**MICU Rotation: Expectations for Interns**

The MICU is an exciting but challenging (and occasionally intimidating) rotation. It is a place of high medical acuity, where patients’ conditions evolve quickly and careful attention to detail can be the difference between life and death. The volume of data to process, interpret, integrate, and present can easily overwhelm, not to mention the physical and emotional toll of caring for critically ill patients.

On the other hand, the nature of critical care makes is a wonderful clinical learning environment, and the support and availability of senior fellows and faculty are second to none. We have structured the rotation to help you succeed, and what follows is initial guidance in the approach to patient care the specific work flow that will help you provide excellent care while optimizing your professional growth.

**General Approach to Care**

Information Gathering

You should know your patient better than anyone else, some tips on where to find it:

1. **SPEND TIME AT THE BEDSIDE:** that’s where your patients and education can be found. RN, APN, Fellows don't always have time to track you down, so be readily available.
2. Talk to the bedside nurse (night nurse on pre-rounds, day nurse through the day). MICU nurses are observant and smart. They are MUCH MORE valuable source of info than EPIC.
3. Consultants can be helpful: formulate targeted questions, read their notes, and have conversations with them. Be able to educate the MICU team on their recommendations and reasoning, and don’t be afraid to ask them questions if you have questions or concerns about their recommendations.

Communication

1. *Nurse*, about every major order/ plan change. FOLLOW-UP on all key orders.
2. *Patient’s family (or patient)*, EVERY DAY to establish rapport, update on condition and plan
3. *Consultants, Co-managers (onc, liver, ENT, Urology)*, will help understand ICU stay in the context illness
4. ***Fellows and Faculty***, we are available 24/7. MICU patients can’t afford delays, so if you can’t get something (consult, procedure, test), ask fellows/attendings for help!

Accountability/Professionalism

1. *Be on time and attentive* on rounds – it may not be your patient, but you may be pulled into action to help a colleague or pulled into the room when they get really sick
2. *Be honest*. If you don’t know the answer to a question, say “I don’t know.”
3. *Be accountable*. If we discuss something on rounds, we assume it will be done in short order. Don’t go to IMR AM Report with uncalled consults, un-updated families, or undone procedures.
4. *Be helpful*.This is a team sport: help your colleagues when they are getting slammed.

Medical Thinking and Care

1. *Pre-round*, allow time to gather data and think (15-30 min/pt). Arrive earlier if necessary.
2. *Know the rationale, not just the plan*, THINK about the physiology and evidence for your patient
3. *Anticipate* your patient’s needs, potential complications, transitions of care
4. *Include interprofessional providers* in presentations and discussions (as below)

**Nuts and Bolts**

Specific Rules/Tips:

* H&Ps should be in before you sign out (day team) or rounds (night team)
* Travel with all patients when going off the floor, unless discussed with fellow
* Run the MAR everyday, d/c liberally, know why your patient is on each medication
* Labs: Order them, Group them, Sign them out
* Daily CXR for intubated patients with evolving illness
* Consult Orders are useless here (except PT, OT, Nutrition), must call the consultants
* **Orders in on rounds- put in orders for your co-intern when they are presenting**

**MICU PRESENTATIONS**

New Presentations

Concise, data driven, and focused: should sound like a legal argument, not a mystery novel. This takes practice and **all presentations** should be reviewed with resident prior to rounds

* **ICU indication followed presumptive Dx in the one liner**
  + 50 yo M s/p AlloSCT for CML admitted with neutropenic fever and septic shock
* HPI: concise story from symptom onset → time MICU assumed care. Rest in A&P
* PMHx, SHx/FMHx: focused, pertinent. Notable ROS in HPI
* Exam/Labs: FIRST VITALS, EXAM, LABS. Evolution/response to treatment goes in the A&P
* Assessment/Plan: **ORGAN SYSTEM based, with most critical problem first (see below)**

Subsequent Presentations

* Overnight events worthy of note prior to systems few (ETT in/out, arrest, stroke, change goals)
* Short one liner, then **JUMP RIGHT INTO ORGAN SYSTEM (see below)**

Organs System-Based Presentation

Modified SOAP note for problems under umbrella of physiologic systems. Lump together hemodynamic data with CV and volume assessment; pulmonary data with vent settings and blood gas results; neurologic data with wake-up assessment, etc. Name the problems, the data, the plan. Except in rare instances the 1st systems should be CV, pulmonary, or neuro. We want you to **STICK YOUR NECK OUT AND MAKE DECISIONS**. It is OK to be off-target on rounds, but learning will be curtailed if you don’t force yourself to engage the data and make a plan. Some narrative example and tips for how to present selected data (our specific expectations) are below:

1. **CV/Hemodynamics** – Sepsis complicated by NSTEMI and A-fib. BP has remained x/y on the following vasoactive drugs (and doses). Pt [wet / dry / euvolemic] based on a [x]. SVO2 is [x], lactate is [y]. UOP [x] over 24 hours, total I/O [y]/[z], and the patient feels warm with good cap refill [ vs cold with thready pulses]. Ischemia markers [x], echo shows [y], Assessment is … Plan today is …
   1. **Blood pressure (reported SBP/DBP so PP evident)**
   2. **Vasoactive (meds and doses)**
   3. **Volume status (with supporting data – PPV, CVP, SVO2, Is/Os, UOP, IVC eval)**
2. **Pulmonary –** Acute hypoxemic respiratory failure from CAP. Pt intubated on the following vent settings… the ABG is… Oxygenation improving/worsening and CXR is [ better / worse ]. Ventilation: SBT revealed RR/Vt of [x] suggesting (in)adequate ability to ventilate. Acid-base characterized by [met acidosis/cause, etc.] which is load on resp system. Plan: Based on oxygenation / ventilation / neuro status / airway feel trial of extubation indicated/not indicated. CAP Plan: continue abx…
   1. **Vent (Assist Control/RR/Set rate/Vt/PEEP/FiO2 or PS RR/PS/PEEP/FiO2)**
   2. **ABG (ph/PaCO2/PaO2)**
   3. **Results of SBT (RSBI, if failed why? – hypoxemia, resp distress, HD parameters, agitation)**
   4. **CXR/CT/Lung US**
3. **Neurologic –** Awake/delirium/coma on sedation meds/dose for mechanical ventilation, awakes and follows commands when sedation held. Hold sedation with SBT today…
4. **ID –** CAP, febrile with a rising WBC despite antibiotics (X,Y,Z). Source likely is … because … Plan…
   1. **Temp trend, WBC and trend, culture data (neg and positive)**
   2. **Antibiotics (gm +, gm -, anaerobes, anti-fungals, anti-virals)**
5. …
6. FASTHUGS at the end

**Note**: you may cover other organ systems in these organs (no need to report “Heme” if WBC related to sepsis only issue, if resolving AKI is covered in CV/Hemodynamics)

**Tips for surviving as MICU resident**

Welcome back. It may be helpful to read MICU Rotation: Expectations for Interns to remind you our *modus operandi* in the MICU.

**Patient Assessment and Triage**:As MICU resident, you are the front line evaluator of critically ill patients and the key member of the team doing the “Assessing of Patients”

* Use the systems based approach and identify all organs failing or at risk for failing during initial evaluation
  + Scut sheets are useful
* Stabilize ***before*** moving a patient
* Bring interns with you to evaluations when possible
  + It’s okay to teach as you figure it out yourself
  + Leave interns behind with patients after stabilizing and discussing initial plan

**Afternoon rounds:** Critical handoff session, gives you the attending level “big-picture” view of the unit

* Ask questions if care plan doesn’t make sense
* Know every patient in the unit

**Important Clinical Management Skills**:

* Initial Ventilator settings for different clinical scenarios (ARDS, PNA, asthma/COPD, shock)
* Ventilator Troubleshooting (High pressure/low pressure alarms)
* The Basics of Ventilator Mechanics (Peaks and plateaus)
* Indications for NIPPV (aka BiPAP) and how to use it
* Shock Assessment and Focused cardiac U/S
* Sepsis management
* Massive Transfusion and GI bleed management
* DKA

**Supervision and Support of Interns:**  your interns can be great assets and you have a lot to teach them

* Put in orders on rounds on your patients while your intern presents
* Don’t go to MR/noon conference until orders are in, consults called, and procedures completed
* Elevate your intern to front-line communicator with family and consultants
* Grab fellow/attending during day to help teach your intern procedures
* Support your intern emotionally- this may be the first time he or she “loses” a patient
* Help your interns send patients to the floor with a solid plan
* Higher level Intern **Goals:**
* Let your intern do the communicating and run family meetings
  + However these meetings should be supervised!
* Interns should put in admission orders as much as possible
  + Consider putting in “stabilization” orders and leaving the intern to clean up the rest of the orders

**LEARN!:** Set educational goals for your block

* **Master basic skills:** triage, manage end-of-life, manage consultants, procedures, read CXRs, acid-base
* **Develop:** run inter-professional team, knowledge of physiology, teach procedures
* **Upper level goals:** for every pertinent critical care problem, formulate a clinical question, research literature, and be able to educate the team