

Critical Care

Explore the future of critical care through ATS 2012



When it comes to presenting the latest clinical and scientific advances in critical care, ATS 2012 has an important advantage: size.

As the largest meeting of its kind, says Greg Martin, MD, MSc, chair of the Assembly on Critical Care's Program Planning Committee, "there's a lot more interaction among the leaders in the field and you get not only cutting-edge clinical information, but also cutting-edge science."

With 18 major sessions and 3 postgraduate courses sponsored or co-sponsored by the Assembly on Critical Care, ATS 2012 will appeal to the multidisciplinary team that provides critical care.

"We selected this year's program with a wide variety of healthcare professionals, not just physicians, in mind," says Dr. Martin. And with several hands-on sections, he adds, "the conference is great for people who want to update their skills or acquire new ones."

Clinical, translational and basic science researchers will be able to discuss with other researchers more than 500 scientific abstracts

on a range of critical care topics from sepsis to ventilator-associated lung injury to pediatric critical care that will be presented during the International Conference. In addition, more than 100 critical care case reports will be presented.

Here are some highlights of the ATS 2012 program:

Intensive care unit monitoring (postgraduate course)

Monitoring concerns virtually everyone working in the ICU, including respiratory therapists, nurses and physical therapists, as well as physicians.

"Although hemodynamic monitoring has fallen out of favor in last decade or so," says Dr. Martin, "new technologies are providing benefits in monitoring certain select patients—and it's safer, too." With these advances, this hands-on course is relevant to established healthcare professionals, as well as trainees.

(For other PG courses on critical care topics, see list on p. 5)



Dr. Martin

"As the largest meeting of its kind, there's a lot more interaction among the leaders in the field and you get, not only cutting-edge clinical information, but also cutting-edge science."

Critical Care

Extracorporeal gas exchange: respiratory failure and beyond

Clinical leaders from Canada, Italy, Taiwan and the United States will explore this rapidly emerging technology and the rationale for using ECGE, as well as review current evidence and ongoing clinical trials. Among the topics that will be addressed: what signals the need for ECGE in critically ill patients, ECGE as a bridge to a lung transplant and ECGE and ARDS.

What do you do now? Clinical challenges at the edge of evidence

Most sessions on clinical practice focus on reviewing the evidence base for a plan of action. But what do you do when there is no evidence? This session will examine five otherwise common clinical scenarios, except that the patient is failing to respond to all the conventional evidence-based strategies. The master clinicians will propose criteria for deciding when to stop standard therapy. They will also discuss how to communicate and resolve a disagreement with family members about care.

An ounce of prevention in critical care

The ICU of the future, believes Dr. Martin, will be more concerned about preventing acute organ failure and complications of critical illness and individualizing interventions for critically ill patients. “Rehabilitation and electronic medical records will help define the ICU of the future,” says Dr. Martin. “There is a lot of data showing that neuromuscular complications can be ameliorated with rehabilitation that begins in the ICU. At the same time, the increasing use of electronic medical records can help alert physicians to those at high risk of a life-threatening event, so that a rapid response team can intervene in time to make a difference.”

Intensive care of the future

How might technology, medications and staff patterns change the ICU of the future? This symposium will continue the exploration that took place at ATS 2011 of how critical care will be delivered tomorrow. Among the topics: robots and remote providers, preventing ICU-induced disability and bringing intensive care services to the patient’s bedside anywhere in the hospital.

Using genomics to understand and treat acute lung injury

Genetic association studies are becoming increasingly prevalent and complex. Eventually, these discoveries will transform medicine, but it’s not yet clear how. This session will provide insight into how these studies are likely to change ALI therapy. Presenters will review the state of the art of genomic ALI investigations at both the translational and clinical levels, population differences in ALI susceptibility and cell-based therapies that integrate phenotype with biological data.

Acute kidney injury in the ICU

Many ICU patients develop acute kidney injury during their hospitalization, and increasingly intensivists are diagnosing and treating these patients without the advice of a nephrologist. An international panel of critical care and renal experts from Switzerland, France, Amsterdam and the United States will discuss the epidemiology of and biomarkers for early prediction of AKI—important, says Dr. Martin, especially to physicians who must decide if a patient should be transferred to another hospital with the resources to treat AKI. Other presenters will discuss when to start renal replacement therapy, pharmacokinetics during therapy, whether colloids are toxic for the kidneys of critically ill patients and long-term outcomes for patients with AKI. ■

Pulmonary medicine sessions

Paralleling the Critical Care Track at the ATS International Conference is the series of major symposia on pulmonary science and health. Among the symposia topics that will be presented at ATS 2012:

- COPD Exacerbations: Lessons Learned from Clinical Trials
- Evidence-Based Innovations in TB Diagnosis & Treatment
- Models of Sleep Apnea Care Utilizing Portable Monitoring & Alternate Delivery Methods+
- Addressing Variability in Asthma Treatment Responses: Implementing an Individualized Approach
- Lung Cancer State of the Art 2012*
- Clinical Year in Reviews: COPD; Asthma; Sleep; & Rehabilitation for Pulmonary & Critical Care Patients
- Pushing the Envelope: Reevaluating the Criteria for Lung Transplant Candidate Selection
- Scientific Breakthroughs of the Year: Biomarkers for Lung Disease
- Neonatal Origins of Adult Pulmonary Disease
- Current & Emerging Treatments for SDB*
- Pulmonary Rehabilitation Across the Spectrum of Illness for Patients with COPD
- Pneumonia & Pleural Infection: Advances and Controversies
- Pulmonary & Non-Pulmonary Manifestations of Hyperinflation in COPD: Pathogenesis & Implications for Treatment

**Postgraduate course
+Workshop*