



# Adaptation as Both Necessity and Discipline

## Communication Skills Training in the COVID-19 Era

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It is obvious that the coronavirus disease (COVID-19) pandemic has forced medical educators to change practices and activities to facilitate physical and social distancing, accommodate diminished boundaries between work and personal lives, and navigate new and rapidly evolving clinical challenges. However, the obviousness of this fact undermines neither its importance nor the lessons to be learned from it. Rather, it represents an opportunity to realize innovation and adaptation as bounded disciplines with particular methods, outcomes, and measurements that can enhance the quality of educational products and the evidence base underlying them (1).

In implementation science, adaptation indicates deliberate and reflective changes to an intervention's design or delivery to improve its effectiveness within a particular context (2, 3). Through this lens, the pandemic and its downstream effects can be seen as a set of disruptive new contexts that necessitate updating many interventions and behaviors. Without adaptation, such disruption can

be massively problematic, as highlighted by the supermajority of U.S. trainees reporting negatively impacted clinical education because of the pandemic (4).

In this issue of *ATS Scholar*, Chiarchiaro and colleagues describe their adaptation of a communication skills training experience for critical care fellows into a hybrid course (5). This work could not be timelier: High-quality communication with patients and families, which has always been essential in the intensive care unit (ICU), has taken on new importance and urgency in the face of obstacles such as visitor restrictions (6) and misinformation (7). These acute issues exacerbate long-standing challenges distilling complexity and uncertainty, delivering bad news, and informing surrogate decision making (8, 9). The high stakes of these challenges (10, 11) were evident before the pandemic and are almost certainly higher now. For these reasons, it is imperative to train ICU clinicians in effective communication.

Before discussing the important work of Chiarchiaro and colleagues, it is useful to

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ATS Scholar Vol 3, Iss 1, pp 5–8, 2022  
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Originally Published in Press as DOI: 10.34197/ats-scholar.2022-0002ED

reflect on the enormity of effort trainees and programs devote to developing communication skills and behaviors. These skills take years to develop and maintain, and mastery—or at least competence—is expected at advanced postgraduate training levels. As such, the Accreditation Council for Graduate Medical Education requires clinical fellowship programs to track and report learner development of this core competency (12).

Many programs provide curricula on serious illness communication, such as the Critical Care Communication (C3) course, which serves as the substrate for Chiarchiaro and colleagues' adaptation. C3 is a 3-day course for critical care fellows focused on development of communication skills through a combination of didactics, deliberate practice, and role play (13). Unfortunately, just as the COVID-19 pandemic has presented an opportunity for improved communication skills to shine, it has also posed a challenge to the type of experiential learning that makes C3 so successful. Facing limited in-person learning opportunities, programs disseminated educational material electronically. However, skills requiring deliberate practice, such as ICU communication, are more challenging to replicate virtually.

Chiarchiaro and colleagues adapted C3 into a hybrid version of the course, with critical care fellows participating in novel virtual activities as well as traditional small group simulated sessions (5). The authors describe the efforts they took to maintain fundamental elements of the traditional C3 curriculum. First, interactive online modules focused on fundamental ICU communication skills such as responding to emotion and mapping values. Second, learners participated virtually in live

“drills” to practice the skills taught during the didactic session. Finally, learners consolidated new skills by role playing within simulated ICU scenarios; this activity, just as in prior iterations of C3, took place in person with small groups. This carryforward of core functions from the prior version of C3 would be described as “fidelity consistent,” a marker of adherence to the intervention's components and the competence with which it is delivered (2, 3). Because fidelity-consistent adaptations are generally believed to produce better outcomes than those that disregard core elements of prior interventions, the authors have likely set the stage for success in this project.

After the course, participants self-assessed their competence and reported overall course satisfaction on a 5-point Likert scale (5 = high). Results from the 28 critical care fellows in the hybrid course were compared with those from 101 fellows who completed the traditional in-person version over the prior 8 years. The authors' findings suggest that the adapted hybrid-virtual course can prepare learners for critical illness conversations as effectively as the traditional in-person curriculum. More than 90% of the hybrid course participants reported feeling “well prepared” to apply skills such as delivering serious news and conducting a family meeting, which did not differ significantly from the traditional course. A similar proportion rated the various components of the hybrid course as “effective” or “very effective” and relevant to their practice.

Perceived course quality was not compromised by the virtual format. In both versions, learners universally rated the educational quality of the course as a 4 or 5. Hybrid course participants reported high satisfaction with the course components, with a mean rating of 4.8.

Notably and perhaps surprisingly, the online didactics were rated significantly more highly than traditional didactics. Although some existing literature indicates that virtual learning is frequently noninferior to traditional approaches, fewer studies suggest that virtual or hybrid options are actually superior (14, 15). One conceivable explanation is that this study's adaptations were particularly well designed to incorporate important principles of adult learning: leveraging intrinsic motivation, incorporating deliberate practice, and spaced learning (16), which could have contributed to the high ratings. For example, the didactics engaged learners with interactive questions, provided immediate feedback with data from the literature and expert clinicians, and reinforced learning through further practice with specific skills. In addition, the presentation of material in multiple formats (e.g., text plus video with interspersed questions) may enhance engagement by allowing learners to select styles suited to their learning preferences (16). Finally, the authors suggest increased flexibility and self-paced learning as possible advantages of the virtual platform.

As Chiarchiaro and colleagues appropriately acknowledge, their study does have some important limitations. First, like most studies of communication training in critical illness (17), this work did not measure objective improvement in

learners' skills after the hybrid-virtual training course. Second, the work was performed at a single center and led by faculty highly proficient in communication skills training; it is unclear whether training programs with less relevant experience or fewer resources would find the same degree of success. Attention to more meaningful outcomes and their durability over time, as well as the adapted C3's external validity, should be the focus of future work.

As the pandemic persists into its third year, fellowship programs will continue to face the challenge of educating learners in an environment of uncertainty and dynamic risk, emphasizing the necessity of flexible remote and hybrid education.

Undoubtedly, virtual components of medical education will persist beyond this pandemic and, as Chiarchiaro and colleagues suggest, may in some cases be preferred because of their flexibility and convenience. It is essential that physicians in critical care acquire and hone their serious illness communication skills to best serve patients and their families; thus, we commend the authors of this study for adapting their critical care communication skills training to maintain its value during the pandemic's constraints.

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

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