MICU ROTATION DIRECTORS: Joseph Govert, MD and Loretta Que, MD

EDUCATIONAL GOAL AND OBJECTIVES:
Learn the diagnosis and management of critical illness, including respiratory and general medical critical care.

During this rotation the resident will:
1. Develop proficiency in obtaining a comprehensive history and performing a thorough physical exam in critically ill patients.
2. Provide safe and effective health care with compassion, consideration, professionalism, and courtesy.
3. Formulate in conjunction with the fellow/attending a thoughtful assessment and plan for your patients.
4. Gain proficiency in the basic procedures of internal medicine and critical care medicine, including but not limited to phlebotomy, arterial blood gas, arterial line placement, nasogastric tube placement, central venous line placement, intubation, thoracentesis, arthrocentesis, paracentesis, and lumbar puncture.
5. Record daily notes on patient’s condition.
6. Follow-up on studies and tests performed on patients.
7. Gain basic understanding of critical care management in sepsis, cardiac and respiratory failure, sedation practices, hemodynamic monitoring, and other critical illness

Expectations
The MICU at Duke is a busy clinical teaching service. Patient-based independent learning is emphasized, but there is also web-based structured teaching on the rotation.

Daily Schedule:

• Work/Teaching Rounds – The MICU team meets at 7:30 am on 8200. New patient presentation occur in front of the combined MICU teams. After all new patients are presented the two resident teams (Bed 1-8 and bed 9-16) split and daily rounds occur. The MICU fellow and MICU attending alternate daily. The structure of the callschedule is q3 call for long-call with a typical call cycle: long-call – post-call – short call. The MICU averages approximately 100 admissions/month.
• **Noon Conference** - MICU residents are encouraged to attend Dept of Medicine noon Conference

• **Evening rounds** – On-call residents, MICU fellow and MICU attending make evening round as a group.

• **Critical Care Conference** – Thursday 11:45 – 12:45 am. Alternates between M&M, ethics conference and lecture presentations.

• **Grand Rounds** – Friday morning 8AM – You are expected to attend while on MICU.

**Admissions:**
• On-call residents admit patients. The number of admissions averages 2 admissions per resident, but on occasion the on call team may admit up to 9 patients.
• Residents see all MICU consults (ie evaluation for admission). If the patient is not admitted to the MICU the fellow also must evaluate the patient
• Residents must see all ED or floor consults within 30 minutes of being called

**Codes**
• MICU resident is part of code team. MICU resident is responsible for establishing central IV access.

**Discharges:**
• MICU residents dictate all MICU death summaries or discharge summaries for patients transferred from MICU to nursing facilities or home.
• Communicate with the patient, family and PRM every day about disposition plans.
• PRMs should be contacted by your team every day as early as possible. It is best if the assigned PRM rounds with you.

**Documentation:**
• A Duke History and Physical Admission database (handwritten or typed on template) must be completed on every patient by the intern or resident. Every section of the database must be completed and should be on the chart by 7AM the post-call day. MSIV admission notes may go in the chart.
• Call or email PCP to inform them of admission and discharge.
• All H&P’s must be signed, dated and timed by an attending within 24 hours of admission.
• The H&P must be complete (including pain score and functional status).

**Days Off** - Days off are marked on the schedule. Average of one per week for residents, interns and sub-I’s of the team.

**Students** – Teaching is important on MICU. Discuss this with students at the beginning of rotation and clearly outline what you expect of them and what you envision their role on the team to be.
• Sub-intern/4th year - 2 admissions per night
• Student notes - Sub-I notes must be reviewed by the resident on the team. You must addend the note with a brief paragraph describing your findings for the day. Simply stating “Agree with above” and signing does NOT count

• **Give feedback often** – both positive and negative. Have students practice presentations with you.
• Please make sure that the students get to all their required teaching conferences.
• Grading - Discuss evaluations with the attending to avoid discrepancies. Look for online evaluation.

CORE COMPETENCIES ON THE DUKE UNIVERSITY HOSPITAL MICU ROTATION

**Patient Care** – Your main goal while on the MICU rotation is to provide care that is compassionate, appropriate, and effective for the treatment of the health problems of the critically ill patients.

The residents on the team should work together as advocates for each patient cared for by the MICU team. MICU patients frequently have complex histories and medical problems. Take ownership for the care of your patients and strive to provide them the best possible care. This will often involve coordinating consultations, diagnostic tests and therapy.

• You will see a broad variety of problems while on the service some of which are listed above.
• Important diagnostic tests and urgent therapy (IV fluids, antibiotics etc) should be ordered promptly carried out expeditiously.
• Care should involve prompt history and physical as soon as a patient arrives from the emergency department or from the floor. You will need to assess acutely how ill the patient is and begin upon a course of diagnosis and therapy. Do not rely upon the history or diagnosis given by the ED! Your admission and daily notes should reflect your own assessment and exam.
• The MICU team will assess each patient at least twice daily and whenever needed for a change in status with daily examination and documentation with medical chart notes.
• Housestaff should spend as much time as possible at the patient’s bedside. Exams should be careful and accurate. A sick patient deserves a doctor close-at-hand.
• Care should be delivered with sensitivity and caring. Treat all patients and their families with the utmost respect.
• Resident are expected to communicate information about patient’s progress (or lack thereof) with patients’ family or decision making surrogate.

**Medical Knowledge** - Housestaff are to use the MICU experience to review pertinent parts of the established and evolving biomedical, clinical, and sciences as pertinent in the care of patients on MICU.
• MICU is a time for patient-focused learning. Reading should be primarily based around the problems your patients have (although housestaff should read broadly on topics as their schedule allows). Textbooks of medicine (Harrison’s), systematic reviews from key
journals (NEJM), ACP journal club reviews, guidelines from national organizations are all reasonable sources of information. A key reading list is provided above

- There is a Duke University Critical Care Website that contains a file of commonly used critical care articles as well as a core lecture series. The website is http://criticalcare.duhs.duke.edu

- Medicine Department noon conferences should be attended if possible during the MICU month as these provide a source of core-curriculum. Patient care is the priority.

**Practice-Based Learning and Improvement** – While on MICU rotation, housestaff should remain mindful of the quality of the care they provide. This involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care.

- When errors are noted, these should be reported through the error-reporting systems in place. When in doubt, the attending or MICU Director should be notified.
- If there are systems improvements that the housestaff discover, particularly in the realm of safety, these should be shared with the chief resident or MICU director.
- Application of medical knowledge should be an active pursuit while on MICU. Critical appraisal behind the medical evidence (or lack- thereof) should be an important part of the rotation.

**Interpersonal and Communication Skills** – Housestaff on the MICU service should always practice the most respectful and clear communication with colleagues, staff, patients and families. The goal is effective information exchange for the betterment of patient care.

- There may be times on MICU when one’s patience will be tried by a consultant who is yelling into the phone, by another floor or ED consult or by a family who is scared and frantic about a loved one. Always take the upper-hand when communicating with others.
- Do your best to remain empathetic. Listening is often the best tool you can use. Echo the emotion of the person with whom you are communicating. Take a deep breath and try to learn why the other person is so worried, frustrated, scared etc.
- If communicating with others is a skill where you need to improve, talk with the chief resident (sooner rather than later) or your attending. These skills can be learned. There are many helpful books that teach communication skills (Getting to Yes, Difficult Conversations: How to Discuss What Matters Most, Crucial Conversations are three resources that may be helpful).
- Effective communication and hand-offs with other housestaff are critical for patient care and safety. On the MICU rotation, interns and residents should be able to provide a concise, clear presentation of each patient. This is a skill that should be practiced over the course of the rotation. Residents should help their students learn to give excellent oral presentations of their patients.
- Questions to consultants should be clearly articulated with pertinent history provided. Think in advance about why you are calling (for a second opinion, for a procedure, to help make the diagnosis, for expert opinion, for a therapy that needs approval...)
- The written medical record is an important part of the MICU experience. Each new patient needs an admission note on the chart to be available for the attending and any consultants
to review.
• Daily notes must be written by a team member and should clearly reflect any new events that have occurred. The physical exam and pertinent labs should always be included in the note.
• Whenever possible, communicate directly with the PCP to review events of the MICU hospitalization and plans for transfer from the MICU.

Professionalism – The DUH MICU rotation, as with all of your Internal Medicine rotations, demands a high level of professionalism as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.
• Professional attire and demeanor are expected. Scrubs may be worn while in MICU.
• Refer to patients respectfully by their last names (Mrs. Smith).
• Treat all patient confidential medical information in accordance with HIPAA. Patient records and outside documents should be maintained in the chart outside the patient room. Documents should not be left in workrooms, call rooms, or any conference rooms used for rounds.
• Learn the names of the nurses with whom you work and always treat them as colleagues and members of the care team— it goes a long way.
• Be respectful of your colleagues. If one of your peers is overwhelmed, ask what you can do to help.

Systems Based Practice Manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value
• Resident teams will partner with Patient Resource Managers, Social Workers, nurses, physical and occupational therapists, pharmacists, respiratory therapists and other health professionals to provide comprehensive and effective care for patients on Duke MICU.
• MICU teams are expected to communicate and partner with referring physicians within and outside of the Duke Health System to ensure safe and effective transitions of care for our patients.
Appendix:

Diseases You May See on MICU Rotation:

Pulmonary: ARDS, Acute management of resp failure, COPD, PE, pneumonia (PORT score), new dx ILD, new dx lung cancer, pulmonary hypertension, lung transplant complications, post-operative respiratory failure

Cardiac: CHF, chest pain, a fib, cocaine chest pain

Rheumatologic: small vessel vasculitis, acute gout

Dermatology: Stevens-Johnson,

Gastroenterologic: GI bleeding, cholangitis, cholecystitis, SBO, pancreatitis, bowel ischemia

Liver: End-stage liver disease, acute alcoholic hepatitis, fulminant hepatic failure, portal hypertension, refractory ascites

Hematology: Anemia, TTP, ITP, HIT, sickle cell disease

Oncology: AML/ALL, Complications of treatment of hematologic malignancy, complications of treatment of solid tumor, graft vs. host

Endocrine: DKA, DM management, hyper, adrenal insufficiency,

General: Management of sepsis, Electrolyte disorders (K, Na, Ca), Failure to thrive, falls, syncope, decubitus ulcer, PVD, delirum, hip fx, peri-operative risk management (pulm and cardiac risk stratification), overdose, ETOH withdrawal, CO toxicity

Infectious: Sepsis/sepsis syndrome/septic shock, endocarditis, meningitis, pneumonia, abdominal catastrophe, Rickettsial disease

Renal: Acute renal failure

Neurologic: Neuromuscular respiratory failure, acute stroke, anoxic brain injury