

Crouse ICU Multidisciplinary Critical Care Trainee Curriculum

Goals and Objectives

The Crouse ICU is a Multidisciplinary ICU with a 40 year heritage of Multidisciplinary Critical Care. Residents will actively manage complex medical and surgical patients of every description except Burn/Solid Organ Transplant/Cardiac Surgery. The goals of the rotation are to improve skills and advance one's knowledge base in the essential methods of caring for critically ill patients. Upon completion of the rotation, trainees should be more skillful in diagnosing and treating patients with critical illnesses and be able to better manage the resuscitation of critically ill patients on the wards until they can be transferred to an intensive care unit. In addition, trainees should be capable of deciding about the utility and appropriateness of this advanced but invasive and expensive care in the overall treatment of patients.

At the outset of traineeship training there is an expectation of facility with the basic principles of management of the critically ill medical patient. It is the explicit goal of this rotation to further those skills and expand judgment in the prioritization of diagnosis and treatment of these patients. It is also the explicit goal of this rotation to advance competence in the management of the complex surgical patient with significant emphasis on abdominal and neurological surgery. The Supervising Faculty for the rotation are Drs. Acevedo, Polacek, Landsberg and Magnuson.

We recognize six general areas where competency-based goals have been defined:

I. Patient Care: Designed to provide compassionate, appropriate, and effective care for the treatment of critically ill patients.

By the end of this rotation, you will have gained experience in the evaluation and management of the diverse systems encountered in critical care units that include the following areas:

- A. circulatory disorders;
- B. shock syndromes;
- C. cardiovascular diseases;
- D. sepsis and sepsis syndrome;
- E. hypertensive emergencies;
- F. acute and chronic respiratory failure;
- G. acute metabolic disturbances, including over dosages and intoxication syndromes;
- H. multi-organ failure;
- I. electrolyte and acid-base disorders;
- J. metabolic, nutritional, and endocrine effects of critical illnesses;
- K. hematologic and coagulation disorders associated with critical illness.
- L. acute neurological emergencies
- M. critical illness in obstetrical patient

Within these areas, the attending staff will discuss with you the appropriateness of invasive modalities, and the balance between performing services for patients and those procedures that may not be helpful in reaching the family's or patient's goals for their care. We expect trainees to be able to diagnose these disorders and perform the initial

steps in effective management.

II. Medical Knowledge: Designed to allow you to develop a knowledge base about evolving biomedical, clinical and cognate sciences.

The field of critical care is extremely broad and this rotation is designed to give you the opportunity to experience almost its entire breadth in one physical ICU guided by a multidisciplinary approach. It encompasses the following areas, as recognized by ACGME:

- A. management of the immunosuppressed patient;
- B. management of anaphylaxis and acute allergic reactions;
- C. hemodynamic and ventilatory support of patients with organ system damage or in the post operative period;
- D. use of paralytic agents and sedative and analgesic drugs;
- E. detection and prevention of iatrogenic and nosocomial problems in critical care medicine;
- F. psychosocial and emotional effects of critical illnesses on patients and their families;
- G. management of end of life issues and palliative care, and have formal instruction and clinical experience and competency in the following areas:
 - 1. with trauma;
 - 2. with neurosurgical emergencies;
 - 3. with disorders of the cardiovascular, respiratory, renal,
 - 4. gastrointestinal, genitourinary, neurologic, endocrine, hematologic,
 - 5. musculoskeletal, and immune systems as well as of infectious diseases;
 - 6. with critical obstetric and gynecologic disorders
- H. after discharge from the critical care unit
- I. airway management
- J. use of variety of positive pressure ventilatory modes, to include:
 - 1. initiation, maintenance, and weaning of ventilatory support;
 - 2. respiratory care techniques;
 - 3. withdrawal of mechanical ventilatory support.
- K. use of reservoir masks and continuous positive airway pressure masks for delivery of supplemental oxygen, humidifiers, nebulizers, and incentive spirometry;
- L. management of pneumothorax (needle insertion and drainage system);
- M. insertion of chest tubes and drainage systems;
- N. insertion of arterial, central venous, and pulmonary artery balloon flotation catheters;
- O. emergency cardioversion;
- P. interpretation of intracranial pressure monitoring;
- Q. operation of bedside hemodynamic monitoring systems;
- R. nutritional support.

Trainees should also acquire expertise regarding the indications for and utility of the procedures listed below.

- A. emergency pericardiocentesis;
- B. transvenous pacemaker insertion;
- C. endotracheal intubation and management options for the difficult airway;

- D. renal replacement therapy;
- E. pharmacokinetics, pharmacodynamics, and drug metabolism and excretion in critical illness;
- F. principles and techniques of administration and management of an MICU;
- G. ethical, economic, and legal aspects of critical illness;
- H. recognition and management of the critically ill from disasters, including those caused by chemical and biological agents;
- I. management of critical illness in pregnancy;
- J. quality improvement and patient safety activities in the intensive care unit.
- K. the use of critical care ultrasound to diagnose and treat shock states, thoracic and pulmonary pathology, thromboembolic disease and abdominal assessment.
- L. indications for and initiation/management of VV ECMO as well as VA ECMO including e-CPR

III. Practice-based learning and improvement: Designed to improve your ability to investigate and evaluate the care that occurs here on our patients to assimilate evidence and improvements in patient care.

Every four weeks we have a Critical Care Performance Improvement Committee (CCPIC) meeting with nurse managers, representatives of pharmacy, nutrition, respiratory therapy and the quality department to consider and implement new initiatives based on data from our own patients outcomes. Attending this and participating in the initiatives is an important part of your educational experience. We also want you to make suggestions about areas for improvement based on your observations in our units, compared with evolving clinical literature; and you will have the opportunity to study their implementation or develop practice algorithms to be presented in our CCPIC At the end of your traineeship, we expect you to know how to organize the a CCPIC activity to improve care within a defined area of practice.

IV. Interpersonal and Communication Skills: Designed to improve the effective exchange of information and collaboration with patients, their families, and other health professionals.

Weekly multidisciplinary rounds with allied professionals allow you to participate in multidisciplinary approaches that emphasize consensual and collaborative models of patient care. Biomedical ethics consultations are available for difficult issues. Effective communication with consultants is also an art that must be developed and can be challenging. At the end of this rotation, each trainee will be able to demonstrate the ability to:

- A. Communicate in a consensual and collaborative approach with allied professionals.
- B. Effectively participate in a family conference where you deliver necessary information to patient surrogates.
- C. Develop receptivity to others' views and contributions during consults.

V. Professionalism: Designed to support ethical principles and responsibilities and sensitivity to patients of diverse backgrounds within our patient population.

By the end of this rotation, each trainee is expected to develop skills in the following areas:

- A. The fluent demonstration of respect, compassion, integrity and kindness to patients, families and other care-givers, including those with whom you may disagree;
 - B. The ability to recognize and avoid conflicts of interest;
 - C. Strict adherence to confidentiality and the provision of informed consent that is understandable and within context;
 - D. Sensitivity to the gender, age, culture, religion, socioeconomic class, disabilities, sexual preferences and other characteristics of our diverse patient group.
- Professionalism optimizes our effectiveness, lends us credibility, and permits us to work in complex environments.

VI. Systems-based practice, as manifested by actions that make you responsive to and interactive with the larger context and system of health care, and make you knowledgeable about how to call effectively on resources within our system.

By the end of this rotation, each trainee will learn to:

- A. Collaborate with case workers in identifying post-discharge planning congruent with the economic means and prerogatives of our patients, to optimize their chance of a durable good outcome.
- B. Determine how to use the resources of Crouse Hospital, the University, the School of Medicine and legal consultants at your disposal to optimize patient care.

Methods of Instruction

Daily rounds are at 8:30 am - 11 a.m. and at 3 p.m. - 4 p.m. and include patient-based teaching to improve patient care and medical knowledge base. The trainee is expected to progress into the role of directing rounds and committing to management plans that will be critiqued in real time by the supervising attending.

The core curriculum is on Wednesdays and Thursdays from 1:00 pm. – 2:00 pm and includes all of the topics described above under the core competency of Medical Knowledge.

Daily radiographic and imaging interpretation is taught during AM rounds concurrent with review of our patients' radiographic studies.

Practice-based learning and systems-based learning occurs in the Critical Care Performance Improvement Committees (Every fourth Thursday at 7:30 AM) and in implementation of our protocols; and in Multidisciplinary Care Review Committees (Tuesday mornings) every week.

Professionalism should be demonstrated daily and practiced in interactions with nursing, other allied health care professionals, families, consultants and referring physicians.

Level of Supervision

Attending physicians will maintain an independent familiarity with and knowledge base of each patient on our service, separate from your own, designed to assure adequate oversight. The Attendings write daily progress notes that capture their plans, developed consensually with you. Whenever present trainees are expected to supervise all line placements and procedures performed by residents.

Wherever circumstances and/or patient safety allow the trainee will see patients and formulate plans ahead of the attending to get a true assessment of the trainee's progress towards clinical independence. The trainee's degree of autonomy and expectation of mastery will graduate through their levels of training with the Critical Care Fellow expected to be capable of independently initiating management on the majority ICU admissions.

Evaluations

The MedHub system will allow you to document hours of duty, procedures performed and to register your evaluations of our teaching functions. Doing this documentation is very important, but does not supplant direct discussions with the faculty about any concerns or suggestions you may have to improve our rotation. Faculty are expected to provide an end of rotation evaluation and discussion with you, so please expect this and use it as an opportunity. Electronic evaluations of each trainee will be performed by the faculty attendings.

Professionalism and interpersonal and communication skills are also assessed by other health care professionals by direct communication with the Site Director. Expect feedback regarding these skills from nursing staff, respiratory therapists and pharmacists to be routed through the Site Director.

04/03/2016 DML adapted

CROUSE INTENSIVE CARE UNIT ORIENTATION

INTENSIVISTS-

Russ Acevedo MD, FACP, FCCP, FCCM
Clinical Professor of Medicine

Daniel Polacek MD
Clinical Associate Professor of Medicine

David Landsberg MD, FACP, FCCP
Associate Professor of Medicine and Emergency Medicine

Ryan Magnuson DO
Assistant Professor of Medicine

CRITICAL CARE NURSES & AIDES

SECRETARY – Karen (days) Joyce Houston (eves)
Helen Bain (nights)

RESPIRATORY THERAPISTS- RT makes rounds with the team in the morning

CLINICAL DIETICIAN- Maria Meola-makes dietary recommendations

CARE COORDINATORS- Christine Gantos ---- follow patients re: advanced directives, home care, rehab, financial concerns

CLINICAL PHARMACIST- Andrea Call - follows Vancomycin & Gentamycin dosing & orders levels routinely. Follows Coumadin protocols for ICU pts.

ADVANCED CARE/PALLIATIVE CARE – Kelly Wheeler NP, Peter Sinatra NP & Dr Melinda McMinn – Pt and family support for medical regimen and decision making.

GENERAL

- 22 beds mixed MED-SURG
- CENSUS BOARD WITH PATIENT NAME & MD & RN ASSIGNED IS LOCATED AT MAIN DESK BY SECRETARY. The patient census is determined by available nurses and beds...so an 'empty' bed can't always be filled
- CALL ROOMS – Primary On-call room adjacent to ICU, secondary down hall
- Resident Resource Book- located in rolling chart rack at the desk . See attached index
- UNIT PHONE – All Crouse phone #'s begin with 470
ICU = 470-7037 470-7038 470-7039 470-7034
Crouse operator = 470-7111 from outside the hospital

INFECTION CONTROL- wash hands on entering unit and before and after entering rooms and/or touching patients & after removing gloves

CONFERENCE ROOM OUTSIDE OF ICU JUST BEFORE THE WAITING ROOM – has a phone, computer and PACS for your use

COMPUTERS – please avoid using the secretary and charge nurse computers. We have several others available at each desk area.

MAR sees all patients considered for ICU admission. They may be asked to assess a floor patient who may need an ICU bed. You may also be asked to re-assess patients in the ED and PACU waiting for ICU beds and see if they can be downgraded to a floor bed. Please discuss admissions with charge RN to plan bed allocation.

- LECTURES- WED 1P-2P IN CONFERENCE ROOM A
THURS 1P -2P IN CARDIAC CONFERENCE ROOM

PROTOCOLS AND SPECIAL INFO

- Insulin
(Daily Lantus dose (1400) must be ordered on morning rounds)
Restraints- must be reassessed q4 hrs and ordered daily
- Sedation is generally kept to a minimum
- RER- routine electrolyte replacement
- NO Verbal orders are allowed except during an emergency and telephone orders are discouraged
- Blood transfusion consents
- Frequently used order forms are found in slots near the fax machine across from bed # 3.
- TPN orders must be done on morning rounds or by 1200
- DNR orders – a resident can sign as a concurring MD and get a verbal order from attending on call.

ADMISSIONS (FROM ED OR DIRECT FROM ANOTHER HOSP)

- Use CPOE ordersets
- Use infection specific or sepsis ordersets to assure proper antibiotic usage

- MEDICATION RECONCILIATION ORDERS NEED TO BE DONE ON ALL PATIENT (STARTED BY ED RN OR ADMITTING ICU RN)
- ADD TO ICU SIGNOUT LIST ON THE DESKTOP OF ALL COMPUTERS - include key facts re: history meds, current issues, update changes during ICU stay

TRANSFERS IN FROM THE MED-SURG FLOORS

- Use CPOE ordersets
- Medication Reconciliation must be done
- ADD TO ICU SIGNOUT LIST ON COMPUTER

TRANSFERS OUT OF THE UNIT

- * Use CPOE ordersets
- * Attention to insulin dosing on transition to floor as well as DVT prophylaxis
- ALL ICU ATTENDING PATIENTS GET TRANSFERED TO THE HOSPITALIST SERVICE BY THE ATTENDING
- DELETE PT INFO FROM THE ICU SIGN OUT IF NOT DONE BY THE CHARGE RN

ROUNDS

- MULTIDISCIPLINARY & BEGIN BETWEEN 0830-0900 QAM
- AFTERNOON ROUNDS BEGIN BETWEEN 1300-1500 WITH ATTENDING

CODES

- Resident and intern will carry the code beeper
- There will be a daily “test” beep that you will need to call the operator and tell her you received it

CODE A - respiratory or cardiac arrest (ICU RN, anesthesia, IV team, respiratory, MAR, nursing supervisor)

CODE M - Medical response team called due to change in patient condition (nursing supervisor- MAR & respiratory)

CODE B - Stroke emergency- (MAR- neurology – nursing supervisor- respiratory- ct scan , transport)

BEDSIDE PROCEDURES-

- All invasive procedures need a procedural consent and a “time-out” procedure performed as well as a procedure note
- All central line procedures must have all present in the room in gown , glove, mask and cap
- Ultrasound is available and must be used for line insertion
- Residents may do procedures under the direct supervision of a resident that has independent privileges for the same or inclusive procedure.

CRITICAL CARE RESIDENT INFORMATION RESOURCE BOOK	IND EX								
ADMISSION ORDERS TO ICU- MED RECONCILIATION ORDER FORMS PLEASE BE SURE TO MARK ALLERGIES ON ADMIT ORDERS- NARCOTIC RENEWAL Q 7 DAYS	1								
BLOOD TRANSFUSION & CONSENT FORMS	3								
BOWEL PROTOCOL	4								
CODE POLICY- CODE A, CODE B, CODE M (STROKE ADMISSION PACKET FOR CODE B)	5								
COMFORT CARE ORDERS	6								
DAILY LABS & XRAYS	7								
DVT PROPHYLAXIS	8								
GI PROPHYLAXIS	9								
GREEN BEDSIDE BINDERS	10								
HANDWASHING- INFECTION CONTROL	11								
HEPARIN INFUSION PROTOCOL	12								
HYOPERFUSION PROTOCOL FOR CODE M'S	13								
INSULIN PROTOCOL'S & FAQ'S/ NOT FOR DKA PATIENTS	14								
ISOLATION POLICIES / AIRBORNE, CONTACT, DROPLET	15								
RER/ ROUTINE ELECTROLYTE REPLACEMENT	16								
RESTRAINT GUIDE	17								
SEDATION PROTOCOL	18								
SPONTANEOUS BREATHING TRIAL POLICY	19								
STERILE PROCEDURES/ LINE PLACEMENT	20								
TPN ORDER SHEET	21								
TRANSFER OUT ORDER SHEET/ TRANSFER MEDICATION ORDERS/ TRANSFER MED-SURG INSULIN PROTOCOL	22								
TUBE FEEDING ORDER FORM	23								
VISITOR INFORMATION SHEET	24								

Review & Revised by: D. Landsberg, MD
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