Evidence Based Practice – NE DFs

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QMUL – Friday 23rd October 2015
We want you to breakout into groups

• Elect a spokesperson
• Share ideas
• Reflect
• Work as a team
Group Working on potential Audits

- Store idea – choose subjects that are relevant to you all
- What are the agreed standards?
- What is measurable?
- Tools – that we can use from others?
- Follow the crowd or do we have balls?
- Look at quality of the things we do to patients?
- Collation and Presentation
- Identification of problem and re-audit and close loop

DF Projects for 2015/16
- EBD
- Posters
- Audits
- Clinical Outcome
Milestones – Audit Projects for 2015/16

• Agree projects – within groups – agree responsibilities
• Pilot and then carry out first Audit
• Assess results & identify problems / successes – need for change and if necessary - re-audit to close loop
• Report: Oral, Poster or Written
• Drive up Clinical Outcome
Prosthodontics

- Impression Audit for indirect fixed Prosthodontics
- Remakes - back to laboratory – fixed / removable
The Quality of Impressions for Crowns and Bridges: An Assessment of the Work Received at Three Commercial Dental Laboratories. Assessing the Quality of the Impressions of Prepared Teeth.

D. Storey* and T.J. Coward†

Abstract - The literature is limited in studies directly assessing the quality of impressions for crowns and bridges in the UK. The aim of the study was to assess the quality of impressions for conventional crown and bridgework received by commercial dental laboratories. Three dental laboratories were visited over a 3-month period. All impressions for conventional crowns and bridges that arrived on the days of the visits were examined prior to any laboratory processing. A total of 206 impression cases were examined and assessed against criteria laid out in a custom-designed assessment form. Defects were commonly found in the recording of prepared teeth. Overall, 44.2% of impression cases were unsatisfactory. NHS impressions were more than twice as likely to be unsatisfactory compared to private impressions. If the results of this survey are typical then the general quality of impressions for fixed crown and bridgework is unacceptable. This is particularly true for work completed under the NHS contract.

KEYWORDS: Impression, Crown, Quality
Impression quality audit for indirect fixed restorations

- Identify NHS standards (Storey and Coward 2013)
- Identify quality measure
- Identify gold / DF standard – what is it?
- Roll out to other members of the practice e.g. trainer?
# Impression quality Audit

(what to measure?)

## Table 1. Classification Criteria

<table>
<thead>
<tr>
<th>Reason For Classification</th>
<th>Specific Features Assessed</th>
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<tr>
<td>Impression Definitely Unsatisfactory</td>
<td>Impression clearly records tooth preparation.</td>
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<tr>
<td></td>
<td>• Clearly defined and continuous margins exhibiting no imperfections.</td>
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<td>• Absence of voids, drags or tears in the rest of the preparation.</td>
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<tr>
<td>Impression Probably Satisfactory</td>
<td>Minor faults present that can be overcome by the judgment of a trained technician.</td>
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<td></td>
<td>• Small inclusions at the margins.</td>
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<td></td>
<td>• Small losses of marginal integrity (less than 1mm).</td>
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<tr>
<td></td>
<td>• Minor imperfections in the remainder of the impression of the prepared tooth.</td>
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<tr>
<td>Impression Unsatisfactory</td>
<td>Significant faults requiring guesswork by the technician if a die is to be produced.</td>
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<tr>
<td></td>
<td>• Complete loss of marginal definition greater than 1mm.</td>
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<tr>
<td></td>
<td>• Extensive voids, drags or tears within the impression of the preparation.</td>
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Impression quality Audit
(expected standard setting)

Figure 1a. Example of an impression with clearly defined preparation margins.

Figure 1b. Example of an impression that would be categorised as probably satisfactory.

The above impression accompanied a request for an NHS gold crown. It is clearly contoured with what is likely to be blood and gums, therefore no guidance as to the finishing lines of the preparation.

Figure 2. Quality of the Impressions of prepared teeth (NHS/Private/All Contracts)

(The 4 cases that did not specify contract type are included in the All Cases category)
Radiographs: Simple Intra-oral BW and LCPA Audit

The standard:
The NRPB suggest the following standards:
Subjective quality rating of radiographs-
No less than 70% of dental images should have a rating of Excellent – No errors of patient preparation, exposure, positioning, processing or film handling.
No more than 20% should have a rating of diagnostically acceptable – Some errors present, but do not detract from the diagnostic utility of the radiograph.
No more than 10% should have a rating of Unacceptable - Errors which render the radiograph diagnostically unacceptable.
Simple Intra-oral Audit

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NRPB Standard Audit
Could combine with endodontic pre-op, diagnostic and radiographs
An audit of root canal treatment performed by undergraduate students


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Keywords:
Audit, technical quality, root canal treatment, undergraduates

Abstract

The objective of this study was to audit the quality of root canal treatment performed by undergraduate students on adult patients.

Methodology

All root canal treatment completed by first and second clinical year undergraduates over a 12 month period were included in the study. The availability and availability of permanent, diagnostic, length, taper, point and periapical radiographs were noted for each case. All available periapical radiographs of primary treatments were examined for quality of the root filling, categorized as unacceptable, incomplete apices, impossible apices and all three or not assessable. The distance from the radiographic apex of the root to the apical extent of each root filling was measured to 0.1 mm precision.

Results

Unacceptable root treatment on 11% teeth. A periapical radiograph was available in 81% of cases. A try-in point radiograph was unavailable in 54% of cases. Twenty percent (20%) were categorized as satisfactory in terms of both radiographic quality and distance of the root filling from the radiographic apex.

Conclusions

Overall, the technical quality of root canal treatment completed by undergraduate students was poor.
Things to measure

Radiographic

- Voids
- Depth of obturation - filled to within 2mm of radiographic apex
- Technical errors – perforations, blockage, zips, ledges etc.
- Presence of likely untreated canal(s)
What other endo things could you look at in your VT practices in the coming year?

- Post endodontics / extraction Rx flare ups – Tools: questionnaire for patients
- Quality of anaesthesia for RCT – did you get the pulp out, did you top up? did you need intra-pulpal injection? Was it painful? Tools: patient questionnaire / DF / dentist questionnaire
- Quality and diagnostic of pre-op, diagnostic and post-op endodontic radiographs – Tools: BES / ESE radiographic outcome forms
- Number of RCT appointments Tools: Clinical notes
Things we could measure – patient-centred -

• Flare up – severity, signs, symptoms and duration of pain
• Disruption of sleep
• Number and type of analgesics needed to control pain
• Need to antibiotic – visit to other health professional
RCT - Number of appointments needed to complete RCTs
Posterior mandibular teeth

- Audit effectiveness of pain control for pulpal extirpation of mandibular molars or premolars
- Auditing against a known standard using top up techniques
- Usual ID Block, Buccal Articane 4% and intra-ligamental infiltration with specialised device
- It will be patient and operator based
Record Keeping

1. Warning of post op flare up
2. Warning of likely success failure
3. Report on special tests – to include radiographs
4. Advice recorded re: analgesia and antibiotics after Rx
5. If suboptimal result – evidence that patient has been informed and further measures / options discussed with them
6. Batch numbers of LA etc
7. Use of thermometer where acute infection
So there is lots to look at

• Sana and I will help