What do radiology incident reports reveal about in-hospital communication processes and the use of health information technology?

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Outline

• Introduction to the Centre for Health Systems and Safety Research
• Background
• Aim
• Methodology
• Findings
• Discussion and implications for further research
Centre for Health Systems and Safety Research
Background

• Rapid growth in medical imaging.
• Concerns about over demand for services.
• The potential for health IT-enabled innovation.
• Health IT can introduce new and unexpected errors.
• Understanding and addressing the occurrence of IT-related errors
Study aim

To examine the role of HIT in incident reports relating to imaging services:
(1) categorise incidents to provide an overview of the type and frequency of incidents reported at the study site;
(2) to identify and examine any relationship, explicit or otherwise, between incidents and the use of HIT.
Methodology

• Setting
• Data extraction (non-identifiable)
• Data analysis
• Ethics approval
International Classification for Patient Safety

The ICPS is an attempt to create a standardised classification taxonomy for medical errors.
Results

- 216 incidents from 17 January 2005 to 8 October 2011.
- After coding, 209 classified events.
- 15 incidents unable to be classified.
- 8 incidents classified twice.
- ICPS coding sometimes failed to reflect true nature of the event.

<table>
<thead>
<tr>
<th>Incident Type</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources/organisational management</td>
<td>56</td>
</tr>
<tr>
<td>Behaviour</td>
<td>38</td>
</tr>
<tr>
<td>Clinical administration</td>
<td>28</td>
</tr>
<tr>
<td>Clinical process/procedure</td>
<td>25</td>
</tr>
<tr>
<td>Medical device/equipment</td>
<td>20</td>
</tr>
<tr>
<td>Patient accidents</td>
<td>19</td>
</tr>
<tr>
<td>Documentation</td>
<td>17</td>
</tr>
<tr>
<td>Medication/IV fluids</td>
<td>5</td>
</tr>
<tr>
<td>Infrastructure/building/fixtures</td>
<td>1</td>
</tr>
<tr>
<td>Oxygen/gas/vapour</td>
<td>0</td>
</tr>
<tr>
<td>Blood/blood products</td>
<td>0</td>
</tr>
<tr>
<td>Nutrition</td>
<td>0</td>
</tr>
<tr>
<td>Healthcare associated infection</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>209</strong></td>
</tr>
</tbody>
</table>
Results

• Communication breakdown evident in 103/209 (49%) of incidents

• 21 (10%) of these incidents reported an explicit connection to an HIT system including:
  a) electronic requests for tests (11/21);
  b) Incorrect storage of digital images (6/21);
  c) Incorrect or amended reports (3/21);
  d) medical records (1/21)

• 6/21 HIT errors involved some element of human error
Conclusion

• ICPS unable to classify 15 incidents, and deficient in classifying others.
• Further refinement of classification systems are needed in order to extract more specific HIT-related data:
  • Which stage of use (data input; transfer; output)?
  • Human error, computer error, or human-computer interface error?
• Radiology Events Register (RaER) 2006
Thank you

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http://www.aihi.unsw.edu.au/chssr

Australian Research Council Linkage Project (LP0989144) ICT and work innovation