Curricular area: Medical Intensive Care Unit
Rotation: Medical intensive care rotations at Doctors Hospital at Renaissance (DHR)
Responsible faculty: Dr. Juan Ortiz, MD
Reviewed and revised by Dr. Amer Malas, Program Director, on 12/1/2013
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Goals:
Residents will develop and refine the necessary knowledge base, medical interviewing skills, and clinical acumen to diagnose and manage patients with conditions that fall within the scope of care of a Board Certified Internal Medicine physician referred for admission or transfer to a medical intensive care unit.

Setting: Medical intensive care units of DHR.

Key to Competencies: PC = Patient care    MK = Medical Knowledge    I/C = Interpersonal/communication skills
PR = Professionalism    PBL = Practice based learning    SBP = System based practice

Teaching activities:
Combined teaching/patient care rounds are conducted by the attending physician daily.
Topics relevant to critical care medicine are also covered in the resident lecture series, the intern learning groups, and in selected M and M conferences.
PGY-2 and PGY-3 residents attend morning report four times a week and journal club once weekly.

Level of supervision:
The attending physician rounds on all patients on the critical care medicine service daily.
Invasive procedures are supervised or performed by qualified personnel according to the guidelines outlined in the Resident Policy Manual.
The attending physician provides face to face feedback to the resident physician at the end of the rotation, and as needed during the course of the rotation.
The resident physician is expected to ask for specific feedback at the midpoint of the rotation.

Patient characteristics:
Patients cared for on medical intensive care unit at DHR are a diverse group which include men and women, age 16 and over with acute and sequelae of chronic diseases requiring intensive care management(see attached list of conditions commonly encountered in the critical care medicine rotation). Many patients are indigent and may be Spanish speaking or come from other linguistic or ethic backgrounds.

Reading lists/resources:
Residents are expected to read independently about their patients’ conditions. Residents have access to online library resources, Uptodate, and electronic textbooks. Additional reading materials and sources relevant to specific cases are provided by the attending physician.

Sample schedule
(Residents should contact the unit attending or upper level resident prior at the start of the rotation for specific details of the schedule for the month)

<table>
<thead>
<tr>
<th>PGY-1</th>
<th>7:00-8:00 am: data collection for work rounds</th>
<th>8:00-9:00 am: patient care</th>
<th>9:00-11:30 am attending teaching/work rounds</th>
<th>11:30-12:30 am conference/lunch</th>
<th>12:30 – 4:00 pm patient care</th>
<th>4:00 – 7:00 pm check out rounds with the critical care on-call house staff</th>
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</thead>
<tbody>
<tr>
<td>PGY-2,3</td>
<td>7:00-8:00 am: data collection for work rounds, Morning report</td>
<td>8:00-9:00 am: patient care</td>
<td>9:00-11:30 am attending teaching/work rounds</td>
<td>11:30-12:30 am conference/lunch</td>
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Continuity clinic: Residents attend one continuity clinic/week from 1 pm -5 pm during their medical intensive care unit at the Ambulatory Medicine Clinic at Renaissance. Unit responsibilities should be handled by another member of the team and attending physician when the resident is in clinic.

Call Days: Details on call days will be distributed at the start of the rotation. Please contact the chief residents if you have questions or concerns prior to the start of the rotation.

Days off: Residents have at minimum one day off per week. These days are scheduled prior to the start of the rotation by the chief residents. The attending physician must approve the schedule. The attending physician is available to supervise the team when the upper level resident is off.

Medical Intensive Care Unit Rotation

<table>
<thead>
<tr>
<th>OBJECTIVES &amp; SKILLS</th>
<th>EXPECTATIONS BY PGY LEVEL</th>
<th>COMP</th>
<th>TEACHING ACTIVITIES</th>
<th>EVAL</th>
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| Residents will learn to evaluate patients admitted to medical intensive care unit by history and physical examination, and use this information to generate an appropriate plan for further diagnostic testing and management. | History taking/Physical examination:  
PGY-1:  
- Obtain relevant history. Identify key elements of the chief complaint and HPI.  
- Perform a complete physical examination emphasizing key elements related to the chief complaint.  
- Guide medical students in the skills required to obtain a medical history and perform a physical examination.  
- Utilize appropriate resources to obtain historical information important to the diagnosis and management of inpatients, including accessing medical records, data from other health care facilities and physicians and family members as appropriate.  
- Demonstrate the ability to convey key information to the resident, attending and other members of the health care team in a logical, coherent manner.  
PGY-2:  
- Demonstrate understanding and recognition of important positive and negative elements of the CC, HPI, ROS and other aspects of the history, particularly as they relate to the patient’s chief complaint.  
- Increase physical examination skills to include recognition of sentinel signs and findings in a variety of commonly encountered inpatient medical conditions. Increase | PC, MK, I/C, | Teaching rounds, Resident lecture series, Intern learning group | Global eval |
Residents will be able to convey these findings to other members of the team.

**OBJECTIVES & SKILLS**

**EXPECTATIONS BY PGY LEVEL**

| PGY-1: Recognize patients requiring urgent stabilization and evaluation by experienced staff |
| Know initial presentation, evaluation and management of common critical care medicine conditions* |
| Demonstrate knowledge of and use of basic resources for learning about diseases and critical care issues commonly managed by internists, including regular reading in an internal medicine textbook, and use of the medical literature to increase knowledge base. |
| Be certified in BLS and ACLS |
| PGY-2: Be competent in the identification and stabilization of patients requiring urgent care such as cardiac arrest, respiratory distress, shock, acute mental status changes, seizures, gastrointestinal bleeding. |
| Be certified and competent in BLS and ACLS and be able to function in the role as team leader in a code situation |
| Demonstrate sufficient medical knowledge to be able to generate an appropriate differential diagnosis for patients admitted to the medical intensive care unit and to initiate an appropriate sequence of diagnostic and therapeutic interventions. |
| Demonstrate continued commitment to learning and study. |

| PGY-3 |
| Master all elements of history-taking and physical examination of medical inpatients. |
| Demonstrate the ability to teach these techniques to other residents and students. |

<p>| COMP | TEACHING ACTIVITIES | EVAL |
| PC, MK, PBL | Teaching rounds, Resident lecture series, Intern learning group | Global eval Inservice scores on critical care medicine |</p>
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| PGY-3:              | Demonstrate the medical knowledge required to recognize and manage conditions that fall within the scope of care of a Board Certified Internal Medicine physician*  
|                     | Demonstrate a commitment to life-long learning and an understanding of how to pursue the goal of life long learning.  
|                     | Show the ability to foster learning in students and other residents on the team. |      |                     |      |
| PGY-1:              | Know indications for and interpretation of diagnostic tests commonly used on the medical intensive care unit*  
|                     | Be able to use the results of diagnostic tests to refine a differential diagnosis and initiate additional testing or a therapeutic plan. | PC, MK, PBL | Teaching rounds, Resident lecture series, Intern learning group | Global eval Inservice examination |
| PGY-2:              | Demonstrate increased understanding of diagnostic tests, including more specialized and less commonly performed tests, and how to apply the results to patient care.  
|                     | Demonstrate the ability to teach others indications for and interpretation of diagnostic tests |      |                     |      |
| PGY-3:              | Demonstrate mastery of diagnostic testing in the management of critically ill patients and the use of these tests to enhance patient care.  
|                     | Be able to explain the purpose and meaning of diagnostic tests to students and residents on the team. |      |                     |      |
| Residents will learn the indications for diagnostic tests relevant to critical care medicine. Residents will be able to interpret results and apply them to patient care. | Residents will know how to | PC, I/C, MK | Teaching rounds, resident lecture series | Global evaluation |
| PGY-1:              | Understand which procedures/interventions require written, informed consent |      |                     |      |
| PGY-2:              | Demonstrate increased understanding of diagnostic tests, including more specialized and less commonly performed tests, and how to apply the results to patient care.  
|                     | Demonstrate the ability to teach others indications for and interpretation of diagnostic tests |      |                     |      |
| PGY-3:              | Demonstrate mastery of diagnostic testing in the management of critically ill patients and the use of these tests to enhance patient care.  
|                     | Be able to explain the purpose and meaning of diagnostic tests to students and residents on the team. |      |                     |      |
inform patients and obtain voluntary consent for the general plan of medical care and specific diagnostic and therapeutic interventions.

- Understand how to counsel patients and surrogates about the risks and possible benefits of diagnostic and therapeutic interventions in order to obtain informed consent.
- Understand when surrogates should make decisions for patients who lack decision-making capacity, and how to select a surrogate.
- Know the principles that apply when the physician must decide for a patient who lack decision-making capacity when there is no surrogate decision maker.

PGY-2:
- Know specific risks/complications of procedures and interventions commonly used in the management patients in the medical intensive care unit.
- Demonstrate the ability to effectively counsel patients or surrogates and assist them in the decision-making process.

PGY-3:
- Master the skills required to inform patients and surrogates about the plan of care and obtain informed consent when required.

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| Residents will learn indications for and recommended techniques for diagnostic and therapeutic procedures important in the management of patients in a medical intensive care unit | PGY-1:  
- Know indications for and technique for:  
  - central venous catheter placement  
  - vasopressor initiation and management  
  - lumbar puncture  
  - Nasogastric tube placement  
  - bladder catheterization  
  - obtaining arterial blood gases and venous samples of blood  
  - arterial line placement  
  - paracentesis (diagnostic and therapeutic)  
  - thoracentesis  
- Recognize complications related to procedures performed on the medical intensive care unit and know the initial management of complications. | PC, MK, PBL | Teaching rounds, Direct instruction by staff/upper level residents | Global eval Direct observation of procedural technique MiniCEX |
| | PGY-2:  
- Demonstrate competence in the performance of these procedures. Acquire additional experience in critical care procedures including:  
  - Endotracheal intubation  
  - Initiation and management of mechanical ventilation | | | |
- Management of noninvasive positive pressure ventilation
- Pulmonary artery catheter placement and interpretation
- Biopsy of tissue as appropriate
- I and D of abscesses

- Know how to manage complications related to these procedures.
- Understand when lines/monitoring devices may be safely discontinued.
- Demonstrate the ability to teach others the indications for and the proper performance of these procedures.

**PGY-3:**
- Demonstrate mastery of diagnostic and therapeutic procedures in internal medicine inpatients, including indications for procedures, technical performance, and recognition and management of complications.

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| Resident will demonstrate interpersonal/communication skills required for successful management of patients admitted to the medical intensive care unit | PGY-1:  
- Be able to communicate important findings and plan of care to attendings and other members of the team.  
- Serve as the primary source of information for patients and families. Maintain a therapeutic relationship with patients under the care of the team.  
- Communicate effectively with consultants, nursing staff, and other members of the health care team  
- Communicate effectively with students and other learners regarding their responsibilities and performance.  
- Maintain the medical record, including daily progress notes, discharge summaries, procedure notes, and additional documentation of sentinel events/changes in status. | I/C, SBP | Teaching rounds, interviewing course | Global evaluation, Peer evaluation, Student evaluation |
| | PGY-2:  
- In addition to mastering the skills listed above, the upper level resident should provide effective team leadership by defining and communicating the responsibilities of each team member.  
- Supervise and provide feedback on the clinical skills of students, PGY-1s and other members of the team, including reviewing the written record, cosigning notes, and providing feedback. | | | |
### OBJECTIVES & SKILLS

**Residents will demonstrate skills in practice-based learning required to master management of critically ill patients.**

**PGY-1:**
- Demonstrate evidence of study to improve knowledge of diseases and conditions being managed in the medical intensive care unit.
- Demonstrate the ability to access appropriate resources, including practice guidelines, online textbooks, and other medical literature to improve patient care.
- Seek feedback from attendings and other members of the health care team to improve performance. Show evidence of reflection and the ability to learn from errors.
- Promote student education and facilitate learning by the student members of the team.

**PGY-2:**
- Increase ability to generate questions based upon cases encountered in the medical intensive care unit, and to use the medical literature to answer these questions.
- Understand the approach to evaluating the quality of medical literature and how to apply the literature to patient care.
- Promote scholarship and learning by all members of the team.

**PGY-3:**
- Master the interpersonal/communication skills required to be an effective practicing internal medicine physician, including maintaining professional relationships with other members of the health care team and developing therapeutic relationships and effective communication with patients and family members.

### EXPECTATIONS BY PGY LEVEL

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<tr>
<td>PGY-1:</td>
<td>MK,</td>
<td>Journal club</td>
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<td>PBL,</td>
<td>Attending rounds</td>
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<td>PC</td>
<td>M and M conferences</td>
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<td>Global evaluation</td>
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<td>PGY-2:</td>
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<td>PGY-3:</td>
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- Demonstrate increasing competence in the use and interpretation of the medical literature to enhance patient care.
- Demonstrate an understanding of how to analyze medical errors and poor outcomes and use this experience to improve performance.

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| Residents will demonstrate appropriate systems-based practice required to care for patients medical intensive care unit. | PGY-1:  
- The resident will understand his/her responsibilities including daily work rounds on all patients, completion of all tasks determined to be necessary for the care of the patient, and attendance at required conferences/rounds.  
- Learn the role of ancillary services such as pharmacy, dietary, physical and respiratory therapy, and other available services. Learn to use these services effectively to enhance patient care.  
- Learn the role of consultants and demonstrate the ability to use consultants appropriately to enhance patient care.  
- Maintain appropriate professional relationships with nurses, pharmacists, clerks, and all other members of the health care team.  

PGY-2:  
- In addition to the above, the upper level resident will be responsible for assigning schedules to each team member, supervising daily work rounds, supervising procedures, cosigning notes and maintaining appropriate lines of communication with the attending physician.  
- Upper level residents should ensure that students and junior residents are able to | SBP PBL PC I/C | Attending rounds  
Work rounds  
M and M conferences  
Housestaff conferences | Global evaluation  
Peer evaluation  
Student evaluation |
- Complete their responsibilities and have performed appropriate documentation.
  - Upper level residents should be able to teach students and junior residents when to involve ancillary services and consultants in the care of the patients, and the appropriate role for these services.

**PGY-3:**
- Master aspects of systems-based practice needed to ensure optimal patient care and utilization of available resources.
- Demonstrate patient advocacy within the system of care.
- Teach students and junior level residents how to use the system to optimize patient care.