

## Preface



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*Guest Editor*

Sleep is a basic physiologic function of the human body. It is required to maintain health and to assist in recovery from disease. Unfortunately the hospital environment is not a very conducive environment for restful sleep. The ICU is one of the harshest environments for maintaining necessary sleep and circadian rhythms. In this issue of *Critical Care Clinics*, we explore many different aspects of sleep and circadian rhythms and how their disruption may affect the patient hospitalized in the ICU.

The initial article reviews what occurs during normal sleep, examining its effects on not only the central nervous system but also other physiologic systems. The second article delves into the dramatic effects caused by sleep deprivation, an obvious result of the ICU environs.

The next two articles analyze medication effects. One article looks at the effects on sleep of the drugs that are commonly used in the ICU setting, an analysis not often considered when using these medications. Because sleep disorders are extremely common, the second article is included to review the effects of common medications used to treat sleep disorders. The purpose of including this article is to familiarize the intensivist with these medications, which they may not use regularly.

The next article examines another potential disruptor of sleep in the ICU, artificial ventilation. Both invasive and noninvasive ventilation have been shown to have adverse effects on sleep and some studies suggest this disruption may potentially lead to prolonged time for weaning.

The next four articles are dedicated to examining sleep disorders that are commonly found in patients admitted to ICUs, including

obesity-hypoventilation syndrome, the overlap syndrome (patients who have both COPD and obstructive sleep apnea), and heart failure complicated by sleep-disordered breathing syndromes. These three articles critically appraise these syndromes and how they might affect a patient's ICU stay. The fourth article reviews sleep disorders that may be concomitantly found in ICU patients on admission, again alerting the intensivist to ways these disorders may adversely affect the underlying diagnoses for ICU admission.

In the final article, we investigate the potential contributors to sleep and circadian rhythm disruption in the ICU and methods that the ICU director and staff may use to minimize that impact on their patients.

In conclusion, I hope you find that this issue of *Critical Care Clinics* prompts you to consider the impact of sleep, sleep deprivation, and sleep disorders on your ICU patients and contemplate ways to improve the ICU environment and the care of your patients' sleep needs.

I would like to thank the authors for their excellent contributions to this issue and Lisa Richman for her patience. I dedicate this issue to my husband, Tom Collop, for his love, companionship, and unremitting dedication to our family.

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