

## UNIVERSITY MICU

This policy is designed to:

- a. Delineate the responsibilities of interns, residents and fellows in the MICU at the University of Maryland Medical Center.
- b. Ensure appropriate coverage of ICU patients during day and night hours with a shift work coverage scheme.
- c. Specify the algorithm for admitting patients to the MICU.
- d. Specify the policy for transfer out of the unit.
- e. Delineate the Department's policy for off-service ICU patients.

### **Staffing:**

1. The MICU consists of two separate teams, designated MICU A and MICU B. Each team is comprised of one attending, one fellow, two residents, three interns, and one or more nurse practitioners.
2. The teams will be responsible for patients admitted to the MICU on Weinberg 7.
3. The PGY-2,3,4,5s will be on call every 4<sup>th</sup> night and the PGY-1s every 6<sup>th</sup>. The PGY-2,3,4,5s will come in for attending rounds on their call day. To prevent on-call fatigue and allow more rest the morning of their call. They will not come in for pre-rounds on their call days. They should be excused from rounds on their post-call day after any presentations they need to give the team. The PGY-1s will come in at 7am for prerounds on their call and non-call days and be excused from rounds on post-call days after presenting their patients.
4. All residents will be given four >24hr off periods during the block. The residents will have their days off on weekend days when they are not on-call or post-call. The interns will have every 6<sup>th</sup> day off on their pre-pre-call day. However, if this leads to an intern having 5 days off during the block, they will come in on one of those pre-pre-call days as needed to help fill holes in the schedule. The chiefs will determine the days off and will place them on amion.
5. Categorical residents will go to 2 clinics per block. They should leave for clinic by 1:00pm.
6. Morning reports and noon-conferences will not be required during the MICU rotation. Instead, attending physicians will conduct teaching sessions on topics relevant to critical care.
7. Emergency Medicine interns may attend their Wednesday morning conference every week, except for their post-call days. They will not attend work rounds on the days when they have EM conference and therefore must provide the team with detailed sign-outs on Tuesday evening.

### **Admission flow:**

1. Residents on teams A and B will be responsible for the care of no more than 20 patients in the MICU. The remainder of the patients will be cared for by the nurse practitioners. Additionally, should the ICU not be full with 29 patients, the NPs should always care for 1/3 of the total number of patients admitted to the ICU at any time.
2. Admission flow into the MICU will be as follows:
  - a. The two teams will admit everyday.
  - b. The on-call resident and interns will admit patients from 7am on day of call to 7am next day when next team of house officers will take over. The goal is that the intern who admit the patient continues to follow the patient throughout the MICU course. This will mean that the intern can take up to 5 admissions while on call and the resident would work up any patient over 5 with maximum number of 10 admission in 24 hours.
  - c. Admissions during hours with NP coverage (7am-6pm), with particular focus during attending rounds, should be preferentially given to the NPs as primary caretaker with resident supervision in order to maintain their census with at least 1/3 total number of admitted ICU patients.
  - d. Should house staff teams cap at 20 at night or hours not staffed by NPs, new admissions over the cap should be handed off to the NPs during attending rounds the next morning.
  - e. All critical care consults outside the MICU will be the responsibility of the night attending.
  - f. All supervisory admission notes will be written by the night attending and will therefore not be the responsibility of the on-call resident.
  - g. Cross-cover responsibilities in the MICU will be as follows:

- i. The on-call R-1 will cross-cover all patients on his/her team with supervision from the upper level resident and back-up from the night attending. Additionally, the on-call upper level resident will cross-cover all patients on his/her team with back-up from the night attending.

**Roles of team members:**

**1. Interns:**

- a. Learn about critical care medicine and attain competency in procedures, presentation skills, and developing effective diagnostic and management plans while providing primary care for their own patients, developing a plan with the guidance of their resident, fellow, and attending, writing daily notes and orders, transfer notes and orders and cross-covering other patients on their team.
- b. During call days, interns are responsible for admitting patients up to a cap of 5 per day and covering patients on their own team.
- c. A major goal is to learn how to work effectively in a team and to manage their time efficiently.
- d. The interns are responsible to provide a detailed sign-out to their counterparts who are on call.
- e. Subinterns are expected to take call with their resident. They can admit one patient overnight with their resident to their own team.

**2. Residents:**

- a. Extend their knowledge of critical care medicine and team management
- b. Provide the first level of supervision and teaching for interns and NPs.
- c. Primary admissions of patients that exceed the intern cap of 5 will be admitted by the resident.
- d. Develop a plan, along with the fellow and attending, that distributes workload equitably to provide high quality care and documentation and efficient patient disposition while meeting RRC-mandated restriction on resident duty hours.
- e. The residents are responsible to provide a detailed sign out to residents on call.
- f. Residents and interns should work together to deliver patient care during the day to their team's patients. Interns will be required to provide primary care of all patients on their team, including but not limited to, updating sign-outs, writing progress notes, assisting in procedures, and returning pages. However, residents should be closely involved in the care of all patients and provide assistance and support in an aggressive manner to help the intern.
- g. In addition, the resident is expected to inform and discuss the following with the on-call Fellow or Attending at the earliest opportunity:
  - 1) Admissions and transfers into the MICU/IMC
  - 2) Patient deaths, whether or not they were expected.
  - 3) Complications, especially if they are being attributed to someone not directly assigned to the MICU team.
  - 4) Significant deterioration in the patient's condition, whether expected or not. This specifically includes initiation of any form of life support (including BiPAP) or opening of a code cart for any reason.
  - 5) New clinical data that have the potential to significantly alter management.
  - 6) Need for any procedures to be done.

**3. Nurse practitioners: (approximately 7AM – 6 PM)**

- a. Provide primary care for their own patients, admit patients during the day between 7:30 AM and 6:00 PM, and help cross-cover other patients on the team during the week.
- b. NP's will provide primary care for approximately 1/3 of the service, accumulating patients either as new admissions or from the newly admitted or current pool of patients on the teams.
- c. On the weekend, the NP's primary responsibility is to provide care for all patients that have been previously followed by other NPs. They should also assume their usual weekday responsibilities.
- d. Additional clinical care duties will be assigned to the NP as necessary by either the fellow or attending as needed to assure equitable distribution of clinical duties and compliance with RRC Duty Hour Requirements.

4. **Fellows (7:30 AM until 9 PM):**
  - a. The fellows are responsible for the overall operation of their team, including leading work rounds, distributing work load within and between teams along with the other fellow, planning patient discharges and transfers, evaluating admissions, supervising procedures, providing patient-based and didactic teaching for interns, residents, and NPs, managing attending/fellow sign-out, and performing critical care consults for patients outside the MICU.
5. **Daytime attending (8 AM – 6 PM):**
  - a. The daytime attending is the physician of record for the patient and is ultimately responsible for the care of all the patients on the team.
  - b. The daytime attending is also responsible for the education of the residents, fellows, NPs, and students. In carrying out this role the daytime attending will make rounds with the team, provide didactic and bedside teaching as appropriate, supervise management decisions, triage decisions, procedures, family conferences, and interact with consulting physicians as needed.
  - c. The attending will conduct rounds efficiently, rounding on the post-call residents' patients first. Night shift residents (junior and senior) 10:30am. Night shift interns (PGY-1s) must leave before they have been on duty for 30 hours. Rounds will begin at 8am, include a 30min didactic teaching portion and IDR and must be completed no later than 1pm.
  - d. Patients who are followed primarily by residents should be presented first during attending rounds with NP patients to be completed last. Residents will stay on rounds until completion of resident-associated patients. They may continue on rounds for NP patients no later than 1pm. All residents must be excused from rounds by 1 pm at which time the attending will complete rounds with the NPs.
  - e. The attending will write supervisory progress notes on each patient on the team with attestation language linking to the residents' note or documentation of intensivist-provided critical care services and time, and other event notes as appropriate. If circumstances require and the primary data recorded are sufficient, the attending note can suffice as the sole team physician progress note.
  - f. The attending will be present when all procedures are done by the residents or fellow, and will document their presence in the record.
  - g. When appropriate, this attending will also perform critical care consultation on patients who are not in the MICU.
  - h. The daytime attending is responsible for the evaluations of the team members, and will provide face-to-face constructive feedback to the students and residents, especially if there are issues of concern. This feedback must occur at the mid-point of the rotation and in summative format at the conclusion of the rotation.
6. **Evening attending (5:30 PM – 11:30 PM):**
  - a. The evening attending is the most senior physician in the MICU during these hours and as such has final authority for evaluation, management, and triage decisions during the evening.
  - b. The evening attending is responsible for evaluating and staffing all new admissions to the MICU not previously staffed by the daytime attending, writing appropriate admission and follow-up notes as defined above for the daytime attending.
  - c. The evening attending is responsible for the triage of patients to the MICU from the inpatient services and ED during the evening shift.
  - d. When appropriate, this attending will also perform critical care consultation on patients who are not in the MICU.
  - e. The evening attending has the primary responsibility for supervising the residents in the evaluation and management of new and existing patients, cross-coverage decisions, and procedures. When necessary, the evening attending will also provide primary evaluation and management of new and existing patients, perform procedures, and supplement the patient coverage when demands exceed the capabilities of the residents and fellows.
7. **Nighttime attending (11 PM – 9 AM)**
  - a. The nighttime attending has the same responsibilities as the evening attending. As the physician of record and the most experienced member of the nighttime team, they are the final authority for evaluation, management, and triage decisions at night.

- b. The nighttime attending is responsible for receiving sign out from the evening attending at or about 11 PM, and signing out to the daytime attending and/or fellow between 7:30 and 8:30 AM the next morning.

**Duty hours:**

All residents will work less than 80 hours/week on average over the rotation.

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