

# Adding to the COVID-19 Educational Script

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As we face the coronavirus disease (COVID-19) pandemic for yet another month, it rings true that our training programs, medical teams, and trainees need a sound plan and script. The pandemic has changed the way we deliver care, teach, and conference in medicine (1–3).

COVID-19 has even forced us to change the way we interview applicants for our specialties (4, 5). Two articles recently published in *ATS Scholar* inform us of how COVID-19 altered medical education globally in the intensive care unit and in U.S. pulmonary critical care medicine (PCCM) training programs as a whole. Matta and colleagues surveyed program directors from the United States to evaluate the impact of COVID-19 on American PCCM fellowship training (6), whereas Wahlster and colleagues performed a global survey of trainees and attending physicians from around the globe on COVID-19's effect on critical care training (7). From their surveys, these authors illuminate strategies to overcome COVID-19 obstacles and further add to the educational script to date. These articles deliver practical strategies in a timely fashion that programs can use to augment education as the pandemic continues.

Matta and colleagues distributed an efficient program director-only survey

that yielded rich quantitative and qualitative data. Directly accessing program leadership ensured that educational efforts across the entire country were well represented. Significant gaps in particular curricular areas related to COVID-19 were identified, including reduced opportunities for fellow pulmonary function test interpretations, procedures such as elective bronchoscopies, and outpatient encounters. The inclusion of qualitative data offered insight on how programs adapted their curricula to account for these changes and delivered “how to train in a pandemic” recommendations for PCCM fellowships: have frequent check-ins with fellows, adjust work schedules to ensure contiguous days off during busy rotations, continue to educate with didactics using virtual platforms, and add simulation opportunities to bolster procedure experiences. Although the authors are applauded for obtaining robust information during a pandemic peak, the efficiency-based approach applied certainly came with limitations, including a relatively low response rate at 28.5%, and most of the information derived came from university-based programs, leaving some uncertainty regarding curricular changes at community-based programs. To maintain efficiency, no trainee

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data was accumulated, and the survey focused on perceptions of education rather than objective outcomes.

Wahlster and colleagues used a global survey of both critical care attending and trainee physicians and obtained a robust response of over 1,100 respondents from over 37 countries. Although some of the responses were divided, most respondents reported that COVID-19 had negative effects on critical care training, and the authors found that some changes in education were perceived differently among trainees and attendings. Their evaluation, including multivariate analyses, found specific changes to avoid while educating during a pandemic: do not decrease formalized didactics and teaching, do not reassign trainees to areas outside their primary specialty, do not substantially decrease supervision, and avoid drastic reductions in procedures performed by trainees. Similar to Matta and colleagues, this investigation had limitations, including a focus on perceptions of education and a lack of objective outcome measures. The authors note that their study was also limited by a potential lack of generalizability, as they were unable to account for a response rate because of dissemination methods and sampling bias. Like the Matta paper, clinical burden of the target population may have limited some responses. Applicability of their survey data could potentially be limited by cultural differences, as autonomy and duties

can vary regionally. Failure to inquire directly about things that could have positively influenced education may have also limited results.

Both groups note that these studies evaluated learning perceptions of frontline physicians and did not obtain objective data linked to outcome metrics. However, it must be noted that obtaining any data of frontline physicians at the peak of a pandemic is not easy. Though both articles have limitations, the authors should be applauded for obtaining the information expeditiously during difficult times. These survey investigations inform program directors across the country for policy making and decisions that affect their curricula in unprecedented times. Although individual programs may choose to implement based on their unique needs, it is helpful to have a script, constructed from surveys like these, as guidance on how to adapt educational approaches and make real-time adjustments. For example, after being informed by these authors that a potential contemporary pulmonary outpatient gap exists, fellowships can update their educational programs and locate a novel outpatient curriculum (8) and discuss implementation strategies with their fellows. The papers from Wahlster and colleagues and Matta and colleagues add to our COVID-19 educational script.

**Author disclosures** are available with the text of this article at [www.atsjournals.org](http://www.atsjournals.org).

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