BACKGROUND

Emergency medical services (EMS) provides initial care to many patients who present to the emergency department (ED). Emergency medicine physicians must have knowledge around care provided in the prehospital environment. While lectures and QI initiatives have been utilized, ambulance ride-alongs are frequently implemented to provide field experience in physician EMS curricula. During the pandemic, risk mitigation strategies led to suspension of ride-alongs for medical students completing an EMS elective. In response, “ED EMS time” (EET) was developed as a novel alternative, replacing four 6-h ride-alongs with an activity limiting COVID-19 exposure.

EXPLANATION

EET consists of four 4-h ED shifts where medical students experience prehospital care through observation and reflection on...
2 activities, online medical control (OLMC) and EMS handoffs. These activities are structured around the following learning objectives:

1. Explain the challenges of field medicine.
2. Describe the treatment capabilities of EMS.
3. Analyze how the field environment impacts treatment decisions.

OLMC

OLMC is a trained physician on call who provides over-the-radio care recommendations to EMS. Locally, this is done by ED residents with faculty oversight. Medical students observe these consultations, listening to the radio while completing a structured reflection (Table 1). OLMC physicians serve as instructors, debriefing with the medical student afterward.

EMS handoffs

Handoffs are a contributor to adverse events and serve as an opportunity for medical students to better understand field care and the dynamics of the transfer of care process.4–6 Medical students observe the EMS-to-ED handoff and complete a guided reflection (Table 1). Next, the student asks EMS if they are willing to be interviewed about the run (Table 1). EMS serves as the expert/educator on prehospital medicine.

Debriefing on these experiences occurs during a structured meeting between a board-certified EMS physician and the medical student. The physician utilizes the student’s experience to help him/her realize the learning objectives.

DESCRIPTION

Four medical students completed 78 handoffs (about 19 per student) and seven OLMC reflections (range 0–4 per student as these events are less frequent). Each student completes 16 h of EET and 1 h of debriefing. A similar amount of ambulance time would yield around 10–12 EMS runs. Outcome data were obtained from completed reflection forms, debrief sessions, and end-of-rotation evaluations. Medical students identified language barriers with a lack of interpreter access, extrication/movement of injured patients, and monitoring scene safety as unique challenges in EMS. Pain management was a common EMS intervention with variability in practice patterns noted between clinicians. Information from bystanders was commonly the most useful information obtained from the scene. One student was surprised by treatment capabilities of EMS. In the rotation evaluation, while acknowledging COVID-19 limitations, two students listed a lack of ambulance time as a rotation weakness. One student mentioned EET as a strength of the rotation. Future research can evaluate similar outcomes during ride-alongs. Future medical students will substitute one ride-along for one EET shift. Through EET, medical students obtain a unique perspective on prehospital care in a nontraditional setting.

CONFLICT OF INTEREST

The authors have no potential conflicts to disclose.

AUTHOR CONTRIBUTIONS

Tom Grawey: study design, developed educational concept, manuscript composition and revision. Janice Hinze: study design, developed educational concept, manuscript composition and revision. Benjamin Weston: manuscript revision, oversight of project.

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| TABLE 1 | Outcome measures—by intervention component |
|-----------------|------------------------------------------------|
| OLMC reflection questions |
| 1) Summarize the call and care provided. |
| 2) Describe any challenges the OLMC physician encountered during the call. How could these have been overcome? |
| 3) What did you learn from this observation? |
| Handoff reflection questions |
| 1) What is the presenting complaint? |
| 2) What did EMS see? |
| 3) What did EMS do? |
| 4) What questions did the receiving team ask EMS? |
| 5) Do you think this was an effective handoff? Why or why not? |
| Interview reflection questions (to be asked to EMS) |
| 1) What was your “primary impression?” What led you down this route? |
| 2) Was there any information at the scene that helped you reach this conclusion? |
| 3) Did you perform any interventions for the patient? How did the patient respond? |
| 4) Were there any unique challenges you encountered when providing care for this patient? |

Abbreviation: OLMC, online medical control.
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