

Beyond the Emergency Department: Perceived Effects of COVID-19 on Emergency Medicine Resident Education

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BACKGROUND

After the COVID-19 pandemic began in late 2019, many medical residents saw a rapid shift in their professional demands:

- Increasing numbers of patients infected with COVID-19¹
- Decreased patient volumes¹
- increased utilization of personal protective equipment
- Deviation from in-person education to virtual didactics²

OBJECTIVE

Determine the perceived effects of the pandemic on Emergency Medicine (EM) residents' educational experiences.

METHODS

Cross-sectional **Mixed-methods**
Survey Based

We administered a survey to Emergency Medicine (EM) residents at seven US programs, varying by length of training, geographical location, and local incidence of COVID-19 infections. We summarized quantitative data with comparisons of subgroups, and answers to open-ended questions were analyzed using the framework method to guide our inductive approach.³

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Systems Experience

- Operational knowledge gained from participating in a disaster response
- Increased innovation
- Positive view of EM as a specialty
- More efficient hospital workflow and improved interdepartmental relationships



- Frustration with frequently changing protocols
- Changes to schedules or rotation cancellation
- Disruption in clinical workflow

Clinical Experience

- Increased knowledge and experience in the management of respiratory pathology
- Increased comfort with the implementation of infection control measures
- Increase in time available on shift
- Increased exposure to procedures and critical care for senior residents



- Frustration with protocolized restrictions on which patients provider could treat
- Limited experiences for junior residents
- Decreased patient volumes, clinical variety, and clinical acuity
- Decreased on-shift teaching opportunities
- Concern for the impact of anchoring bias

Didactic Experience

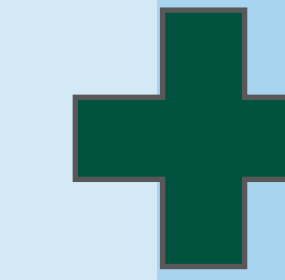
- Experience with independent learning
- Increased convenience or flexibility with virtual didactics
- Inclusion of outside speakers with virtual didactics



- Less engagement with virtual didactics
- Decreased education in core content due to increased focus on the management of COVID-19
- Negative effect of virtual didactics on interpersonal interactions with colleagues
- Inability to travel to national conferences
- Decrease in simulation

Wellness

- Increased time for residents to do things they enjoy
- Career affirmation
- Increased camaraderie and resilience



- Negative impact on mental health
- Frustration & discomfort related to personal protective equipment
- Concern for physical safety of self and close contacts
- Negative impact on social interactions
- Anxiety regarding future career implications

CONCLUSION

We found mixed results of the pandemic on the EM residency experience with an overall negative effect on education, wellness, and clinical rotations, but an increase in satisfaction with EM as a career choice. This is further contextualized in our qualitative data analysis, highlighting the impacts of participants' systems, clinical, and didactic experiences during the pandemic in addition to the influence on resident wellness.

LIMITATIONS

These data examine subjective effects important to residents in the short term and do not explore long term or objective effects of the pandemic, an important area for future research. In addition, while we included residents from 7 institutions intentionally selected for diversity of training experience, these findings may not be generalizable to all programs.

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