Radiology Extern Handbook

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Overall Workflow and Responsibilities

When someone orders imaging in the hospital after hours, it needs to be protocoled by the Radiology resident on call before the technicians can perform the study. You will hold the on-call pager (3205) and screen new imaging requests for certain criteria before letting the resident know which studies need to be done. You will also respond to basic questions from hospital staff so that the resident can read the studies that have already been performed.

- Shifts are from 5 PM - 8 PM on weekdays and 10 AM - 4 PM on holidays that fall on weekdays. No weekends.
- Report to the Radiology reading room in the ED, room 1012-G. You may need to badge in for access.

At the beginning of your shift:

- Use Smartweb or Epic On-Call finder to identify the senior resident on for your shift. If you can't find the resident in the reading room, send a page. The senior resident is responsible for finding the 3205 pager for you.
- Make sure you are marked as "Available" on Epic secure chat. If you're secure chat status is "offline", the techs will not be able to message you and vice versa.
    - The techs you interact with during your shift are generally an MRI tech, CT tech, and US tech. Generally, they reach out to you first and that how I know who to message if you need to reply or send a follow up message. Their schedule is not on the Epic On-Call finder (at least not that I could find). Usually, you don't need to message them first so that's rarely an issue.
- Get the on-call pager from the senior Radiology resident
- Log in to Voalte on RadCode phone: (this is just for Codes, the usual messages don't come through here)
    - Username: radcode
    - Password: 11111
    - Turn volume on high
    - Keep plugged into charger
- Open Epic to look up patients.
- Open Smart Web for paging: smartweb.healthcare.uiowa.edu or click "paging" on Epic
- The ED context can sometimes be helpful to find patients that only specify imaging for "ED Bed #" - otherwise, use the "Rad Gen" context for most everything else.
- Open QGenda (additional call schedule viewer): *insert link* or start typing "qgenda" in browser and it should auto-populate.
    - https://app.qgenda.com/LandingPage/uiowa-rad

During your shift:

- Your main priorities during the shift are assisting your resident with the workflow of protocoling studies. As they are reading studies, imaging requests will come through a variety of channels: Pager, Epic Secure Chat, Phone Calls.
- Your job is to take down the necessary information about each individual protocol while the resident is reading studies.
- If the resident is in between studies (the PACS screen is black), that is usually a good time to unload your list of protocols. This allows residents to read without too many interruptions. That being said, the best approach is to ask your resident at the beginning of the shift how they like to be made aware of protocols, especially if its your first time working with them.
- If a protocol is urgent (e.g., trauma, stroke, Cauda Equina, ruptured AAA, etc.) you should interrupt the resident to get this study protocoled. This includes urgent Store and Interprets.
- Answer phone calls as they come and direct to the appropriate channel. It is okay to interrupt the resident for a call. If non-urgent
- Other responsibilities:
    o Answer any other pages promptly.
    o Paging/calling providers for residents.

End of your shift:

- Log out of Epic. Most days, a radiology coordinator comes on at 8pm. Sign-off to them anything that they may need to follow-up on.
- Throw any papers with patient info into the confidential bin.

Incoming Calls/Pages/Secure Chats

Who is calling/What are they calling about?	Steps to Take
Ultrasound Tech	Needs to talk to resident usually.
CT Tech	If requesting protocol, get patient information and pass on to resident. If requesting resident to look at images on scanner/Epic, send resident to scanner or give patient MRN and transfer phone to them. If asking about extending field or scan, either repeat question to resident or transfer phone to them.

MRI Tech	If requesting protocol, get patient information and pass on to resident. If question about MRI protocol that's already been done, transfer phone call to resident. MRI calls and requests order for glucagon – get patient MRN and pass it on to resident. They will place order for it. Other example: MRI tech calls and says patient has been moving a lot, asks to have resident take a look at images to see if they are usable before giving contrast. --> Get patient MRN & name, place tech on hold. Ask resident to look at images. Resident will tell you either yes, give contrast or no, don't give. Relay that information to MRI tech on hold.
Provider asking for a read on an in-house study	-Search by MRN in "Study History" -Find out if they need emergent read and/or what are they looking for? -Place on hold while you ask resident if they have time to look at study/if they want to speak to the provider. -If residents are busy, get doctors callback number.
Provider asking for a read on an EXTERNAL study	For trauma, always interrupt resident right away, make sure to give patient's MRN. For non-traumas, get MRN, name/call back provider, and make sure to ask when study was originally done, what the question is, and when they want this interpret by. If they say it is not urgent and can be interpreted during business hours, please ask provider to call the reading room during business hours. If they require it to be interpreted urgently, inform the resident.
Provider asking for a FINAL read on a study	-Search by MRN in "Study History" -Locate study and find out the division (Chest/Body/Neuro/MSK/etc) -Open QGenda and locate staff pager on-call -Give pager# to provider requesting the final read, they will need to page for request.

	Ask them what they are looking for, place on hold and repeat question to resident.
Provider asking about what study to order	Resident will either tell you what study to have them order or ask you to transfer call to them.
ATC or Call Center asking to find out if external images are stuck in the cloud	-Refer them to Image Management (62345), the radiology coordinators can do this but externs don't have access to Life Image.

Tech calls with a retained object film	Get following information:
	  - Name & MRN
	  - What are they looking for?
	  - Which OR?
	  - Contact number
	Alert residents of a retained object film and provide MRN

Requesting IR procedure	Give them IR on call fellow pager number and let them know it will have to be arranged with them.

Requesting Nuclear Medicine scans	Check Qgenda to find out who is covering.
	  - If listed as X-ray, then overnight rad residents are responsible for making this call
	  - All other times, requesting physician is to page Nuc Mec Resident on Call

Requesting Vascular Ultrasound	Not done by overnight Ultrasound Techs. If URGENT, the requesting physician can page vascular resident (3700), otherwise wait until morning.

Outgoing Calls/Pages/Secure Chats

| What needs done?	Steps to Take
Need to request images for patient that is being transferred from outside hospital	Call outside hospital and tell them you're looking for any recent imaging that the patient has had done. If it's a hospital on our list of LifeImage Sharing sites, ask if they would push the images. If not on our list, request they burn a CD and send the images with the patient.
Resident requests you call an ordering physician so they can discuss a protocol/results	Go to study history and find the listed ordering physician. Contact them by either phone, secure chat, or page.

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	If ED patient and no response from provider, call main ED at 6-2233 and ask to speak to resident taking care of patient. If floor patient, open their chart to see what unit they're on. Call inpatient unit and get contact info on the physician taking care of the patient.
General Page format	"Patient Name, MRN. Please call radiology 4-6419. – Your name *3205" OR "Please call radiology *extension #*"
Requesting change of order	"Patient Name, MRN. Please change order (example) CT abd w con to CT abd/pelv w/o con. –Your name, radiology 4-6419"
Resident gets a fax protocol from Keokuk, and is asking to have the filled-out protocol sent back	Can fax back just dial 91-then fax number.

Retained Object OR

1. An automatic page will be sent to 3205. Page will include the order name and the MRN.
2. E.g., ABDOMEN IMAGE OR RETAINED OBJECT; MRN: 00002222
3. Page AND Epic SecureChat the faculty on-call and tell them that an order has been placed for [insert order]. Give the resident a heads up as well.

Order	Section to page
ABDOMEN IMAGE OR RETAINED OBJECT	Body
fa	Body
CHEST IMAGE OR RETAINED OBJECT	Chest
SKULL IMAGE OR RETAINED OBJECT	Neuro
SPINE IMAGE OR RETAINED OBJECT	Neuro / MSK
NECK IMAGE OR RETAINED OBJECT	Neuro
EXTREMITY IMAGE OR RETAINED OBJECT	MSK
IMG4636 PELVIS IMAGE OR RETAINED OBJECT	MSK

4. Once tech calls to say the image is in, let the resident know and page AND Epic Secure Chat the faculty on-call to call the line to the resident. When paging the faculty, be sure to include the prefix to the 5-digit number of the on-call room. As they might not have that readily available at home when they receive the page. (e.g. if the call back number is 81111 you put 6781111)
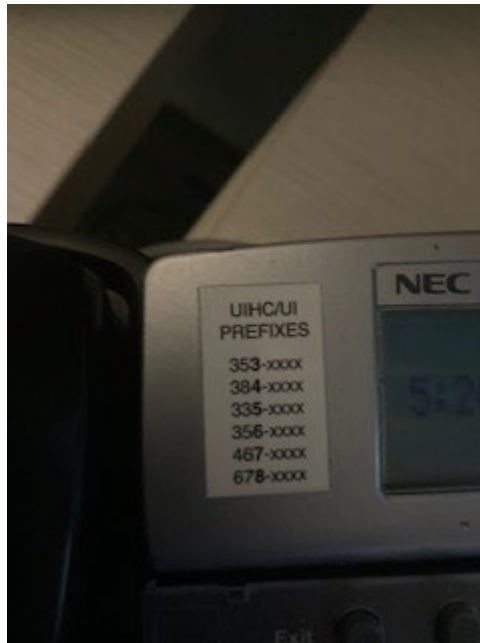
    a.

    b. If staff does not call back in 5 minutes, remind the resident that the staff hasn't called back and proceed to page AND epic secure chat again or call staff on their cell phone number (listed in the binder on the RCC desk).

    c. Give it up to 5 minutes, if staff haven't called the reading room, ask the resident how the want to proceed. Usually they follow the algorithm below
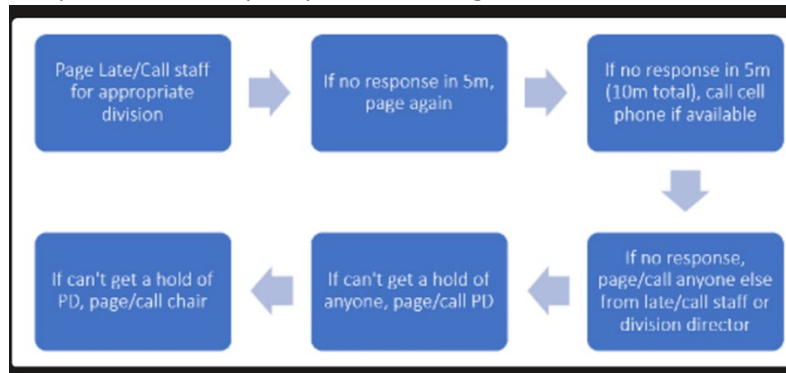
    i.

5. Let the resident know ASAP. They need to note on their report the time the tech called.

Resources

Radiology Film Management:

The Radiology front desk (63350) is staffed from 7:00 – 21:00 on weekdays and from 7:00 – 17:30 on weekends. This person can help referring clinicians load outside CDs (though most clinicians already know how to do this). They can also move studies to our PACS. If you get a request for a read on an outside study that comes in during the time that a film room person is here, confirm that the ordering clinician has uploaded the study. Then call the file room employee to request an accession number.

ACR Appropriateness Criteria:

Website detailing what studies are indicated for a variety of studies. Google ACR appropriateness criteria to find. This can further your discussion with providers. (e.g., why did you order this study as compared to this study. Don't be critical- this is just a discussion to order the appropriate imaging. A lot of times there is a specific reason they ordered the study they wanted.

Operator:

Dial 0 on the phone. This is very helpful for calling floors to get into contact with providers you can't contact with pages, SecureChat, or phone

Important Numbers:

CT- 46536; pager 3345

MRI - 62236

Ultrasound- 62040; pager 6383

IR - pager 5390

There is also a book of important phone numbers on the extern desk.