

Surgical and Neurosurgical ICU Goals and Objectives

The year spent in the SICU will be an educational and growing experience for the fellow. The fellow will be the central contact person for the residents, nurses, attendings, consultants and other ancillary services. Besides mastering the clinical knowledge of intensive care medicine, the fellow will grow as a teacher, administrator, arbitrator, and researcher. Due to the nature of critical care medicine, difficult political and ethical issues will be part of daily experience. At some point during the year, the fellow will begin to perform the role of an attending. This metamorphosis in role comes from gaining knowledge, respect from colleagues and self confidence. We hope that the program will continue to train young women and men to become dedicated surgical intensivists who will continue to carry on the spirit of teaching as well as to strive for improving patient care.

Patient Care

Competency

Fellows must be able to provide patient care that is compassionate, appropriate, patient-centered and effective for the diagnosis and treatment of critical care problems and the promotion of health. Fellows are expected to:

Objectives:

1. Assess and manage critically ill or injured patients and understand the rationale behind physiologic goals:
2. Cardiovascular support
3. Pulmonary support
4. Maintenance of other vital organ function: liver, kidney, GI tract
5. Prevention of multi-system organ failure
6. Pathophysiology of Sepsis, treatment
7. Metabolic control: blood sugar
8. Hormonal imbalance: adrenal, thyroid function
9. Early nutritional support: enteral feeds
10. Antibiotic use
11. Pharmacokinetics of common ICU drugs
12. Hematologic support
13. Dialysis management
14. Issues regarding life support and withdrawal
15. To treat all types of shock: Septic, Hypovolemic, Hemorrhagic, Neurogenic, Cardiogenic.
16. Early recognition and treatment of shock.
17. To be able to identify and evaluate high risk surgical patients, prepare them for surgery and provide intra- and postoperative treatment
18. To be able to do a thorough neurologic assessment and manage patients with neurosurgical problems including declaration of brain death.
19. To understand the structure of critical care units as well as system issues in policies, procedures and quality assurance development.

Medical Knowledge

Competency

Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care. Fellows are expected to be able to:

Objectives:

1. Insert correctly arterial, central and pulmonary artery lines.
2. Gather information and data from these lines and explain their significance to the care plan for the patient.
3. Describe methods for detecting monitor errors and correcting those and troubleshooting equipment.
4. Diagnose cardiac problems, including arrhythmias, tamponade and cardiac failure.
5. Perform cardiopulmonary resuscitation.
Recognize acid base abnormalities and write orders to correct the problem.
6. Recognize, diagnose and provide appropriate treatment for metabolic problems.

7. Be able to discuss electrolyte abnormalities with plans on correcting the abnormalities.
8. Diagnose pulmonary diseases, such as ARDS, aspiration pneumonia, bacterial pneumonia or COPD, pulmonary contusion.
9. Explain in detail the management for ventilator patients, including an explanation of the differences between various modes of ventilators and their effect on the work of breathing.
10. Write a plan for weaning and extubation of patients from a ventilator.
11. Explain the pathophysiologic concepts of SIRS, sepsis and patterns of multiple organ failure and describe the appropriate support for each situation including novel modalities of treatment such as activated protein C.
12. Describe how to identify patients at risk for renal failure and methods for prevention.
13. State the indications for dialysis, continuous modes of dialysis, and describe adjustments and drug therapy necessary for patients in renal failure.
14. Write individualized nutritional orders, describe how to monitor the ongoing nutritional needs of the patient and how orders will need to be changed in order to meet a patient's nutritional needs.
15. Explain the rationale for early enteral feeding and its role in prevention of multi-system organ failure
16. Explain the role of anti-oxidants in critically ill patients.
17. Identify and treat accordingly high risk surgical patients including the preoperative optimization of cardiac status and prevention of perioperative cardiac complications.
18. Describe the pharmacology and pharmacodynamics of frequently used drugs.
19. Explain use of blood products and various etiologies of coagulation failure.
20. Assess neurologic deficits and institute management of the neurosurgical patient including spinal cord injuries, control of ICP.
21. Understand the neurologic exam for declaration of brain death and mobilization of the Organ donor service.
22. Recognize all types of shock and initiate correct treatments for each.
23. Understand the logistics of diagnosing brain death, and understand the methodology in asking for organ donation (although personnel not specifically trained are not allowed to ask for organ donation). Anticipate potential problems in organ donors and be able to treat these complications.
24. Participate in research design, analysis and writing of a manuscript.

Practice- Based Learning and Improvement

Competency

Fellows must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life long learning. Fellows are expected to develop skills and habits to be able to:

Objectives:

1. Evaluate one's own knowledge, incorporating feedback from others.
2. Modify self-directed learning appropriately including feedback provided from the faculty and peers.
3. Appraise and assimilate evidence from scientific studies to enhance patient care, especially as it relates to surgical critical care medicine.
4. Effectively use information technology to access and manage patient information.
5. Effectively use information technology and other resources to support one's own ongoing self-education (DVDs, CDs, online resources, journals, five-volume SCC handout).
6. Contribute to discussions concerning patient care with other health care professionals, attendings, and consultants.
7. Attend and participate in teaching conferences, didactics and rounds.
8. Participate in research design, analysis and writing of a manuscript.

Systems Based Practice

Competency

Fellows must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as be able to effectively call on other resources in the system to provide optimal health care. Fellows are expected to:

Objectives

1. Collaborate with and maintain appropriate professional attitudes and behaviors toward other medical professionals and allied health personnel.
2. Assess how one's own actions affect others, especially in the critical care setting.
3. Use diagnostic and therapeutic procedures appropriately and judiciously.
4. Evaluate risks, benefits, limitations, and costs of patient care.
5. Provide data for conferences to positively affect patient care.
6. Participate in clinical pathways designed to improve patient outcomes.
7. Serve as patient advocates in dealing with system complexities.
8. Serve as patient advocates for quality patient care.
9. Work effectively with other services, health care agencies, and case managers.
10. Work to improve the system of medical care at the Queen's Medical Center and demonstrate cost conscientiousness by ordering individual tests as necessary instead of a routine battery of tests. Understand Systems issues, process involved in Quality Control and outcome measures.

Professionalism

Competency

Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Fellows are expected to:

Objectives:

1. Exemplify and display an observable respect and compassion toward patients.
2. Exemplify reliability, punctuality, integrity and honesty.
3. Accept responsibility for one's own actions and decisions.
4. Apply sound ethical principles in medical practice, including issues of patient confidentiality, informed consent, provision for the withholding of care, and interactions with insurance companies or disability agencies.
5. Consider the effects of personal, social, and cultural factors in the disease process and patient management.
6. Demonstrate non-judgmental sensitivity and responsiveness to the age, culture, disability status, and gender of patients, families and colleagues.

Interpersonal and Communication Skills

Competency

Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates. Fellows are expected to:

Objectives:

1. Establish trust and maintain rapport with patients and families.
2. Complete dictations and chart notes in a timely manner (monitored by medical records department and Institutional Site Coordinator).
3. Discuss diagnoses, prognoses and treatment options clearly and accurately to patients.
4. Synthesize information and present clinical and diagnostic information clearly to colleagues.
5. Utilize effective listening skills.
6. Communicate and interact with staff/team in respectful, responsive manner.
7. Promote teamwork, and coordinate the work up of surgical critical care patients.

8. Discuss ethical considerations, dilemmas, and family support for patients and a surgical intensive care unit. Model effective communication skills with fellow residents, attending physicians, consultants, nurses and allied health personnel.