MICU J and Wellness Rotation - Curriculum

Educational Purpose

Seemingly contradictory, we have created this 1-week rotation to mitigate fatigue and stress on the professional front while endeavoring to promote wellness on a personal level. MICU J will offer an additional house officer to support our critical care patients on our most vulnerable days (such as during didactic requirements or on weekends) while Wellness will protect the same house officer at all other times of the week to focus on personal needs.

Learning Venue

A. Rotation Description: The critical care rotation at Upstate is one of the busiest and most educationally rewarding services. It is a senior resident (R2/R3) dominated rotation. The team structure usually consists of 4 senior residents (R2/R3, one of which may be an Anesthesia resident), an R1 on elective, a Pulm/CC fellow, and attending. Third and 4th year medical student may be on the team as part of an elective.

The day usually starts around 7am with the resident/intern pre-rounding on the sickest patients. Call is 24 hours and is every 3rd day. One of the four residents is on night coverage of the ICU from 9pm-8am for one week in a four week block. An electronic sign-out (WARD manager) is maintained by the ICU residents and is usually updated by the on call resident. The night resident and the resident who is post call will sign-out to the oncoming team. The fellow will usually arrive between 7:30am-8:00am and will begin rounds until the attending arrives and formal walk rounds start. The post call resident will leave after presenting new patients to the attending. The rest of the day involves attending the noon conference lecture and completing patient care issues. Admissions and transfers in the unit will continue throughout the day. Around 3-4pm, the team will round with the fellow in the afternoon to re-check on the patients after which the non-call resident will leave. Interns work from 7am-7pm Mon-Fri and take overnight call on Saturday.

The MICU J resident is a PGY-2 who will provide consultative and patient care support in the UH ICU on Wednesday mornings from 7AM-12PM (when the Anesthesia resident is in his/her protected morning didactic time) and on weekends from 7AM-7PM (both Saturday and Sunday). He/she will do admissions and consults in the ICU and is expected to take an active role in the treatment and management of patients. Active reading around current ICU topics is required. The resident is expected to teach and supervise junior residents and students. The senior resident should actively seek out and supervise procedures. All consults and admissions will be discussed with the fellow or attending.

When not rotating on the MICU service, the “MICU J” resident will have designated personal time to manage health and wellness needs. There is no educational requirement during this personal time although we certainly recognize some may choose to concentrate on studies or scholarship…this is ultimately a decision left to the house officer on this rotation.

B. TeachingMethods:
    I. The primary method of learning during this rotation is being actively involved during bedside rounds with the attending

and fellow doing direct patient care. The attending and fellow will give lectures on severe sepsis, ventilator management, weaning from mechanical ventilator and other topics.

II. *Unique learning opportunities*:

-Basic Ventilator Management and Weaning

-Primary Interpretation of Tests

1) Hemodynamic monitoring
2) Pulse oximetry
3) Telemetry monitoring

-Ordering and Understanding Tests

1) Bronchoscopy
2) Computed tomography, magnetic resonance imaging of chest, abdomen, brain
3) Echocardiography
4) Electroencephalography

-End of life issues

III. *Patient characteristics*: Expect to see patients age 18 years and up usually with medical related issues and occasional post surgical patients.

IV. Mix of disease/Core topics

- Acute abdominal pain
- Acute chest pain
- Acute intoxication
- Acute liver failure
- Acute renal failure
- Altered mental status, coma
- Antibiotic management
- ARDS
- DKA
- Delirium Tremens
- Hypotension, shock
- Life-threatening arrhythmia
- Massive gastrointestinal bleeding
- Massive hemoptysis
- Morbid Obesity
- Multi Organ Failure Syndrome
- Obstructive Sleep Apnea
- Overdoses
- Pulmonary Hypertension
- Respiratory distress or failure – mechanical ventilation/non-invasive positive pressure ventilation
- Septic Shock
- Severe hypertension
- Severe Sepsis
- Status epilepticus
- Various malignancies
- Rational use of fluids and vasopressors

VI. ProcedureSkills

- Advanced cardiac life support
- Arterial puncture for arterial bloodgas

- Mechanical ventilation (basic)
- Placement of arterial and central venous lines
- Placement of nasogastric tube
- Lumbar puncture
- External cardiac pacing
- Thoracentesis
- Paracentesis
- Insertion of temporary pacemaker (optional)
- Placement of endotracheal tube (optional)
- Placement of pulmonary artery catheter and it's utility (optional)
- Use of Ultrasound for the placement of central line and to guide thoracentesis and paracentesis

Recommended Reading

- Marino,P.L.(1998) *TheICUBook,3rd edition*.This book is dated but contains useful principles and physiology about ICU related issues.
- www.thoracic.org/criticalcare/is an excellent online resource for practiceguidelines, treatment algorithms, hemodynamic monitoring and the unique ethics of the ICU.
- Up todate
- Mayo Clinic Well-Being Index: https://www.mywellbeingindex.org/signup (Code: Upstate)

Evaluations

Evaluations are based on the six core competencies. All residents should seek clear guidelines and expectations for reporting and learning at the beginning of their rotation. We recognize that the nature of this rotation, however, may not allow for robust evaluation from supervisors so we instead hope that the house officer on this rotation takes a more introspective approach to self-evaluation.

Rotation-Specific Competencies

1) Patient care: At the end of the rotation the resident should be able to appropriately manage and triage very ill patients. They should be able to distinguish patients that require an intensive setting vs. one that can be managed on a floor.
2) Medical Knowledge: Be familiar with and able to interpret hemodynamic monitoring devices and the initial workup and management of the core topics listed above. Additionally, we request completion of the Mayo Clinic Well-Being Index so that one can gain knowledge of one's own wellness.
3) Professionalism: Self-reflection and introspection are important attributes of a physician to promote better patient care as well as support one's own well-being. We request completion of the Mayo Clinic Well-Being Index to support one's professional development.
4) Interpersonal and communication skills: Be able to communicate and interact with other health care personnel. Fundamental in the ICU is an understanding of end of life care and the legal/ethical implications of care or withdrawal of care. Residents need to be effective and empathetic communicators with patients and their families.
5) Practice-based learning: Be able to use the necessary tools to find the most effective and proven management plans for their patients.
6) Systems based practice: Be able to utilize high tech services in a cost effective manner. Additionally residents will need to work closely with extended care providers, knowledgeable nursing staff, respiratory therapy and hospital administration.

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