LSU Health NEW ORLEANS

School of Medicine

Department of Radiology

LSU School of Medicine

Department of Radiology

Interventional Radiology

House Officer Manual

2018-2019

TABLE OF CONTENTS	PAGE
Preliminary Intervention for Resident Non-Compliance	4
Preliminary Resident Grievance Procedure	4
American Board of Radiology (ABR)	4
Radiology Memberships	5
RSNA Online Physics Modules	5
Collaborative Institutional Training Initiative (CITI)	5
USMLE Step 3 Policy	5
Program Educational Goals	5
Supervision of Residents	6
Resident Responsibility for Patient Care	7
Six General Competencies	9
Resident Selection and Promotion	9
Criteria for Resident Promotion/Advancement	9
Clinical Competency Committee	10
Radiology Milestones	11
Program Evaluation Committee/Annual Program Evaluation	11
Clinical and Educational Work Hours Policy	11
Transitions of Care Policy	17
Alertness Management/Fatigue Mitigation	18
Use of Strategic Napping	20
Moonlighting	20
Leave	21
Extended Leave Policy	23
Evaluations – Faculty and Resident	23
American College of Radiology In-Service Exam	25
Chief Residents	25
Residents	26
Mentors	26
Resident Responsibilities	26
Medical Licensure & Other Licensure	27
Dress Code	28
Travel/Meetings	28
Resident Educational Fund	28
American Institute for Radiologic Pathology (AIRP)	29
Payroll	29
Insurance Coverage	29
Computers and Libraries	29
Medical Records	29
Procedure Logs	30
Case Logs	30
Conferences	30
Core Lectures for Each Subspecialty	32
Chest/Cardiothoracic	32
Musculoskeletal	32
Abdominal	32
Neuroradiology	33
Breast Imaging/Mammography	33
Nuclear	33
Ultrasound	34

Pediatrics	34
Interventional	34
Outside Rotations	35
Research/PBL Rotations	35
R4 YEAR	35
Guidelines for Presentations and Abstracts	36
New Innovations	40

PRELIMARY INTERVENTION FOR RESIDENT NON-COMPLIANCE

Substandard disciplinary and/or academic performance is determined by each Department. Corrective action for minor academic deficiencies or disciplinary offenses which do not warrant remediation as defined in the LSU GME House Officer Manual, shall be determined and administered by each Department. Corrective action may include oral or written counseling or any other action deemed appropriate by the Department under the circumstances. Corrective action for such minor deficiencies and/or offenses are not subject to appeal.

Residents are expected to comply with the policies stated in this Radiology Residency Handbook, the LSU GME House Office Manual, as well as policies of the affiliated institutions. If a resident is found to be in non-compliance with any of these policies, the Chief Resident will meet with the resident to verbally discuss the non-compliance. If the problem is not immediately resolved, the Program Director or Associate Program Director will meet with the residents and will verbally counsel the residents and will keep written documentation of the event and remediation plan.

If the non-compliance persists, probation will be considered as per the LSU GME House Officer Manual.

PRELIMARY RESIDENT GRIEVANCE PROCEDURE

If a resident has a grievance, they should first discuss it with the Chief Resident, if appropriate. The Chief Resident should report the grievance to the Program Director or Associate Program Director. The Program Director or Associate Program Director will then meet with the resident to discuss, and if possible, resolve the issue.

Resident complaints and grievances related to the work environment or issues related to the program or faculty that are not addressed satisfactorily at the program or departmental level should be directed to the Associate Dean for Academic Affairs. For those cases that the resident feels can't be addressed directly to the program or institution s/he should contact the LSU Ombudsman. (GMEC October 2007)

AMERICAN BOARD OF RADIOLOGY (ABR)

All residents are required to register with the ABR within their first month of residency. Residents will pay all associated fees, which are available on the ABR website at http://theabr.org/. All resident will register and take the ABR examinations at the earliest time available for their level. If you do not pass one of these examinations, you are required to retake the examination at the earliest possible date.

RADIOLOGY MEMBERSHIPS

Residents are required to register with the RSNA, ARRS, SIR and the ACR by July 31st of their first year. These memberships are either free or are at a discounted membership for residents. Residents will pay any associated fees.

RSNA ONLINE PHYSICS MODULES

Residents are required to complete the RSNA physics module at its assigned time in conjunction with the radiology physics course. The modules that are assigned for

that week are listed in the course schedule. A minimum score of 70% is required. Residents must email the residency coordinator a “print screen” of their post-test.

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI)

The CITI program is a subscription service providing research ethics education to all members of the research community. Residents are required to complete the CITI training and give the certificate of completion to the Program Coordinator within their first month of residency. Instructions are located at http://www.lsuhsc.edu/administration/academic/ors/training.aspx and training is located at https://www.citiprogram.org/.

USMLE STEP 3 POLICY

The Louisiana State Board of Medical Examiners will confer unlimited licensure only after the candidate successfully completes the post - graduate year I level and passes the USMLE Step examinations 1 through 3. Residents are expected to take USMLE Step 3 during their Internship year. If you have not passed USMLE Step 3 upon entering the LSU Radiology Residency program, it must be taken at the earliest available date. If you do not pass Step 3 in your first year as a Radiology Resident, you will not be promoted, and therefore must exit the program. Please note that the Louisiana State Board of Medical Examiners will only allow three attempts to pass Step 3.

PROGRAM EDUCATIONAL GOALS

Residents must demonstrate achievement of the following goals and objectives related to Interventional Radiology:

Patient Care:

1. Develop competence in arterial, venous, portal-venous, biliary and urinary percutaneous endoluminal procedures and percutaneous image-guided biopsy, drainage and ablative therapies.
2. Demonstrate an ability to provide clinically useful consultation in a wide variety of clinical situations were image-guided therapies may be considered.
3. Develop ability to deliver consistent focused pre-procedural evaluation and care, including assessment of procedure risks and potential benefits. This process should include the ability to recognize when consultation of another specialist is needed to help in this pre-procedural assessment of risks and benefits.
4. Demonstrate the appropriate use and interpretation of pre-procedural imaging studies.
5. Demonstrate competence in case selection for a wide variety of image-guided therapies
6. Demonstrate appropriate use of conscious sedation and competence in the performance of conscious sedation for image guided therapies in a wide variety of patient clinical situations.
7. Provide post-procedural care with attention to common and uncommon adverse events, knowledge of when to obtain consultation from other services, and selection of appropriate discharge criteria.
8. Understand the importance of focused clinical follow-up and develop an ability to arrange for appropriate long-term follow-up after an IR procedure.
9. Participate in collaborative multidisciplinary patient care.
10. Demonstrate competence in the interpretation of plan films, CT, MR, ultrasound and nuclear medicine studies pertinent to the practice of IR.

Medical Knowledge:

1. Understand the common principles that link image-guided therapies including fluoroscopic projection of 3D structures in 2D, planar image guidance (CT and US), Seldinger technique, contrast opacification and flow, and the relations between guidewire and device movement.
2. Know the indications, contraindications, risks and benefits of all common IR procedures.
3. Develop an understanding of the anatomy and pathology seen in IR and be able to correlate this knowledge with imaging used in the planning, follow-up and execution of IR procedures.
4. Demonstrate competence in Radiation Physics and Biology as it applies to IR and DR
5. Develop a working knowledge of coagulation, coagulation disorders, anticoagulation therapy and correlation of coagulation for procedures.
6. Understand microbiology and antimicrobial therapy as it relates to IR procedures
7. Demonstrate mastery of radiographic contrast agent pharmacology and radiographic properties
8. Understand common IR clinical and translational research methods and statistical analysis

Practice-based Learning and Improvement:
1. Develop an ability to work with other specialists to develop a treatment plan for patients undergoing IR consultation.
2. Understand the impact of successful procedures and procedural complications through the focused follow-up of patients.
3. Evidence-based medicine: Use the IR literature to plan procedures and manage patients.
4. Through participation in quality improvement projects of faculty, develop the habits of measuring performance in practice and using practice performance data to shape improvements.
5. Develop an understanding of the natural history of the biliary, urinary, arterial, venous and solid organ pathology seen in IR through long-term follow-up of IR patients.

Interpersonal and Communication Skills:
1. Learn how to communicate effectively with patients and their families and develop the skills to manage difficult situations
2. Be able to clearly present the relative risks and benefits of a procedure to patients, families, staff and referring physicians.
- Overcome language barriers with patients and families
- Demonstrate understanding of bringing staff and referring/consulting physicians into complex discussions of risks and benefits of procedures.
- Demonstrate how to succinctly and effectively relay pertinent information to referring and consulting physicians

3. Demonstrate enhanced interpersonal skills with staff, peers and referring physicians
- Address staff concerns and questions appropriately and respectfully
- Demonstrate collegial conversations with referring physicians regarding patient care plans

4. Be able to produce quality consults and be able to communicate these reports effectively
- Understand judicious use of imaging studies
- Appropriately weigh relative value of alternative medical or surgical management

5. Provide consistently high-quality procedure reports that are useful for all the potential recipients within the health system\

Professionalism:

1. Develop bedside skills required for gaining trust and for obtaining appropriate consent for IR procedures
2. Demonstrate effective communication skills (written and oral) with staff and referring/consulting physicians
3. Develop the leadership skills to direct an IR procedure independently
4. Understand the professional contributions of all the staff and physicians of a hospital or clinic to allow an IR service to practice
5. Demonstrate working knowledge of the Medical Professionalism Charter, including the three fundamental principles and 10 professional commitments
6. Performs assigned and required administrative tasks in a timely fashion, not requiring excessive reminders or follow-up

Systems-based Practice:
1. Display proficiency in the multidisciplinary collaborative care of patients
2. Display an ability to determine when referral of IR patients to other specialists is required
3. Recite the treatment alternatives for common image-guided therapies
4. Develop an understanding of the role of IR in health care, and work collaboratively with other specialists to optimize patient care across the health care system
5. Be able to evaluate the costs associated with IR procedures and alternative therapies

SUPERVISION OF RESIDENTS

Faculty members are available at all sites of training. There is direct faculty supervision of all percutaneous invasive procedures (excluding intravenous injection of contrast). The level of responsibility and independence given to each resident depends upon their individual level of knowledge, manual skills, and experience. There is no in-house call. Should independent in-house call be instituted, the resident will have a minimum of 12 months training in radiology prior to in-house on-call responsibility. Should in-house call be instituted, all residents will participate in taking call during the first six months of the final year of their interventional radiology residency.

Residents always have faculty back-up when taking night, weekend or holiday call. All images are reviewed by faculty and all reports are signed by faculty. This faculty review always occurs within 24 hours. There is continuous coverage for Interventional and Neuroradiology by faculty at home. When a resident is on that rotation residents are in a separate call pool and assist the attending. Every rotation has at least one faculty supervising the rotation, and all studies must be signed out by the attending, and all procedures must be performed with an attending.

RESIDENT RESPONSIBILITY FOR PATIENT CARE

The expected components of supervision include:

1. Defining educational objectives.
2. The faculty assessing the skill level of the resident by direct observation.
3. The faculty defines the course of progressive responsibility allowed starting with close supervision and progressing to independence as the skill is mastered.
4. In addition to close observation, faculty are encouraged to give frequent formative feedback and required to give formal summative written feedback

that is competency based and includes evaluation of both professionalism and effectiveness of transitions.

On each rotation residents are responsible for patient care. For example, the resident is responsible for calling critical results, working-up Interventional patients, obtaining informed consent, and communicating with the patient and family regarding results of examination and appropriate after care.

Residents and faculty must inform patients of their respective role in patient care. Before all procedures residents will inform patients of their role as well as the faculty's role in their care. On all services prior to performing a procedure especially when consent is being obtained, the resident informs the patient of who they are, who the attending is, and who will be involved on all invasive procedures. The Interventional and Neuroradiology staff will introduce themselves during the time they are obtaining consent for invasive procedures.

Resident responsibility for patient care increases progressively as the resident is promoted from year to year. Where applicable, progressive resident responsibility is based on specific milestones. Before residents are able to perform Image Guided Lumbar Puncture with indirect supervision, they must complete a specified number of LPs successfully and have the faculty fill out an electronic Entrustable Professional Activity (EPA) forms. The supervising section will then look at the EPA performance and determine if that resident is able to perform that procedure with indirect supervision.
The chart below outlines the guidelines for supervision of residents. It is broken down by year of training and level of supervision. The level of supervision is broken down as follows: direct supervision by faculty, direct supervision by senior residents, indirect immediately available supervision by faculty, indirect immediately available supervision by senior level residents, indirect available and Oversight.

PGY	Direct by Faculty	Direct by Senior Residents	Indirect but Immediately available - faculty	Indirect but immediately available residents	Indirect available	Oversight
I.	We do not have PGY 1 N/A	N/A	N/A	N/A	N/A	N/A
II.	Performing basic procedures, performing Fluoroscopy studies	Performing Fluoroscopy studies	Performing Fluoroscopy studies	N/A	N/A	N/A
III.	Performing more advanced procedures on Interventional Radiology & Neuroradiology	N/A	Obtaining informed consent and performing fluoroscopy studies	Pediatric overnight at home call	Pediatric at home call	Pediatric at home call

IV.	Perform more advanced procedures with faculty supervision, and assist with advance procedures	N/A	Obtaining informed consent and performing fluoroscopy studies	Pediatric overnight at home call	Pediatric at home call	Pediatric at home call
V.	Perform basic and advance procedures with faculty supervision and assist with very complex subspecialty procedures	N/A	Obtaining informed consent and performing fluoroscopy studies	Pediatric overnight at home call	N/A	N/A

Junior residents are expected to teach and supervise medical students. Senior residents are expected to teach and supervise junior residents and medical students.

SIX GENERAL COMPETENCIES

Moving towards a competency based education; the ACGME has implemented the requirement of six general competencies into the curriculum of all accredited programs. These competencies will be used as an evaluation tool for faculty evaluating residents on each rotation, the definition of each is outlined below:

1. Patient Care – Compassionate, appropriate and effective treatment for and prevention of disease.
2. Medical Knowledge – About established and evolving sciences and their application to patient care.
3. Interpersonal and Communication Skills – Effective information exchange and cooperative “learning.”
4. Professionalism – Commitment to professional responsibilities, ethical principles and sensitivity to diverse patient populations.
5. Practice-Based Learning and Improvement – Investigate and evaluate practice patterns and improve patient care.
6. System-Based Practice – Demonstrate an awareness of and responsiveness to the larger context and system of health care.

RESIDENT SELECTION AND PROMOTION

The Radiology Residency Program follows the Residency Eligibility and Selection criteria of the LSU School of Medicine, as stated in the most recent version of the LSU GME House Officers Manual.

Radiology residents are required to complete an intern year in a clinical based specialty (Surgery or Internal Medicine is preferred). A research year alone is not sufficient.

CRITERIA FOR RESIDENT PROMOTION/ADVANCEMENT

In accordance with the policies for Medical Education at LSU Health Sciences Center and the Accreditation Council for Graduate Medical Education, the following general criteria must be fulfilled for promotion to the next level of residency training and/or graduation. Ultimately, the Clinical Competency Committee will make the final decision about promotion, graduation, remediation, probation or dismissal from the program. While there may be specific criteria for each year, a satisfactory performance in all the areas listed below is required for promotion:

- Satisfactory semi-annual and annual evaluations
- Satisfactory conference attendance (at least 70%)
- Timely and accurate completion of ACGME case logs and procedure logs
- Timely and accurate completion of dictated reports
- Satisfactory completion of intra- and extramural rotations
- Demonstrate appropriate expertise in teaching of junior colleagues including medical students
- Demonstrate professional behavior
- In the judgment of the Program Director, Associate and/or Assistant Director(s), the resident has sufficient clinical management skills to warrant promotion and/or graduation.

CLINICAL COMPETENCY COMMITTEE

The Clinical Competency Committee (CCC) of the Interventional Radiology Residency is tasked by the Accreditation Council of College for Graduate Medical Education (ACGME), as well as the Louisiana State University Health Sciences Center in New Orleans, with evaluating each IR Resident within the department and determining if they are progressing successfully throughout their training. As such, the Radiology CCC determines if Residents are progressing through the ACGME defined Interventional Radiology milestones, as well as determining if they are capable of fulfilling their responsibilities as a Resident.

The Radiology CCC will make decisions about promotion, probation, remediation, dismissal and graduation. These decisions will be submitted to the Radiology Program Director, who will make the ultimate decision as to what action to take regarding the resident. If an action is made contrary to the decision of the CCC, sufficient justification of a contrary action must be provided. Members from the active teaching faculty will be chosen by the Chairman of the department and the Program Director based upon their standing amongst the residents as determined by evaluations and direct feedback and will serve a term of at least 3 years. These committee members will be chosen to reflect varied opinions in a relatively small department. The CCC will meet at least twice per year and can be called to meet if an immediate problem arises.

The Chairmanship of the committee will be decided by vote of the committee. The Chair of the CCC is responsible for calling the committee to order, holding votes

on all decisions and reporting decisions to the Program Director. Ultimately, if adverse actions are required, the Chair of the CCC will assist the Program Director in conveying the decision of the CCC and help to explain the decision process to the Resident. The Program Director will be a member of the CCC and may, if called upon, act as a Chair. These guidelines and revisions will be voted upon and approved by the CCC.

INTERVENTIONAL RADIOLOGY MILESTONES

One of the many assessment tools the Clinical Competency Committee will use to judge resident performance is the Interventional Radiology Milestones. The Radiology Milestones are a list of the expected entrustable professional activities that all Radiologists should be able to perform. It includes specific goals for residents to achieve during residency by year level. All residents are required to be knowledgeable of the milestones and understand that they will be evaluated based on their ability to reach their milestone for their appropriate level. A copy of the Radiology Milestones can be found on the ACGME website by following the below link:

Interventional Radiology Milestones

PROGRAM EVALUATION COMMITTEE/ANNUAL PROGRAM EVALUTION

The Department of Radiology Program Evaluation Committee (PEC) meets at least 3 times a year to review the Interventional Radiology Residency and its academic mission. The committee is made up of the Academic Directors within the department, as well as invited guests such as the Director of Faculty Development, the Director of Medical Student Education and the Chief Resident. The committee is responsible for performing the Annual Program Evaluation (APE) of the entire residency, as well as meet on a routine basis to make sure that the department is following through on its goals, objectives and action plans. The PEC also approves significant changes to the program including new rotations, changes to evaluations or goals and objectives, as well as changes to the curriculum or lecture series.

CLINICAL AND EDUCATIONAL WORK HOURS POLICY (Effective 7/1/2017)

The institution adopted the ACGME Clinical and Educational Work Hours that may be summarized as:

Maximum Hours of Clinical and Educational Work Per Week

Clinical and educational hours must be limited to 80 hours per week, averaged over a four week period, inclusive of all in-house call activities, clinical work done from home, and all moonlighting.

Mandatory Time Free of Clinical Work and Education

Residents must be scheduled for a minimum of one day free of work every week (when averaged over four weeks). At-home call cannot be assigned on these free days.

Maximum Clinical and Educational Period Length

Clinical and educational work periods for residents must not exceed 24 hours of continuous scheduled clinical assignments. Programs must encourage residents to use alertness management strategies in the context of patient care responsibilities. Strategic napping, especially after 16 hours of continuous duty and between the hours of 10:00 p.m. and 8:00 a.m., is strongly suggested.

It is essential for patient safety and resident education that effective transitions in care occur. Residents may be allowed to remain on-site in order to accomplish these tasks; however, this period of time must be no longer than an additional four hours.

Residents must not be assigned additional clinical responsibilities after 24 hours of continuous in-house duty.

In unusual circumstances, residents, on their own initiative, may remain beyond their scheduled period of work to continue to provide care to a single patient. Justifications for such extensions of work are limited to reasons of required continuity for a severely ill or unstable patient, academic importance of the events transpiring, or humanistic attention to the needs of a patient or family.

Under those circumstances, the resident must:

Appropriately hand over the care of all other patients to the team responsible for their continuing care; and,

Document the reasons for remaining to care for the patient in question and submit that documentation in every circumstance to the program director.

The program director must review each submission of additional service, and track both individual resident and program-wide episodes of additional duty.

These additional hours of care or education are counted towards the 80-hour weekly limit.

Minimum Time Off between Scheduled Work and Education Periods

Resident should have eight hours free of clinical and educational activities between scheduled work periods.

Residents must have at least 14 hours free of clinical work and educational activities after 24 hours of in-house call.

Residents must be scheduled for a minimum of one-day-in seven free of clinical work and required education (when averaged over four weeks).

At-home call cannot be assigned on these free days.

Circumstances or return-to-hospital activities with fewer than eight hours away from the hospital by residents must be monitored by the program director. This must occur within the context of the 80-hour and the one day in seven off requirement.

Maximum Frequency of In-House Night Float

Night float must occur within the context of the 80-hour and one-day-off-in-seven requirement. [The maximum number of consecutive weeks of night float, and maximum number of months of night float per year may be further specified by the Review Committee.]

Maximum In-House On-Call Frequency

Residents must be scheduled for in-house call no more frequently than every-third-night (when averaged over a four-week period).

At-Home Call

Time spent in the hospital by residents on at-home call must count towards the 80-hours maximum weekly hour limit. The frequency of at-home call is not subject to the every-third-night limitation, but must satisfy the requirement for one-day-in-seven free of duty, when averaged over four weeks.

At-home call must not be as frequent or taxing as to preclude rest or reasonable personal time for each resident.

Residents are permitted to return to the hospital while on at-home call to care for new or established patients. Each episode of this type of care, while it must be included in the 80-hour weekly maximum, will not initiate a new “off-duty period”.

Residents are required to log all clinical and educational hours in New Innovations Software Program or its replacement program. Those who fail to log hours or log erroneous hours are subject to disciplinary action. (GMEC Feb 2011)

The institution as well as each program is required to monitor and document compliance with these requirements for all trainees. To accomplish this, the institution will implement the following policies and procedures:

1. Each program will need to sign a statement attesting to compliance with these requirements at all sites.
2. Each program will develop their own written clinical and educational work hours policy that is in keeping with the ACGME and Institutional policy. This policy will be distributed to all trainees and faculty with a copy provided to the GME Office. The policy must delineate specifically how compliance will be monitored and what actions will be taken to remedy problems. Yearly changes or revisions to policies must be forwarded to the GME Office.

3. Programs must monitor residents for fatigue. The institution will develop resources to educate faculty and residents about sleep deprivation and fatigue.
4. The institution will ask each participating institution to advise it where legally permissible of incidents or trends suggesting fatigue as a component of the problem.
5. If the program has developed and instituted a method to monitor for individual resident clinical and educational work hour compliance (eg work hour logs) it will regularly share this data with the institution.
6. The institution encourages programs to add questions on the clinical and educational work hour requirements to their monthly rotation evaluations in addition to other monitoring.
7. The institution will make it clear to residents that our Ombudsman is available to field questions or complaints about clinical and educational work hours and those such complaints will remain anonymous.
8. The resident agreement of appointment/contract includes a reference to clinical and educational work hours policy and an agreement to participate in institutional monitoring of clinical and educational work hours.
9. Special Focused Reviews may include detailed sections on clinical and educational work hours.
10. An annual web-based questionnaire will be administered to residents regarding clinical and educational work hours by the GME Office. Responses will be anonymous.
11. The GME Office will randomly audit programs.
12. Program specific data will be presented annually in the End of Year Program Review Minutes submitted to the GME Office for review.
13. Violations of clinical and educational work hours requirements by participating institutions may result in removal of residents from that institution.
14. Programs with violations will be subject to close, regular monitoring by GMEC.
15. Programs cited by the ACGME for clinical and educational work hour violations will have special monitoring programs implemented.
16. Moonlighting must be strictly approved in writing and monitored to assure resident fatigue does not become a problem.
17. Clinical and Educational Work Hours Hotline is established to monitor residents complaints.

This policy applies to every site where trainees rotate.

GRANTING CLINICAL AND EDUCATIONAL HOUR EXCEPTIONS:

Please note - The Review Committee for Radiology will not consider requests for exceptions to the 80-hour limit to the residents' work week.

Neuro and VIR call:

We allow the residents to choose their own call schedule during the Neuro and VIR rotations. The resident chooses 9 call days (including 1 of each day of the week) for the block. First year residents should weight the call towards the second half of the rotation. Residents should avoid taking two call days in a row but may take call Friday, Saturday and Sunday consecutively if they choose to do so.

Night Float Rotation:

We allow the residents to make their own schedule during the night float block. The intention is for residents to get exposure to every night of the week, but gives them flexibility to choose their own schedule. Residents should follow the guidelines below:
Residents will need 20 shifts total per block including at least 1 of each day of the week, plus one more Friday, Saturday or Sunday of your choice. (at least 4 shifts total on a Friday, Saturday or Sunday.)
Residents should not schedule themselves on the last Sunday since they will be starting a new day-time rotation the following Monday.
ACGME rules dictate that residents must not be scheduled for more than six consecutive nights of night float.
If there are hospital holidays during the block, it is subtracted from the total shifts.

Interventional Radiology Residents will:

Residents are required to log all clinical and educational work hours in New Innovations or its replacement. Residents who fail to log their hours or log erroneous hours are subject to disciplinary action by the program.

Clinical and Educational Work Hours Policy will be monitored through New Innovations. Residents are required to log their hours daily. Hours will be monitored on a weekly basis by the Residency Coordinator and Program Director.

TRANSITIONS OF CARE

Assuring effective transitions (hand offs)

1. **Policy for accepting of a patient for Interventional Radiology to conduct a procedure.**

   Interventional Radiology residents will when appropriate check the identity of the patient, verify the procedure they are going to perform, verify the indication and orders, and communicate with referring physician, if necessary. The residents will when appropriate verify that the patient is able to consent to the procedure, check all pertinent laboratory studies, imaging, and allergies. Communicate with attending that all of the above is acceptable. If the above criterion is met the attending and resident consent the patient for the procedure. This process ultimately leads up to the performing of the Time Out after the patient is brought into the procedure room. The Time Out is a documented check of an effective transition of patient care.

2. **Policy for transitioning of care and monitoring patients that Interventional radiologists have consulted on.**

   When a resident is present on the Interventional Radiology rotation, the faculty and residents will hold regular meetings. The meeting discussions will include changes in the patients that they are monitoring, procedures they have performed, any follow-up for those patients as well as any change in the status of patients on which they have been consulted. These services are completely covered by the faculty and often but not always a resident is assigned on a monthly basis to this

rotation. There is not continuous resident coverage on this rotation; it is primarily covered by faculty. When a resident is on Interventional Radiology they participate in the meetings. If there is an important change in a patient's status it must be directly communicated to faculty, and this is monitored continuously by the interventional radiology staff as well as during daily rounds with faculty.

At the end of the rotation if there is a resident on the current rotation and a resident coming in to the next rotation a resident to resident transition occurs during the evening sign off of the last day of rotation or the last day the resident is on rotation. Otherwise, if there is no resident coming on all patient information is conveyed to the faculty during the evening meeting. Verbal face to face handoffs as well as the daily meetings are conducted in an area where interruptions are less likely, in a radiology reading room or angiography suite. There will be direct faculty monitoring of this handoff.

3. How transitions of care are monitored:

Faculty are required to answer a question on effectiveness of witnessed transitions on each evaluation. The following statement will be added to the New Innovations evaluation for Interventional Radiology "I have witnessed effective transitions in person and attest the essential elements as defined in the Transitions Policy was transmitted to and understood by the receiving team."

The process and effectiveness of each program's system is monitored through the Annual Program Review and the Internal Review process. The institution and program will monitor this by periodic sampling of transitions, as part of the Annual Review of Programs and as part of the Internal Review Process. As above the Interventional Radiology staff will monitor the transitions.

MANDATORY NOTIFICATION OF FACULTY

In certain situations, faculty must be notified of a change in patient status or condition. The following require immediate notification of staff:

1. Patient admission
2. Transfer of a patient on the IR inpatient service to the ICU
3. Transfer of a patient under the direct care of an IR physician (resident or faculty) to the ICU
4. Code or rapid response called for a patient on the IR inpatient service or under the direct care of an IR physician
5. Unexpected/unplanned admission overnight observation of a patient to the hospital following a procedure
6. Any change in a patient's advanced directive
7. Any patient death

A change in a patient's care needs that requires more than a typical IR admission, such as consultation to other services or subspecialty (like cardiology, internal medicine, endocrinology, general surgery, vascular surgery, etc.) must be discussed with staff as soon as circumstances allow, with a maximum of 6 hours elapsed time. This includes transfer of a complex patient on the IR service to another service for more expert management.

ALERTNESS MANAGEMENT/FATIGUE MITIGATION

Residents and faculty are educated about alertness management and fatigue mitigation strategies via on line modules and in departmental conferences. Alertness management and fatigue mitigation strategies are outlined on the pocket cards distributed to all residents and contain the following suggestions:

1. Warning Signs
    a. Falling asleep at Conference/Rounds
    b. Restless, Irritable w/ Staff, Colleagues, Family
    c. Rechecking your work constantly
    d. Difficulty Focusing on Care of the Patient
    e. Feeling Like you Just Don't Care
    f. . Never drive while drowsy
2. SLEEP STRATEGIES FOR HOUSESTAFF
    a. Pre-call Residents
        1. Don't start Call w/a SLEEP DEFICIT – GET 7-9 ° of sleep
        2. Avoid Heavy Meals / exercise w/in 3° of sleep
        3. Avoid Stimulants to keep you up
        4. Avoid ETOH to help you sleep
    b. ON Call Residents
        1. Tell Chief/PD/Faculty, if too sleepy to work!
        2. Nap whenever you can á > 30 min or < 2°)
        3. BEST Circadian Window 2PM-5PM & 2AM- 5AM
        4. AVOID Heavy Meal
        5. Strategic Consumption of Coffee (t ½ 3-7 hours)
        6. Know your own alertness/Sleep Pattern!
    c. Post Call Residents
        1. Lowest Alertness 6AM –11AM after being up all night
        2. Full Recovery from Sleep Deficit takes 2 nights
        3. Take 20 min. nap or Cup Coffee 30 min before Driving

In addition, programs will employ back up call schedules as needed in the event a resident cannot complete an assigned duty period.

How Alertness Management/Fatigue Mitigation is Monitored:

The institution and program monitor successful completion of the on line modules. Residents are encouraged to discuss any issues related to fatigue and alertness with supervisory residents, chief residents, and the program administration. Supervisory residents will monitor lower level residents during any in house call periods for signs of fatigue. Adequate facilities for sleep during day and night periods are available at all rotation sights and residents are required to notify Chief Residents and program administration if those facilities are not available as needed or properly maintained. At all transition periods, supervisory residents and faculty will monitor lower level residents for signs of fatigue during the hand off. The institution will monitor implementation of this indirectly via monitoring of duty hours violations in New Innovations, the Annual Resident Survey (administered by the institution to all residents and as part of the annual review of programs) and the Internal Review process.

Use of Alertness Management Strategies

The program is committed to and is responsible for promoting patient safety and resident well being in a supportive environment. If a faculty member is concerned that a resident is not fit for duty due to fatigue or illness or any cause, they will immediately report this to the program director or associate program director or chief resident. The department has distributed information on recognizing signs of fatigue; this information is also located on the website.

Recognizing Signs of Fatigue.

If a faculty member is concerned that a resident is not fit for duty due to fatigue or illness or any other cause, they should immediately report this to the Program Director or Associate Program Director or chief resident. Residents are also informed of the ACGME duty hour rules and receive similar education on the signs of sleep deprivation, alertness management and fatigue mitigation through a variety of educational sources. They include the LSUHSC core modules, semiannual discussions during monthly resident meetings and at semiannual reviews. Residents are provided a call room with a bed in a quiet area away from patient care to rest. Napping is encouraged for the residents who are required to work overnight during the hours of 10pm to 8am to minimize the effects of sleep deprivation. If a resident feels that fatigue is affecting patient care, they should tell the faculty that is in house at that time. If a resident should feel that fatigue may affect patient care or their transportation home, they may access the call rooms at any time for rest. In addition, if they feel that they are too fatigued to return home safely the department will reimburse them for a taxi ride home. If a resident cannot perform their required duties we have 24/7 faculty in house coverage and their services will be maintained by the faculty member.

USE OF STRATEGIC NAPPING

Residents are provided call rooms with beds in a quiet area away from patient care to rest. Napping is encouraged for the residents who are required to work overnight during the hours of 10pm to 8am to minimize the effects of sleep deprivation. If a resident feels that fatigue is affecting patient care, they should tell the faculty that is in house at that time. We have faculty that are in house 24/7. The faculty assumes the resident responsibility during those times.

MOONLIGHTING

The following guidelines have been set forth by the Department with regard to a resident's work hours outside their regularly assigned clinical and research duties:

1. No moonlighting is allowed for first year residents.
2. All moonlighting must be tracked in New Innovations. All internal and external moonlighting must be counted in 80 hour maximum weekly hour limit. Residents must not schedule moonlighting that will cause the 80 maximum. Residents who schedule moonlighting resulting in violation of the 80 hour rule will be subject to disciplinary action including but not limited to loss of moonlighting privileges.

3. Second, third, and fourth year residents may moonlight throughout the year, with the following restrictions:
    a. At no time should moonlighting activity adversely affect clinical or academic responsibilities. Conference attendance must be over 80% to be eligible for moonlighting activities.
    b. Residents desiring to moonlight must submit their work schedule at the beginning of the month to their advisor and to the staff physician responsible for that resident's rotation. Staff physicians may overrule resident moonlighting schedules while the resident is on their service.
    c. Residents scoring below the 50th percentile on the ACR In-Training examination will not be allowed to participate in moonlighting activities.

4. It is each resident's responsibility to complete the "Request for Moonlighting" form and submit it to their service chief and faculty advisor at the beginning of each month. The form should include the location and phone number where they can be reached if an emergency arises. If the advisor feels that the level of moonlighting is excessive or the resident's level of performance is adversely affected by the level of extramural activity, it is the advisor's responsibility to advise the resident to limit his/her moonlighting activity. Failure to respond will be grounds for probation, suspension or dismissal.
5. Research residents should not allow their moonlighting to interfere with ongoing research projects. Under no circumstances is moonlighting permitted during the work week (Monday - Friday, 8:00 a.m. – 5:00 p.m.). A copy of the moonlighting schedule must be submitted at the beginning of the month to the resident's faculty advisor and the research supervisor.
6. A copy of each resident's monthly moonlighting schedule will be included in the resident's permanent academic record.
7. Please refer to the Liability Insurance Section of the GME Policy and Procedures Manual. Moonlighting is NOT covered by your LSU malpractice insurance.

RESIDENTS MOONLIGHTING OUTSIDE THESE GUIDELINES WILL BE SUBJECT TO IMMEDIATE DISMISSAL.

LEAVE

Please refer to the Graduate Medical Education House Officer Manual for general policies and specific time allowed.

Vacation – Vacation time is allotted per GME/state/ABR policy. Residents will receive 28 days (4 weeks) of vacation. Three (3) of these weeks must be taken in one week (7 day) blocks. These one week vacations blocks will be taken every four months (1/3 year). The remaining week can be taken as individual week days throughout the year. If needed, exceptions can be made for those interviewing for fellowship positions, as long as prior approval is received from the Program Director. You must take vacation if you are interviewing at another institution (i.e. fellowship). If you expect to be interviewing and need a larger block of time than one week, notify the program director at the earliest time and special arrangements to accommodate this request will be attempted. If you have already taken vacation, then extra time away for

interviews will be recorded as leave without pay; you will not receive pay for this time.

All vacation requests must first be sent to the Program Coordinator for initial approval prior to filling out a vacation request form.

We will make every attempt to oblige vacation requests, but make no promises as we are trying to give each resident the best experience possible. Residents seeking vacation time should notify the chief resident and/or the staff chief of service before the beginning of each quarter. Graduating residents are allowed to take up to seven days of vacation in the last two weeks of June. If a graduating resident wants to take the final week of June off, they should reserve 56 hours (7 days) of vacation time. If they do not have any vacation time remaining, they will not be able to take off the final week of June. Non-graduating residents are not allowed to take leave during the last 7 days of June. Residents are allowed to take up to three days of vacation in the first two weeks of July.

Residents are not allowed to take leave during Night Float, Nuclear Medicine rotations and during their last month of Mammography.

Educational Leave – Residents are allowed five days per year to attend and/or present at scientific meetings and conferences. Any additional time will be recorded as leave without pay.

Maternity/Paternity Leave – Residents must inform their faculty advisor and the Program Director of the Department as soon as possible so schedule changes may be made accordingly. Every effort will be made to accommodate unforeseen circumstances (i.e. premature delivery, pre-eclampsia, etc.) with minimal disruption to the schedule. This requires early planning and the cooperation of the residents in the program.

Funeral Leave – Leave granted when attending a funeral or burial rites of a parent, step-parent, child, step-child, brother, step-brother, sister, step-sister, spouse, mother-in-law, father-in-law, grandparent, or grand-child; provided such time off shall not exceed two days on any one occasion. For these brief periods, full salary and benefits will continue.

**If you take leave from the program to do research for any length of time, you will return in the PGY year which you left, and will be paid accordingly. For example, if you complete your PGY2 year, and then leave for 2 years of research you will return as a PGY3 and will be paid at that level.

EXTENDED LEAVE POLICY

A resident is not to exceed 6 weeks (30 working days) of absence in one year; 12 weeks (60 working days) of absence in two years, 18 weeks (90 working days) of absence in three years, or 24 weeks (120 working days) of absence for residents in a program for four years. If a longer leave of absence is granted, the required period of GME must be extended accordingly. Absence is to include vacation, leaves of absence (paid or unpaid – leave without pay), and sick time during the entire 48 month training program. Leave time assigned to each year of training cannot be accrued from year to year.

If upon review by a committee of faculty members headed by the Program Director and Chairman, a resident in training is deemed to be academically performing at a satisfactorily level, then the committee will have complete discretion to make final accommodations.

EVALUATIONS – FACULTY AND RESIDENT

Resident Evaluation by Faculty – Residents are evaluated at the end of each rotation by the faculty members they worked under. The evaluation forms are rotation and level specific. These evaluations become part of the permanent file and will be used at periodic evaluation sessions by the Department as a means of determining strengths, weaknesses, problems and promotions. These evaluations plus the yearly in-training examination, plus comments from the faculty, are the basis for renewal of contracts and promotions as well as recommendation to sit for the qualifying examination of the American Board of Radiology.

Faculty Evaluation by Residents – House officers are provided the opportunity to evaluate individual faculty members with whom they have worked. Evaluations should be completed following each rotation. These evaluation forms will be e-mailed via New Innovations to the resident at the completion of the rotation. Residents are encouraged to be completely honest in their assessments; at no time will faculty members see the individual completed evaluation forms. Faculty receives feedback from cumulative results of the resident evaluations at their annual evaluation with the Department Head.

Program Evaluations – All residents will complete semi-annual Program evaluations. Additionally, faculty evaluates the Program on an annual basis. The results of these evaluations will be synthesized and reviewed by the Program Director, Coordinator and a faculty committee to determine program strengths and weaknesses and as a basis for program development and change.

Hidden Evaluator/360 Evaluations – Evaluations are completed on residents by non-faculty members with whom the residents interact. These hidden evaluators may include technicians, nurses, Program Coordinator, patients (interventional rotation), or other individuals with whom the resident interacts with during the course of his/her training rotation.

Resident Self Evaluation and Wellness Plan – Each resident will complete a semi-annual self assessment and individual wellness plan.

Clinical Work Hours Survey – Residents will log duty hours into New Innovations. In addition, a Work Hours survey will be completed annually by the GME office.

Semi-Annual Program Director Evaluation of Residents – The Program Director will conduct a semi-annual review of each resident, and will meet with individual at these times. Feedback from competency-based evaluations and other assessment tools will be discussed with the resident, and the resident's self-evaluation and individual learning plan will be reviewed.

Definitions of Evaluation Grades – The grades used on some of the evaluations are defined as follows:

Honors – is given to all residents whose quality of performance is considered to be excellent and who have demonstrated a degree of understanding and ability which is considerably above the level of adequacy required for passing status.
High Pass – signifies that all work in a given rotation has been completed at a level well above the average but below that of honors.
Pass – is indicative that all requirements of a rotation have been completed satisfactorily and that the minimum requirements of promotion have been met.
Fail – is the grade assigned to residents who are considered to be inadequate in meeting the minimum rotation requirements and have demonstrated a degree of deficiency which makes them ineligible to be promoted, or in some instances, to continue in the residency without appropriate remedial action.
Taught Very Well – is the grade assigned to faculty whose teaching is considered to be excellent and who have demonstrated a degree of performance in instruction which is considerable above the level of adequacy required to educate a resident.
Taught Well – signifies that all instruction in a given rotation has been performed at a level well above the average but below that of Taught Very Well
Taught – indicates that all requirements of a rotation have been taught satisfactorily and that the minimum requirements for competent instruction have been met.
Failed To Teach – is the grade assigned to faculty who are considered to be inadequate in meeting the minimum standards of instruction in a given rotation and have demonstrated a degree of deficiency which may make them unfit to provide further instruction if they were the faculty member specifically responsible for this topic.

AMERICAN COLLEGE OF RADIOLOGY IN-TRAINING EXAM

Each year (generally in early February), the American College of Radiology (ACR) In-Training Examination is administered. All residents, regardless of the hospital to which they are assigned at the time of the examination, will take the examination simultaneously. This examination is extremely important. It gives both you and the department an idea of your strengths and weaknesses. The Department gives serious consideration to your scores when considering individuals for promotion in the program.

Residents scoring below the 50th percentile will not be allowed to participate in moonlighting activities. Residents should develop and maintain a daily study routine to ensure the highest possible score.

CHIEF RESIDENTS

The Chief Residents speak for all residents in the program and are responsible for the overall management of resident activities within the program. The Chief Residents will be the residents to whom the Department Head will communicate all problems within the program.
The Chief Residents are responsible for coordinating the student conferences. In addition, the Chief Resident works with faculty to coordinate basic and clinical science conferences. Assignments for student and resident conferences should be made sufficiently in advance so that those presenting may properly prepare.

It is fair to say that the Chief Residents speak for the administration in matters that pertain to the running of each individual service. He/she must also report to the staff regarding all activities within the hospital.

The Chief Residents are expected to be familiar with the cases on their services at all times. Each staff member should be informed of the happenings on his/her service. The staff serves as the ultimate authority for all service activity and will be held legally responsible for the care rendered on his/her service. The chief resident is responsible to educate the residents on a semiannual basis about wellness, fatigue and alertness.

RESIDENTS

All residents are involved in teaching and are expected to participate in helping to train students and lower level residents. Students will evaluate residents at the end of each block. The evaluations will become part of each resident's academic file. Evaluations are anonymous. As well, the residents will evaluate the student's performance at the completion of each rotation. These evaluations will be distributed and collected by the Business Office.

MENTORS

Residents are required to have chosen a mentor by January of their first year.

RESIDENT RESPONSIBILITIES

It has been said that in order to be a successful physician, one must display three vital characteristics: *availability, affability,* and just plain *ability*. (Dr. R.J. Lousteau, 1987). In the Department of Radiology, these essential qualities will be expected of every resident, without exception.

Availability. .The residents are responsible for working the same expected work hours and times for their assigned rotation as the faculty. If they will not be at their assigned rotation during normal work hours it is their responsibility to inform the program director, chief resident and faculty member assigned to the rotation. Residents on the Vascular & Interventional rotation will choose 9 nights (two of which must be weekend nights) in which they will take call during the 4 week rotation block. Residents on night float will choose 4 weekend nights in which they will work during the 4 week (20 night) rotation block. Our department has proudly observed a long tradition of service, and here at LSU we have a reputation of being ready and willing to provide that service to anyone in need. Thus, we make it a policy to be available at all times, and to answer all calls promptly. The persons listed in the call schedules must regard their on-call days and nights as serious responsibilities that are not to be taken lightly. If at any time a resident is unable to fulfill the demands of being on call, he or she must immediately notify the other resident members of the team so that alternative coverage may be arranged.

It is the resident's responsibility to be sure that beepers and telephones are in working order and that the hospital operators, emergency rooms, and ward know how to reach him/her at all times. Furthermore, it is the responsibility of all residents to be

"geographically positioned" in the community so that responses to hospital calls can be made within a reasonable time. Remember that in a real emergency, someone's life may depend on how far away you are. As a general rule, residents on call should be reachable by beeper and telephone within five minutes, and when taking calls from outside of the hospital, must be able to get to the hospital within 15 to 20 minutes.

Affability. Our policy toward consultations, whether from primary care physicians, emergency rooms or other services, is to be courteous and "glad to be of assistance." Remember that few other medical professions have any in-depth training in radiology, and no matter how simple or how complex the patient's problem may be you are being called to provide help in solving it. We will, therefore, project a pleasant, outgoing attitude in answering all calls for help from other services. Your demeanor is a reflection of your Department!

Ability. Every resident in our program will be expected to perform at the very highest level he or she is capable of attaining. By virtue of your acceptance into this training program, you have demonstrated the basic skills necessary to become a fine radiologist. While the Department will provide an excellent foundation for developing those skills, each resident will be expected to devote the time and energy necessary to hone them finely through a combination of didactic study, clinical observation, and one-on-one contact with faculty.

The three factors mentioned above are the foundations of professionalism. Implicit, of course, in this concept of professionalism are the qualities of personal integrity, responsibility, and honesty. It should go without saying that these qualities will be expected from each and every resident at all times. By embracing these ideals, we all strive to provide the best of care for our patients as well as the spirit of cooperation and concern for our colleagues.

As residents progress through the program they will be expected to grow emotionally, technically and intellectually. Individual responsibilities will increase yearly in a graduated fashion. Every resident should recognize that he/she is part of the LSU Radiology Program for an entire four years.

MEDICAL LICENSURE & OTHER LICENSURE

Every resident is required to hold a Louisiana medical license. A copy must be provided to the Department upon initial receipt and upon renewal each year. Specific licensure information should be obtained directly from the Louisiana State Board of Medical Examiners. www.lsbme.org.

Per ACGME guidelines, residents must maintain current Advanced cardiac life-support (ACLS) training. Courses are offered through the LSU Community Training Center. Please see the coordinator for schedule of classes. Any class taken must be accredited by the American Heart Association (AHA). The department will reimburse the resident for their ACLS renewal, at the cost of renewal at LSUHSC. Please contact the Program Coordinator for information on documentation needed for reimbursement.

DRESS CODE

All employees should wear appropriate business attire during business hours. Clothing should be the appropriate size. Clothing should be clean, pressed and in good repair. Shoes should be closed-style, polished and in good repair. Good personal hygiene is a must. Surgical scrubs are not to be worn outside of the operating suite without a white lab coat over the scrubs. Surgical scrubs are not appropriate and should not be worn in the clinics unless returning to the operating room during the clinical session.

TRAVEL/MEETINGS

The program encourages resident attendance at educational meetings. Likewise, presentation of papers or posters at national meetings will be treated as educational leave and in some instances be funded by the Department with a stipend of $1500 once a year.

Reimbursement for travel and entertainment is strictly controlled by University, Program, and Department rules, which are available in the administrative area. Travel rules and forms are available on the website: http://state.la.us/osp/travel/traveloffice.htm. It is advisable to read the institutional travel policies prior to making travel arrangement. In order to receive reimbursement for approved travel, all applicable institutional travel policies **must** be followed.

No reimbursement for travel is allowed without prior written approval (on the appropriate institutional forms), signed by the Department Head. No reimbursements will be made without original receipts. **Please notify the Program Coordinator as soon as your abstract, presentation, etc is accepted by a conference. All prior travel approval must be submitted at least three months ahead of the conference.**

RESIDENT EDUCATIONAL FUND

The department provides a $250 per academic year educational fund for the purchase of educational material applicable to resident training. All textbook purchases must be made by the Department of Radiology Business Manager and are subject to departmental approval. All electronic purchases or subscriptions are to be made by the resident. Once purchases are made, please submit receipts and/or verification of purchase (i.e. bank statement, credit card statement) to the Business Manager for reimbursement. Reimbursement requests must be submitted by June 15th.

AMERICAN INSTITUTE FOR RADIOLOGIC PATHOLOGY

The AIRP rotation is funded by the department of radiology and a stipend of $2000 is provided to assist residents with the costs associated with attending the course. It is expected that residents will have a 100% attendance or otherwise jeopardize their stipend. If a resident's attendance is below 90%, the resident will receive a reduced stipend based upon their actual attendance percentage. If the need arises for

residents to not attend a day at the AIRP an email must be sent to the program coordinator or program director.

PAYROLL

It is required that you sign up for direct deposit. Paycheck advices (stubs) are available via the LSU Employee Self Service Website:

http://employeeselfservice.lsuhsc.edu

INSURANCE COVERAGE

Please see the GME House Officer Manual on Policies and Procedures for information on health, life, and malpractice insurance as well as disability coverage.

COMPUTERS AND LIBRARIES

Computers and medical libraries are available to residents at all hospitals. User IDs and passwords are assigned by Computer Services upon hire and entry into the PeopleSoft system. All residents are given an e-mail account through LSU and are required to check it daily.

SOCIAL MEDIA POLICY

Residents are expected to adhere to the Guidelines for the Appropriate Use of Social Media and Social Networking, set forth by the Federation of State Medical Boards which are located here:

http://www.fsmb.org/pdf/pub-social-media-guidelines.pdf

MEDICAL RECORDS

Residents are responsible for dictating and signing medical records on all patients they are responsible for. It is the resident's responsibility to check their EPIC Inbox regularly and sign off on all notes when on interventional services. If you do not sign off on notes in a timely manner you will be placed on the delinquent list, which will ultimately lead to a suspension of privileges without pay. It is extremely important that residents complete all dictations prior to changing rotations. Residents are responsible for dictating imaging studies on their rotations and ensuring that the studies are read-out with faculty.

PROCEDURE LOGS

To comply with the Program Requirements for Graduate Medical Education in Interventional Radiology, the procedural training experience of each interventional radiology resident must be tracked through two methods:

1. ACGME Resident Case Log System
2. Interventional Radiology Patient Procedural Encounters Log

Resident Case Log System

The ACGME's Resident Case Log System is intended to capture a sample of the procedural experiences of an interventional radiology resident. Interventional radiology case data must be entered into the Case Log System for each resident. Interventional radiology Case Log data are entered in aggregate, similar to the diagnostic radiology Case Logs, and must be reviewed at least semiannually by the program director for accuracy [Program Requirement II.A.4.r)].

Specific interventional radiology Case Log procedural categories were chosen to provide a representative picture of resident procedural activities across the full domain of interventional radiology (see **Table 1**). Procedural minimums have not been established at this time, but will be determined in the future once sufficient data has been collected. Of note, initial interventional outpatient evaluation, while not a procedure, is an important resident experience and has been included as a Case Log category.

Interventional radiology-integrated program directors must track both interventional radiology Case Log categories and diagnostic radiology Case Log categories (see **Table 2**). Interventional radiology-independent program directors need to track only the interventional radiology Case Log categories.

Interventional radiology Case Log categories are defined by CPT codes, shown in **Table 3**. The Association of Program Directors in Interventional Radiology/Society of Interventional Radiology will inform the ACGME of CPT code updates on an annual basis.

Interventional Radiology Patient Procedural Encounters Log

An interventional radiology patient procedural encounter is defined as a patient visit during which an interventional radiology patient is evaluated or treated by a resident. This includes visits in which an interventional radiology patient undergoes an interventional radiology or interventional radiology-related procedure, as well as outpatient visits in which an initial evaluation is performed.

The Interventional Radiology Patient Procedural Encounters Log reflects the cumulative procedural experience of an interventional radiology resident. The Program Requirements for Graduate Medical Education in Interventional Radiology specify a minimum number of procedures per resident (1000 procedures during the interventional radiology residency, and
500 during the Early Specialization in Interventional Radiology (ESIR) curriculum). Programs must ensure that residents keep a log of all interventional radiology patient procedural encounters in order to track the cumulative procedural experience obtained during training. The
cumulative Interventional Radiology Patient Procedural Encounters Log, commonly known as a
"procedure log," should track the volume and type of all procedures and patient encounters, but
should also provide some meaningful detail about each case.

Guidelines for Determining Interventional Radiology Case Log Numbers

1. Case Log entries are defined and counted according to established CPT code descriptions of interventional radiology procedural activity
2. The Case Log information for each ESIR resident who enters an independent program must be entered into the Resident Case Log System by the receiving interventional radiology-independent program director upon resident matriculation.
3. No more than two residents can take credit for the same procedure.

Guidelines for Counting Patient Encounters

1. An interventional radiology patient encounter is associated with an interventional radiology or interventional radiology-related procedure or initial outpatient evaluation and management visit.
2. Vascular imaging studies do not count toward interventional radiology patient encounters.
3. A resident must be the first operator on a patient procedural encounter in order to count it. An exception can be made to allow both a senior and a junior resident to count the same procedure when the senior resident is supervising the performance of a minor procedure performed by the junior resident.

12/2017

CASE LOGS

Case logs are distinct from procedure logs. The ACGME Case Log system is required for specific CPT codes. UMCNO IT will track these CPT codes for residents while on a rotation at UMCNO. It will be the resident's responsibility to keep track of these CPT codes and turn them into the Program Coordinator when on rotations at Children's Hospital or VA. The Program Coordinator will enter these into the ACGME case log system annually. The ACGME and the Radiology Residency Review Committee require tracking of the CPT codes listed below:

Diagnostic CPT Codes:

Case Log Categories	Required Minimum Number	CPT Codes
Chest X-ray	1900	71045, 71046, 71047, 71048
CT Abd/Pel	600	72192, 72193, 72194, 74150, 74160, 74170, 74176, 74177, 74178
CTA/MRA	100	70496, 70498, 70544, 70545, 70546, 70547, 70548, 70549, 71275, 71555, 72159, 72191, 72198, 73206, 73225, 73725, 73706, 74174, 74175, 74185
Image Guided Bx/Drainage	25	20604, 20606, 20611, 32555, 32557, 49083, 49405, 49406, 49407, 77012, 76942
Mammography	300	77065, 77066, 77067
MRI Body	20	71550, 71551, 71552, 72195, 72196, 72197, 74181, 74182, 74183, 74712, 74713
MRI Brain	110	70551, 70552, 70553
MRI Lower Extremity Joints	20	73721, 73722, 73723
MRI Spine	60	72141, 72142, 72146, 72147, 72148, 72149, 72156, 72157, 72158,
PET	30	78459, 78491, 78492, 78608, 78609, 78811, 78812, 78813, 78814, 78815, 78816
US Abd/Pel	350	76700, 76705, 76706, 76770, 76775, 76830, 76856, 76857

Interventional CPT Codes: Required Minimums TBA

Table 3: Interventional Radiology CPT Codes by Category

CASE LOG CATEGORY (12)	CPT CODES
Aortic Stent Grafting	33880, 33881, 34701, 34702, 34703, 34704, 34705, 34706, 34707, 34708, 34713, 34841, 34842, 34843, 34844, 34845, 34846, 34847, 34848,
Arterial PTA or Stent	37220, 37221, 37224, 37225, 37226, 37227, 37228, 37229, 37230, 37231, 37236, 37246
Dialysis Access Intervention	36901, 36902, 36903, 36904, 36905, 36906
Embolization	37241, 37242, 37243, 37244, 61626
New Outpatient Clinic Evaluation	99201, 99202, 99203, 99204, 99205, 99211, 99212, 99213, 99214, 99215
Primary GI Intervention (PTBD, Cholecystostomy, Gastrostomy)	47533, 47534, 47490, 49440
Primary Nephrostomy	50432, 50433
Thrombolysis or Thrombectomy (Arterial or Venous)	37184, 37187, 37211, 37212
TIPS or TIPS Revision	37182, 37183
Tumor Ablation	20982, 20983, 32994, 32998, 47382, 47383, 50592, 50593
Venous Port	36560, 36561
Venous Intervention (Stent, PTA, or filter)	37191, 37193, 37238, 37248

CONFERENCES

The resident's curriculum consists of a daily lecture schedule. The conference schedule for the Department can be found on the Departmental Home Page as well as in New Innovations.. Residents are expected to attend all conferences and arrive on time (attendance is kept and reported to the RRC). Attendance at less than 70% of conferences will be regarded as inadequate. Failure to attend a minimum of 70% of conferences may result in the following actions including not being recommended for promotion, remediation, or possible dismissal. Attendance is required. Personal sign-in is required. Sign in for others is not allowed. In addition while attending AIRP it is expected that residents will have a 100% attendance or otherwise jeopardize their stipend. If the need arises for residents to not attend a day at the AIRP an email must be sent to the program coordinator or program director.

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1					
7:30am-8:15am	Chapter	Tumor Board	Core	Core	Multidisciplinary Tumor Board (Hepatobiliary, Breast, Lung)
12:15pm-1pm	Chapter*	**	Core***	Core	Grand Rounds
4pm-5pm		ICC-Smith			
Week 2					
7:30am-8:15am	Chapter	Tumor Board	Core	Resident Mtg	Multidisciplinary Tumor Board (Hepatobiliary, Breast, Lung)
12:15pm-1pm	Chapter*	**	Core***	Shreveport	Journal Club
4pm-5pm		ICC-Smith			
Week 3					
7:30am-8:15am	Chapter	Tumor Board	Core	Core	Multidisciplinary Tumor Board (Hepatobiliary, Breast, Lung)
12:15pm-1pm	Chapter*	**	Core***	Core	Grand Rounds
4pm-5pm		ICC-Smith			
Week 4					
7:30am-8:15am	Chapter	Tumor Board	Core	Core	Multidisciplinary Tumor Board (Hepatobiliary, Breast, Lung)
12:15pm-1pm	Chapter*	**	Core	Core	Resident ICC
4pm-5pm		ICC-Smith			
Week 5					
7:30am-8:15am	Chapter	Tumor Board	Core	Core	Multidisciplinary Tumor Board (Hepatobiliary, Breast, Lung)
12:15pm-1pm	Chapter*	**	Core	Core	Grand Rounds
4pm-5pm		ICC-Smith			

*Will be replaced with Peds Conferences: every 3rd Monday

**Research Meeting: 1st Tuesday of each block at 12:15pm

Diagnostic CORE LECTURES FOR EACH SUBSPECIALTY

Chest/Cardiothoracic Core Lectures: Robert Karl, M.D.

1	Methods of Examination, Normal Anatomy, and Radiographic Findings of Chest Disease
2	Approach to Chest Radiograph
3	The Radiographic Report
4	Mediastinum and Hila
5	Pulmonary Vascular Disease and Pulmonary Neoplasms
6	Pulmonary Infection
7	Diffuse Lung Disease and Airways Disease
8	Pleura, Chest Wall, Diaphragm, and Miscellaneous Chest Disorders
9	Cardiac Anatomy, Physiology, and Imaging Methods
10	Cardiac Imaging in Acquired Diseases
11	Cardiac MRI
	See 'Fundamentals of Diagnostic Radiology', Brant and Helms See 'Cardiopulmonary Imaging', Kazerooni & Gross

Musculoskeletal Core Lectures: Michael Maristany, M.D.

1	Benign Cystic Bone Lesions
2	Malignant Bone and Soft Tissue Tumors
3	Adult and Pediatric Skeletal Trauma
4	Metabolic Bone Disease
5	Do Not Biopsy Lesions and Miscellaneous Bone Lesions
6	Magnetic Resonance Imaging of the Knee
7	Magnetic Resonance Imaging of the Shoulder
8	Magnetic Resonance Imaging of the Foot and Ankle
9	Arthritis
10	Osteomyelitis
11	Hardware Placement and Post Operative Complications
	See Fundamentals of Diagnostic Radiology, Brant and Helms

Abdominal Core Lectures: David Smith, M.D. and Aran Toshav, M.D.

1	Phenomenology of Imaging and Abdominal/Pelvic Imaging Anatomy Review
2	Esophagus, Stomach, and Duodenum
3	Liver & Spleen (non-biliary)
4	Adrenal Glands & Focal Kidney Disease
5	Female Pelvis II – Malignancy
6	Bladder, Urethra, and Male Reproductive Organs
7	Biliary Tract & Pancreas
8	Small Bowel & Colon
9	Diffuse Renal Disease, Renal Collecting Systems & Ureters
10	Female Pelvis I – Benign Disorders, Anatomy, and MRI Concepts
11	Advanced Body MRI & CT Techniques – Problem Solving

Neuroradiology Core Lectures: Roque Ferreyro, M.D.

1	Introduction to Brain Imaging
2	Craniofacial Trauma
3	Cerebrovascular Disease
4	Central Nervous System Neoplasms
5	Central Nervous System Infections
6	White Matter and Neurodegenerative Diseases
7	Pediatric Neuroimaging
8	Head and Neck Imaging
9	Nondegenerative Diseases of the Spine
10	Lumbar Spine: Disk Disease and Stenosis
11	Functional Neurological Imaging

Breast Imaging/Mammography Core Lectures: Mignonne Morrell, M.D.

1	Mammography Technique: Mammography Basics, Analog vs Digital, Special Views
2	Breast MRI
3	Birads and Lexicon: Terminology, Findings, Recommendations
4	Breast Ultrasound
5	Interventional Procedures (Biopsies): Methods, Indications
6	Benign Breast Lesions
7	Masses: Benigns, Malignants, Management and Calcifications, Types Breast Cysts: Classification, Management, PART I
8	Masses: Benigns, Malignants, Management and Calcification: Types Breast Cysts: Classification, Management, PART II
9	Invasive and Non-invasive Carcinomas
10	Male Breast
11	High Risk Breast Lesions and High Risk Patients Screening
12	Breast Implants

Nuclear Medicine Core Lectures: Richard Kuebler, M.D.

1	Radioactivity, Radionuclides, and Radiopharmaceuticals and Instrumentation
2	Quality Control, Legal Requirements and Radiation Safety to include Informed Consent
3	Cerebrovascular/Central Nervous System
4	Musculoskeletal System
5	GI System to include Hepatobiliary System and Respiratory System
6	Infection, Inflammation, and Oncologic Imaging to include Lymphoscintigraphy
7	Endocrine System including Thyroid Gland, Parathyroid Gland; Salivary Glands
8	Genitourinary System and Adrenal Glands
9	Cardiovascular System
10	Positron Emission Tomography including PET/CT
11	Radioimmune Therapy including review of Informed Consent and Radiation

Ultrasound Core Lectures: Michael Morin, M.D.

1	General – getting started (ultrasound properties, transducers, artifacts)
2	ABD – RUQ – Liver, Gallbladder, Ducts, and Pancreas
3	ABD – Kidneys, Bladder and Aorta/Para-aortic region.
4	Pelvis: GYN emphasis, Uterus and Ovaries
5	Obstetrical: 1st Trimester and Ectopic Assessment
6	Obstetrical: 2nd and 3rd Trimester and Anomaly Assessment
7	Thyroid/Parathyroid
8	Scrotum
9	Vascular: Carotids, Peripheral Arteries, Veins
10	Miscellaneous: Bowel, EUS, Appendix and MSK Emphasis

Pediatrics Core Lectures: Eric Patrick, M.D.

1	Mammography Technique: Mammography Basics, Analog vs Digital, Special Views
2	Breast MRI
3	Birads and Lexicon: Terminology, Findings, Recommendations
4	Breast Ultrasound
5	Interventional Procedures (Biopsies): Methods, Indications
6	Benign Breast Lesions
7	Masses: Benigns, Malignants, Management and Calcifications, Types Breast Cysts: Classification, Management, PART I
8	Masses: Benigns, Malignants, Management and Calcification: Types Breast Cysts: Classification, Management, PART II
9	Invasive and Non-invasive Carcinomas
10	Male Breast
11	High Risk Breast Lesions and High Risk Patients Screening
12	Breast Implants

Interventional Radiology Core Lectures: Leonard Bok, M.D.

1	Preoperative Evaluation of the Interventional Patient; Inpatient/Outpatient Interventional Radiology
2	Abscess Drainages and Biopsies
3	Central Venous Access
4	Peripheral Venography and Interventions
5	IVC Filters; Retrieval of Foreign Bodies
6	Percutaneous biliary interventions
7	Percutaneous nephrostomies and other interventions
8	Abdominal Aortic Angiography; Thoracic Aortic Angiography
9	Lower Extremity Angiography; Upper Extremity Angiography
10	Mesenteric Angiography and Interventions
11	Pulmonary Angiography; Bronchial Embolization
12	TIPS

lnterventional Radiology/Diagnostic Radiology Residency Curriculum by Lecture Topic:

The PGY 5-6 IR/DR Curriculum is structured to provide comprehensive education on all facets of IR including safety, clinical evaluation, treatment, follow up care, practice standards and maintenance of certification. The curriculum lasts one year (it is repeated twice during each resident's pathway) and is organized into five sections: Fundamentals of Image Guided Interventions, Clinical Care in lnterventional Radiology, Vascular Imaging and Diagnosis, Vascular Procedures and Non-Vascular Interventions. Each part of these subjects will be presented by an assigned faculty member who will lead a discussion of relevant topics. 1-2 par.ts will be covered per week. Reading assignments will be given prior to each lecture, including chapters from *Image-Guided Interventions,2nd Edition (Mauro)* (listed in pa re nthes es), *Interventional Radiology Procedures in Biopsy and Drainage, Techniques in IR Series (Gervais)* (listed in parentheses, designated as IR Bx&D, with chapter) as well as supplemental material from the presenter. Lectures will be held twice weekly in 1-hour blocks on Tuesdays and Thursdays from i-2pm in the Invasive Lab conference room. Residents are excused from clinical duty at these

times and are expected to attend. 70% overall attendance (including vacation) is mandatory for promotion.

Fundamentals of Image Guided Interventions

Part 1:

3. Basic Tools (4-12)
4. Basic Imaging Techniques (2)
5. Specific Techniques and Devices

(2) Part 2:

6. Radiation Safety (17)
7. Biosafety (17)
8. Occupational Hazards

(17) Part 3:

9. Quality Improvement (PMID 21997978[1])
10. Joint Commission
11. Hospital Standards
12. Regulatory Supervision and

Reporting Part 4:

13. ACGME Competencies (IR Milestones)
14. Certification (http://www.theabr.org/ic-vir-landing)
15. MOC (https://myabr.theabr.org/MOC/home)
16. Participation in

Societies Part 5:

17. Re sea rch and Publishing (Paula Gregory, PhD)
    Statistics (PMC3800037[2], PMC3800031[3])
18. Literature Search and Int erpre tation (LSUHSC Librarian)
19. HIPAA (htt p:/ / www.hhs.gov/ hipaa/ for-profess io nals / securi ty / laws - regulations/)

Clinical Care in Interventional Radiology

Part 1:

- Focused History and Physical Examination (15)
- Informed Consent (R. Keubler, MD/JD, Informed Consent lecture)

Procedural Sedation, Reversal Agents (19, Sedation for IR- PMID: 23479720[4])

- Recognition and Init ia l Management of IR Emergencies (16)
- IR Reporting (SIR Quality Improvement Initiatives, http://www.sirweb.org/clinicaljquality.shtml)

Part 2:

- Inpatient Care (22,23,24)
- Clinical Care/IR Clinic (18)
- Pharmacology (22,23,24)
- Health Care Conditions Relevant to IR
- Health Care Team Coordination
- Billing and Coding

Vascular Imaging and Diagnosis

Part **1:**

- Clinical Vascular Examination (15)
- Non-Invasive Vascular Lab (2)
- CTA/MRA (2)
- US (2)

Part 2:

- Angiography (3,20)
  - Diagnostic angiography-normal anatomy, vessel selection and injection rates
  - Diagnostic angiography anbormals

Vascular Procedures (assigned by topic):

Part 1:

- Aortic Interventions (35,46-51,82,83)

Part 2:

- Visceral Aneurysm Interventions (73)
- Renal Artery Interventions (57-

61) Part 3:

- Hepatic Arterial Interventions (64-70)

Part 4:

- Uterine Artery Interventions (75-77)

Part 5:

- Bronchial Artery Embolization (84)
- GI Bleeding-Arterial (53, 54)
- Mesenteric Ischemia (55,

56) Part 6:

- Arterial Trauma Interventions (71, 78, 97, 98)

Part 7:

- Transjugular Intrahepatic Porto-Systemic Shunt (TIPS) (112)

Part 8:

- Balloon-occluded Retrograde Transvenous Obliteration (BRTO) of Gastric Varices (113)

Part 9:

- Portal Vein Dilation and Stenting (103, VuMedi Webinar DIPS)
- Portal Vein Recanalization (103, VuMedi Webinar DIPS)
- Portal Vein Embolization (PMC3444878(5])

Part.10:

- Variceal Obliteration, Sclerosis (79-

81) Part 11:

- Pulmonary Artery Arteriovenous Malformation (AVM) (86)
- Intervention/Treatment of Arteriovenous Malformation (AVM)

(44,45,85) Part 12:

- Reproductive Tract

(81) Part 13:

- Pulmonary Embolism (PE) Management-Thrombolytic Therapy

(86) Part 14:

- Upper-Extremity/ Superior Vena Cava Occlusive Disease (99,102) Part 15:
- Lower-Extremity Venous Occlusive Disease (100, 101) Part 16:
- Cava! Filtration (104)

- Transvenous Biopsy, Venous Sampling for Endocrine Disease (108-111) Part 17:
- Hemodialysis Access Management (114-117) Part 18:
- Venous Access (118-121) Part 19:
- Foreign Body Retrieval (107) Part 20:
- · Lymphangiography (121-1 23)
- Thoracic Duct Ablation (124)

Non-Vascular Interventions (assigned by topic):

Part 1:

- Biopsy in the Abdomen and Pelvis (125,126)
- Liver Biopsy (IR Bx&D Liver Biopsy)
- Thoracic Biopsy (IR Bx&D Chest Biopsy, Mediastinal Biopsy)
- Bone Biopsy (IR Bx&D Bone Biopsy)
- Soft Tissl e Biopsy (Adrenal, Renal, Pancreatic, Lymph Node, Splenic, Thyroid and Prostate Biopsy)

Part 2:

- Abdominal, Pelvic Drainage (127) (IR Bx&D Drainage of Abdo minal, Pelvic Fluid Collection)
- Solid Organ Absces s Drainage (IR Bx&D Intrathoracic, Liver Collections) Appendiceal, Peri-Appendiceal Abscess Drainage (IR Bx&D Draina ge of Abdominal and Pelvic Fluid Collections) (PMID:20410514)[6]

Part 3:

- Pancreatic Inflammatory Disease (128) (IR Bx&D Drainage of Pancreatic Abscess and Fluid Collections,)
- Enterocutaneous

Fistula Part 4:

- Follow -Up Care and

Procedures Part 5:

- Paracentesis
- Placement of Tunneled Peritoneal

Drain Part 6:

- Simple Cysts
- Lymphocele Drainage and Sclerosis, Seroma Drainage and

Sclerosis Part 7:

- Esophageal Intervention (129)
- GI Tract Stenting (Duodenal and Colonic)

(130) Part 8:

- Gastrostomy and Gastrojejunostomy (132,133) Percutaneous Cecostomy
- Percutaneous

Jejunostomy Part 9:

- Percutaneous Transhepatic Cholangiography (PTC) (134-139)
- Biliary Drainage (134-139) (IR Bx&D Percutaneous Biliary Drainage and Stenting)

Part 10:

- Biliary Dilation and Stent, Percutaneous (134-139) (IR Bx&D Percutaneous Biliary Drainage and Stenting)
- Cholecystostomy (134-139) (IR Bx&D Cholecystostomy and Choloecystolithotomy)

Part 11:

- Percutaneous Nephrostomy (146,147) (IR Bx&D Percutaneous Nephrostomy and Antegrade Ureteric Stenting)
- Nephroureteral Dilation and Stenting (146)
- Suprapubic Cystostomy
- Urodynamics

(145) Part 12:

- Renal Cyst Sclerosis (147)
- Renal and Peri -Renal Fluid Collection Drainage

(147) Part 13:

- Ablation of the Kidney

(140) Part 14:

- Ablation of the Adrenal Gland

(151) Part 15:

- Hysterosalpingography and Fallopian Tube Interventions (150)

- High -Intens ity Focused Ultrasound (HIFU)

(149) Part 16:

- Treatment of Uterine Leiomyomata (Fibroids)

(75,76) Part 17:

- Ablation of Liver Masses (141-144)
- Chemical Ablation of Liver Masses

(144) Part 18:

- Thoracentesis/Chest Tube Placement (153)
- Tunneled Pleural Drainage Catheters (153)
- Sclerotherapy (Pleurodesis) (153)
- Airway Dilation and Stenting

(156) Part 19:

- Lung Tumor Ablation

(154) Part 20:

- Breast Drainage
- Breast

Biopsy Part 21:

- Percutaneous Vertebroplasty (159)
- Vertebral height Restorationlzl(159)
- Percutaneous Disc Interventions

(161) Part 22:

- Thermal Ablation of Bone Lesions

(158, 159) Part 23:

- Chemical Ablation of Desrnoid Tumors

(162) Part 24:

- Selective Nerve Root Block (163)
- Stellate Ganglion Block (164)
- Facet Injections (164)

51 topics-covered throughout the year (annually)

1. Kruskal JB, Eisenberg R, Sosna J, Yarn CS, Kruskal JD, Boiselle PM: **Quality initiatives: Quality improvement in radiology: basic principles and tools required to achieve success.** *Radiographies* 2011, 31:1499-1509.
2. Hickey R, Vouche M, Sze DY, Hohlastos E, Collins J, Schirrnang T, Mernon K, Ryu RK, Sato K, Chen R, et al.: **Cancer concepts and principles: primer for the interventional oncologist-part** *I.} Vase lnterv Radio!* 2013, 24:1157-1164.
3. Hickey R, Vouche M, Sze DY, Hohlastos E, Collins J, Schirmang T, Mernon K, Ryu RK, Sato K, Chen R, et al.: **Cancer concepts and principles: primer for the interventional oncologist-part 11.J** *Vase lnterv Radio/* 2013, 24:1167-1188.

4. Moran TC, Kaye AD, Mai AH, Bok LR: **Sedation, analgesia, and local anesthesia: a review for general and interventional radiologists.** *Radiographies* 2013, 33:E47-60.
5. May BJ, Madoff DC: **Portal vein embolization: rationale, technique, and current application.** *Semin lntervent Radio!* 2012, 29:81-89.
6. van Santvoort I-IC, Besselink MG, Bakker OJ, Hofker HS, Boerrneester MA, Dejong CH, van Goar H, Schaapherder AF, van Eijck CH, Bollen TL, et al.: **A step-up approach or open necrosectomy for necrotizing pancreatitis.** *N EnglJ Med* 2010,362:1491-1502.

OUTSIDE ROTATIONS

The only rotations performed outside of University Hospital are done at Children's Hospital, Southeast Louisiana Veterans Healthcare System, or at the AIRP if positions are available. Residents will be in charge of monitoring the current hospital quality improvement project while on the AIRP rotation.

RESEARCH/PBL DAY

First year residents are excused from their clinical responsibilities on the first Tuesday of a new rotation block, and second year residents are excused from their clinical responsibilities on the second Tuesday of a new rotation block. During these days, residents are required to be at the hospital or in the office (In-House)

GUIDELINES FOR PRESENTATIONS AND ABSTRACTS

Guidelines for Giving Effective Presentations

Remember that the hallmark of a good presentation is communication. Basic rules of public speaking always apply. Obviously, you have to know your subject matter. But just knowing your subject matter does not make you a good speaker. We have all had the experience of sitting through lectures from "experts" who clearly knew their subjects inside and out but could not communicate it. Remember to speak to the audience, not to the projection screen. Speak up and speak clearly. Whenever possible, include clinical cases or examples to make the subject matter more interesting and relevant to the listeners. When appropriate, invite participation by asking residents and staff for their input or interpretation. In other words, **communicate**.

One of the goals of this residency program is to turn our physicians who are capable of, and comfortable with, giving excellent medical presentations. This skill will enable you to speak more clearly not only to audiences, but to colleagues, co-workers, and patients alike. Because communication is so

important to good medical care, you will be expected to give frequent presentations throughout your residency. You may be asked to give presentations at local, regional, or national meetings. If you are uncomfortable with speaking before audiences, you should read "Osgood On Speaking," a very short, concise, and excellent resource book by Charles Osgood.

Whenever you give a presentation, do your best to see that the area in which you will give your talk is as neat and orderly as possible. If you want to make a good impression, you shouldn't let the physical environment distract your audience. This includes making sure that the computer and projector work, that the shades come down (so your computer presentation can be seen well), that the screen is there, that you have some kind of pointer if you need one, etc.
When presenting x-rays, CT scans, MRI scans and the like, use PowerPoint and a projector if possible. This magnifies the image and allows as many people as possible to see and focus on what you are trying to show. Have your x-rays in correct orientation and order.

Guidelines for Making Visual Aids for Presentations

One of the most frequent complaints about medical educational presentations is that many speakers use PowerPoint slides that are difficult to read or that are too complicated or "busy." The following guidelines come from expert speakers and educators who know how to get a point across without confusing an audience. You want your presentation to communicate as effectively as possible. Following the recommendations below will help you to accomplish this goal.

Guidelines for Legible PowerPoint Slides

- All word sides should have no more than 7 lines (including title) and each line should be no longer than 27 characters (including spaces).
- Each slide should be devoted to one single concept.
- Keep each slide simple and in outline form.
- Do not put all text in capitals – it's less readable that way.
- Be certain to break down complicated concepts into a series of simple slides.
- One key word is often more effective than a sentence.
- If you are using graphs, charts, or other non-verbal material, consider splitting the material into two or more graphs, or put complicated graphic material in your handout rather than a slide.
- Avoid using complicated tables as slides.
- Avoid using distracting backgrounds or colors that contrast poorly in slides.
- Make sure you spell check everything correctly in your slides. There is nothing quite like a spelling error in a medical presentation to make people doubt whether you really know what you are talking about!

Guidelines for Preparation of Posters for Presentation at Meetings

The usual standard poster board surface area is four feet high and eight feet wide (4x8). Your presentation must be limited to this area. Boards will be provided and set up by staff at most meetings. You are responsible for affixing your posters to the board and removing them.

Prepare for the top of your poster space, a label indicating the title of the abstract and the authors. The lettering for this section should not be less than one inch. A copy of your abstract, in large typescript, should be posted.
Bear in mind that your illustrations will be viewed from distances of three feet or more. All lettering should be at least 3/8" high, preferably in bold font. Charts, drawings, and illustrations might well be similar to those used in making slides. Keep everything as simple as possible; avoid "artsy" or ornate presentation. Captions should be brief and labels few and clear. It is helpful to viewers if the sequence to be followed in studying your material is indicated by numbers, letters, or arrows. Do not mount illustrations on heavy board as it may be difficult to keep in position on the poster board.

Your poster should be self-explanatory so that you are free to supplement and discuss particular points raised by inquiry. The poster session offers a more intimate forum for information discussion than the PowerPoint presentation, but this becomes difficult if you are obliged to devote most of your time to merely explaining your poster to a succession of visitors. You may find it useful to have on hand a tablet of sketch paper and suitable drawing materials, but please do not write or paint on your poster boards. Bring push pins, double-stick tape, or similar fasteners with you to the meeting.

Guidelines for Preparation of Abstracts

Introduction: The introduction should be 2 or 3 brief sentences and contain the following elements: 1) The reason the study was inaugurated; and 2) What the object of the study was (what could be gained).

Methods: A description of the methods necessary to evaluate the study must be included (i.e., retrospective chart review, prospective trial, etc.). Detailed descriptions of laboratory techniques should not be included (i.e., measurements were made of calcium, phosphate and creatinine). Methods of specimen collections, etc. should be indicated. Where the paper is to describe a study based on a laboratory technique (i.e., leukocyte adherence in advanced malignancy), the technique should be described sufficiently to be understood by workers in the field. *Methods* should occupy a brief portion of the abstract.

Results: This should occupy one-half to two-thirds of the abstract. Specific data necessary to evaluate the abstract should be included along with p values and significance should be indicated whenever possible. If there is doubt that

additional data would enhance the abstract, include them. Statements such as "data will be discussed at the presentation" or "results of the study will be presented" etc. are sometimes grounds for refusal of the abstract.

Conclusions: The conclusion should be no more than 2 or 3 lines indicating the significance of the results in terms of what was originally designed.

Remember the four basic questions that should be answered by any abstract:

- Why did you do the study?
- What did you find?
- How was it done?
- What is the importance of your findings?

Some Reasons why Abstracts are Turned Down:

- Previously reported study
- Paper presented or published elsewhere
- Too little data
- Inadequate control
- Insignificant study
- Methods of study not indicated
- Abstract did not conform to requirements
- Poorly written presentation
- Conclusion is questionable in relationship to data presented

SUBMISSIONS OF MANUSCRIPTS AND ABSTRACTS

All residents are both encouraged and expected to write articles for publication in journals and to make presentations to Radiology meetings. Any such contributions to the scientific literature by residents must, however, be submitted for approval by a full-time faculty member and the Department Head prior to submission of the final manuscript to any journal. The name of the journal to which the manuscript is being submitted must be indicated. This must be done whether the resident is the sole author or has co-authors. Residents may be reimbursed for any expenses incurred while presenting a paper at a major meeting within the 48 contiguous states. Reimbursement will fall within state guidelines if adequate advance notice is given and the trip has been approved.

Residents who plan to present papers or posters at scientific meetings must submit the final abstract to the Department Head and Residency Director prior to submissions for presentation. Abstracts cannot be submitted without such prior departmental approval.

These policies are in no way intended to discourage resident submission of abstracts and papers. Rather, they are intended to ensure that all scientific

contributions from residents have had the benefits of review by individuals who have had experience with the process, thereby enhancing the likelihood of acceptance by journals and meetings.

New Innovations

New Innovations is a web based system that will be used to track schedules, conference attendance, evaluations, procedures and Clinical and Educational Work Hours.

To log on go to:

https://www.new-innov.com/login/

The institution login is: lsuhscno

You will be assigned your login and password separately.