**Introduction**

- Visiting medical students banned from in-person rotations at CU due to COVID-19 pandemic.
- Interventional radiology (IR) residency recruits heavily from visiting medical students.
- Virtual elective designed to allow for continued education of interested medical students and to develop relationships with potential applicants.

**Objectives**

- Develop IR virtual elective curriculum
- Develop infrastructure for streaming live cases
- Evaluate medical student perceptions of the elective

**Materials & Methods**

- 2-week virtual elective

**CURRICULUM:**

- **Live Content**
  - Daily morning case and imaging review
  - Daily review of inpatient service
  - Live IR and diagnostic radiology resident lectures
  - Live streamed IR cases
- **Pre-recorded lecture content**
  - Core and elective lectures

**COMPLIANCE**

- HIPAA compliant, UCHealth HIPAA approved
- Data security compliant
- University Microsoft cloud-based platform
- Media and marketing patient consent
- CU Medical School course approval

**Equipment**

- Start up cost
  - Initial investment $1,547
  - Second round $3,885
    - Majority dedicated laptop
- Audio
  - eMeet M2 speakerphone
  - Apple Airpods
- Video
  - GoPro cameras (2x)
  - Video capture device, StarTech
- Software
  - RTMP Server (MonaServer)
  - Open Broadcast Software (OBS)
  - Microsoft Teams

**Results**

- Have you had a previous in-person interventional radiology (IR) elective/rotation?
  - Yes 1
  - No 1
- Have you had a previous “COVID-era” remote learning of IR elective/rotation?
  - Yes 0
  - No 1
- What is your current level of interest in matching into radiology residency, specific to Integrated IR?
  - None 1
  - Low 0
  - Moderate 0
  - High 1
  - Very high 0
- How well did this virtual elective meet your learning expectations?
  - Far exceed expectations 0
  - Meet expectations 2
  - Slightly exceed expectations 0
  - Slightly meet expectations 1
  - Far exceed expectations 2
- Relative to the text book study and recorded lectures, how would you rate the effectiveness of the streaming of live cases and procedures overall?
  - Not effective at all 0
  - Slightly effective 0
  - Somewhat effective 0
  - Very effective 0
  - Extremely effective 1

**Conclusions**

- Live streaming of IR procedures is technically feasible and can be achieved for a relatively low start up cost.
- Virtual rotations can attract highly-interested medical students.
- Live streaming of procedures with real-time teaching is perceived by students to be highly effective relative to book study and pre-recorded lecture content.

**References**


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**Materials & Methods**

- Most students had previously completed traditional in-person IR rotations.
- None had completed a virtual IR rotation.
- Enrolled students were highly interested in matching in IR.
- The rotation met or exceeded expectations of all students that have rotated to date.
- Respondents found live cases to be highly effective relative to book study and pre-recorded lecture materials.

“"The live cases were exciting and engaging. The radiologists did a great job of keeping me informed about what was happening and asking if I had questions. I really enjoyed these cases, especially when interacting with the radiologists.”

–Virtual IR Elective Student