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94 Emergency Clinical Problem Solving (ECPS) – A Model Capstone Curriculum for 4th Year Medical Students

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Introduction: The AAMC recommends “all medical schools adopt an explicit set of clinical skill education objectives.” To meet this goal and to prepare medical students for transition to residency, establishing a successful capstone course in acute care problem solving is an important curricular innovation.

Educational Objectives:

1. Identify an emergency across clinical settings
2. Evaluate high risk undifferentiated patients and generate a differential diagnosis using advanced clinical reasoning methods.
3. Perform patient management: assess acuity, stabilize, and treat. Secondary objectives were to understand a multidisciplinary team approach, best practices in communication and re-integrate basic science material.

Curricular Design: Under EM sponsorship, ECPS was implemented as a four week required pass/fail course in a curriculum re-design. A consensus group of educators designed the curriculum to include: lecture, simulation, and clinical experiences in the ED, using the CDEM consensus fourth year curriculum in EM as a starting point. The course begins by teaching the approach to the undifferentiated patient, progressing through eight high risk chief complaints, and then cumulating with arrest scenarios. (Table 2) Didactics are matched to a high fidelity clinical scenario. Sessions on CPR, airway management, and vascular access are taught and integrated into scenarios. Lectures on advanced diagnostic reasoning focus on dual process theory and use of cognitive checks. Learning modules on CDEM curriculum.org, video and quizzes were made available. Educators require high fidelity mannequins and task trainers. Difficulties in implementing the curriculum have been faculty development in simulation, need for a clinical coordinator, and engaging learner in the lectures.

Impact/effectiveness: Thirty-seven students have completed the course. (Table 1) Simulation and crisis management training and were the highest rated components in helping students learn the material.

Table1. Medical Student Assessment of ECPS Course through E*Value.

Evaluation Topic	Rating
Generating a Differential Diagnosis	3.68/4.00
Crisis Management Training	3.92/4.00
Simulation	3.86/4.00
Overall course rating	3.47/4.00

Table 2: ECPS Curriculum Overview: Scope of Content

Weeks	Didactics (Mon)	Simulation topics (Tues)	Didactics (Wed)	Clinical Shifts (Thursday through Sunday)
1	<ul style="list-style-type: none"> ▪ Education Contract, Objectives/Overview ▪ Approach to the undifferentiated patient ▪ Approach to Emergent Patient ▪ Focused HPI ▪ SNAPPs/ASOAP 	<ul style="list-style-type: none"> ▪ Undifferentiated patient simulation cases ▪ Teamwork didactics 	<ul style="list-style-type: none"> ▪ Empathy ▪ Overview Advanced Diagnostic Reasoning ▪ Clinical Decision Rules and Meta cognition ▪ Diagnostic reasoning CPC Format ▪ Introduction to the clinical experience 	<ul style="list-style-type: none"> ▪ Students work 2 shifts per week at a community or academic ED site.
2	<ul style="list-style-type: none"> ▪ Approach to Chest Pain ▪ Approach to Arrhythmia ▪ Approach to SOB ▪ Lunch Break (12-1PM) ▪ Simulation procedures stations(1-3PM) 	<ul style="list-style-type: none"> ▪ Approach to Life Saving Procedures ▪ Approach to Life Saving Procedures Integrated Cases Part 1 	<ul style="list-style-type: none"> ▪ Student Case Presentations ▪ Altered Mental Status ▪ Patient Safety ▪ Mental Status Change w/ Transition of Care (SBAR) 	<ul style="list-style-type: none"> ▪ Students work 2 shifts per week at a community or academic ED site.
3	<ul style="list-style-type: none"> ▪ Fever R/o Sepsis EGDT ▪ Sepsis Cases ▪ Approach to Arrest ▪ End-of life discussion ▪ Mid rotation Feedback (1-3:30PM) 	<ul style="list-style-type: none"> ▪ Life Saving Procedures with Integrated cases Part 2 ▪ Mid rotation feedback (1-3:30PM) 	<ul style="list-style-type: none"> ▪ Approach to Abdominal Pain ▪ Cases Abdominal Pain ▪ Approach to Undifferentiated Shock ▪ Approach to Bleeding 	<ul style="list-style-type: none"> ▪ Students work 2 shifts per week at a community or academic ED site.
4	<ul style="list-style-type: none"> ▪ Holiday 	<ul style="list-style-type: none"> ▪ Jeopardy ▪ Life Saving Procedures Integrated Cases Part 3 ▪ Summative Review 	<ul style="list-style-type: none"> ▪ Completion of Clinical Shifts 	<ul style="list-style-type: none"> ▪ Completion of Clinical Shifts