DUKE INTERNAL MEDICINE RESIDENCY PROGRAM

CARDIOLOGY SUBSPECIALTY CONSULTS/ELECTIVE ROTATION DESCRIPTION

http://cardiology.duke.edu/

ROTATION DIRECTOR: Michael Blazing, MD
ADMINISTRATOR:
Contact information: 919-681-5916

On the first day of the consults rotation the JAR or SAR signs on to pager: 970-1489

Here’s the sign on/off procedure. If you forget the sequence, no worries—the computer voice on the phone will remind you:

-Dial 970-1489 (or 970-0061—all of the beepers we have to cover work the same way)
-Hit “star, (*)” then “pound, (#)”
-Enter the “security code,” which is simply the beeper number (“1489”), followed by the “pound” sign (#).
-Follow the computer voice instructions:
-hi “1” to change the beeper status;
-hit “5” to change coverage;
-hit “1” to say “yes, change coverage”

Intern Cardiology elective for 2012-13: See pages 10-13

OVERVIEW:

The Duke Cardiology Consults Rotation consists of an inpatient, consultative experience for Internal Medicine house officers, presenting trainees with the opportunity to learn a broad spectrum of Cardiovascular Medicine during their rotation. The Cardiology Elective for Interns consists of a mixed inpatient and outpatient experience.

The house staff on the inpatient Cardiology Consults Rotation work with the Cardiology Consult Service teaching attending. The intern or resident is responsible, under the supervision of the teaching attending, for the performance of inpatient consults as requested from other clinical services at Duke University Medical Center.

Limitations in staffing and support have led to the following as the current proposed and actual model of the GEN/Consult service. At all times the most important concern of the team is patient care. The patient should always come first, and the details worked out later if there are logistical problems.

GOALS OF THE ROTATION:

1) Develop the ability to perform a medical history, review of systems, and physical examination that is appropriate to adequately evaluate, diagnose and begin to provide therapy and advice for inpatients with suspected or confirmed Cardiovascular disorders
2) Learn internal medicine with focus on the subspecialty field of Cardiovascular Medicine.

SPECIFIC OBJECTIVES:
1) Demonstrate the ability to serve as a consultant and evaluate new patients with initial presentation of Cardiovascular disorders
   a. Identify characteristics on the review of systems that are consistent with the presence of various Cardiovascular disorders.
   b. Perform a thorough Cardiovascular system physical examination and formulate a comprehensive differential diagnosis
   c. Recommend, order and interpret appropriate diagnostic testing for patients with cardiovascular disorders

2) Develop skills to evaluate and co-manage patients with previously established cardiovascular disease
   a. Identify characteristics on the history and review of systems that are relevant to the underlying cardiovascular disorder and its therapy.
   b. Perform a thorough cardiovascular system physical examination and formulate a comprehensive differential diagnosis as appropriate
   c. Order and interpret appropriate diagnostic testing for patients with cardiovascular disorders
   d. Formulate an evaluation and management plan

Team Responsibilities

Limited inpatient service (generally 1-4 pts.) – “Elective” service only generally comprised of patients seen in the ED or in consultation.

No patients assigned to the service unless specifically requested by the attending (i.e. his/her own patient, a particular type of problem the attending is interested in, etc.) When a resident is present, the attending may request additional patients for teaching purposes.

Only patients the teaching intern admits or who are seen on consults and transferred to the service will be followed and discharged by the service. These patients are to be added only at the discretion of the rounding attending and intern

Expectations are that when there is a resident is on the service with the intern the team will carry a small cadre of 1-4 patients on the ward depending on consult service size and on ER load (see below). The size of the service is to be determined by the attending physician only.

Consult service
General cardiology consult patients are to be seen anywhere in the hospital or ER. At the discretion of the attending, certain cardiovascular issues may be more appropriate for a sub-subspecialty group (i.e. transplant, EP, DHP) and these can be referred to the appropriate rounding team.
See general cardiology consult patients
   Initial staffing by students supervised by the resident (if no resident then students must report directly to the attending)
Or
Initial staffing by the intern on service with students observing
Provide teaching for the medical students on cardiology
Resident or attending supervision of students who present
Students shadowing interns if resident unavailable and attending with
other duties

ER responsibilities

Cover admissions pager 970-0061 from 7am to 7pm (see below) – Resident and/or attending
Triage low and high risk ER patients (see below) – Resident and/or attending
Triage/expedited hold over ER patients when hospital is full – Res/intern/attend
Manage patients in the ER when hospital has inadequate beds- Res/intern/attend
Provide consultation and assist in disposition for Chest Pain Unit patients when
there is a cardiology related issue- Res/intern/attending

Individual team member responsibilities

Resident (JAR/SAR) responsibilities

A) Resident covers the ER admissions pager from 7am to 7pm – (0061)
   Intermediate risk patients with stable sx who require admission do not
   need to be evaluated in person by the resident but can be accepted for
   admission to the floor. The resident will keep a log of all admissions for
   feedback

B) Resident will personally evaluate ER patients who are:
   1) Low risk admissions
      a. Paucity of risk factors
      b. Atypical presentation
      c. CEU candidates but “CEU” full

   Goal with low risk patients considered for admission is ER
   evaluation and discharge if possible from ER by the ER with
   formal cardiac consultation. If the resident confirms low risk then
   Attending called and evaluates in ER with consultation (dictated
   as OP cardiology consultation by the resident). If attending feels
   the patient can not be discharged then admission with team
   assigned by resident. Resident can suggest observation in CEU if
   appropriate and CEU beds available with attending approval.

   2) High risk admissions
      a. Unstable Angina (ie. ST changes on EKG)
      b. Unstable rhythms
         i. AFib or Flutter with uncontrolled rate
         ii. ICD firing > 1 discharge in 24hr
iii. Any VT
c. CHF with evidence of
   i. Low output
      1. SBP < 90
      2. Low serum bicarb
   ii. Respiratory distress
   iii. New or worsening renal dysfunction
      1. Creatinine rise of > 1mg/dl above baseline.
d. Syncope of unknown etiology (ie possibly VT)

_Thought behind evaluation of high risk patients is as a first screen to deter admission of individuals too sick or unstable to be on the floor. High risk admissions will be assigned to a team by the resident with a call to the attending of that team._

3) _When a resident is not on service the attending will cover 0061 and be expected to:_

   _Evaluate low risk patients for discharge independently_

   _Communicate high risk admissions to the admitting team upon accepting the admission_

C) _Holdover patients in the ER – When the hospital is full this team will take all admissions being held/managed in the ER. (When a resident is not on service this becomes the attending’s responsibility)_

   a. When the hospital is full and patients are held over in the ER the resident will evaluate these patients for procedures and medical necessity for continued admission/observation
      i. Goal is to expedite the patient’s course
      ii. Quick evaluation and engagement of the attending for triage to testing (stress or cath)

   b. Patients who clearly need admission but have no bed are to be assigned to the intern on the service. Once a floor bed is available the patient is transferred to another service or kept depending on resources available within the team and the attending’s comfort.

D) _Resident has co-primary responsibility for covering the consult service (when there is no resident the attending assumes these responsibilities)_

   1) Covers the consult pager – (1489)
   2) Assigns students to consults and oversees them
   3) Assigns intern to consults
   4) Does consults primarily when intern not available
      a. Weekend/Days off
      b. Intern occupied with ER management or Ward management
E) Resident oversees any patients the intern is caring for on the ward (when there is no resident the attending assumes these responsibilities)

Intern responsibilities:
A) ER
   a. Manages any patients boarding in ER – This is the primary responsibility
   b. Can screen as consultant for attending in ER if no resident

B) Consult
   a. First call for consults if no resident or no inpatient service
      i. Covers the consult pager (1489) – (also when resident in clinic if no service in ER or on ward. IF ward or ER service then attending covers)
      ii. Must discuss all consults immediately with attending
         1. At time of call if patient felt to be in any way critical
         2. Immediately after consult for others
   b. Second call if inpatient service or ER service
   c. Is not the direct student supervisor, but students may shadow intern

C) Inpatient –
   a. Pre-rounds, rounds on inpatients and manages patients when appropriate
      i. Should not carry inpatient service without a resident unless attending is able and willing to appropriately supervise without help
      ii. Responsible for admission note completion, orders, lab followup, discharge planning, handoffs, etc. as with any inpatient service.
      iii. Present to attending
      iv. Resident to oversee
   b. When on Call –
      i. Can take admissions to own team – All admissions should be discussed that day with the attending
      ii. May act as a second night float
   c. When on Long Call
      i. Can take admissions 5-8 pm with attending approval
      ii. Is responsible for admissions for other services
   d. When on short call– does admissions for other services if other duties finished

Attending responsibilities
In the absence of a resident the attending takes on most of their responsibilities so please review above as well.

A) Inpatient –
   a. Determine appropriateness for service.
   b. Rounds on inpatients when applicable
   c. Insure chart maintained and billing performed
   d. Appropriately and timely evaluation of housestaff on service
B) ER
   a. Must be available to consult on patients in ER 8am to 7pm
      i. Consults are for the purpose of
         1. Triage low risk to discharge/admit with resident
         2. Triage low risk to discharge/admit independently or with intern
            if no resident
      ii. Covers (970-0061) admissions pager 7am to 7pm when no resident
         1. This included coverage when resident is in clinic
         2. Can sign out admissions pager at 5pm and on weekends (see
            below) with appropriate handoff to hospitalist or covering
            housestaff.
   b. Evaluate patients held over in ER when house full and resident is absent
   c. Oversee intern management of patients held over in ER – essentially
      rounding on ER service in this instance
   d. Service covered by hospitalists 7pm to 7am

C) Consults
   a. Must carry consult attending pager
   b. Covers consult resident pager when resident gone if you have either an
      inpatient or ER service
   c. If no resident and no intern covers both attending and consult pager

Weekends

If attending rounding alone on weekend (no intern or resident), attending has option of
transferring inpatients to HFS or PAC service on weekend.

Residents are to have one day per week off, usually a weekend day – preferred day is
Sunday. Residents cover consult pager 1489 and are responsible for follow-up of
patients on the consult service and seeing new consults on weekends on the day
requested if called before 5pm. These consults are to be staffed with attending on the
day called. Resident covers admissions pager 0061 on weekend mornings- this may be
signed out to rounding fellow (who serves as hospitalist) after 12 noon on weekends.

Intern days are scheduled off and are not easily moved unless there are unusual
circumstances.

Attendings will cover for resident on resident day off
Cover consult pager 1489 if no intern. If intern then intern can cover consult.
Admission pager 0061 can be signed-out to rounding fellow (who serves as hospitalist)
after 12 noon on weekends.
Resident will cover for intern on intern day off (if no resident then attending covers)
PATIENTS AND DISEASE PROFILE:

Inpatient Cardiology Consult Service: Adult inpatients on any adult service within Duke University Hospital who are confirmed or suspected of having a cardiovascular condition.

Outpatient Intern Cardiology Elective: Adult patient panel in the Cardiology subspecialty clinics

Diseases and conditions encountered by the house staff during this rotation may include: Congenital heart diseases, valvular heart disease, complications of systemic hypertension, diseases of the pericardium, heart failure and cardiomyopathy, coronary artery disease, aortic and peripheral vascular diseases, and cardiac arrhythmias.

Procedures (if applicable)

The house staff will learn how to perform EKGs and basic interpretation. They will have the opportunity to observe cardiologic procedures such as ECHOcardiogram and cardiac catheterization.

Hand-off protocol (if applicable)

Beeper sign on instructions (courtesy of Neil Freedman)

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Educational Conference Attendance

House staff will attend the following conferences:

1) Cardiology Grand Rounds:
2) Cardiology/Radiology Conference:
3) Cardiology Journal Club:
**Back-up**

At no time should house staff feel overwhelmed by either the number of Cardiology consult service patients to care for, amount of work to do or a feeling that there are too many patients that need to be seen. In the event that this does occur, the resident must take responsibility for asking for help and should not feel any pressure to not do so, or that such an action would be viewed as “a sign of weakness”. Available resources include the Cardiology attending and the medical chief resident.

**EDUCATIONAL METHODS:**

Residents are assigned significant responsibilities for Cardiology patient evaluation and care in the inpatient setting where teaching and supervision are provided by the teaching attending physician on service. These clinical experiences are complemented by didactic Cardiology conferences which focus on clinic and basic science aspects of cardiovascular medicine. Based on the complex needs of some patients with chronic cardiac conditions, residents are presented an integrated program for care based on cultural, socioeconomic, ethical and behavioral approaches.

**Supervision of the trainees by faculty is accomplished by:**

- Review by the faculty of the resident’s history and physical examination, plan of therapy and evaluation of laboratory and other diagnostic data
- Direct Observation of Resident’s History and Physical Examination
- Direct Observation of Procedures and Skills
- Case Review and Discussion at Conferences

**Assumption of graduated responsibility for the care of patients is monitored by:**

- Review by the faculty of the resident’s history and physical examination, plan of therapy and evaluation of laboratory and other diagnostic data
- Direct Observation of Procedures and Skills
- Case Review and Discussion at Conferences

**EVALUATION METHODS:**

Each house officer will be evaluated for his/her ability to formulate a reasonable plan of diagnostic testing and patient management, as well as by his/her performance of collateral reading and medical knowledge, judgment, intellectual honesty, and maturity. The resident’s performance in the core competencies of patient care, medical knowledge, practice-based learning, interpersonal and communication skills, professionalism and system based practices will be evaluated by the various attending physicians with whom s/he works during this rotation and documented using [https://duke.medhub.com/](https://duke.medhub.com/). Each intern and resident will also be evaluated by the attending as needed as to his/her potential for academic medicine, insofar as the attending can assess this through observation and interaction in the context of the rotations in the outpatient clinics and inpatient consult service. The evaluation will consist of a written evaluation as well as individual verbal feedback.
CORE COMPETENCIES:

Patient Care

1. Recognize common clinical presentations and cardinal manifestations of Cardiovascular disorders to formulate initial clinical impression and differential diagnosis
2. Demonstrate comprehensive evaluation, presentation, documentation and decision-making skills including history taking, physical examination, laboratory evaluation, diagnosis and patient management on the Cardiology consult service
3. Develop and carry out comprehensive patient evaluation and management plans for patients with Cardiovascular disorders.
4. Gain clinical experience and competence in interpreting procedure results required for the diagnosis and management of Cardiovascular disorders.
5. Acquire clinical skills, experience and competence in consultative Cardiology to provide patient care recommendations to patients on other subspecialty or specialty services

Medical Knowledge

1. Appropriately select, order and interpret routine Cardiovascular tests and apply the findings to the management of patients
2. Effectively employ medical knowledge to manage patients seen on the Cardiology inpatient consult service under the supervision of the teaching attending physician

Practice Based Learning and Improvement

1. Identify and evaluate evidence from clinical and scientific studies relevant to patients with Cardiovascular disorders.
2. Present case discussions and literature reviews at weekly Cardiology conferences working closely with the teaching attending physician.

Interpersonal and Communication skills:

1. Work effectively as part of the hospital staff and inpatient consult service team consisting of other interns, residents, medical students, nursing staff and pharmacists.
2. Develop effective communication skills towards patients, their families, colleagues, and members of the patient care team

Professionalism:

1. Demonstrate exemplary attitude, respect, compassion and integrity at all times.
2. Demonstrate a consistent commitment to excellence and ongoing professional development.

System Based Practices:

1. Practice cost-effective utilization of laboratory studies
2. Work effectively with primary health care teams and ancillary care providers to provide appropriate and timely patient care
3. Coordinate outpatient follow-up for Cardiology consult service patients and communicate with clinic physicians.
Intern Cardiology elective for 2012-13

This is a newer program initiated for the Internal Medicine Interns on Cardiology elective. In this program 1 to 2 interns every month (Aug-June) have committed to an elective in cardiology. Our collective thoughts were that the best mix for this elective would be a 50-50 split between outpatient medicine in cardiology clinics and inpatient consults with the Inpatient service when there are two interns on service and solely outpatient if only one intern.

Outpatient elective Weeks 1-2 or 3-4 or if one intern then weeks 1-4

Mon am  off
Mon pm  Duke South consult clinic 2J with Dr Blazing (except when he is scheduled for Lumberton when the clinic will move to Friday pm)

Tue am – off
Tue pm – Dr. Douglas Shocken at Southpoint

Wed am and pm – Dr. Douglas Shocken at Southpoint

Thur am Dr Schuyler Jones PVD and Gen Card  Southpoint
Thur PM Dr John Alexander  Southpoint

Fri am – PVD clinic at Southpoint

Fri pm – free except when Blazing gone on Mon then Duke South 2J

The OP person is expected to do a presentation to the inpatient interns on service on the Friday afternoon of their last week. This will occur at 1pm on the last Friday after the Noon conference. It will happen in 7300 work room. The presentation is case based discussion of an interesting outpatient case.

Inpatient elective Week 1-2 or 3-4 only when 2 interns

Mon-Fri with consult service doing consults
Meet Monday of first day of block at 715 am in 7100 work room and look for consult resident. Daily meet in 7100 at 7am. Look for consults left in “ER overnight.
Directions to Center For Living - CFL

***These directions are leaving the hospital

<table>
<thead>
<tr>
<th>Directions</th>
<th>Distance</th>
<th>Time</th>
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<tr>
<td>Start: Depart Start on Erwin Rd (West)</td>
<td>1.2</td>
<td>0:02</td>
</tr>
<tr>
<td>End: Arrive End</td>
<td>&lt; 0.1</td>
<td>&lt; 1min</td>
</tr>
<tr>
<td>Total Route</td>
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<td>2 mins</td>
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Directions to North Duke Street Clinic

***These directions are leaving from hospital.

<table>
<thead>
<tr>
<th>Directions</th>
<th>Distance</th>
<th>Time</th>
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</thead>
<tbody>
<tr>
<td><strong>Start</strong>: Depart Start on Fulton St (North)</td>
<td>0.4</td>
<td>0:01</td>
</tr>
<tr>
<td>1: Road name changes to Hillandale Rd</td>
<td>1.0</td>
<td>0:02</td>
</tr>
<tr>
<td>3: At exit 176, turn RIGHT onto Ramp (US-501 / Gregson St / Duke St / Northgate)</td>
<td>0.2</td>
<td>&lt; 1min</td>
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<tr>
<td>4: Keep LEFT to stay on Ramp</td>
<td>0.3</td>
<td>&lt; 1min</td>
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<tr>
<td><strong>End</strong>: Arrive End</td>
<td>&lt; 0.1</td>
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<td><strong>Total Route</strong></td>
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Version June 2012
### Directions to Southpoint Clinic

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<thead>
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<td><strong>Start:</strong> Depart Start on Trent Dr (North-East)</td>
<td>0.1</td>
<td>&lt; 1min</td>
</tr>
<tr>
<td><strong>1:</strong> Road name changes to Trent St</td>
<td>0.1</td>
<td>0:01</td>
</tr>
<tr>
<td><strong>2:</strong> Take Ramp (RIGHT) onto SR-147 [Durham Fwy] (NC-147)</td>
<td>9.6</td>
<td>0:09</td>
</tr>
<tr>
<td><strong>3:</strong> At exit 5B, take Ramp (RIGHT) onto I-40 [John Motley Morehead III Fwy] (I-40 / Chapel Hill)</td>
<td>3.3</td>
<td>0:03</td>
</tr>
<tr>
<td><strong>4:</strong> At exit 276, turn RIGHT onto Ramp (Fayetteville Rd / Southpoint)</td>
<td>0.2</td>
<td>&lt; 1min</td>
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<tr>
<td><strong>5:</strong> Keep LEFT to stay on Ramp (Southpoint Blvd / Jordan Lake)</td>
<td>0.1</td>
<td>&lt; 1min</td>
</tr>
<tr>
<td><strong>6:</strong> Keep RIGHT onto Local road(s)</td>
<td>&lt; 0.1</td>
<td>&lt; 1min</td>
</tr>
<tr>
<td><strong>7:</strong> Bear LEFT (South) onto Fayetteville Rd</td>
<td>0.2</td>
<td>0:01</td>
</tr>
<tr>
<td><strong>8:</strong> Turn LEFT (South-East) onto Herndon Rd</td>
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<td><strong>End:</strong> Arrive End</td>
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<tr>
<td><strong>Total Route</strong></td>
<td>13.6 mi</td>
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</tbody>
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***These directions are leaving from Trent Drive.