Background

The radiologist responsibility does not end with image interpretation. Failure to communicate significant radiological results efficiently can jeopardise patients’ safety and have serious consequences. Electronic communication of significant results is preferred as it is faster, more reliable and improves the efficiency of read receipts by the referrer. Recent data highlight issues with communicating results in some UK radiology departments with only 34 radiology departments out of 103 have automated electronic alert system[11]. The aim of this audit is to present the electronic radiology alert system we use in a major teaching hospital in the UK.

Our local E-mail based system

1. Significant unexpected finding has been reported and needs clinicians’ attention
2. Email is sent by the reporter to the radiology alert team which have centralised email inbox
3. Radiology alert team respond by sending an email to the relevant clinicians’ department email inbox and ask them to reply with a read receipt
4. Once the alert is received, secretaries within each department tick a read receipt box to send back a confirmation to radiology alert team

Standards

* RCR standards for communicating unexpected findings state that a radiology department should have a policy in place for reports requiring reliable communication. Our local standards expect clinicians to be informed of an unexpected finding within 24 hours of issuing an alert by the reporter[10].

Indicator

* The time between the reporter issuing an alert and the radiology alert team sending an e-mail to the responsible clinician’s department.

Target

* 100% of alerts issued by reporters should be dealt with by our radiology alert team within 24 hours from issuing the alert.

* 100% of alerts received by the clinical departments should have a read receipt sent back to radiology alert team to confirm delivery.

Methodology

* Over 6 months period (Jan-June 2015), the number of alerts received by the radiology alert team were identified via the centralised email inbox. Information regarding date and time of emails received and sent were collated and analysed in Excel 2013.

What is being reported?

* Over a period of 6 months, a total of 860 alerts were dealt with by the radiology alert team, with CT scan being the most common modality, and suspected malignancy being the most common unexpected finding.

Did we reach our target?

* 83% of total alerts were looked at by our radiology alert team and emails sent to the referring clinicians’ departments within 24 hours (710/860).

* Out of the 150 alerts which did not meet the 24 hour target, 66 (44%) were sent by the reporter on either Friday after 17:00 or Saturday. The table below also demonstrates the high percentage of alerts not reaching the target if they were sent any time on Friday:

<table>
<thead>
<tr>
<th>Alert Day</th>
<th>Total</th>
<th>Alerts not sent within 24 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>161</td>
<td>17 (31%)</td>
</tr>
<tr>
<td>Tuesday</td>
<td>187</td>
<td>8 (11%)</td>
</tr>
<tr>
<td>Wednesday</td>
<td>163</td>
<td>2 (1%)</td>
</tr>
<tr>
<td>Thursday</td>
<td>113</td>
<td>16 (14%)</td>
</tr>
<tr>
<td>Friday</td>
<td>110</td>
<td>49 (45%)</td>
</tr>
</tbody>
</table>

* 34 % of total alerts had read receipt sent by the referrer’s clinical department (293/860). It has been agreed that this low percentage does not reflect the true number of respondents. Many departments would have actually responded to the alert but not sent a read receipt via email and would still be counted as non-responders.

Discussion and Action Plan

* Although this current model has the advantage of being electronic based, it still relies on a third party to act as a messenger between the reporter and the clinician. A significant proportion of non-compliance in this audit was due to alerts being sent over the weekend when there is lack of administrative manpower.

* The use of an electronic alert system integrated into a new PACS product already purchased by our trust is being considered. The main benefit would be to ensure the delivery of the alert to the clinicians directly into their emails or smart devices even during out of hours without the reliance on manpower.