Impact of COVID-19 on Virtual Learning Modalities for Housestaff and Educators

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• Introduction
• Objectives

• Overview of COVID-19 & Medical Education
• Survey, Results & Tips

• Virtual Education: Test Run
• Future
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Please post your comments in the chat box
Objectives

1. Discuss implications of COVID-19 on medical education
2. Review survey data of learners and educators during the pandemic
3. Understand the ways to improve medical education during the pandemic
- Bedside Teaching
- Rounds on the floors
- Interactions with trainees
- Interactions with families

- Tele Medicine
- Limited staff & faculty
- Reduction of in person visits
- No families

Social distancing

Trainees
Faculty
disruption
New York
American College of Physicians
Leading Internal Medicine, Improving Lives

Early Career Task Force Committee  Resident Committee  Wellness Committee
FACULTY COHORT

• Did your residency or fellowship program transition to new online education methods during the pandemic?
• Which platform was used for online education?
• How successful was online education with engagement of trainees as compared to pre-pandemic?
• How did Covid-19 impact your ability to conduct education at your institution?
• How did COVID-19 change the education on team rounds?
• Name 1-2 ways in which education plans can be modified in preparation for a second wave of COVID-19.
• How much did COVID-19 impact your level of teaching involvement?
• Have the changes to education implemented during the peak of COVID-19 been sustained post-peak? Yes/No
• Please share additional comments/concerns about the impact of COVID-19 on education.

TRAINEE COHORT

• Did your institution transition to new online education methods during the pandemic?
• Which platform was used for online education?
• How effective was online education format for your educational needs as compared to pre-pandemic?
• Was the online education format an adequate replacement for in-person education?
• How did COVID-19 impact your education flow on rounding teams?
• How would you rank the impact of COVID-19 on medical students pursuing Internal Medicine?
• How comfortable did you feel with your role?
• How did Covid-19 impact the house-staff education experience as a learner at your institution?
• How would you rank the impact of COVID-19 on your post-graduate training plans?
• Have the changes to education implemented during the peak of COVID-19 been sustained post-peak? Yes/No
• Please share additional comments/concerns about your Covid-19 experience.
How would you rank the impact of COVID-19 on medical students pursuing Internal Medicine?

How would you rank the impact of COVID-19 on your post-graduate training plans?

> 50 %
Academic Crisis

Loss of:
Medical Community
Bedside teaching
In person Interaction
Mentoring
Peer Support
Networking

 naïvely confident
You think you know, but still don’t know what you don’t know

clueless
You don’t know what you don’t know

discouragingly realistic
You know what you don’t know

Mastery achieved
You know it
Have the changes to education implemented during the peak of COVID-19 been sustained post-peak?

- **Trainees (%):**
  - Yes: 66.6
  - No: 33.3

- **Educators (%):**
  - Yes: 82.6
  - No: 17.3
Transformative efforts in medicine and medical education that were in progress were accelerated by the pandemic:

- Distance learning, recorded lectures
- Virtual and simulated learning
- Interprofessional care
- Scope of practice
- Professional/personal wellbeing
- Disparities in healthcare
- Social justice
Did your residency or fellowship program transition to new online education methods during the Pandemic?

- Faculty: 72%
- Trainee: 28%
Which Platform(s) did you use?

- ZOOM
- Webex
- Microsoft Team
- Goto Meeting
- Google Meet
how to annotate
How effective was online education format for your educational needs as compared to pre-pandemic?

- Trainees (%)
  - Extremely Effective: 0%
  - Very Effective: 11.11%
  - Moderately Effective: 22.22%
  - Slight Effective: 33.33%
  - Not at All Effective: 33.33%

How successful was online education with engagement of trainees as compared to pre-pandemic?

- Educators Cohort (%)
  - Very Successful: 0%
  - Successful: 34.7%
  - Neutral: 52.1%
  - Unsuccessful: 13%
  - Very Unsuccessful: 0%

> 60 %
what are other words for unprepared?
unready, unrehearsed, impromptu, extemporaneous, offhand, extempore, untrained, spontaneous, improvised

"The Comfort Zone"

Transition
Was the online education format an adequate replacement for in-person education?

How much did COVID-19 impact your level of teaching involvement?

Trainess(%) > 60%
How did Covid-19 impact the house-staff education experience as a learner at your institution?

“Severely affected the education.”

“We just did our jobs as always.”

“Less Formal learning.”

“Learning was initially put on hold. Were expected to read on our own while we figured out our pandemic response.”

“Extremely stressful & learning incredibly diminished.”
How did Covid-19 impact the house-staff education experience as a learner at your institution?

“Extremely stressful & learning was incredibly diminished.”

We transitioned from subspecialty fellowship training (cardiology) to a more generalist, critical care based experience.

“After 3 months: went back to regular learning only via Zoom instead of in person, or in person in small groups and broadcasted on Zoom for the rest of the students and residents.”

The education experience: really impacted due to change in rotations & the deployment of every single resident.
How did Covid-19 impact your ability to conduct education at your institution?

“COVID pandemic negatively impacted our ability to provide educational activities, we suspended regular lectures and morning report. Education was provided only during the rounds at the height of pandemic. Once the situation started improving (May), we established morning report and subsequently restarted noon lectures, but it was hard to engage the trainees over virtual platforms. It was definitely easy for them to log in into the conference, but participation was not the same as during in-person activities.”
How did Covid-19 impact your ability to conduct education at your institution?

“Usage of online platform was very cumbersome and limited interactivity.”

“Essentially broke our use of active learning between residents and faculty.”

“Less bedside teaching, including history taking skills and physical exam.”

“Medical students, pharmacy students kept remote; majority of residents pulled for inpatient/ICU coverage.”

“very negative.”
How did Covid-19 impact your ability to conduct education at your institution?

“Very stressful to provide the volume of care & get back on our feet educationally.”

Out of sight so not out of mind.

“Still don't know how effective & how much resident's have been learning through online sessions.”

“Daily rounds were circumscribed by the need to socially distance. Zoom lectures did not allow adequate interaction with residents.”
How did Covid-19 impact your ability to conduct education at your institution?

“Frequent interruption by nursing during didactics because residents were signing in remotely from their workrooms in the hospital. “

“Numerous technical & procedural challenges encountered. Unable to fully engage learners. Exam and other demonstrations severely curtailed. Considerable instability and quality issues with streams and conferences.”
How did Covid-19 impact your ability to conduct education at your institution?

“Attendance is up at Grand rounds.”

“Easier to access Grand Rounds & Subspecialty conference.”

“Only teaching was about COVID, because those were the only patients in house.”
How did Covid-19 impact your ability to conduct education at your institution?

“Conferences continued virtually but resident engagement is a challenge and continue to be.”

“Reduces the face to face connection and relationship building significantly.”
Challenges with Virtual Education

- Engagement
- Technology
- Time
- Support
- Adaptability
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Creating an educational environment

Set ground rules
Avoid cognitive overload
Moderator
Small group
Leverage Technology

Flipped Classroom
Clinical Vignettes
Pauses
Leave space for discussion
Assessment
Feedback

Eduational Experience

Social Presence
- Engagement with Participants
- Supporting Discourse
- Setting Climate
- Re-Goals / Direction

Cognitive Presence
- Engagement with Content
- Regulating Learning

Teaching Presence
- Application
- Discipline Standards
- Educational Context
The Fab Five for learner engagement ("PEACE")

- **Prepare**: Practice using the actual technological tools & delegate technical support.
- **Establish**: Set "ground rules" for the session.
  
  **Example**: Cameras on, mics muted, specify ways to ask questions (i.e. chat room or other).

- **Address**: Make direct, concrete asks of learners.

  **Example**: Call on an individual to read a clinical stem/case scenario.

- **Connect**: Make interpersonal connections prior to starting the session.

  **Example**: Greet individual participants by name as they enter the session.

- **Engage**: Familiarize, practice with, and use interactive features.

  **Example**:
  - Breakout room
  - Polling (directpoll.com)
  - Annotation

Brondfield, S, Cetnar, J, Rangachari, D. ASCO PD Retreat 2020
How did COVID-19 impact your education flow on rounding teams?

How did COVID-19 change the education on team rounds?
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Name 1-2 ways in which education plans can be modified in preparation for a second wave of COVID-19

“Improved communication.”

“Prepare short mini topics for discussion related to pandemic.”

“The Johns Hopkins COVID Rounds were helpful lectures.”

“benefit from centralized source of education, like lectures and updates given by the Faculty from different institutions and available to all programs.”
Name 1-2 ways in which education plans can be modified in preparation for a second wave of COVID-19

“decreasing group size.”

“Use of larger indoor spaces.”

“residents need uninterrupted time for didactics, no matter where they occur and in what format.”

“Faster pivot to telehealth for outpatient visits.”
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Exercise:
You are giving a lecture via Zoom, and jump right into the talk. On the next slide see if you can spot all the things wrong...
Can anyone hear me?
What are some thing wrong with this set up?

1. No name
2. Speaking over
3. Background distracting

1. No video
2. Too busy slide
3. Unmuted, sleeping

1. Poor camera position
2. Inappropriate setting
3. Speaker muted/technical difficulties
How do we prepare doctors in training for the future, when the present is already challenging?

- Flexibility and expectations
- Curricular design (time commitment)
- Diverse approaches to learning
- Technology integration
- Feedback and assessment
Virtual Learning

Scaleable
Accessible
No limitation
Take Home points
Thank you