Addendum report coding for the National Quality Improvement Programme in Histopathology: a multi-institutional audit

S. Mahon¹,³, D. Catargiu², S. Phelan², S. Crowther³, N. Swan¹.
St. Vincent’s University Hospital¹, University Hospital Galway², and Tallaght Hospital³
Quality = Timely / Accurate / Complete

Final complete report

Preliminary diagnostic information
Addendum Reports

• Amended Report (Q021)
  – Interpretive disagreement
  – Only categorised as error after review by 2 pathologists

• Corrected Report (Q022)
  – Non-interpretive error (typo, omission, site change)

• Supplementary Report (Q020)
  – Additional information (no change to primary diagnosis)
Addendum Reports

• Increasing number over past 20 years*
  – 1993 = 0.8% → 2008 = 8.6%
  – 2012 = 20% of cancer reports

• NQAIS Data (2011 – 2014) = 5%
  – Supplementary = 4.8%
  – Corrected = 0.16%
  – Amended = 0.1%

* Finkelstein et al. Am J Clin Pathol 2012;137:606-611
Addendum Reports - Problems

• Risk of information not being communicated to clinician
• Tendency of pathologist to code addendums as supplementary reports
• To improve TAT many supplementary reports contain majority of diagnostic information
Amended Reports and Errors

• Discrepancy = difference of opinion between the original interpretation and the interpretation at review

• Only considered an error when confirmed by two independent reviewers

• Assessment of discrepancies
  – Performance of pathologist / laboratory
  – Duty of care review
# RCPPath Categorisation of Discrepancies – performance concern

<table>
<thead>
<tr>
<th>Category (Expression of concern)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong> Inadequate dissection, sampling or macroscopic description</td>
<td></td>
</tr>
<tr>
<td><strong>B</strong> Discrepancy in microscopy 1. Surprised to see from any pathologist 2. Clearly incorrect but not surprised to see a small % suggesting 3. Large inter-observer variation</td>
<td></td>
</tr>
<tr>
<td><strong>C</strong> Discrepancy in clinical correlation - Failure to answer clinical question</td>
<td></td>
</tr>
<tr>
<td><strong>D</strong> Failure to seen 2nd opinion in an obviously difficult case</td>
<td></td>
</tr>
<tr>
<td><strong>E</strong> Discrepancy in report - typos, internal inconsistencies or ambiguities which should have been corrected before authorisation</td>
<td></td>
</tr>
</tbody>
</table>
## RCPPath Categorisation of Discrepancies – Duty of care review

<table>
<thead>
<tr>
<th>Category (Duty of Care)</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1                      | No impact on care  
- No harm / near miss (report not received or disregarded) |
| 2                      | Minimal harm (no morbidity)  
- Delay in diagnosis / therapy < 3 months  
- Unnecessary treatment without morbidity |
| 3                      | Minor harm (minor morbidity)  
- Delay in diagnosis / therapy > 3 months  
- Delay in therapy with minor morbidity |
| 4                      | Moderate harm (moderate morbidity)  
- Due to delay in diagnosis  
- Unnecessary diagnostic / therapeutic efforts |
| 5                      | Major harm (major morbidity)  
- Loss of limb or organ or organ function due to unnecessary diagnostic efforts  
- Severe morbidity due to delayed / unnecessary therapy efforts  
- Death |
Aim of Audit

• Evaluate categorisation of addendum reports as coded for NQAIS in 3 laboratories

• Assess reproducibility of RCPath categorisation of discrepancies in histopathology
Methods

• All cases coded as amended (Q021), corrected (Q022) and supplementary (Q020) extracted from NQAIS of 3 labs
• Tallaght, UHG & SVUH
• July to December 2015
• All amended and corrected reports reviewed
• Sample of supplementary reports reviewed (20%)
## Pre-review Coding

<table>
<thead>
<tr>
<th>Laboratory</th>
<th>Supplementary Q020</th>
<th>Amended 021</th>
<th>Corrected Q022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab 1</td>
<td>385 (3%)</td>
<td>12 (0.09%)</td>
<td>15 (0.1%)</td>
</tr>
<tr>
<td>Lab 2</td>
<td>939 (4.8%)</td>
<td>8 (0.04%)</td>
<td>57 (0.29%)</td>
</tr>
<tr>
<td>Lab 3</td>
<td>1221 (7.7%)</td>
<td>45 (0.26%)</td>
<td>42 (0.26%)</td>
</tr>
<tr>
<td>Total</td>
<td>2545 (5.3%)</td>
<td>65 (0.14%)</td>
<td>114 (0.23%)</td>
</tr>
</tbody>
</table>

Based on total combined workload of 47,942 cases for 3 labs
Post-Review Corrections

• Amended reports (n=65)
  – 7 revised to corrected report
  – 3 revised to supplementary report
  – ?? Levels on skin excision changes margin to positive
  – ?? Elastic stain changes stage (T3-T4) in colon cancer resection
Corrected Report Revisions (n=144)

• 11 revised to amended
  – Nodular LP Hodgkin lymphoma (HL) changed to Classical HL, nodular sclerosing type
  – Pancreas cancer resection margin changed from negative to positive (R0 → R1)

• 5 revised to supplementary
  – Gastric biopsy with negative HLO immuno
  – Prostatectomy with further sampling performed (stated in original report)
Supplementary reports

- 554 reviewed (20% of total)
- 21 revised to amended (3.8%)
  - Breast cancer stage change (Tis → T1a) following IHC
  - Bone marrow WNL to suggestive of MDS following MDM
- 12 revised to corrected (2%)
  - Omission of grade on breast WLE report
Supplementary Reports

• 70% due to IHC/levels/specials
• 14% outside review
• 11% due to molecular tests
• 5% post-MDM discussion
## Revised addendum report totals

<table>
<thead>
<tr>
<th></th>
<th>Pre-Review</th>
<th>Post-Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amended Reports Q021</td>
<td>65 (0.14%)</td>
<td>84 (0.18%)</td>
</tr>
<tr>
<td>Corrected Reports Q022</td>
<td>114 (0.23%)</td>
<td>117 (0.24%)</td>
</tr>
<tr>
<td>Supplementary Reports Q020</td>
<td>554* (5.3%)</td>
<td>519 (change in 6.3%)</td>
</tr>
<tr>
<td>Amended / Corrected</td>
<td></td>
<td>Error rate = 0.42%</td>
</tr>
</tbody>
</table>

* = number of supplementary reports reviewed (20% of total)
### RCPath Categorisation of Discrepancies – Review of Amended Reports

<table>
<thead>
<tr>
<th>Category (Expression of concern)</th>
<th>Description</th>
<th>Review (n = 51)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Inadequate dissection, sampling or macroscopic description</td>
<td>A = 11</td>
</tr>
<tr>
<td>B</td>
<td>Discrepancy in microscopy</td>
<td>B1 = 3, B2 = 11, B3 = 16</td>
</tr>
<tr>
<td></td>
<td>1. Surprised to see from any pathologist</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Clearly incorrect but not surprised to see a small % suggesting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Large inter-observer variation</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Discrepancy in clinical correlation</td>
<td>C = 0</td>
</tr>
<tr>
<td></td>
<td>- Failure to answer clinical question, state inadequate</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Failure to seen 2(^{nd}) opinion in an obviously difficult case</td>
<td>D = 4</td>
</tr>
<tr>
<td>E</td>
<td>Discrepancy in report</td>
<td>E = 6</td>
</tr>
<tr>
<td></td>
<td>- typos, internal inconsistencies or ambiguities which should have been corrected before authorisation</td>
<td></td>
</tr>
</tbody>
</table>
Category A – Inadequate dissection, sampling, macroscopic (or microscopic) description

• Positive cytokeratin stain in sentinel lymph node as part of WLE breast cancer specimen, change from N0 to N1(mi)

• Deeper levels on skin excision changed deep margin to positive

Category A equivalent to QI Programme definition of corrected report in many instances
Category B (Discrepancy in microscopy interpretation)

• B1
  – LLETZ, CIN-1 amended to CIN-3

• B2
  – Skin, in-situ to invasive SCC
  – Colon biopsy, chronic colitis changed to WNL

• B3
  – Oesophageal biopsy, low grade dysplasia to indefinite for dysplasia
CATEGORY D – FAILURE TO SEEK 2ND OPINION IN OBVIOUSLY DIFFICULT CASE

- Uterine carcinoma – high grade endometrioid to high grade serous
- Liver biopsy – non-specific to chronic rejection

CATEGORY E – DISCREPANCY IN REPORT

Prostate biopsy – carcinoma present in 3 cores, original report stated 1 core positive

CATEGORY E equivalent to QI programme definition of corrected report
Conclusion

• Amended / Corrected reports incorrectly coded in 9.5% of cases
• Supplementary reports incorrectly coded in 6% of cases
• RCPath Categorisation of discrepancies (expression of concern) clinically useful
Recommendation

• Supplementary report review should be performed in conjunction with amended / corrected report review

• Suggest reviewing 20% of supplementary reports with target of <5% requiring revision

• Suggest using RCPath categorisation of discrepancies with consensus at QI meetings
“With every mistake we must surely be learning .......... while my guitar gently weeps”