



Infections in the Critically Ill during the COVID-19 Pandemic: Infectious Diseases on Steroids



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The first issue of “Complex Infectious Diseases Issues in the Intensive Care Unit” in *Infectious Disease Clinics of North America* highlighted the overwhelming presence of infection in the intensive care unit (ICU) and the unique intersection of infectious disease and critical care medicine. Now, 5 years later, the COVID-19 pandemic has highlighted the intersection of these two subspecialties in an obvious way and has made abundantly clear that the partnership should be strengthened. The second issue of “After the Covid-19 Crisis: Update on Complex Infectious Disease Issues in the Intensive Care Unit” is a compilation of articles that combines current evidence with the opinions of experts to highlight important nuances in caring for patients in the ICU in this new era of COVID-19.

The pandemic has raised the world’s guard around infectious diseases in general. It has undoubtedly heightened interest in the infections that tend to make us very sick, the ones that challenge the paradigms in medicine, the ones that keep clinicians up worrying at night. It has made health care leaders and society reflect on the multiple mishaps that occurred during the pandemic due to lack of planning, and to work on bolstering resilience so we are better prepared for the next one, as there surely will be. It is also why 5 years ago, before the pandemic, we put together the original issue of this *Infectious Disease Clinics of North America* collection, “Complex Infectious Diseases Issues in the Intensive Care Unit.”

Now well into the third year of the pandemic, as we write this Preface, we can’t help it but marvel at one remarkable accomplishment of our time when basic scientists, clinicians, industry, funding, and regulatory agencies joined forces to develop and test effective vaccines in record time. This certainly should set a standard for a model going forward. We also note how the practice of medicine has changed, and how the demeanor of our colleagues has been impacted: despair at the thought of millions losing their lives needlessly to an avoidable tragedy; respect for our colleagues on

the frontline, whose dedication, sacrifice, hours, and in some cases their own health, have been at risk while they maintained the patient as their top priority; acceptance of the fact that the doctor—patient relationship will be adversely affected by the need for personal protective equipment for the foreseeable future. As we, as a profession, grapple with these changes, this issue of “Update on Complex Infectious Diseases Issues in the Intensive Care Unit” will leverage these changes in medical practice into an opportunity to better equip our fellow clinicians to follow the evidence, learn from the opinions of world experts, and save more lives.

This issue disentangles ongoing and additional “Complex Infectious Diseases Issues in the Intensive Care Unit” continues to disentangle ongoing and additional clinical controversies and provides evidence-based updates on cutting-edge critical care management of patients with serious infections beyond just COVID-19. Although COVID-19 has impacted the way we deliver care for all patients in the ICU, there are still some areas of ICU care that are complex enough without COVID-19 and warrant a discussion of a detailed evidence-based approach. These topics include the timing and spectrum of antibiotic therapy in sepsis, distinguishing cytokine release syndrome from sepsis, management of infections with highly resistant gram-negative bacteria, management of some unique pneumonias, updates on the management of severe streptococcal infections, and an updated discussion of the management of *Clostridioides difficile* infections. Of course, this issue would not be complete if we did not address topics that are COVID-19 related, such as preparing an ICU for a lethal respiratory virus pandemic, management of serious COVID-19 infections with immunotherapies, and addressing supportive ICU care in patients with COVID-19.

Crises, wars, and major disasters have historically been coupled with significant advances and opportunities. COVID-19 was no exception; we should in turn take it, learn from the last several years, and prepare for the next pandemic.

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