




2/1/2019  
10:30 AM –  
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SYMPOSIUM:  
INCORPORATING  
ENTRUSTABLE  
PROFESSIONAL ACTIVITIES  
(EPAS) INTO MEDICAL  
SCHOOL CURRICULA

## INTRODUCTION OF SYMPOSIUM MEMBERS

 Sarah Stumbar and Suzanne Minor @ Florida International University (AAMC pilot site)


 Steve Scott and Christine Savi @ Texas Christian University/University of Texas North Health Science

 Frank Babb @ Texas Tech University Health Sciences Center SOM

 Magdalena Pasarica @ University of Central Florida

 Javad Keyhani and Kirby Clark @ University of Minnesota

 Tomoko Sairenji and Danielle Bienz @ University of Washington

 Kristen Hood Watson @ Medical University of South Carolina Charleston

## AAMC's 13 Core Entrustable Activities for Entering Residency<sup>2</sup>

1. Gather a history and perform a physical examination
2. Prioritize a differential diagnosis following a clinical encounter
3. Recommend and interpret common diagnostic and screening tests
4. Enter and discuss orders and prescriptions
5. Document a clinical encounter in the patient record
6. Provide an oral presentation of a clinical encounter
7. Form clinical questions and retrieve evidence to advance patient care
8. Give or receive a patient handover to transition care responsibility
9. Collaborate as a member of an interprofessional team
10. Recognize a patient requiring urgent or emergent care and initiate evaluation and management
11. Obtain informed consent for tests and/or procedures
12. Perform general procedures of a physician
13. Identify system failures and contribute to a culture of safety and improvement

# School-level implementation

## Florida International University

**Facilitators:** Suzanne Minor and Sarah Stumbar

**EPAs:**

	History & Physical	Differential Diagnosis	Ordering/ Interpreting Labs	Oral Presentation	Evidence Based Medicine	Team-work	Informed Consent
	EPA 1	EPA 2	EPA 3	EPA 6	EPA 7	EPA 9	EPA 11
# Required Assessments	1	1	2	2	1	1	1

**Pre-clinical, Clinical:** Assessed in all clinical clerkships in period 3

**Type:** 8 week block family medicine clerkship

**Implemented:**

- Starting in 2017, assessed across all 3<sup>rd</sup> year clerkships
- Implementation:
  - Workplace-based assessments using iPads with EPA-specific rubrics
    - Formative, but students lose points if they do not complete the required number of surveys
    - EPA assessment tools based on one-pagers from AAMC
  - Student training during 3<sup>rd</sup> year orientation, clerkship orientation, midpoint meetings
  - Faculty development through newsletters, emails, live sessions
  - Entrustment committee pilot
  - Stakeholder involvement: students, clerkship directors, faculty

### Resources and structure of EPA implementation

- iPads for each student
- Time to create rubrics and write clerkship newsletter articles

**Training:**

- students were trained in period 3 orientation and clerkship orientations
- faculty development through emails, clerkship newsletter, one-on-one meetings

**Progress tracking:**

- as a pilot, data tracked over the year and assessed by an Entrustment Committee at midpoint and end of year

## School-level implementation

Texas Christian University/University of Texas North Health Science Center

**Facilitators:** Steve Scott and Christine Savi

**EPAs:** All 13 EPAs

**Pre-clinical, Clinical:** Pre-clinical and clinical

**Type:** Longitudinal

**Implemented:** Aligned and tagged to Educational Program Objectives (EPOs)

**Resources and structure of EPA implementation:** Embedded within ongoing and frequent assessment

**Training:** Stakeholder education regarding EPA implementation

**Assessed:** Using developmental milestone approach through faculty, preceptor, patient, mentor, peer and self-assessment methods especially in clinical skills, each specialty within the longitudinal integrated clerkship (LIC), and ending with a final demonstration in the residency boot camp.

**EPA assessment tools:** Integrated into milestone criteria and used in rubrics to assess student performance by direct observation throughout the curriculum

**Progress tracking:** Longitudinal tracking of data based on milestone ratings of current performance, mapping and tagging of EPAs to EPOs, and formative/summative progress tracking of student performance with low performance notifications and remediation assistance. Data will be collected on a continuum, tracked and evaluated for intra and inter-rater reliability.

**Stakeholder involvement:** University and community-based faculty, staff, and students, student affairs, faculty affairs, administration

**Resources:** Curriculum management system for mapping and tagging, faculty development structure

### Pearls:

- Alignment with Educational Program Objectives (EPOs) and curricular assessment
- Phase 1 training with students, faculty, and staff and re-orientation in Phase 2
- Stakeholder involvement in the development, implementation, and review of assessment criteria, tools

**Contact:** [Stephen.scott@tcu.edu](mailto:Stephen.scott@tcu.edu) or [Christine.savi@tcu.edu](mailto:Christine.savi@tcu.edu)



## Texas Tech University Health Sciences Center School of Medicine

**Facilitator:** Frank Babb

**EPAs:** Faculty and Resident House Staff completed surveys to evaluate areas of confidence and areas where there is a lack of confidence to be able to teach and assess medical students on each of the EPAs.

Faculty reported high levels of confidence in being able to teach or assess all EPAs, but the lowest scores were given for 4, 8, and 13. This indicated they had the least confidence in being able to teach or assess students to:

- Enter and discuss orders and prescriptions.
- Give or receive a patient handover to transition care responsibility.
- Identify system failures and contribute to a culture of safety and Improvement.

Residents reported varying level of confidence in being able to teach or assess all EPAs, but the lowest scores were given for 13,12, and a tie for third of 4 and 7. This indicated they had the least confidence in being able to teach or assess students to:

- Identify system failures and contribute to a culture of safety and improvement.
- Perform general procedures of a physician.
- Form clinical questions and retrieve evidence to advance patient care.
- Enter and discuss orders and prescriptions.

Students reported varying level of confidence in being able to perform all EPAs, but the lowest scores were given for 4, 8, and a tie for third of 5 and 12. This indicated they had the least confidence in being able to perform:

- Enter and discuss orders and prescriptions.
- Give or receive a patient handover to transition care responsibility.
- Document a clinical encounter in the patient record.
- Perform general procedures of a physician.

**Implemented:** Intervention with Faculty/Residents in Family Medicine Block Clerkship which included instruction in opening the chart and then allowing the student to enter the orders under direct faculty or resident supervision. This easily lends itself to instructing/discussing how and why the orders were placed with the student.

**Progress tracking:** Surveys will continue to evaluate the confidence that the Faculty, Residents, and Students have with respect to the EPAs. EPA 4 will continue to be a focus for now and moving forward will include interventions for EPAs 12 and 13.

## University of Central Florida

**Facilitator:** Magdalena Pasarica

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	TEACHING	ASSESSMENT
EPA1	SLMs, evolving cases in didactics	preceptor observation, OSCE
EPA2	Didactics (cases), physical diagnosis session, clinical experience	preceptor evaluation, MCQ, OSCE
EPA3	Didactics (cases), clinical experience	preceptor evaluation, MCQ, OSCE
EPA4	Didactics (cases), physical diagnosis session, clinical experience	preceptor evaluation, MCQ, OSCE
EPA5	SLMs, clinical experience	preceptor evaluation
EPA6	SLMs, clinical experience	H&P assignment, preceptor evaluation, OSCE
EPA7	SLM, LCT	EBM project
EPA8	SLM, Didactic practice, handout, formative feedback from clinical preceptors using the grading rubric	formative - preceptor evaluation AND summative - OSCE
EPA9	clinical practice to include student-run free clinic work in intraprofessional teams	preceptor formative feedback
EPA10	didactics (cases)	MCQ, preceptor evaluations
EPA11	SLM, discussion during procedure teaching	preceptor evaluation
EPA12	simulation workshop on us guided iv placement, iud insertion, pap smears, joint injections	preceptor evaluation

### UNIVERSITY OF CENTRAL FLORIDA

	Learner task	Grading rubric
EPA1	Task students to gather a history and perform a physician exam and report findings	SP scores the skill, MD scores the written note
EPA2	Task students to recommend and interpret diagnostic/screening tests for a simulated clinical encounter	MD to score the differential list submitted
EPA3	Task students to create a differential for a simulated clinical encounter	MD to score the interpretations or order list
EPA4	Task students to write orders for a simulated clinical encounter	MD to score the orders
EPA5	Task students to document a simulated clinical encounter	MD to score the documentation
EPA8	Task students to write a handover for a simulated clinical encounter	MD to score the handover

## EPAs in LIC

### University of Minnesota-- Rural Physician Associate Program/ Metropolitan Physician Associate Program (RPAP/MetroPAP)

**Facilitators:** Javad Keyhani and Kirby Clark

**Program:** Oldest Longitudinal Integrative Clerkship in the Country--49 years old.

**Duration:** 9 months, most of the 3rd year.

**Locations:** 36 or more sites throughout Minnesota and western Wisconsin. Majority are rural but we now have 7 underserved urban sites.

**Students:** 40-45 students per year.

**Hospital Systems:** Over 20

### EPA Pilot Program 2017-18

**Study:** 12 sites with 16 students were randomized to be 'Intervention Sites'. 24 other sites were 'control' sites. 'Summative' EPA evaluations of all 13 EPA's were done by community preceptors twice in the year--once early and then again at the end. 'Intervention' sites were encouraged to do an EPA evaluation daily or near-daily. Control sites used their regular feedback methods. Primary endpoint of the study was the improvement in Summative EPA scores of the Intervention Group vs the Control Group..

**Preparation:** All students received some basic teaching on EPA's using a short lecture and then a primer on how to use the program to have their preceptors do the summative evals. Intervention students had an additional session to prepare them. The Intervention Preceptors had a phone call introducing the Pilot. There was a short video created for the students and preceptors to give further instruction. There was also a 'Quick sheet' summarizing the 13 EPA's. There were also follow up e-mails about their progress, and answering questions.

**Data:** Collected using an electronic platform that could be accessed from a phone, tablet, laptop or desktop. Overall compliance of the Intervention Group with doing EPA's multiple times per week was poor. The hope was that students would do an EPA about 3 times per week for their family medicine clinic weeks. The actual average was only about once per week. A few students averaged as much as 2.5x/wk, but there were a few that averaged less than 0.5x/wk. The compliance in doing the summative evaluations was generally good with around a 90% compliance.

**Results:** There were no statistical differences in the improvement in Summative EPA assessments between the Intervention Group and the Control Group. Secondary end-points looking at the correlation between community preceptor evaluations and Core Faculty EPA assessments, and the correlation of EPA assessments and final grades (using a separate assessment system for grading) are being completed. Subjective feedback from Preceptors and Students in the intervention group was more negative than positive. Negative comments included concerns that the EPA system was not better than standard feedback. Time involved and

some technology issues were also concerns. Positive feedback included the more focused feedback that EPA's generate.

Conclusions: There were no statistically significant differences found between an EPA strategy and a standard one. EPA's are challenging to implement in a dispersed and established LIC. Poor compliance with doing EPA's regularly limits the interpretation of the results.

Discussion: RPAP/MetroPAP has been very effective in generating physicians for rural and underserved areas. Our students have done well clinically and on testing in general. We believe, however, that having EPA's done regularly will give the students more direct observation and more actionable, timely and focused feedback. We do not want to do this at the expense of losing or burning out our excellent community preceptors. This is our challenge, to the benefits of EPA's to our students while keeping our community preceptors engaged and happy.

Future goals:

1. **Student buy-in:** add student incentive (grades) or like, we are trying for this year, (completing EPA assessments is now an honors eligibility option) to increase the frequency of EPA assessments done.
2. **Preceptor buy-in:** more preceptor input to benefits/barriers to EPA assessments. Right now we have preceptors volunteering for our 2nd EPA pilot and hope to simplify and clarify the process more and hopefully have some community preceptor champions. We are debating whether to continue a voluntary program and hopefully grow that vs having all sites doing EPA's.
3. Whatever we do we want to make sure we **retain our great community preceptors**. We will use the pilot data to improve and simplify the EPA language and technology (we have begun this). We can bring the process to them by doing some demonstrations and lectures during our RPAP visits.

Further research:

1. One simple thing to continue to **track is the number of EPA's done**. Minnesota's Pediatric LIC has been doing EPA's for all their students for several years and their number of EPA's goes up each year.
2. Track **improvement in the Step 2 CS exam**.
3. Track **PGY-1 Initial Milestone Evaluation**, where EPA's may really help students to be prepared.
4. The biggest thing we want to **avoid is losing good community preceptors or increasing burnout** for them. So we plan to survey their satisfaction, and use their feedback yearly.

## **EPA based Clinical Performance Evaluation (CPE) from for grading**

### **Medical University of South Carolina Charleston**

**Facilitator:** Kristen Hood-Watson

- The goal of utilizing EPAs was to have an objective, competency based measure of student performance keeping in mind that medical schools want to develop students who will be prepared for internship
- EPAs assessed:
  - EPA 1- gather a history and perform a physical exam
  - EPA 2- prioritize a differential diagnosis
  - EPA 3- recommend and interpret common diagnostic and screening tests
  - EPA 5- document a clinical encounter
  - EPA 6- provide an oral presentation of a clinical encounter
  - EPA 9- collaborate as a member of an interprofessional team
- Implementation:
  - Introduced in AY 18-19
  - Utilized in the clinical years only
  - All evaluators utilize this grading form whether on campus or at community sites
  - Faculty development was provided via clerkship directors and a video created by the Association Dean for Curriculum, Clinical Sciences
- Rotations are in a block format. The Family Medicine clerkship is 6 weeks in length.
- Progress Tracking: Range of scores is being monitored through our Office of Assessment, Evaluation, and Quality Improvement and reviewed at our Clinical Sciences Planning and Evaluation Committee
- Stakeholders: the policy was created with input from the Dean's office, clerkship directors, other invested faculty members, clerkship coordinators, and students



**EPAs:**

1. EPA 1- gather a history and perform a physical exam
2. EPA 2- prioritize a differential diagnosis
3. EPA 3- recommend and interpret common diagnostic and screening tests
4. EPA 4- enter and discuss orders and prescriptions
5. EPA 5- document a clinical encounter
6. EPA 6- provide an oral presentation of a clinical encounter

**Pre-clinical/Clinical:** Clinical

**Program Collaboration:** WWAMI Rural Integrated Training Experience (WRITE) is a 22 or 24-week rural longitudinal integrated clerkship during the Patient Care Phase (first year of clinical rotations)

**Type:** 4-week block at the end of WRITE

**Implementation:**

- Pilot in 2017-2018 with 19 WRITE students at 19 rural community sites
- 22 week WRITE sites complete 18 week core curriculum + 4-week Advanced Outpatient Clerkship



**EPA assessment:**

- Evaluation:
  - Pre-assessment completed on first day of clerkship via Catalyst survey
    - EPA assessment tools based on one-pagers from AAMC
    - Submitted to UWSOM WRITE office
  - Post-assessment completed last week of clerkship via Catalyst survey
    - EPA assessment tools based on one-pagers from AAMC
    - Submitted to UWSOM WRITE office
  - Pre- and post-assessment not a formal evaluation or incorporated into student grades at this time
  - Clerkship grade submitted through separate evaluation process

**Training:**

- Student training during WRITE orientation and rotation-specific webinar
- Faculty development
  - Rotation webinar for site directors and students
  - Site visits by WRITE Director, WRITE Education Specialist, Family Medicine faculty, and Regional Clinical Deans
  - Sessions provided at annual faculty development conferences (Seattle and WWAMI)
- Stakeholder involvement: Family Medicine faculty, UWSOM Curriculum office, WRITE students, WRITE site directors, Regional Clinical Deans and administrators

**Resources:**

- Faculty - Family Medicine, WRITE, Site Directors
- Administrators - WRITE program, regional offices, site administrators
- Software/platforms – Catalyst survey, EValue grade collection, ZOOM videoconferencing

**Pearls:**

- Preceptors love the EPAs compared to our normal grading form
- Don't be afraid to use the critical functions! Preceptors and students find them helpful

**Contact:** [dbienz1@uw.edu](mailto:dbienz1@uw.edu)