

Assessing the Association between EPAs, Competencies and Milestones in the Pediatric Subspecialties

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Hypothesis:

Milestones will be a valuable method with which to determine level of entrustment for the pediatric subspecialty EPAs.

Specific Objectives:

1. For six of the seven common EPAs, to determine if there is a specific milestone level at which a fellow is deemed entrustable.
2. For six of the seven common EPAs, to compare the milestone level at which fellows are deemed entrustable across the pediatric subspecialties and to determine if any specific competencies are more influential in the entrustment decision than others.
3. For six of the seven common EPAs, to compare the initial overall impression of fellow level of entrustment made by the Fellowship Program Director with that determined by the Clinical Competency Committee after the milestone levels are assigned.

NOTE: Six of the seven common EPAs will be evaluated. The Scholarship EPA will be excluded from the study.

Participants

- Pediatric subspecialty *networks*.
- Must have at least 20% of programs (30% preferred) in the subspecialty to participate
- Each subspecialty will be responsible for program recruitment within its subspecialty.
- Each network must have an identified leader(s) to supervise their subspecialty participation.
- Identified leaders will comprise the Project Steering Committee led by Herman/Mink.
- At least some Steering Committee meetings will be held using videoconferencing/webinars so that documents can be simultaneously viewed. If necessary, a wiki can be setup to house important documents.

Outline of Methods

- Each subspecialty will be responsible for recruiting fellowship programs within that subspecialty.
- APPD LEARN will assist in study design, data management, statistical analysis, and IRB submission.
- IRB: When multiple subspecialties at one institution are participating in the project, one IRB submission should suffice. The IRB application should include the plan for longitudinal data collection.

For each fellow:

- About 1 week prior to the meeting of the CCC in which milestone levels are to be assigned, the Fellowship Program Director will record his/her impression of the level of entrustment for six of the seven common EPAs. The Fellowship PD may use any assessments that he/she would “traditionally” use as a part of the semi-annual evaluation with the fellow.

- Scales for level of entrustment: A specific scale may need to be developed but one proposed Scale for entrustment decision:
 1. Observation but no execution, even with direct supervision
e.g. a nephrology fellow has never seen a dialysis catheter placed.
 2. Execution with direct, supervision (physically present)
e.g. second time a fellow is placing a central venous catheter.
 3. Execution with indirect supervision but direct supervision immediately available (physically within the hospital or other site of patient care)
e.g. capable second year fellow placing a central venous catheter in a seriously ill patient
 4. Supervision at a distance but direct supervision available (not physically present within the hospital or other site of patient care, but immediately available by telephone and/or other electronic modalities and available to provide direct supervision)
e.g. third year fellow managing a patient with severe ARDS
 5. Ready to execute independently without supervision
e.g. third year fellow placing a central venous catheter in an unstable patient 2 weeks before completion of fellowship

- The CCC will determine the milestone level for each competency mapped to the 6 common EPAs to be examined. A total of 29 competencies will be evaluated (19 of the 21 to be reported to the ACGME and an additional 10).
- “Abbreviated” milestone descriptions should not be used for assigning milestone levels but could be used for the evaluation tools.
- At the end of the CCC session discussion in which milestone levels are assigned for each fellow, the level of entrustment for six of the seven common EPAs will be determined by the CCC.

Data Collected

- Fellowship Program Director’s entrustment decisions for each fellow on the EPAs being evaluated prior to the CCC milestone and EPA evaluation.
- CCC’s milestone level assignment for the 29 competencies being evaluated in the project for each fellow.
- CCC’s entrustment decisions for each fellow on the EPAs being evaluated.
- Other data to be collected include subspecialty, number of fellows in program, number of fellows remediated in the past X years (need further definition), prior understanding of EPAs and milestones by the fellowship program director and CCC (Likert scale?), any recent modification of evaluation tools used and did the CCC use the milestones information in making its entrustment decision.
- Subspecialties may voluntarily report milestone assignments for competencies mapped to their subspecialty-specific EPAs.
- Data are to be collected from ACGME reporting periods December 2014 and June 2015 (to allow for comparison of time periods).
- Data will be collected through APPD LEARN which will maintain confidentiality of information.

Analysis

For each EPA, consider developing a composite score based on the milestone level for each competency mapped to that EPA.

- Specific Aim #1: For each EPA, develop ROC of fully entrustable (Y/N) vs. composite score. Do the same for each competency mapped to that EPA. Compare ROC curves. Also, for those competencies mapped to more than one EPA, examine whether the correlation between the milestone assessment for one EPA is the same as that for the other EPA(s).
- Specific Aim #2: For each EPA, compare the correlation of the composite scores with level of entrustment across the subspecialties. Also examine the correlation of level of entrustment with individual competencies across the subspecialties to determine if some are weighted more heavily than others.
- Specific Aim #3: For each EPA, compare the correlation of the level of entrustment as determined by the fellowship program director before the milestones assessment with that determined by the CCC after assigning the milestone levels.

Other potential analyses (depending, at least in part, on power analysis)

- Comparison of variability of large versus small programs
- Examine variability within the subspecialties

Potential Covariates in analysis

- Subspecialty
- Size of program or number of fellows in program
- CCC use of milestones
- Fellow PD understanding of EPAs/milestones
- CCC understanding of EPAs/milestones
- Whether evaluation tools have been revised for milestone assignment

Dissemination of Study Results

- Presentation at National Meetings. Considerations include:
 - ACGME
 - PAS
 - APPD
- Presentation at Subspecialty Meetings
- Publication in Peer-Reviewed journals
- Authorship will use the criteria developed by APPD LEARN