Commencing an StR-led on call MR spinal imaging service in a tertiary neuroscience centre

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Background
- Until 2016 the on-call spinal MRI (OCSM) in our tertiary neurosciences centre has been a Consultant-led service.
- However, interpreting spinal MRI is included in the core competences in the RCR curriculum and trainees were reporting inadequate exposure to such imaging when approaching their CCT.
- In July 2016 we introduced a specialty registrar (Sbr) led service with specialist Neuroradiologist support available off site.
- Here we review the implications of this change.

Methodology
- A radiology information system (CRIS) search identified all OCSM comparing the same 6 month period (Jul-Jan) in subsequent years, 2015 (Consultant-led) and 2016 (StR-led).
- Data collection included:
  - Basic demographic information
  - Indication
  - Areas scanned
  - Positive findings
  - On call StR and final consultant report concordance


Results
1. The total number of OCSM increased 202% following the introduction of StR-led service. The most common indication was to assess for compression of the cauda equina

<table>
<thead>
<tr>
<th>Indication</th>
<th>Total number of on call scans</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>180</td>
</tr>
<tr>
<td>Trauma</td>
<td>20</td>
</tr>
<tr>
<td>Infection</td>
<td>10</td>
</tr>
<tr>
<td>Malignancy</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
</tr>
</tbody>
</table>

2. The proportion of positive studies remained comparable 23% (22/95) pre StR-led service compared to 18% (35/192) post-StR-led service.

3. Greater proportion of OCSM done after midnight with knock-on effects on elective daytime imaging due to required staff rest periods.

4. High concordance between on call and Consultant reports (93% complete agreement)

5. A slight reduction in the average scan-to-theatre time interval (13 hours with consultant reporting, 16 hours for StR-led reporting).

Standard
- Following the service change there should be no impact on the level of patient care provided.

Indicator and target
- There should be a high level of concordance between StR and Consultant reports (major discrepancy rate <10%; minor discrepancy rate <20% as per RCR audit guidelines* )
- The number of studies performed and proportion of positive scans should remain stable.

We acknowledge that the audit guidelines proposed by the RCR pertain to CT reporting but believe a similar standard should be achieved in all on call reporting.


Action plan
- Assess feasibility of a 7am reserved scan slot to avoid imaging after midnight.
- Work with all stakeholders to explore the optimum process for providing safe effective imaging for patients in a timely manner without compromising elective imaging.
- Produce educational resource for OCSM to improve concordance of reports.