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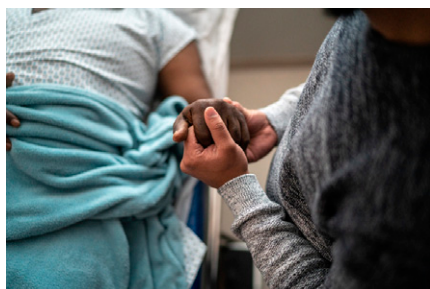


## Leveraging Family Experience to Improve Their Engagement in the Intensive Care Unit

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Since the emergence of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), patients hospitalized with coronavirus disease (COVID-19) have been cared for in hospitals that enacted new, and often restrictive, visitor policies (1–3). These policies arose out of fear regarding the transmissibility of SARS-CoV-2, the

uncertainty in the effectiveness of personal protective equipment at preventing transmission, and limited personal protective equipment supply (3). It was hoped that restricting visitation would limit the spread of SARS-CoV-2 and protect hospital staff who were desperately needed as the pandemic took hold. Though data are limited, it appears that visitor restrictions were nearly universal, and in the majority of hospitals no visitors were permitted in the absence of extraordinary circumstance, such as end-of-life events (1). These policies may have had their most severe consequences in intensive care units (ICUs), where the acuity of illness and the urgency of decision making for patients and their surrogates is most immediate.

Representing the F, for Family Engagement, in the Society of Critical Care Medicine's ABCDEF bundle to promote ICU liberation and survivorship, family engagement for patients with critical illness is a key element of evidence-based critical care medicine (4). Family engagement can decrease the risk of delirium, improve collaborative decision making, and reduce patient suffering. In addition, family members of critically ill patients may themselves experience long-term psychological effects, including depression,

post-traumatic stress disorder (PTSD), and complicated grief (5). Fortunately, family engagement during a patient's ICU stay can lessen the morbidity of critical illness for both patients and their families (6). Specific to the COVID-19 pandemic, the lack of family presence was one of only two modifiable delirium risk factors found in a large international study of critically ill patients with COVID-19 (7). Evidence also suggests that visitor restriction policies related to COVID-19 delayed important goals of care decisions and may have prolonged the suffering of patients in the ICU who ultimately died (8). The absence of family at the bedside may have complex effects on the experiences of ICU clinicians (9). However, difficulties with communication, loss of the humanizing presence of families, and witnessing patient deaths without family present may increase the burnout and moral distress that is now endemic among those caring for patients in the ICU during the COVID-19 pandemic (9, 10).

With the evolution of new SARS-CoV-2 variants and incomplete vaccination coverage, visitor restriction policies will likely continue in some form. As we see this happen, visitation policies should be designed to minimize the negative impact that visitor restrictions are known to have on

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patients and their families (11, 12). Updated evidence-based strategies are needed to inform policy revision and help clinicians and families navigate these difficult circumstances. Although quantitative research can define the extent of visitor restrictions and the associations with important patient and family outcomes, the impact of visitor restriction is a complex social phenomenon. Qualitative research, which is used to describe and explore these types of complex processes, is well suited to examine the impact of visitation policies on patients, families, and ICU clinicians (13).

In this issue of *AnnalsATS*, Hochendoner and colleagues (pp. 614–624) provide important data on this topic (14). The authors used qualitative methods to examine the experiences of family members of critically ill patients in the ICU at 10 U.S. sites during times of visitor restrictions. Semistructured interviews were conducted to explore the constructs of illness narrative, stress, communication, and satisfaction with care. All interviews were conducted approximately 3 months after patients were discharged from the ICU and were tailored to the participants' Impact of Event Scale-6 score (measuring symptoms of PTSD). Overall, 74 family members of survivors or nonsurvivors were interviewed.

Several important themes emerged. Importantly and disturbingly, there were reports of substantial stress, emotional anguish, and suffering related to being unable to visit their critically ill family member. Participants described a yearning to provide physical presence and touch as a means of support. Participants valued proactive, frequent, consistent, and compassionate communication with providers. Although videoconferencing was viewed as a facilitator for providing this type of communication, it

was not a panacea. A substantial proportion of participants reported barriers to using this technology. In addition, mental preparation for what the family was to witness on video was viewed as an important aspect for effective and compassionate video communication. Unfortunately, the physical divide between staff and family was found to undermine trust between families and ICU care teams and was most poignant during goals of care discussions. Consistent with the effects of critical illness on patients' families (5), participants reported substantial psychological distress and illness, both at the time of the patient's ICU stay and at the time of the interview.

Importantly, the researchers were able to leverage family expertise to make recommendations to guide clinician communication during times of visitor restrictions. The authors summarized these family-derived recommendations as the "3Cs: *contact, consistency and compassion.*" Participants noted that daily and consistent contact effectively alleviated stress. This was especially true when family updates occurred at an agreed upon, set daily time. When daily updates could not occur on the planned schedule, having this relayed to the family by nonclinical support staff was recommended. Personalizing information about the patient and describing or showing aspects of care being provided were described as important components of compassionate communication. In addition, families recommended measures to provide family support in the absence of physical presence by facilitating the posting and sharing of messages, photos, and cherished home items with the patient.

Overall, the study by Hochendoner and colleagues is a rigorous qualitative

exploration of this important and timely topic. Conducted at multiple sites throughout the United States, these findings are likely to transfer to other U.S. settings and align with emerging findings in other countries (15, 16). Racial, geographic, and economic diversity was a goal of recruitment, and the study population was geographically and racially diverse. However, the sample is composed exclusively of English-speakers, with generally high educational attainment and who mostly reside in urban areas. In a pandemic that has laid bare the existing disparities in U.S. society, this leaves out important voices. Including underrepresented communities in future qualitative assessments is an important goal. When revising existing visitation policies and communication strategies, careful attention to including appropriate representation to avoid systematically worsening disparities will be needed.

At the beginning of the pandemic, uncertainty and fear drove the implementation of widespread visitor restrictions. Though the pandemic continues, our understanding of how to prevent SARS-CoV-2 transmission in medical settings has increased dramatically. Continuing, or reverting to, blanket visitor restrictions risks substantial harm to our patients and their families and will be a source of distrust in an already highly fractured and volatile society. Fortunately, by leveraging the expertise of those most experienced with this topic, patients' families themselves, we have an opportunity to improve communication and family engagement during the pandemic and beyond. ■

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

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## Tuberculosis, Chronic Obstructive Lung Disease, and Lung Cancer: The Holey Upper Lobe Trinity?

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Tuberculosis (TB) research has traditionally focused on diagnostics and therapy for acute infections. TB diagnosis remains difficult, but several new diagnostics have been developed

in recent years with higher sensitivity and specificity for diagnosis (1, 2). In addition, many advances have been made in the treatment of TB with promising high-efficacy treatment regimens of shorter duration. Treatment that used to take up to 9 months can now potentially be as short as 4 months (3). With better living conditions, improved nutrition, and the improvements in diagnosis and treatment of TB, more people are surviving TB. In 2019, 86% of people treated with first-line therapy were successfully treated for TB (4). As more people survive TB, long-term complications are increasingly recognized (5).

The potential complications after treated TB are numerous. They include chronic respiratory symptoms, post-tuberculous lung disease, and increased risk for specific lung diseases such as chronic obstructive pulmonary disease (COPD) (6), which in turn increase the risk for subsequent bouts of TB (7). Prior pulmonary TB is a known risk factor for the development of lung cancer (8). COPD, in addition to being associated with increased risk for TB, is a strong risk factor for development of lung cancer regardless of smoking status (9). As TB is associated with increased risk for both COPD and lung cancer, and COPD is associated with increased risk for lung cancer, the question is

whether TB works synergistically with COPD, thereby further enhancing the risk for subsequent lung cancer.

In this issue of *AnnalsATS*, Park and colleagues (pp. 640–648) evaluated whether a history of pulmonary TB is associated with increased risk of lung cancer in people with COPD (10). Using a large national cohort with longitudinal follow-up, they evaluated the risk of lung cancer after TB in both smokers and never-smokers with COPD. To evaluate the effect of COPD on the risk of lung cancer after pulmonary TB, they matched 1:3 individuals with and without COPD. The authors found that a history of pulmonary TB was associated with a 1.23-fold increased risk of lung cancer among people with COPD. Among the participants without COPD, there was no association of prior pulmonary TB with risk of lung cancer in this cohort.

In this cohort, a large proportion of participants were never-smokers, with only 31.7% of those with no prior TB and 44.2% of those with a history of TB being ever-smokers (past and current). The proportion of never-smokers with COPD diagnoses was substantial, at approximately 66%. The authors thus performed a subanalysis in never-smokers to assess whether the relationship of prior pulmonary TB with lung cancer persists in those who do not have

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