Supplemental digital content for Meyer EG, Taylor DR, Uijtdehaage S, Durning SJ. EQual rubric evaluation of the Association of American Medical Colleges' Core Entrustable Professional Activities for Entering Residency. Acad Med.

Supplemental Digital Appendix 2

Free-Text Comments From 6 Subject Matter Experts[a]

EPA 1: Gather a history and perform a physical examination

Problems	Recommendations
Clearly describes a unit of work	
I would recommend revision. To meet criterion 5, the documentation of history should be included in this EPA; this is why #1 and #5 overlap	1. I would recommend merging #1 and #5 2. I would propose to shorten the description to everything that is really needed, but not more. 3. I would avoid adjectives that refer to a proficiency in the mere description of the EPA [of course a history must accurate- but that would hold for any EPA - there is no need to stress the quality of EPA is the mere description of an activity]. I recommend to be parsimonious in EPA description is in general [I may not repeat this recommendation every time, but it is in fact general] 4. In future descriptions of EPAs I would recommend to the full description, not just the specification of the activity [I will not repeat this recommendation either but it holds for all]
Too broad with focus on H & P across all settings and types of encounters. Incorporates data gathering from the patient as well as data gathering from other sources and communication skills. Clinical reasoning expectations in this EPA overlap with other EPAs.	Focus on the type/purpose of the H & P and setting. remove detailed descriptions of communication and cultural awareness.

EPA 2: Prioritize a differential diagnosis following a clinical encounter

Problems	Recommendations
clearly a unit of work specific to a physician or other health care provider	
For a pre-clerkship learner, it can work fine as a discrete foundational EPA, but for higher level learners, should be integrated/nested into larger EPAs on patient care	

This is probably not an EP is the true sense. If the result by a medical student will always be reviewed by a supervisor before any action is taken (team members must 'endorse' and 'verify' the working diagnosis), the EPA may be rather a sandbox exercise, but not a true contribution to health care. re Q9: if it is no true contribution to health care, I would not see why not a secondary school kid could prioritize a differential as an exercise.	I would merge with #1 and #5
This EPA contains a lot of information that would be only in the head of the learner and not observable. The expectation to 'Synthesize essential information from the previous records, history, physical exam' overlaps with EPA 1 which requires clinical reasoning to determine which history and exam to gather. Unclear if ambiguity would arise in all encounters, and if ambiguity refers to uncertainty in the clinical picture or the student's knowledge gaps. Explain and document clinical reasoning sounds like oral presentation and note writing.	Focus more on what kind of clinical reasoning - for what clinical problem or setting. perhaps merge with EPA on note writing or oral presentation so that it's clear how the learners demonstrates the reasoning. the focus on continued updating of the differential (as would be true when test results return) makes the ending of this task unclear.

EPA 3: Recommend and interpret common diagnostic and screening tests

Problems	Recommendations
a unit of professional practice	
Appropriate for a pre-clerkship learner, but would nest it into a larger patient care unit of activity for more advanced learners.	
re Q6: It is hard to imagine that 'documenting a clinical encounter' (#5) would exclude diagnostic test recommendations; also the distinction between recommending tests and ordering tests (#6) feels artificial.	Merge with #4. That will give this EPA the necessary teeth
This is a multipart EPA: order tests, interpret the results, consider cost effectiveness/value, communicate with patient, seek help for certain abnormal results	Some of this (test ordering) could be part of EPA on creating note or oral presentation, or clinical reasoning. Interpreting results requires knowledge and clinical reasoning skill.

The one revision would be to eliminate "common" from the description, but the adjective in this case provides defined boundaries (in the description) that seem relevant to the level of training.	

EPA 4: Enter and discuss orders and prescriptions

Problems	Recommendations
Ordering a test if someone else has recommended this test seems to reduce #4 to a merely administrative task Process observation (Q4) is somewhat trivial	Advise merging with #3
I'm on the fence with this one but I think that deciding on the orders addresses knowledge and clinical reasoning and is part of A/P, whereas the communication of the plan to patients is different.	see above

EPA 5: Document a clinical encounter in the patient record

Problems	Recommendations
History and physical (#1) without documentation seems illogical as stand-alone activities, vice versa.	I would merge with #1
this EPA is discrete, focused, and relevant to physician practice	

EPA 6: Provide an oral presentation of a clinical encounter

Problems	Recommendations

Possibly. This is a difficult one because people look at different things when assessing an oral presentation. There is the presentation skill itself (how information is organized and delivered in a concise and understandable way), but also the presentation as a proxy for the history and PE information gathering activity and for clinical reasoning. So then it can be unclear what people are rating - though we could argue that this is a training issue or an issue with the EPA being dependent on other EPAs. The other challenge with this EPA is entrustment. It can be hard to think about conferring trust on a learner for an oral presentation and what the risk might be. The way I've thought about trust for this EPA is around presentations involving those outside the immediate clinical team - for instance, calling a consultation or presenting in front of the family in family-centered rounds.	I'm not sure. Perhaps being clear that in the specifications about what is NOT included (e.g. appropriateness or comprehensiveness of the hx and PE and clinical reasoning ability), and including examples of when entrustment decisions would be made around oral presentations.
whether the EPA is suitable for an entrustment decision is somewhat questionable, or, more precisely, can a pivotal moment be envisioned that a learner is allowed to do this without supervision, before which supervision is required. For some oral presentations this may be applicable (i.e. an oral handoff), but for others not. The description should include the various forms of oral presentations that are included in the certification for (entrustment with) this EPA 2. With this EPA it is essential the activity is not for educational purposes. It should be an activity that medical specialists would need to do if no students or residents were present. I'm not sure whether many users consider this an activity that LEARNERS should do well, rather than professionals	The specification can be more precise.
This does not seem like a standard expectation for an oral presentation: 'Assure closed-loop communication between the presenter and receiver of the information to ensure that both parties have a shared understanding of the patient's condition and needs.'	remove this: 'Assure closed-loop communication between the presenter and receiver of the information to ensure that both parties have a shared understanding of the patient's condition and needs.'

I think the verb "Providing" can be attributed to the resident as a competency.	Could consider using a different verb such as "Presenting" which to me is more of a task

EPA 7: Form clinical questions and retrieve evidence to advance patient care

Problems	Recommendations
I think this EPA would be hard to observe in the current clinical environment and feels more like a habit than a specific activity. At the same time, I think the core EPAs are harder to write as discrete professional activities such as "admit a patient to the ICU" because they are subunits that provide the foundation for larger patient care activities.	It is hard to measure whether someone identifies their gaps/ key clinical questions. While it would leave out this aspect, an entrustable activity might be "Retrieve evidence for clinical questions to advance patient care".
I have problems with this EPA. While it may be important, it is difficult to envision this and a EPA the requires qualification or certification to work unsupervised	I would probably delete it and incorporate aspects of it in other EPAs
This reads like a didactic assignment - i.e. apply PICO - rather than a physician task. This is part of oral and written presentations and management decisions/orders. The reflection piece will be hard to measure as written.	Do not have this as a freestanding EPA; incorporate into oral and written presentations.
Is retrieving the correct word? The learner retrieves the evidence... but may not do anything with it. Also the task is more than just retrieving the evidence but also to apply it.	? recommend a course of action based on the evidence retrieved?

EPA 8: Give or receive a patient handover to transition care responsibility

Problems	Recommendations
Generally well formulated, tiny suggestions	- The title may have 'and' instead of 'or'. The idea is that the qualification must include whatever the learner will be allowed to do unsupervised. - Avoid adjectives of quality of proficiency

Well written EPA that is supported by literature on benefits of rigorously performed handovers for patient care. I would recommend editing this sentence 'Assume full responsibility for required care during one's entire care encounter.' The mention of the 'entire care encounter' isn't clear to me - does this refer to the handover or the whole hospitalization or illness? if the latter, then that seems beyond the scope of this EPA.	See above.
...transition care responsibility is awkward	...for transitions of care?

EPA 9: Collaborate as a member of an interprofessional team

Problems	Recommendations
To me, this is not an EPA. It is not an entrustable unit of work. It was difficult rate on some of the EQual items because it is not a unit of work.	It needs to be rewritten to focus on application to professional work with an outcome
This is not an adequate EPA	There may be a way out. That would be to specify a series of very concrete collaboration activities, such as leading an interprofessional meeting. One or more of these together as the specification may make it a clear unit of professional practice
This is not an EPA - not a discrete activity, not limited to qualified physician personnel	Incorporate interprofessional collaboration into other EPAs
This is a competency domain in and of itself and not an EPA	A task that is measurable for example would be "Participate in or contribute to a multidisciplinary team meeting". Collaboration would be one of the aspects of this EPA, as would listening and respecting other members opinions, etc... At this level of training, we would not expect lead.

EPA 10: Recognize a patient requiring urgent or emergent care and initiate evaluation and management

Problems	Recommendations

While the process of "recognition" is difficult to envision as an EPA, the initiation of evaluation and management make it very concrete. There may still slight improvement, but the listing of the conditions that require action make it very tangible.	
similar to EPA 1-4. I'm on the fence about this one; the boundaries are difficult to define, the content is broad, and it overlaps with EPA 1-4	focusing it more may help. a strength is that it captures MS4 level work

EPA 11: Obtain informed consent for tests and/or procedures

Problems	Recommendations
Clearly written. I do however think that ordering diagnostic test may have to include asking informed consent. Professional usually do not ask that if someone else does the HxPx and still someone else the ordering of test. At a certain moment that must come together. I do suggest avoiding 'and/or' in the title but use 'and'	
I question whether informed consent should be separate from procedures. However, there could be informed consent for a procedure the learner / physician will not personally do, such as give a transfusion. (although physician writes the order). The informed consent discussion could be done by a non-physician, in theory (perhaps not legally)	use of the word 'appropriate' may not be needed. shouldn't all EPAs be performed appropriately?

EPA 12: Perform general procedures of a physician

Problems	Recommendations
sort of a catch-all statement	
Clearly described. [But I have always been surprised that this only includes four procedures].	

This is another one that raises a question for me. There could be a learner entrusted to perform one but not all of these procedures. What happens then regarding entrustment/badges/etc?	
I am not sure the venipuncture and IV placement are relevant to physician practice in 2019	Remove venipuncture and IV placement and perhaps add administration of medication through injection (e.g. Narcan)

EPA 13: Identify system failures and contribute to a culture of safety and improvement

Problems	Recommendations
I don't think this is a discrete entrustable unit of professional work. It focuses primarily on the systems-based practice competency domain, is hard to measure in terms of outcomes, and is trying to get at a habit of practice.	It needs to be changed into a discrete task. One approach might be to focus on things along the lines of "investigate and determine cause of system failure" or "develop a systems improvement plan for a clinical unit". At the same time, I can see people who worry that the tasks listed above are too focused and do not fully get at all the skills of interest. A potential idea to play with is whether one could have a list of systems failure "procedures" that could be an EPA, similar to "perform general procedures of a physician".
Not revised as this cannot be repaired. The activity is not described under 'description', it is only justified.	"Identifying" something that is not planable [sic] (at variance with, e.g., identifying a lesion on a radiograph), and "contributing" are not activities that are suitably described as EPAs, for various reasons. I'm not sure this can be fixed.
As written, it seems it could be done outside of a clinical setting. Seems applicable to interprofessional providers as well as physicians.	focus more on physician practice clarify how this EPA is achieved
This is much too broad an EPA that is not solely a task to be observe. It has no end and how do you measure "contribute". Many of the functions would have to be inferred rather than observed.	A smaller piece may be more practical and measurable such as Identify a system error and complete an entry in a safety learning system, for example

I think the description and title need to be more activities related.	Might change title to "Participate in safety and improvement activities." Functions would then be 1. Demonstrate universal precautions 2. Demonstrate hand hygiene 3. Identify errors 4. Use system reporting mechanisms to report a systems error 5. Participate in improvement activities (e.g. Morbidity and Mortality conference, root cause analysis, rapid cycle change team, lean team, six sigma improvement effort)

[a]Please note that these comments have had limited to no editing.