrustment decisions for this EPA may require stratification by age group)
8. Recognize, provide initial management and refer patients presenting with surgical problems
9. Facilitate the transition from pediatric to adult health care
10. Provide patient resuscitation, stabilization and triage that aligns care with severity of illness (Entrustment decisions for this EPA may require stratification by two age groups: neonate and non-neonate).
11. Provide consultation using a variety of media (e.g. telephone, e-mail, webcast, video conferencing)
12. Refer patients who require consultation
13. Perform operational functions in a group practice setting
14. Improve care for a population of patients
15. Lead a health care team
16. Facilitate handovers to another healthcare provider either within or across settings

EXAMPLE EPA: CARE OF THE WELL NEWBORN

Description: Care of the well newborn in the immediate peri-natal period will occur predominantly in the newborn nursery. This activity requires the learner to recognize pre- and peri-natal risk factors, perform a physical exam to recognize congenital abnormalities, identify and follow key evidence based guidelines, transition care to the primary care practitioner, and demonstrate confidence to put new parents at ease.

Maps most critically to 2 patient care, 1 PBLI, 1 ICS and 1 PPD sub-competencies. The table below lists the sub-competencies along with the developmental progression of milestones for the given sub-competency.

Competency & Sub-competency	**Developmental Progression of Milestones**				
PC-3: Provide transfer of care that insures seamless transitions	Demonstrates **variability in transfer of information (content, accuracy, efficiency, and synthesis)** from one patient to the next. Frequent errors of both omission and commission in the handoff.	**Uses a standard template** for the information provided during the handoff. Unable to deviate from that template to adapt to more complex situations. **May have errors of omission or commission**, particularly when clinical information is not synthesized. Neither anticipates nor attends to the needs of the receiver of information.	**Adapts and applies a standardized template, relevant to individual contexts, reliably and reproducibly**, with minimal errors of omission or commission. Allows ample opportunity for clarification and questions. **Beginning to anticipate potential issues for the transferee**.	**Adapts and applies a standard template to increasingly complex situations** in a broad variety of settings and disciplines. Ensures open communication, whether in the receiver- or provider-of-information role through **deliberative inquiry,** including but not limited to read-backs, repeat-backs (provider), and clarifying questions (receivers).	**Adapts and applies the template without error and regardless of setting or complexity.** Internalizes the **professional responsibility** aspect of handoff communication, as evidenced by formal and explicit sharing of the conditions of transfer (e.g., time and place) and communication of those conditions to patients, families, and other members of the health care team.
PC-5: Perform complete and accurate physical examinations (psychomotor performance)	Performs and elicits most physical examination maneuvers **incorrectly**	**Performs basic physical examination maneuvers** correctly (e.g., auscultation of the lung fields) but does not regularly elicit, recognize, or interpret abnormal findings (ex: recognition of wheezing and crackles).	**Performs basic physical examination maneuvers** correctly and **recognizes** and correctly interprets **abnormal findings.**	Performs, elicits, recognizes, and interprets the findings of **most physical examination maneuvers** correctly.	Performs, elicits, recognizes, and interprets the findings of even **special testing physical examination maneuvers** correctly most of the time (e.g., stork test for spondylolysis).
PC-5: Perform	**Does not alter the**	**Sometimes uses a**	**Consistently and**	Is fluid and agile in performing the physical examination in a way	

complete and accurate physical examinations (approach)	**head-to-toe approach** to the physical examination to meet a child's developmental level or behavioral needs.	**developmentally appropriate approach** to the physical examination, achieving variable success.	**successfully uses a developmentally appropriate approach** when examining children.	that **maximizes cooperation of the child** and thus accuracy of findings; experience facilitates the engagement of the child **as well as the caregiver** in the physical examination.	
PC-5: Perform complete and accurate physical examinations (approach to focused exam)	Performs essentially the **same rote head-to-toe physical examination of the patient regardless of presenting complaint**; does not use diagnostic hypotheses from the history to anticipate or look for specific positive or negative findings on physical examination.	With a broad list of diagnostic hypotheses after the history, uses a head-to-toe approach to the physical examination to **anticipate and look for a myriad of potential positive and negative physical examination findings for multiple diagnostic considerations**. This approach can lead to failure to identify pertinent and important physical findings that are present, misinterpretation of physical findings, and attribution of importance and meaning to irrelevant findings.	Uses a narrow list of diagnostic hypotheses generated through the history to **anticipate and look for specific positive or negative physical examination findings of only the most relevant diagnostic considerations**; open to new diagnostic possibilities in the process of performing a survey physical examination to elicit unexpected abnormalities but may dismiss these as unimportant when it is difficult to integrate these findings into the working differential diagnosis.	Uses a narrow list of diagnostic hypotheses generated through the history as well as through extensive clinical experience to anticipate and look for **key specific physical examination findings that will discriminate between competing similar diagnoses**; uses surprises that result from a survey physical examination to rethink and retest diagnostic hypotheses; actively looks for physical exam findings that disconfirm the working diagnosis or rule in or out rare but high-risk alternative diagnoses.	
PBLI-6: Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems	**Explains basic principles** of EBM, but relevance is limited by lack of clinical exposure.	**Recognizes the importance** of using current information to care for patients and responds to external prompts to do so. Able to **formulate questions with some difficulty,** but not yet efficient with on-line	**Able to identify knowledge gaps as learning opportunities. Makes an effort** to ask answerable questions on a regular basis and is becoming **increasingly able to**	**Increasingly self-motivated to learn more,** as exhibited by **regularly formulating answerable questions**. Incorporates use of clinical evidence in rounds and **teaches fellow learners.** Quite	**Teaches critical appraisal of topics to others.** Strives for change at the organizational level as dictated by best current information. **Able to easily formulate answerable clinical questions and does so with majority of patients as a habit**. Able to effectively and efficiently search and access the literature. Seen by others as a **role model** for practicing EBM.

		searching. Starting to learn critical appraisal skills.	**do so.** Understands varying levels of evidence and can utilize advanced search methods. **Able to critically appraise a topic** by analyzing the major outcomes; however, may need guidance in understanding the subtleties of the evidence. **Begins to seek and apply evidence when needed**, not just when assigned to do so.	capable with advanced searching. Able to **critically appraise topics** and does so regularly. Shares findings with others to try to improve their abilities. **Practices EBM** because of the benefit to the patient and the desire to learn more rather than in response to external prompts.	
ICS-1: Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds	Uses **standard medical interview template** to prompt all questions. **Does not vary the approach** based on a patient's unique physical, cultural, socioeconomic, or situational needs. May feel intimidated or **uncomfortable asking personal questions** of patients.	Uses the medical interview to **establish rapport** and focus on **information exchange** relevant to a patient's or family's primary concerns. **Identifies** physical, cultural, psychological, and social **barriers to communication, but often has difficulty managing them**. Begins to use **nonjudgmental questioning scripts** in response to sensitive situations.	Uses the interview to effectively establish rapport. **Able to mitigate** physical, cultural, psychological, and social **barriers in most situations**. Verbal and nonverbal communication skills **promote trust, respect, and understanding.** Develops **scripts to approach most difficult communication scenarios.**	Uses communication to establish and maintain a **therapeutic alliance**. Sees beyond stereotypes and works to **tailor communication to the individual**. A wealth of experience has led to development of **scripts for the gamut of difficult communication** scenarios. Able to **adjust scripts ad hoc** for specific encounters.	Connects with patients and families in an authentic manner that fosters a **trusting and loyal relationship. Effectively educates** patients, families, and the public as part of all communication. **Intuitively handles the gamut of difficult communication** scenarios with grace and humility.
PPD-7: Demonstrate self-confidence that puts patients, families, and members of the	**Unaware of how to solve a problem**/question. **Expected to have little self-confidence** given limited experience, and	Speaks in a **confident manner, but still unsure of when and how to clearly articulate his limitations to the family.** Exhibits	Starts to self-reflect and navigate the interplay of the complexity of explaining uncertainty to patients and families, while	Gaining experience and comfort with uncertainty. Is appropriately **self-confident** and considered to be trustworthy (skilled,	Master of explaining uncertainty and what is known. Does so with a **mature/comforting self-confidence** that is easily identified by all, **modified to the emotional needs of the family/patient**. Families and patients identify him as excellent at placing them at ease, even in

health care team at ease	appropriately identifies the need to ask for help.	behaviors that reflect some comfort and confidence with his role as a physician, but families would not necessarily feel at ease without reassurance from a more senior colleague or supervisor.	remaining confident with information he knows and understands clinically. **Has some insight into when to be confident and when to express uncertainty** with situations and diagnoses. Emerging alignment between knowledge/skill and degree of certainty allows families to assess him as effective in placing them at ease in many situations.	truthful, discerning, and conscientious). The balance between confidence and uncertainty allows families and patients to assess him as quite effective in placing them at ease.	the face of difficult situations.

Vignette: Level 1

Susan Smith is assigned to cover the newborn nursery for the weekend. She arrives on Saturday morning to find a new patient born overnight. Anxious to get her work done she begins her physical examination without warming her hands or stethoscope. She approaches the sleeping infant, and begins her physical exam with the anterior fontanelle. The baby winces with the initial touch of the cold hand and awakens crying. Susan continues her exam with the EENT portion. By the end of the ear exam, the baby is screaming, prompting a nurse to come over and halt the procedure. Susan then goes to interview the mom. During the early part of the interview, the mom asks if she can see the baby. Susan says not until she completes the interview and continues with her template. With the social history, mom notes using Methadone. Susan records this and continues to the review of systems without any clarifying questions due to her own discomfort with the topic. She does not ask about route of administration or HIV exposure.

Susan's supervisor asks her to briefly present the patient and she realizes she never went back to complete the physical exam. She apologizes and returns to complete her head-to-toe exam. She reports the H&P to the best of her ability, and then awaits her supervisor's plans. He asks specifically about the neurologic exam given the possible in utero drug exposure, but Susan hadn't been able to get beyond the baby's state ("awake and alert") and had forgotten the remainder of the neurologic exam in her haste, without recognizing its unique importance in this patient. Prompted about the importance of this aspect of the exam and the need to search the literature, she tries to develop a clinical question, but struggles due to her lack of knowledge about in utero exposures and their post-natal effects.

Given her lack of knowledge and experience, the supervisor is present for Susan's call to the accepting community pediatrician, and gets on the phone after Susan to correct the errors of omission.

Vignette: Level 2

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Susan Smith is assigned to cover the newborn nursery for the weekend. She arrives on Saturday morning to find a new patient born overnight. She warms her hands, approaches the sleeping infant, and begins her physical exam with the anterior fontanelle. She feels a caput, but her lack of experience makes her worry about a skull fracture. She then tries to do those elements of the exam that will cause the least distress to the infant, but when she gets to the hip exam, her awkwardness with the Barlow maneuver results in the baby screaming and renders the remainder of the exam difficult. Susan then goes to interview the mom. During the early part of the interview, the mom asks if she can see the baby. Susan excuses herself to get the baby and then returns to complete the interview. With the social history, mom notes using Methadone. To mitigate her discomfort in dealing with the topic, Susan relies on a script based on her observations of a prior supervisor who had success in eliciting a similar history. However, despite her anxiety about non-accidental trauma as the etiology of the head lesion, she is too uncomfortable with the subject to ask clarifying questions of the mom.

Susan's supervisor asks her to briefly present the patient. She reports the H&P, including the large bump on the baby's head noted in the physical and mom's use of methadone intranatally. She tells the supervisor that because mom is a methadone user she is concerned about the head findings and recommends a CT of the head, and a child abuse evaluation. Her supervisor reassures her that the baby's finding is consistent with a caput, and tells her no further work-up is necessary. He asks specifically about the neurologic exam given the in utero drug exposure, and Susan reports that the basic examination of state, tone, suck, cry, grasp, Moro, and Babinski reflexes were normal. The supervisor notes that the baby was a bit hypertonic to her exam, prompting Susan to ask if there's an association with the Methadone exposure. Susan asks if there are other things to worry about and the supervisor helps her to formulate a couple of clinical questions that would be important to answer in counseling the parents around withdrawal risk and treatment. After doing the successful search, Susan asks her supervisor to join her in discussion with the parents as she is concerned she might get this sensitive information wrong.

Susan uses a template for her hand-over communication to the community pediatrician. However, given her lack of knowledge and experience, the supervisor is present for Susan's call to the accepting community pediatrician, and gets on the phone after Susan to correct a couple of errors of omission.

Vignette: Level 3

Susan Smith is assigned to cover the newborn nursery for the weekend. She arrives on Saturday morning to find a new patient born overnight. She warms her hands, approaches the sleeping infant, and begins her physical exam with the anterior fontanelle. She does those elements of the exam that will cause the least distress to the infant first. She notes a caput and some mild hypertonia during the exam. Susan then goes to interview the mom. During the early part of the interview, the mom asks if she can see the baby. Susan excuses herself to get the baby and then returns to complete the interview. With the social history, mom notes using Methadone. Susan asks clarifying questions about specifics of the drug use and answers questions about withdrawal risk. When mom asks her about the baby's risk of "brain damage", Susan admits she does not know and promises to look it up. Mom thanks her and asks her to let her know as soon as possible.

Susan's supervisor asks her to briefly present the patient. She reports the H&P, including the caput and hypertonia and mom's use of methadone intranatally. She tells the supervisor that she has discussed the risk of withdrawal with the mom, and promised to look up the effects on the developing brain. She discusses her search strategy (in utero exposure to Methadone and effects on brain) and comes up with specific clinical questions with the supervisor. She is able to find a meta-analysis and interpret the findings for the mom.

Susan uses a standard template for her hand-over communication but adapts it to insure that the accepting pediatrician is aware of mom's drug use, the amount, the duration of risk for withdrawal, and mom's treatment program. She specifically makes sure the pediatrician is aware of the most recent withdrawal scores for comparison once discharged. She encourages the pediatrician to ask any questions and provides her pager number should any arise after the call.

Vignette: Level 4

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Susan Smith is assigned to cover the newborn nursery for the weekend. She arrives on Saturday morning to find a new patient born overnight. She washes and warms her hands and stethoscope before the exam. She does those elements of the exam that will cause the least distress to the infant first. She notes a caput and some mild hypertonia during the exam. Susan then goes to interview the mom. Before beginning, Susan brings the baby to the room so that she can observe the mother-infant interaction during the interview. With the social history, mom notes using Methadone that had been noted in the chart. Susan asks clarifying questions about specifics of the drug use and answers questions about withdrawal risk. When mom asks her about the baby's risk of "brain damage", Susan explains that she has just reviewed the literature in anticipation of mom's question, and provides her with information that mom is able to repeat back, including the required follow-up for at risk infants.

Susan's supervisor asks her to briefly present the patient. She reports the H&P, including the caput and hypertonia and mom's use of methadone intranatally. She tells the supervisor that she has discussed the risk of withdrawal and of developmental problems with the mom, and has made a referral to the early intervention program for at risk infants.

Susan uses a standard template for her hand-over communication but adapts it to insure that the accepting pediatrician is aware of mom's drug use, the amount, the duration of risk for withdrawal, and mom's treatment program. She specifically makes sure the pediatrician is aware of the most recent withdrawal scores for comparison once discharged. She also faxes the referral to the early developmental intervention program to the pediatrician's office. She encourages the pediatrician to ask any questions and provides her pager number should any arise after the call.

<u>Vignette: Level 5</u>

Susan Smith is assigned to cover the newborn nursery for the weekend. She arrives on Saturday morning to find a new patient born overnight. She washes and warms her hands and stethoscope. She does those elements of the exam that will cause the least distress to the infant first. She notes a caput and some mild hypertonia during the exam. Susan then goes to interview the mom. Before beginning, Susan brings the baby to the room so that she can observe the mother-infant interaction during the interview. With the social history, mom notes using Methadone that had been noted in the chart. Susan asks clarifying questions about specifics of the drug use and answers questions about withdrawal risk. When mom asks her about the baby's risk of "brain damage", Susan explains that she has just reviewed the literature in anticipation of mom's question, and provides her with information that mom is able to repeat back, including the required follow-up for at risk infants. She asks about the mother's support system in an effort to have another person come in to learn about the expected course for an infant with in utero exposure to Methadone, including signs and symptoms of withdrawal.

Susan's supervisor asks her to briefly present the patient. She reports the H&P, including the caput and hypertonia and mom's use of methadone intranatally. She tells the supervisor that she has discussed the risk of withdrawal and of developmental problems with the mom, and has made a referral to the early intervention program for at risk infants. Susan presents her findings on the evidence regarding treatment of withdrawal and risk of developmental issues for Methadone-exposed infants. In the process of doing the literature search, she discovers a new withdrawal score thought to have increased validity and reliability in the neonatal population, and brings it to the hospital's Clinical Care Committee.

When Susan calls the accepting pediatrician on the day of discharge, she finds that a partner of that physician is on call. Susan expertly relays the acute issues and arranges for a separate handover to occur the following Monday with the primary care physician.