

## **Virtual Clinical Experiences in the Emergency Medicine Clerkship: A Digital, Competency-Based Approach for ‘Clinical Contact’ in the Setting of COVID-19**

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**Background:** The Emergency Department (ED) remains one of the highest-risk clinical learning environments (CLE) in the setting of the novel 2019 coronavirus (COVID-19) pandemic. Given the recent mandate to remove medical students from the CLE to mitigate risk and transmission, it has been challenging to provide medical students in the Emergency Medicine (EM) clerkship meaningful clinical experiences that would meet clinical course goals and objectives for the course, as well as satisfy accreditation requirements for the Liaison Committee for Medical Education (LCME) for graduation.

During the EM clerkship, students play an integral role in interviewing patients, formulating treatment plans, facilitating patient discharges, and counseling patients. Immediately available direct and indirect supervision are paramount to ensure student learning and safe patient care.

In this document, we present a novel clinical educational experience for senior medical students in an EM clerkship that fulfills clinical course learning objectives, while still providing students the opportunity to interact, live, with patients.

**Goal:** To provide students in the Emergency Medicine clerkship with clinical patient care learning opportunities focused on transitions of care.

### **Learning Objectives:**

The learning objectives addressed through this intervention are listed below.

<b>Objective</b>	<b>Assessment domain</b>
Obtain a focused, developmentally appropriate, biomedical and psychosocial history of a patient’s illness in the acute care setting.	Patient Care
Verbally present clinical case presentations to attendings, residents, and consultants in a concise and coherent manner.	Patient Care
Organize information gathered from the interview, physical examination, and diagnostic work-up to appropriately formulate reasonable hypotheses and differential diagnoses.	Patient Care
Formulate management strategies that: are consistent with the acuity of a patient’s illness; incorporate the patient’s interests, needs, and preferences; and are mindful of resource utilization.	Patient Care

Construct safe, appropriate, and evidence-based disposition plans for a wide range of clinical conditions common to the practice of Emergency Medicine.	Patient Care
Apply a range of communication and interpersonal skills to respond to a patient's concerns and needs, in order to establish a trusting relationship, and inform, educate, and enlist the patient to participate in his/her health care decision making.	Interpersonal and Communication Skills

**Resources:** Smartphone, computer, home access to Electronic Health Record, HIPAA-compliant Zoom account

**Description:**

At Sidney Kimmel Medical College of Thomas Jefferson University Hospital, Emergency Medicine is a required rotation for all medical students in the fourth year of training. The authors designed a virtual clinical experience where students performed supervised callbacks on patients seen in the ED.

1) Students made calls to patients who were evaluated and discharged by ED providers who eventually tested positive for COVID-19. While providers were asymptomatic at the time of patient care, testing was ordered as soon as viral symptoms presented (per hospital protocol). Students on the clerkship were provided with a general outline to guide these virtual encounters:

- Inform the patient of the follow-up call and inquire how he/she is feeling.
- Notify the patient that he/she may have potentially been exposed to the coronavirus during their most recent ED visit.
- If the patient has denied any symptoms (i.e., shortness of breath, cough, fever, sore throat, sneezing), the patient was advised to self-isolate at home for fourteen days from date of the ED encounter.
- If the patient endorsed symptoms and met the criteria for testing, the patient was referred for walk-in or drive-thru testing.
- If the patient endorsed significant symptoms, the patient was advised to return to the ED

Follow-ups were timely, as they fulfilled an enterprise need, while still providing students with a clinical experience that reinforced both interpersonal and communication skills and patient care.

2) The students also contacted patients who were recently seen in the ED or urgent care, as well as through JeffConnect, our virtual enterprise telehealth program. These sessions also were clinical follow-ups. EM education faculty selected patients they had seen and discharged on their previous shifts.

All virtual encounters were under direct supervision of EM faculty. Students were remote and were not in the same physical space as the EM faculty or the patient in order to minimize any risk for exposure.

Using a HIPAA-compliant Zoom account, faculty connected with their assigned students in a Zoom virtual room, which allowed them to share their screen to show their students the electronic health record (EHR) prior to the call. Note: students at our institution do not have remote access to our EHR. Each student reviewed the chart and verbally presented the patient to the faculty before the call. A call was then placed to the patient directly through the Zoom software, which the student led. Faculty supervised and closely listened to the conversation. Faculty were able to provide real-time feedback and comments to the students through the chat function, and intervened during the call when necessary. At the end of the call, the students also assisted with documenting these call backs in the EHR.

Faculty assessed student performance and provided feedback in accordance with the evaluation tools used during the traditional clinical components of the clerkship. The clerkship uses the National Clinical Assessment Tool for Medical Students in the Emergency Department (NCAT-EM), a validated, competency-based assessment tool developed by the Clerkship Directors of Emergency Medicine community. A New Innovations form is the final assessment used by SKMC and approved for use in all clinical clerkships by the SKMC Curriculum Committee. They are both attached as appendices.

**Our experience:** Thus far, the clinical experience described above has been implemented for sixty-seven 4th-year medical students. One potential challenge encountered has been the varying degree of success with reaching patients as some did not answer our calls. To address this, faculty had to keep a longer roster of patients they had immediately evaluated.

Students have provided unanimous positive feedback. They report feeling engaged and value the help they are able to provide to the enterprise during the pandemic. They appreciated the ability to see a variety of chief complaints seen in the ED. They also valued the opportunity to work through the assessment and clinical reasoning with the supervising faculty member. On a larger scale, completing the COVID-19 callbacks decreased some of the clinical burden of the department. Patients were also grateful for the follow-up, especially with how difficult it was for them to get in contact with their respective primary care physicians. Faculty who completed the virtual follow-ups appreciated the ability to continue to teach students clinically, one-on-one, in the setting of the pandemic.

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