Radiology Protocols on the Acute Floor

Requesting Imaging on Acute Floor:

- All imaging requests are made via Symphony. This will generate a paper request form. This form requires a written name, signature and grade. The imaging department is not aware of the request until they receive the form in person.
- The specific pathway of requesting and organising imaging will depend on the imaging modality (see below).

Requesting X-Rays on Acute Floor:

- All plain X-Ray requests do not require radiologist vetting and can be organised with the X-Ray radiographer directly (see organising imaging below for specific pathways).
- Indications for common X-Rays:
    - CXR: Infection (exclude LRTI), dyspnoea (exclude CCF/LRTI/effusion), chest pain (exclude PTX), haemoptysis, suspected mass.
    - NB – CXR, in the context of trauma, should not be requested to confirm isolated rib fracture (this is a clinical diagnosis). Discuss chest trauma with ED senior and consider cross-sectional imaging if appropriate.
    - AXR: Clinical suspicion of obstruction. Acute exacerbation of inflammatory bowel disease. Sharp/poisonous foreign body ingestion (D/W ED senior first).
    - Erect CXR: Clinical suspicion of pneumoperitoneum. NB – patient must be sat at 90 degrees for a minimum of 10 minutes.
    - MSK XR: If suspicion of acute bony injury.
    - Foreign body XR: Be sure to specifically query foreign body and request 2 views.
- Special cases:
    - Cervical spine and thoracic spine XRs are not performed. If clinical suspicion of acute spinal injury – discuss with ED senior. CT imaging is the modality of choice.
    - Hip/pelvis and lumbar spine XRs require the patient to arrive at the XR department on a trolley – they will be sent back if ambulatory.
    - Facial bone XRs are of limited diagnostic benefit. If suspicion of facial bone injury in the context of trauma, consider CT (D/W ED senior).
- Portable X-Rays can be requested via the XR radiographer. RSCH – x4242/x4179. PRH - x8034 or bleep 6157.
- X-Ray requests from UTC in RSCH require the patient to walk to the level 5 imaging department waiting room. It is your responsibility to ensure the patient is safely delivered there (you may have to escort them).

Requesting CT Scans on the Acute Floor:

- All CT requests need to be discussed with ED senior (SpR/consultant) first, the senior should then sign the request form.
- CT Scans that DO NOT require radiologist vetting:
    - CT Head: NICE head injury guideline compliant. Stroke call (this should usually be done by the stroke team). Suspected SAH.
    - In addition to CT Head, facial bones can also be included if specified. Discuss this with the CT radiographer first.

    - In addition to CT Head, C-spine can also be included in patients > 40 y/o. This will require an ED consultant specifically mention C-spine immobilisation, as appropriate, on the request form.
    - CT-Traumagram: Mechanism of injury and primary survey findings. CT radiographer will be alerted via fast bleep to all trauma calls. Take the form the CT radiographer to confirm timing of scan. CT-Traumagram should only be requested by ED senior/trauma team leader (unless task directly delegated) and signed appropriately.
    - CT-KUB: Unilateral renal colic pain with microscopic/macroscopic haematuria. Urine HCG status if female of child-bearing age.
- All other CT scans, or any of the above that don't meet guidelines need discussion and vetting with the troubleshooting radiologist.
- Remember to include the most recent eGFR on all contrast-enhanced CT requests.

Requesting MRIs on the Acute Floor:

- Both PRH and RSCH run a 24-hour MRI service.
- Out of hour MRI requests at PRH require the on-call radiographer to come in from home.
- Please see cauda equina pathway (on Microguide) for more information on MRI whole spine (cauda equina protocol).
- Please see Neck of Femur fracture MRI pathway (on Microguide) for more information on diagnostic imaging in suspected neck of femur fracture. T&O referral is mandatory. CT is appropriate for suspected bony injury. MRI is appropriate for suspected bony or soft tissue injury.

Requesting USS on the Acute Floor:

- USS can be difficult to organise within the 4-hour target and are generally not relied upon within the ED.
- Where US would be of diagnostic benefit in an ambulatory patient (fit for discharge) – discuss the case with the appropriate specialty team for next day EACU/RAMU follow-up, where the specialty team can organise ongoing investigations. Examples include DVTs (medical team) or acute abdomens not requiring admission (surgical team).
- Early pregnancy scans are organised directly by the gynae SpR in EPU/GAU.
- Achilles tendon rupture US are performed on an urgent OP basis with T&O follow-up in VFC (see Microguide for specific pathway).

Organising Imaging in RSCH:

<table>
<tr><td></td><td colspan="2">In hours</td><td colspan="2">Out of hours</td></tr>
<tr><td rowspan="2">X-Ray</td><td colspan="2">Hand request to XR radiographer. Usually in ED XR or level 5 imaging reception. They will arrange patient transport.</td><td>Place request in file at nurse-in-charge station.</td><td>Call hospital porter (x3250) to organise transport.</td></tr>
<tr><td colspan="2">Walk patient to level 5 imaging waiting area if ambulatory (eg from UTC).</td><td colspan="2">Walk patient to level 5 imaging waiting area if ambulatory (eg from UTC).</td></tr>
<tr><td></td><td colspan="4">Any hour</td></tr>
<tr><td>CT</td><td>Hand request to CT radiographer or level 5 imaging reception.</td><td colspan="2">Call troubleshooting radiologist (x64239), if vetting required</td><td>Radiographers will organise patient transport.</td></tr>
<tr><td></td><td colspan="4">Any hour</td></tr>
<tr><td>MRI</td><td>Hand request to MRI reception (located on level 4). If OOH – contact CT-radiographer.</td><td colspan="2">Call troubleshooting radiologist (x64239) to vet scan</td><td>Radiographers will organise patient transport.</td></tr>
<tr><td></td><td colspan="4">In hours only</td></tr>
<tr><td rowspan="2">US</td><td rowspan="2">Hand request to level 5 imaging reception</td><td rowspan="2">Discuss with sonographer if availability. Confirm time.</td><td colspan="2">Radiographers will organise patient transport.</td></tr>
<tr><td colspan="2">Walk patient to level 5 imaging waiting area if ambulatory</td></tr>
</table>

Organising Imaging in PRH:

<table>
<tr><td></td><td colspan="3">In hours</td><td colspan="4">Out of hours</td></tr>
<tr><td rowspan="2">X-Ray</td><td colspan="2">Place request in file at nurse-in-charge station</td><td>Call ED porter (bleep 6175)</td><td rowspan="2">Call XR radiographer to arrange XR (x8034 or bleep 6157)</td><td colspan="2">Place request in file at nurse-in-charge station</td><td>Call hospital porter (x8284)</td></tr>
<tr><td colspan="3">Walk patient to XR waiting area if ambulatory. Alert radiographer (x8034 or bleep 6157)</td><td colspan="3">Walk patient to XR waiting area if ambulatory</td></tr>
<tr><td></td><td colspan="3">Any hour</td><td colspan="2">In hours</td><td colspan="2">Out of hours</td></tr>
<tr><td rowspan="2">CT</td><td rowspan="2">Hand request to CT radiographer. X4589 if not in CT control room.</td><td rowspan="2">Call troubleshooting radiologist (x64239), if vetting required</td><td rowspan="2">Arrange time with CT radiolographer</td><td>Place request in file at nurse-in-charge station</td><td>Call ED porter (bleep 6175)</td><td>Place request in file at nurse-in-charge station</td><td>Call hospital porter (x8284)</td></tr>
<tr><td colspan="4">Walk patient to CT waiting area if ambulatory</td></tr>
<tr><td></td><td colspan="7">Any hour</td></tr>
<tr><td>MRI</td><td>Hand request to MRI reception (located on lower ground floor). Confirm time.</td><td colspan="2">Call troubleshooting radiologist (x64239) to vet scan</td><td colspan="2">Place request in file at nurse-in-charge station</td><td colspan="2">Call ED porter (bleep 6175)</td></tr>
<tr><td></td><td colspan="7">In hours only</td></tr>
<tr><td rowspan="2">US</td><td rowspan="2">Hand request to imaging reception</td><td colspan="2" rowspan="2">Discuss with sonographer if availability. Confirm time.</td><td colspan="2">Place request in file at nurse-in-charge station</td><td colspan="2">Call ED porter (bleep 6175)</td></tr>
<tr><td colspan="4">Walk patient to XR waiting area if ambulatory</td></tr>
</table>

Author: Dominic Seiersen. Feb 2021.