Educational Goals & Objectives

The Hospital Medicine rotation will provide the resident with an opportunity to evaluate and manage patients with common acute medical conditions. Training will focus not only on clinical care issues, but also on coordinating patient care with non-physician providers, subspecialists, and allied health professionals; on transitions of patient care; and on the spectrum of leadership, cost, quality and performance activities within the purview of Hospital Medicine.

Faculty will facilitate learning in the 6 core competencies as follows:

Patient Care and Procedural Skills

I. All residents must be able to provide compassionate, culturally-sensitive direct care for acutely ill patients.
   • R2s should seek directed and appropriate specialty consultation when necessary to further patient care.
   • R3s should supervise and ensure seamless transitions of care within the hospital and at discharge.

II. Residents will demonstrate the ability to take a symptom-driven history and perform a focused physical exam.
   • R1s should be able to differentiate ill from stable patients and appreciate abnormal physical findings, particularly abnormal heart and lung sounds, focal neurologic abnormalities, and rashes.
   • R2s should be able to collect complex historical information from electronic and/or outside records, elicit a more thorough history, and detect subtle findings, such as a grade I-II murmur, organomegaly, and lymphadenopathy.
   • R3s should be able to independently obtain a complete history, use physical exam maneuvers to elicit physical findings, and understand the sensitivity and specificity of physical findings.

III. For procedural competence, the focus for resident education is on the following:
   • understanding the indications and contraindications of procedures
   • recognizing and managing complications
   • pain management
   • sterile technique
   • specimen handling
   • interpretation of results
   • requirements and knowledge to obtain informed consent

During the hospital medicine rotation, residents will focus on the following procedures as permitted by case mix:

<table>
<thead>
<tr>
<th>Know, Understand, and Explain</th>
<th>Perform Safely and Competently</th>
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<tbody>
<tr>
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<tr>
<td>Procedure</td>
<td>Indications; contraindications; recognition &amp; management of complications; pain management; sterile technique</td>
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<tr>
<td>Abdominal paracentesis</td>
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<td>ACLS</td>
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<td>Arterial line</td>
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<td>Arthrocentesis</td>
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<tr>
<td>Central line</td>
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<td>Drawing venous blood</td>
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<tr>
<td>Drawing arterial blood</td>
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<td>EKG</td>
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<td>I&amp;D abscess</td>
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<td>Lumbar puncture</td>
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<td>Nasogastric intubation</td>
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<td>Placing a peripheral venous line</td>
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<td>Pulmonary artery catheter placement</td>
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<tr>
<td>Thoracentesis</td>
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- R2 and R3 residents will build on skills learned during the R1 year.
- R2s are also encouraged to develop skills in the use of noninvasive ventilation.
- R3s are also encouraged to develop skills in the use of ultrasound to facilitate the performance of clinical procedures (e.g., thoracentesis) and/or to supplement clinical judgment (volume assessment, EF).
- Residents who wish to pursue additional procedural competencies, such as abdominal paracentesis, central line placement, lumbar puncture, thoracentesis, intubation, and other procedures are encouraged to work with faculty to ensure
they have adequate opportunity to acquire the skills to safely practice those procedures independently.

In addition, residents will be able to counsel patients and/or families regarding indications and contraindications the following procedures:

- **R1s**: acute hemodialysis, noninvasive and mechanical ventilation, PEG placement, and transfusion.
- **R2s**: introduction of palliative care and hospice
- **R3s**: independently counsel patients on the above issues in the setting of complex socio-medical circumstances, such as the issue of PEG placement in demented patients, or mechanical ventilation in the setting of end-stage systemic illness.

**Medical Knowledge**

1. **R1s** will develop an understanding of the pathophysiology and approach to common complaints in hospitalized patients, such as:
   - Acute abdominal pain
   - Altered mental status
   - Chest pain
   - Cough and Dyspnea
   - Diarrhea
   - Edema
   - Electrolyte abnormalities
   - Fever
   - Gastrointestinal bleeding
   - Hypertensive urgency
   - Rash
   - Syncope
   - Weakness
   - Weight loss

   R2s should be able to incorporate this information into the context of past medical history and risk factors to generate a differential diagnosis and a more thorough plan of care.

   R3s should be able to understand statistical concepts such as pretest probability, number needed to treat, etc. and their effect on diagnostic workup and treatment. R3s should be able to independently manage hospitalized patients with evidence-based therapies, including patients with the following illnesses:
   - Acid-base and electrolyte abnormalities
   - Acute renal failure
   - Asthma exacerbation
   - Cellulitis
   - CHF
   - Cirrhosis and liver failure
   - Common arrythmias
• COPD exacerbation
• Diabetes management
• Deep venous thrombosis and pulmonary embolus
• Hepatitis
• NSTEMI
• Pancreatitis
• Perioperative care
• Pneumonia, community-acquired and health-care associated
• Seizure
• Stroke

II. Residents will become knowledgeable in the following issues pertaining to hospital care:
• ACLS protocols (all residents)
• Enteral and parenteral nutrition and PEG tube placement (R2)
• National guidelines for prevention of catheter-associated blood stream infections, deep venous thrombosis, and stress ulcer prophylaxis. (R2)
• Options available in offering palliative care versus hospice (R3)

III. Residents will be able to understand the indications for ordering and interpretation of results from laboratory and diagnostic studies, including:
For R1s:
• Serologies and chemistries
• Arterial blood gas interpretation
• Analysis of sputum
• Chest and abdominal radiographs
• Culture results
• Echocardiogram
• EKGs and continuous EKG tracings
• NT-pro-BNP

For R2s
• Interpretations of pulmonary function tests
• Analysis of cerebrospinal, peritoneal, and pleural fluids
• Computed tomography and magnetic resonance imaging of head, chest and abdomen

For R3s, independently planning diagnostic evaluation and appropriate therapeutic interventions based on test results.

Practice-Based Learning and Improvement

I. All residents should be able to access current clinical practice guidelines from the Society of Hospital Medicine, journals, and other sources to apply evidence-based strategies to patient care.
II. R2s should develop skills in evaluating studies in published literature, through Journal Club and independent study.

III. All residents should learn to function as part of a team, including the hospitalist, nurse, pharmacist, and dietician, and social worker to optimize patient care, with R3s assuming a leadership role.

IV. All residents should respond with positive changes to feedback from members of the health care team.

**Interpersonal and Communication Skills**

I. R1s must demonstrate written, electronic and verbal communication skills that facilitate the timely and effective exchange of information within the system.

II. R2s must also demonstrate interpersonal skills that facilitate collaboration with patients, their families, and other health professionals.

III. R3s should demonstrate leadership skills to build consensus and coordinate a multidisciplinary approach to patient care.

IV. R3s must become proficient in managing social dynamics, including identifying the power of attorney or surrogate decision maker, resolving conflict among family members with disparate wishes, and patient advocacy.

**Professionalism**

I. All residents must demonstrate a commitment to carrying out professional responsibilities.

II. R1s should be able to educate patients in a manner respectful of gender, cultural, religious, economic, and educational differences on choices regarding their care.

III. R2s should be able to counsel patients and families on diagnostic and treatment decisions and on use of palliative care and hospice in a manner respectful of cultural and religious beliefs.

IV. R3s should be able to provide constructive criticism and feedback to more junior members of the team.

**Systems-Based Practice**

I. R1s must have a basic understanding that their diagnostic and treatment decisions involve cost and risk and affect quality of care.

II. R2s must be able to discuss alternative care strategies and the cost and risks involved and articulate current quality issues in Hospital Medicine.

III. R3s should understand high value care measures when evaluating and treating patients as well as the impact of insurance status on patient care and discharge options.

IV. R3s must demonstrate an awareness of and responsiveness to established quality measures, risk management strategies, and cost of care within our system.

**Teaching Methods**

I. Supervised patient care in the hospital
   - Residents will initially be directly observed with patients, to facilitate the acquisition of excellent history taking, physical exam, and procedural skills.
- As residents become more proficient, they will interact independently with patients and present cases to faculty.
  - For R1s, initial emphasis will be on diagnosis and basic management.
  - For more senior residents, focus will be on medical decision-making, and residents will work with supervising physicians to finalize a care plan.

II. Research
- Outcomes research project once during residency, to be supervised by faculty. Results should be presented to hospital staff and if possible, as an abstract at a professional meeting.

III. Conferences
- Multidisciplinary rounds
- Daily noon conference – series covers medical knowledge topics as well such integrative topics as quality, safety, billing, sign-outs and transitions of care.
- Hospital medicine conference
- Journal club

IV. Independent study
- Journal and Textbook reading
  - Understanding Patient Safety (McGraw-Hill’s Lange Series, 2012)
  - Hospital Medicine (Lippincott Williams & Wilkins, 2005)
  - MKSAP
- Additional reading as recommended by the Hospitalist team
- Online educational resources
  - Up To Date
  - Clinical Key

Evaluation
I. Case and procedure logs
II. Mini-CEX bedside evaluation tool
III. In-service Exam
IV. 360 Evaluation
V. Verbal mid-rotation individual feedback
VI. Attending written evaluation of resident at the end of the month based on rotation observations and chart review.

Rotation Structure
I. Residents should contact the lead hospitalist the day prior to determine start time and location.
II. Residents should spend the majority of their time admitting, rounding or consulting on patients in the hospital, with the exception of required conferences or patient-related time elsewhere in the hospital.
• Rotations are a “hands-on” learning experience. If you have a resident, send them to see a patient. Try to let them do a majority of the procedures.
• Case-based learning is very effective. Give your resident patient-based questions to research and report back to you.
• Consider having your resident do a short presentation to the group on a pertinent topic.
• When doing consults, ensure the resident understands the question asked and provides a concise answer.

III. Call and weekend responsibilities TBD by the hospitalist
• Hours worked must be consistent with ACGME requirements and are subject to approval by the Program Director.

IV. Residents have noon conferences and should be excused in a timely fashion to attend.