AIP Hospitalist Preceptorship

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I. **Educational Purpose and Goals**

Management of hospitalized patients remains essential for the practice of internal medicine. For residents interested in a career in hospital based medicine additional training in hospital models of care is essential. The Hospitalist medicine rotation at the AIP allows residents to learn the medical and administrative skills necessary to develop a career as a Hospitalist. Additionally, residents will have ample opportunity to care for a variety of common and uncommon medical problems under direct supervision.

II. **Principal Teaching Methods**

A. Supervised Direct Patient Care:

1. Residents encounter patients admitted to the general medicine services and ICU at the AIP. The population is obtained from the outpatient clinics, the emergency department, transfer from our 9th ave University campus and a variety of private hospitals in the geographic region. Faculty hospitalist attendings trained in hospital models of care will supervise admission histories, physical exams, daily management, and discharge plans.
2. Management and teaching rounds are conducted daily for 1.0 – 3.0 hours. The management team includes one attending hospitalist physician and one PGY2 or PGY3 resident. Bedside rounds emphasize fundamental skills for management of hospitalized patients while incorporating issues such as resource utilization. This mandatory session involves critical critique and discussion assimilating basic science knowledge, clinical data, pathophysiology, and evidence based principles. The bedside component includes confirmation of residents' history and physical examination skills by the hospitalist attending physician. The hospitalist attending assesses and models communication skills.

B. Small Group Discussions

1. Afternoon didactic sessions are conducted by the teaching hospitalist attending on weekdays at 3pm.

C. Didactic Sessions

1. University Grand Rounds: Held on Wednesdays at 12pm and available for viewing via monitor in our conference room.
2. AIP Grand Rounds: Held every other Thursday at 12pm.
3. Core Curriculum Conference: One hour lecture scheduled at 12 or 1pm on any day our hospitalist resident is on service. The topics are drawn largely from literature based on hospitalist models of care.

III. **Educational Content**

A. Mix of Diseases

Encountered patients have a variety of conditions representative of common medical problems. Hospitalist training track residents and those on elective function as the patients' primary hospitalist.

B. Patient Characteristics

Patients admitted to the service are those that cannot be managed effectively in the outpatient setting or those in need of services that can only be provided at our university facility.

C. Learning Venues

1. 6^{th} floor of the AIP
2. The MICU is open. The Hospitalist attending is directly responsible for oversight. A pulmonary-critical care attending and fellow are available for consultation in addition to all other specialty consult services

D. Procedures

1. The procedures that are either learned or reinforced on the hospitalist medicine rotation include but are not limited to:
    1. Arterial puncture
    2. Basic and advanced cardiac life support
    3. Central venous access
    4. Lumbar puncture
    5. Abdominal paracentesis
    6. Thoracentesis
    7. Arthrocentesis
2. Interpretive skills that are reinforced or learned on general ward medicine services include:
    1. Serum electrolytes and routine chemistry panel
    2. Urinalysis and microscopic examinations of urine
    3. Liver function tests
    4. Coagulation studies
    5. Arterial blood gases
    6. Chest x-ray interpretation
    7. Electrocardiogram
    8. Peripheral smear of blood (reviewed with Oncology)
    9. Sputum Gram stain (reviewed with Microbiology)
    10. Spirometry (reviewed with Pulmonary)

3. Consultative skills: Residents may serve as supervised consultants to other specialties during the rotation.

E. Ancillary Services

1. Subspecialist and Hospitalist Medicine faculty.
2. All medical subspecialty fellows
3. Residents from other specialty training programs: General Surgery, Psychiatry, Family Medicine and Obstetrics and Gynecology
4. Case managers
5. Nursing staff
6. Physical Therapy and Occupational Therapy
7. Respiratory Therapy specialists
8. Numerous other ancillary staff – clinical, administrative, and paraprofessionals

F. Structure of Rotation

1. There is no overnight call. Residents will function as a hospitalist and see 8-10 patients with a majority of these patients previously admitted by an overnight hospitalist. At other times the resident will function as the main admitting hospitalist.
2. A non-admitting hospitalist resident will begin their day at 7am and present all of their cases to their attending hospitalist. Required conferences are discussed above.
3. An admitting hospitalist resident will admit a variety of patients from 1pm until 7pm in addition to rounding on their already hospitalized patients.

IV. **Principal Ancillary Educational Materials**

A. All residents and managing physicians are provided with the General Medicine Curriculum and Learning Objectives prior to the start of each rotation.

B. Residents are assigned targeted reading in primary literature sources by the attending hospitalist.

C. Full service libraries are present at the Denison Library at the University of Colorado Health Sciences Center. 24-hour access to on-line programs and literature is available.

D. Computer-based resources are available at the hospitals to facilitate patient care, education and communication. The following are made available:

1. Computer-assisted diagnosis and decision support
2. Drug information including side effect and drug-drug interactions
3. Electronic Medical Record internet accessibility
4. Electronic textbooks of medicine
5. E-mail services
6. Internet access to medical sites on the World Wide Web
7. Laboratory and radiology results retrieval
8. Multimedia procedures training

9. Patient education materials

E. The Medical Record is computerized for patients seen in the university system. Other medical records are obtained from outside facilities via 24 hour fax service.

V. **Methods of Evaluation**

A. Resident Performance

1. Faculty complete computerized resident evaluation forms. The evaluation is competency-based. The evaluation is shared with the resident, who receives a copy, and is internally reviewed by the residency office. The evaluation is part of the resident file and is incorporated into the semiannual performance review for directed resident feedback.
2. Residents electronically record completed procedures. The supervising physician verifies that the resident understands the procedure's indications, contraindications, complications and interpretation.
3. Computer patient records are reviewed by attendings that provide specific feedback to the resident on data-gathering and documentation skills.

B. Program and Faculty Performance

1. Upon completion of the rotation, residents complete a comprehensive rotation specific evaluation commenting on the faculty, didactics and strengths and weaknesses of the rotation.

VI. **Institutional Resources: Strengths and Limitations**

A. Strengths

1 Faculty. Faculty has won numerous awards for teaching excellence.
2. Facilities. The hospital is a modernized institution with state-of-the-art cardiac catheterization, radiology services and experienced technicians
3. Patients. There is an excellent disease mix and patient panel.
4. Bedside rounds are emphasized.
5. One on one mentorship with an attending hospitalist trained in hospital models of care.

B. Limitations

1. Orthopedic specialty services are not currently in house
2. Interventional Radiology limited to three days per week

VII. **Rotation Specific Competency Objectives**

A. Patient Care

1. History taking. Residents at all levels of training will collect a thorough history by soliciting patient information and by consulting other sources of primary data in a logical and organized fashion. History taking will be hypothesis driven. Interviewing will adapt to the time available, use appropriate nonverbal techniques, and demonstrate consideration for the patient. The resident will inquire about the emotional aspects of the patient's experience while demonstrating flexibility based on patient need.
2. Physical Exam. Residents at all levels of training will perform a comprehensive physical exam, describing the physiological and anatomical basis for normal and abnormal findings.
3. Charting. Residents at all levels of training will record data in a thorough, systematic manner.
4. Procedures. Residents will demonstrate knowledge of: procedural indications, contraindications, necessary equipment, specimen handling, patient after-care, and risk and discomfort minimization. They will participate in informed consent and assist patients with decision making. They will correctly identify the meaning of test results. They will also demonstrate extensive knowledge and facility in the performance of procedures while minimizing risk and discomfort to patients.
5. Medical Decision Making, Clinical Judgment, and Management Plans. All residents will demonstrate improving skills in assimilating information that they have gathered from the history and physical exam.

    b. PGY-2 residents will also regularly integrate medical facts and clinical data while weighing alternatives and keeping in mind patient preference. They will regularly incorporate consideration of risks and benefits when considering testing and therapies. They will present up-to-date scientific evidence to support their hypotheses. They will consistently monitor and follow-up patients appropriately. They will develop plans to avoid or delay known treatment complications and be able to identify when illness has reached a point where treatment no longer contributes to improved quality of life. They will begin to apply their knowledge of hospital models of care in an effort to improve patients' throughput and transitions of care.

    c. PGY-3 residents will demonstrate the above and in addition, will demonstrate appropriate reasoning in ambiguous situations, while continuing to seek clarity. Residents at this level of training will not overly rely on tests and procedures and will become extremely sensitive and knowledgeable to the practice of resource utilization. PGY-3 residents will

continuously revise assessments in the face of new data and consistently apply their previously learned knowledge of hospital models of care to their medical decision making and management.

6. Patient Counseling

a. PGY-2 residents will be able to describe the rationale for a chosen therapy and will be able to describe medication side effects in lay terms. They will assess patient understanding and provide more information when necessary. Residents will demonstrate the ability to be a patient advocate.

PGY-2 residents, in addition to the above, will be able to explain the pros and cons of competing therapeutic interventions. They will be expected to counsel patients regarding adverse habits. These residents will be able to educate patients and families for enhanced compliance.

b. PGY-3 residents, in addition to the above, will effectively communicate with critically ill patients and those making life-style modifications.

B. Medical Knowledge

1. PGY-2 residents will demonstrate a progression in knowledge and analytical thinking in order to develop well-formulated differential diagnoses for multi-problem patients. They will also demonstrate socio-behavioral knowledge. They will begin to learn and understand hospital models of care through their daily scheduled didactic sessions and one on one clinical experience with an attending hospitalist.

2. PGY-3 residents in addition to the above will demonstrate appropriate habits to stay current with new medical knowledge, and will exhibit knowledge of effective teaching methods. They will begin to master and apply their knowledge of hospital models of care. The will exemplify this knowledge through the development of several projects related to hospital models of care, practice management and quality improvement.

C. Interpersonal and Communication Skills

1. Residents will develop and refine their individual style when communicating with patients. They will strive to create ethically sounds relationships with patients, the physician team and supporting hospital personnel. They will create effective written communications through accurate, complete, and legible notes. They will exhibit listening skills appropriate to patient-centered interviewing and communication. Residents will recognize verbal and nonverbal cues from patients. They should be able to

successfully negotiate nearly all “difficult” patient encounters with minimal direction.

2. Residents will develop the skills necessary to facilitate appropriate transitions of care to outpatient doctors, nursing care facilities, home health services and other allied health professionals

D. Professionalism

All residents will demonstrate integrity, accountability, respect, compassion, patient advocacy, and dedication to patient care that supercedes self-interest. Residents will demonstrate a commitment to excellence and continuous professional development. They will be punctual and prepared for teaching sessions. Residents will demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentially of patient information, and informed consent. Residents are expected to show sensitivity and responsiveness to patients’ culture, age, gender and disabilities.

E. Practice Based Learning and Improvement

1. Hospitalist residents will use hospital and University library resources to critically appraise medical literature and apply evidence to patient care. They will use hand-held computers, desktop PC’s and Internet electronic references to support patient care and self-education.

   PGY-2 residents will in addition consistently seek out and analyze data on practice experience, identify areas for improvement in knowledge or patient care performance and make appropriate adjustments. They will regularly demonstrate knowledge of the impact of study design on validity or applicability to individual practice.

   PGY-3 residents will additionally model independent learning and development.

F. Systems Based Practice

1. Residents will be sensitive to health care costs while striving to provide quality care. They will begin to effectively coordinate care with other health care professionals as required for patient needs.

   In addition to the above, they will consistently understand and adopt available clinical practice guidelines and recognize the limitations of these guidelines. They will work with patient care managers, discharge coordinators and social workers to coordinate and improve inpatient care. Finally, they will work with ancillary staff and outpatient facilities to improve the transition of care from inpatient to outpatient facilities.

H. Hospital Models of Care

1. PGY-2 Residents will begin to learn the basic tenets of hospital based medicine with regards to issues of practice management such as billing and coding and other key components that relate to the business of medicine. Both PGY-2 and PGY-3 residents will learn the billing process by assisting the attending on filling out the billing sheets for each billable encounter.
2. PGY-2 residents will be able to formulate a dynamic hospital plan upon admission and learn to recognize the difference between inpatient and outpatient testing. They will learn to recognize the clinical and social components to a timely work up and a timely discharge. They will work with an extensive interdisciplinary team to facilitate the patient's throughput. PGY-3 residents will begin to hone their skills and knowledge as it relates to the multiple components that affect patients' throughput. They will recognize the various steps needed for effective, safe and efficient throughput and work to develop new models that facilitate patient throughput from the time of admission through the time of discharge.
3. PGY-2 and PGY-3 residents will learn how to improve communication with outpatient health care providers and facilities in an effort to safely transition the patient from inpatient to outpatient status. PGY-3 residents may choose to spend time at some of these outpatient facilities.
4. PGY-2 residents will learn to recognize the various places in which errors are made that may affect patient throughput, transitions of care and most importantly patient outcomes. PGY-3 residents will be responsible for identifying these quality improvement issues and developing plans to improve them. They will be responsible for a month long quality improvement related project which will be mentored by a hospitalist.
5. PGY-2 and PGY-3 residents will each spend a week on the palliative care service. They will spend one to two hours per day in formal didactics. They will begin to learn and apply a variety of techniques as they relate to the practice of palliative care. These include but are not limitied to end of life issues, hospice care, conducting family meetings, pain management and comfort care.