

The Expanding Role of the Nephrologist in the Intensive Care Unit

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In decades past, the primary role of the nephrologist in the intensive care unit (ICU) was to provide renal replacement therapy and to assist in the diagnosis and treatment of complex acid-base disorders. As the burden of kidney disease increases in our aging population, clinical nephrologists find themselves practicing more and more critical care medicine. For many nephrologists, particularly those in private practice, they are the *de facto* intensivist if one of their patients is admitted to the ICU. In other venues, nephrologists are able to consult on critically ill patients with a multispecialty team of treating physicians. The extent of the role placed on the nephrologist in the ICU is often determined by local practice (*e.g.*, presence of closed or open ICU) and geography (rural *versus* urban). In locales where a critical care consultant is not immediately available, nephrologists are often drawn into the critical care treatment of these patients because their patients have chronic kidney disease or have developed acute kidney injury (AKI). In either scenario, the increasing complexity of the ICU demands that consulting nephrologists understand the clinical and technologic advances in critical care medicine.

In these Moving Points: Advances in Critical Care for the

Nephrologist, six separate reviews have been assembled. Because early goal-directed resuscitation has been a major feature of the recent advances in critical care medicine, it is crucial that nephrologists understand the physiologic goals of resuscitation and the tools that are used to accomplish these outcomes. In the first article, Herget-Rosenthal *et al.* outline the diagnostic approach to shock within the context of the currently available technology and focus on the vital role of first responders. In addition, this article reviews the vasopressors available to clinicians with a section that focuses on the renal effects of these potent drugs. In the second article, Davison *et al.* give an update on hemodynamic monitoring with special emphasis on the role of the pulmonary artery catheter and noninvasive cardiac output monitoring.

As our understanding of critical illness improves, the “cross-talk” of organs in critical illness has become an important area of research. Pulmonary–renal interactions are bidirectional, and the use of mechanical ventilation affects both organ systems. Murray *et al.* address the use of mechanical ventilation and pulmonary–renal interactions in the third article of this Moving Points series. The next set of articles focus on two common syndromes associated with a high mortality in the ICU: sepsis and acute respiratory distress syndrome. The series closes with a pragmatic approach to ethics and guidelines for withholding and withdrawing renal replacement therapy in critically ill patients.

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