Self-referrals within a district general hospital radiology department
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**Background & aims**

The move to decoupling of radiologists from modality lists increases the likelihood of poor communication and inadequate educational feedback with follow up studies reported by colleagues, local or remote.

A perception of increasing internal referrals stimulated us to review this trend and associated issues.

We also wanted to assess how much ownership we take of cases, who reports the follow-up study, and consider the opportunities for educational feedback.

**Methods**

3000 requests reviewed.

1000 each of USS, CT & MRI

We identified the self referrals and then reviewed them in detail. We looked at:

- Ownership in report
- Rationale for next study – eg/ diagnostic uncertainty, staging, disease progression
- Referral grade(Substantive/Trainee/Locum/Radiographer)
- Same radiologist reporting both studies?
- Evidence of feedback on RIS/PACS (report or addenda)

Overall, 128 (4.3%) of the 3000 requests were advised by radiologists. Of these, only 14 reported their recommended investigation leaving 114 sources for potential feedback.

Unfortunately we could not accurately assess how much, if any feedback was given due to the absence of any integrated system support for this function.

**Overall – Percentage of workload from self-referrals**

<table>
<thead>
<tr>
<th>Modality</th>
<th>Referrals</th>
</tr>
</thead>
<tbody>
<tr>
<td>USS</td>
<td>3.90%</td>
</tr>
<tr>
<td>CT</td>
<td>4.90%</td>
</tr>
<tr>
<td>MRI</td>
<td>6%</td>
</tr>
</tbody>
</table>

**Results**

USS – 1000 studies were performed in a 2 week period. 39 were self referred from within the department with only 6 (15%) of these were performed by the referrer. The majority were referred from previous ultrasound, 10 (25%) for follow-up of pelvic cysts and 7 for assessment of liver lesion on CT.

CT – 1000 studies carried out of 6 week period. 49 were self referred with only 2 (4%) of these being performed by the referrer. The majority were referred following ultrasound, 26 (53%) of these were chest/abdomen/pelvis for suspected malignancy.

MR – 1000 studies performed over 11 week period. 60 were self-referred and 6 (10%) were performed by the referrer. Majority were referred from CT, 16 (27%) for malignancy and 14 (23%) for MRCP.

**Referral source - Modality**

<table>
<thead>
<tr>
<th>Modality</th>
<th>X-ray</th>
<th>Nuclear</th>
<th>USS</th>
<th>CT</th>
<th>MRI</th>
</tr>
</thead>
<tbody>
<tr>
<td>MR</td>
<td>9</td>
<td>12</td>
<td>17</td>
<td>25</td>
<td>7</td>
</tr>
<tr>
<td>CT</td>
<td>14</td>
<td>0</td>
<td>18</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td>USS</td>
<td>6</td>
<td>11</td>
<td>17</td>
<td>12</td>
<td>3</td>
</tr>
</tbody>
</table>

**Action plan**

1. We have encouraged reporters to take ownership and measures to facilitate reporting of these studies. If this were achieved it would likely lead to improved referral decisions, diagnostic accuracy, improve efficiency and reduced work load for the radiologist in the department.

2. Where self reporting is not possible, we advise efforts to direct follow ups to the original instigator (especially for characterisation or further assessment).

3. IT suppliers and radiologists should work to better support the communication and feedback issues that arise in the situation of internal radiology referrals.

4. All available mechanisms for feedback should be employed to obtain the benefits mentioned above.

**Conclusions**

There are no published standards for comparison in this area.

Radiologists should be aware of the potential risks with internal referrals and explore ways to secure better patient, service and personal outcomes.

This study confirms that a significant proportion of our work is internally generated. Better communication with scanning staff and alterations to operational flows may be of benefit.

We feel that with each case comes a learning opportunity. There was no documented evidence of feedback; it is, however, accepted that the majority of feedback occurs with RIS messenger, one-to-one interactions and at meetings (discrepancy or MDT).