Rady Children's Hospital
Radiology Resident/Fellow Orientation Packet:

Before arrival:

Make sure to touch base with 2 people to make sure your privileges at Rady have been established:

- Kathy Shepherd
- Marianne Toscano, GME office: 858-576-1700 x6138 fax 858-966-7477
    - Confirm that your paperwork has been processed and that your computer/network access has been granted. She will email you your log-in information and instructions to obtain your badge

First day:

Parking:

-On the first day of rotation for all Residence, Fellows and Med Students- they will have to park in the "NORTH VISITORS " parking lot (take a ticket)

-Once checked in here in Radiology they will be issued an access badge, which they will use in the North Visitors Parking Lot to get in and out of the parking structure- The access badge will able them to park in " North Visitors Parking Lot", for the duration of their rotation.

-In the case that you park in the "South Visitors Parking Lot", they will have to move their vehicle to the North visitors parking lot and will be responsible for paying for the cost of the parking.

***On their last day of rotation, they will turn in the access badge and we will give them a validation, however this is only good for 4 hrs. of Free parking. Beyond 4 hours the fee is $2.00 per hour (max $20.00). You can choose to use your badge to park there in the AM on the morning of your last rotation, but you will need to move your car during lunch (i.e. swipe out, and take a ticket on the way back in) and hand you badge in at that time.

-PLEASE do not take your badge with you beyond the last day of your rotation.

-For parking concerns and issues, contact Denise Smith, Radiology Admin: dnsmith@rchsd.org

-After parking, show up to Radiology department, 3rd floor Rose Pavilion (old part of the hospital), and make your way to the reading room. Check in with the file room staff if you have questions. See Map attached with this packet.

-Touch base with Denise Smith, Radiology Administrator: 858-576-1700 x8954 dnsmith@rchsd.org

- Denise will administer your badge and parking pass

- If this is your first time at Rady, you will need to meet Jerome Gamboa (x6376) and/or Veronica Diaz (x4942) to get your PACS access and Voice Recognition Password

-***You will need to have with you the username and password provided to you from the GME office.

-You will also be given a brief orientation to the PACS and Voice Recognition Systems

-If you are returning after being here for a previous rotation, make sure to ask either Jerome or Veronica how to obtain the latest version of the dictation templates.

Daily to Day Schedule and Responsibilities:

-Workday: 8a-5pm (or whenever the work is done). It is beneficial to arrive before 8am to have enough time to preview the overnight cases.
-Attending schedule for each rotation is posted weekly on the bulletin board to the right of the reading room conference area.
-This is also where the weekly conference schedule is posted. Be sure to get an overview of which conferences are happening during the week, as some occur before 8am.

ED Resident Expectations

- Sit at the desk in the back left corner of the reading room, x3317
- Preview (and if time) pre-dictate all of the overnight cases on the "ED/UC" (urgent care) list. Typically this spans from 21:00 the night before until 7:30am. It is recommended to go in order the images are obtained.
- When you dictate a case, click "Save" to save a draft of your report
- If you are fairly confident of your read, you can click on "Prelim". This save a draft of your report, but also publishes the result in EPIC but will automatically be marked with the statement "This is a preliminary report"
- Once you have previewed a case, mark the case as "Reviewed by RadResident" in the PACS system. Once ready to staff out the cases, let your attending know.
- Please keep up to date on ED/UC cases throughout the course of the day. This is critical to the flow of patients in the Emergency Department. If you see a finding that needs an emergent read, grab your attending sooner rather than later (or a different nearby attending who is available if yours is occupied). Similarly, if you have a handful of cases collected, make sure to read them out and sign them off in a timely manner, especially before heading to noon conference or lunch.
- During the first week of the rotation, take time to ask your attending to show you how to perform Fluoroscopic exams. Also, take the initiative to pick up some cases on the Ultrasound list. Later in the rotation, you will be asked to assist the Junior Resident with Fluoroscopy and Ultrasound cases once you are caught up with your ED/UC responsibilities.

Fluoro/Ultrasound Resident Expectations

- Sit at the desk in the back right corner of the reading room, x3318
- When there is no separate ED resident, the ED/UC worklist is your responsibility, especially first thing In the morning. When there is a dedicated ED resident, split the list up in an efficient manner (typically by time/date or alphabetically). Preview and pre-dictate these cases. Notify your staff as soon as you are ready to review them, because once the Fluoroscopy train gets rolling (usually around 815-830am), it will be hard to make time for a long read out.
- **Fluoroscopy**
  - If this is your first time on service, do not hesitate to ask your attending for some guidance with the first couple of cases, and an orientation to the Fluoro equipment and personnel. The patients and techs will appreciate this as well.
  - Preview the Fluoro schedule for the day. Take note of any unique cases or ones flagged for the attention of the attending. Typically, these are complex cases that require some prior knowledge about the patient or some digging into the clinical history or prior exams before starting the case.
  - All NICU cases require an attending to be present for at least some part of the case
  - All Sharp Mary Birch NICU patients need a "Wet Read" or preliminary report sent back with the patient. See the file room if you have questions about this.

- Fluoro Etiquette:
  - When called back for a fluoro procedure, please make every attempt to go back and start the case as soon as possible. Think about it: if it was your child lying scared on the table with a catheter in his/her bladder you would not want to be waiting any longer than necessary.
  - Before you start any fluoro case, make sure you know what the patient's history is and what the clinical question is.
  - This is your opportunity to use some of those doctor-patient skills from back in med school and internship - interacting with patients…and just as importantly, their parents! Many of them are as anxious as or more anxious than the child.
  - Introduce yourself, let them know what to expect during and after the procedure, communicate with them (to the best of your ability) what you are doing and why.
  - When you are finished, many of them will be looking for "an answer" ("So, what did you find doc?"). If you have a good idea of what is going on based on what you saw real-time, it is good patient care to communicate what you saw. HOWEVER it is very important to remind them that this is just a preliminary interpretation and that "we will be reviewing the images in detail on the high-resolution monitors at the reading station, and will provide their doctor with a detailed final report. So follow up with your doctor after today"
  - You may get questions about what to do from here (e.g. "do we need a followup appointment?", "should I continue the antibiotics?", "if the test is normal why is Little Susie still throwing up all the time?"). Most of these questions are out of the scope of our specialty and it is important to redirect the parents to their clinical provider. Statements like, "I'm not sure, but that would be a good question for the Urologist, Dr. ____"
- Before or during the case, if you need guidance from an attending or would like to have your images reviewed prior to sending the patient out, please notify your attending. None of them will fault you for being thorough and conscientious.
- If the Fluoro technologist has feedback or recommendations, please hear them out. Their feedback is often very valuable and in the best interest of the patients – some of them have been doing this longer than many of the attendings! Often times when they recommend things it's because they know what the attending will want to see later during readout.
- *Please see the attached powerpoint on sample Upper GI and VCUG studies and the key images that are necessary as part of these examinations*

- **Ultrasound:**
  - The technologists will not always come in to review a case with you. They will typically only do this for complicated or positive inpatients and ED cases. If there is a case you have a question on or if feel like you are missing images, make note of the Sonographer and be proactive about contacting and communicating with them. If you need to reach a sonographer, here are the numbers for each room, but keep in mind they may be in the middle of scanning another patient:
  - Room 1: 4455 Room 2: 5599 Room 3: 5616
  - Make sure you have the necessary paperwork (measurement sheet, etc) before staffing out a case. Some exams (pylorus, intussusceptions, hips, soft tissue, liver marking for biopsy) may not have paperwork, but there instead should be a note in the "Tech Comments" section in EPIC
  - Make the effort to go in and watch the uniquely Pediatric exams: Pyloric Ultrasound, Hip Ultrasounds, Head Ultrasounds. This may be the only time you see these in your career.
  - If the exam title includes the word Doppler (e.g. US Kidneys with Doppler, US Pelvis with Doppler, US Scrotum with Doppler), you MUST include a statement in your report to reflect this CPT code. Most of the templates should include this statement, or have a drop down field option for this,

but the statement should read something like “There is normal arterial and venous color Doppler flow and Spectral waveforms bilaterally” (the operative words being underlined)

CT/MRI Resident Expectations

- Sit at the workstation that you first see when entering the main reading area, x4235
- First thing in the morning, preview and pre-dictate the overnight CTs. All of these should have a scanned in report from the overnight preliminary read by the VRC(Nighthawk) Radiologist. As soon as you are ready to review these, let your staff know. The attending for the morning will be the post-call attending sitting one seat over from you.
- It is useful to review the most recent scan first (e.g. from 630am), as some of these may not have been sent to Nighthawk and these patients are still in the ED waiting for reports. In these situations, please grab your attending to staff these out ASAP.
- Sometimes there will be a second senior resident on this rotation (one from UCSD one from Navy), or there may be a Neuro Fellow. Feel free to split the list up in whatever manner you deem to be fair and efficient.
- After morning read out, Outpatient and Add-on Inpatient/ED/Trauma CTs will roll in over the course of the morning. Preview these and staff them out with the morning CT attending.
- Similarly, there will be some Outpatient and Inpatient Body/Chest MRIs from the night before to review with this attending
- For complex non-emergent Neuro cases (Temporal Bone, CT Angiography, Neuro-Oncology cases), review these cases as you come across them, but your attending may elect to save them for the Neuroradiology Read Out in the afternoon. This applies to Neuro cases on the CT and MRI list.

Your role as a consultant:

- You will frequently be approached by clinicians visiting the reading room and asked to review cases. This tends to happen much more frequently in the Pediatric world. Some of these will have already been read, and some are hot off the press. Take a moment to help them out to the best of your ability, even if that simply involves putting them in touch with the person that may have already read the case. Often times they just need help pulling up the cases and seeing the images themselves. If you need help reviewing something outside of the scope of your knowledge, please do not hesitate to ask any nearby attending.

MRI workflow:

- Many of our patients are being scanned under anesthesia, or have complex histories. These patients are required to have their images reviewed prior to being taken off the MR scanner. You will get frequent calls to review these images. Make every attempt to help the MRI tech with this request, and if you are unsure – again, please ask a nearby attending. Typically they want to make sure we are okay with image quality (e.g. free of significant motion or pulsation artifact, poor fat saturation, etc).
- It is useful to ask the technologist how the study was protocolled, and it really helps to review the prior images while the study is opening. Also, you may need to look for the patient’s images in the “Unverified” (Purple) portion of the worklist as the study is often not completed yet.
- In the afternoons, MRI may call if they need coverage for Contrast injections. These are typically in the Sharp-Childrens MRI center (where the residents moonlight at night). If you need help finding this, ask another resident or an attending to show you how you get there from inside the hospital.
- MRI protocols (whether written or verbal) are to be completed by attendings only. The techs should be aware of this fact as well.

Dictation Software:

- If this is your first time at Rady, Veronica (x4942) and Jerome (x6376) will work with you the first day to establish your voice profile (reading some passages) and give you the necessary Macros (templates)
- These should be linked to the exam type to auto-populate when you open up the exam. The main exception to this is for Radiographs of the extremities. These autopopulate as blank and you will need to insert a template. For example, for an MSK film, your options are:
    - "macro Blank" – inserts a template with the correct header, but blank findings & impressions. This can be used for any number or different procedures, especially when there are multiple findings to describe. Other derivations include Blank US, Blank CT, and Blank MR for the other modalities.
    - "macro XR bone" – inserts generic MSK normal template (fields can obviously be edited). Please note, may people rename the "XR bone" template to "Bone" for the ease of saying "Macro bone"
    - "macro Spot" – inserts generic template for intra-operative or C-arm spot fluoroscopic images. These are common for fracture reduction in the ED, but the template can be used for any intra-op fluoro
    - "macro reduction" – inserts generic template for post-fracture reduction radiographs
    - "macro fracture follow-up" – typically used when reading outpatient fracture follow films

Reminder: these are only templates and your daily attending may have specific requests about what information to include or exclude from your reports. Please be sure to confer with them during readout.

<u>Predictating:</u>

-When you are reviewing a case and pre-dictating it, click the "Draft" button in powerscribe to save your report before moving on to the next case.

<u>Approving Reports:</u>

-After readout, review each dictation and make changes accordingly. When you are satisfied with the report you have generated, click "Approve" to sign report and send to your attending. Be sure you have selected the correct attending to receive your dictation. If not, you should be able to change this right from your draft queue.

<u>Sending Prelim Reports to RIS:</u>

-After signing off the cases from morning read-out, review and pre-dictate new cases as they come in.
-During the day, if you are previewing an ED radiograph or ultrasound ONLY but are not able to staff this with an attending a right away (e.g. right before lunch or noon conference), you have the option to click "Prelim" to post a preliminary report to the patient's chart. This is analogous to an "iBox" prelim at UCSD. Please note that these reports are anonymous in the RIS, so if you choose this option you may want to sign your name at the bottom in case the referring clinician as a question (this can be easily done by dictating "Macro Prelim" after your impression).
-Also remember that if the final report differs significantly from your preliminary report, this may require a call to the clinician.
-When you have had an opportunity to review your cases with the attending and may made any adjustments to your report, you will still need to click "Approve" (sign) to release the report to the attending for final signature (as above)

Other:
-At the end of each day, before logging off, make sure you have cleared all the reports in your "Draft" queue. This will insure there are no cases left un-signed or un-reviewed.
-The Explorer screen (i.e. when you are NOT in a dictation) allows you to search for your reports, Approved Today, Approve Queue, and Draft.
-Do a weekly, Checkpoint speech file for Power Scribe 360 VR system (ask Veronica or Jerome if you have questions)
-For CT/MR residents and fellows: When dictating cross-sectional cases, look for orders to associate in the orders tab on the right hand side of PS360 report editor screen. In fact, it is useful to "pin" this window open. Examples include associating a 3D reconstruction to a CT (CT Head is the most common) or associating the Pelvis to the Abdomen on an MRI A/P, or the Chest to the Abd/Pelvis on a concurrently obtained CT. Also, the report needs to reflect these associations. For example, if you associate a 3D head recon, you need to have a statement like "3D reconstructed images were performed at a separate work station and submitted for review". Most templates with have a drop down where you can click to add this line in for a 3D. For associated contiguous body parts, there needs to be separate sections in your report (e.g. Chest: _____, Abdomen/Pelvis: _____)
-Please ask your attending if you have questions about whether or not to associate two exam orders

Academics

Resources:

Senac teaching files:

-Be sure to check out the entire wall of hard copy film teaching files. These contain some classic pediatric radiology differentials and diagnoses.
-The highest yield cases are the ones with the bright orange sticker tabs and the ones with hand-written notes on the fronts and backs
-Grab a hand full of cases and bring them with you to your reading station to review in between read outs.
-Again, if you have questions about a finding, ask a senior resident or attending!

Text Books:

"Fundamentals of Pediatric Imaging" - Donnelly
http://amzn.com/1416059075
-A good basic overview of Pediatric Imaging. You should have read this entire text during the course of your residency.

"Radiology Case Review Series: Pediatric" - Franco
http://amzn.com/007177548X
-An excellent selection of Case-Based pediatric radiology pearls

"Caffey's Pediatric Diagnostic Imaging, 2-Volume Set" - Coley
http://amzn.com/0323081762
-More of a desk reference resource

Online courses and resources:

"Radprimer"

https://app.radprimer.com

-The 1st and 2nd year residents are expected to complete the "Basic Pediatrics" Curriculum in the RadPrimer App by end of their rotation

-The 3rd and 4th year residents are expected to have complete both the "Basic Pediatrics" and "Intermediate Pediatrics" Curriculum in the RadPrimer App by end of their rotation

-If there are questions on how to access this, please speak with Dr Naheedy

"Children's Hospital Cleveland Clinic"

https://www.cchs.net/onlinelearning/cometvs10/pedrad/default.htm

-Online core curriculum in pediatric radiology. Free to register, online interactive curriculm

-Highly recommended for all residents, particularly during their first rotations at Rady.

-Very Highly recommended for residents pursuing a career in Pediatric Radiology

-There is a certificate you can print out after completing the online curriculum

Rotating Residents and Medical Students:

-There tends be many rotating students and residents that will spend time shadowing rotations where the Radiology Residents spend most of their time (ED, Fluoro/US, CT/MRI)

-This includes 3rd and 4th year medical students who rotate through the Pediatric Radiology department. They are either on the radiology elective of their surgery block, or doing a sub-internship in Radiology, and rotating with us for the week.

-Likewise, many of the UCSD/Rady and Balboa Peds residents will rotate through the department. Take a moment to introduce yourselves and help us make them feel welcome in our department. This is a great opportunity for you to educate them on the role of a radiologist as part of the healthcare team, about what a radiologist does from day to day, and there will also be brief moments teach them some basics of radiology and some imaging pearls. They will typically be reviewing some of the same teaching films you are, and may need some of your guidance to make the findings and review the images – sometimes even to hang the images! Remember, "In the land of blind men, the one-eyed man in king!"

End of Rotation Conference Presentation

-Make note of any interesting cases over the course of your rotation. It can be a new diagnosis you were part of, or you may simply be reading the follow up studies. At the end of your rotation, typically on the last day or second to last day, you will be expected to present at our Noon Interesting Case Conference.

-Pull the images into a powerpoint presentation, making sure to anonymize the images. This is a very important step in the process, for HIPAA compliance. Please ask one of the attendings if you have questions on how to do this.

-The goal should be 3-5 cases, 10-15 minutes MAX.

-Format: Show the history, initial images, any follow up or advanced imaging, differential diagnosis discussion, final diagnosis, any intra-op photos or relevant post-operative imaging, brief discussion

-Be sure to leave a copy of your powerpoint presentation on the desktop of your computer (or in the folder labeled "Resident Cases"). You can also browse through and review all of the other interesting cases residents have presented over the years.