

Pulmonary and Critical Care Medicine Fellowship Program

Research

As part of the academic environment, an active research component must be included within each accredited subspecialty program. The program ensures a meaningful, supervised research experience with appropriate protected time in blocks and concurrent with clinical rotations for each resident, while maintaining the essential clinical experience. Evidence of recent productivity by both the program faculty and by the fellows, as a whole will be required, including publication in peer-reviewed journals. Fellows must learn the design and interpretation of research studies, responsible use of informed consent, and research methodology and interpretation of data. The program provides instruction in the critical assessment of new therapies and of the medical literature. Fellows should be advised and supervised by qualified faculty members in the conduct of research.

Educational Goals And Objectives

- Train the fellow in the principles of clinical research and multi-center trials, informed consent and ethical conduct of human research
- Train the fellow in techniques of laboratory investigation, purpose and design of trials.
- Provide critical analysis of literature and relevance to clinical medicine.
- Require participation in and preparation of a research project, research discussions or manuscript/abstract preparation.
- Require presentations and productivity that demonstrate comprehension of research methodology and statistics

Past Research projects:

- Transthyretin (Prealbumin) to assess malnutrition in critically ill patients.(paper accepted for publication in Clinical Biochemistry, 2008)
- Validation of Procalcitonin levels in early identification and monitoring of sepsis in critically ill patients. Prospective observational study, Approved by IRB
- A Retrospective Analysis of the Characteristics and Outcome of Patients Admitted into the Medical ICU with Acute Gastrointestinal Bleeding
- Prevention of venous thromboembolism in critically ill
- Unilateral absence of the pulmonary artery (publication resulted)
- Aspergillus tracheal bronchitis (publication)
- The Prevalence of Tracheobronchomalacia in Patients with Asthma or Chronic Obstructive Pulmonary Disease. Study completed. Accepted for slide presentation at CHEST 2009
- Vancomycin intermediate resistance Staph aureus

- Clavicular tuberculosis (publication resulted)
- Obstructive sleep apnea and procalcitonin levels
- CRP levels in patients with COPD
- Leiomyosarcoma (Case report)
- Acute myelogenous leukemia with lung involvement (case report)
- Prospective study of VDR ventilation vs. low tidal volume ventilation in patients with ARDS
- Linezolid vs. vancomycin in MRSA Pneumonia
- Hypoxemic respiratory failure (resulted in publication)
- "Thyrotoxicosis: a reversible cause of cardiomyopathy" accepted for oral presentation at CHEST 2009
- Non-Invasive Pressure Control Ventilation in conjunction with Intra-Pulmonary Percussive Ventilation avoids Reintubation of Post-Extubation Respiratory Failure –(Accepted for presentation at the SCCM 2010 annual meeting)

New projects planned:

- Comparison of pulmonary artery occlusion pressure with left ventricular end-diastolic pressure in our community-based hospital
- Evaluation of CPAP compliance and effectiveness with a custom fitted sleep apnea mask included in our study. Study is randomized crossover design.
- Comparison of demographics between patients with central line associated blood stream infections vs patients with no documented central line infections in years 2007 and 2008. In process of entering data for 1200+ medical and surgical ICU patients with central lines during this time period.
- Original research study on "Ventilator-associated pneumonia; a bundled approach"
- Case report and review of literature on Babesiosis: a rare cause of splenic infarction,
- Case series on Lymphocytic Interstitial Pneumonitis
- MRI derived Ventricular Mass Index AND 2D-Echo derived RVSP to assess pulmonary artery pressures