

# An audit of external referrals to the periodontology department in an Irish university dental hospital

## Précis

An audit indicated that referral letters submitted to the periodontology department of a university dental hospital frequently failed to provide sufficient information. Clinicians utilising the bespoke referral proforma letter achieved a markedly higher standard of referral.

## Abstract

**Statement of problem:** Concerns were raised that referrals to the Dublin Dental University Hospital (DDUH) periodontology department often lacked sufficient information for triaging.

**Purpose of the study:** To investigate the quality of external referrals to the DDUH periodontology department, as well as identifying how frequently the current referral proforma letter was used, and if proforma use was associated with a higher quality of referral.

**Materials and methods:** Data was collected by retrospectively auditing 150 external referrals to the DDUH periodontology department at representative intervals over a 12-month period (2019/2020). Referrals were assessed to investigate if they included 22 information points as requested by our local standard (referral proforma letter). Data was input into a Microsoft Excel spreadsheet and analysed. Ten periodontal referral proforma from similar dental institutes across Ireland and the UK were also compared to our proforma to investigate if our institution requests a similar level of information to peer institutions.

**Results:** Referral analysis indicated that clinicians provided on average 12.9 out of 22 (59%) items of required information in their referral correspondence. Referrers utilised the appropriate referral proforma in 28% of cases. Use of this proforma was associated with a better standard of referral (17.9 out of 22 required information items provided [80%]) when compared with non-proforma referrals (11.2 out of 22 required information items provided [51%]). Analysis of other institutions' proformas highlighted that the DDUH requests referring practitioners to include more information than equivalent peer institutions.

**Conclusion:** Periodontal referral letters to the DDUH frequently fail to include sufficient information. Practitioners seldom utilise the divisional referral proforma, although its use is associated with improved referral quality. Simplification of the existing referral proforma and dissemination of referral guidelines to practitioners is recommended moving forward.

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## Introduction

Referral letters are an essential means of communicating clinical information between healthcare professionals. High-quality referral letters provide a means of efficient triaging to provide appropriate patient care.<sup>1-8</sup> Previous studies have highlighted that referral letters to specialist care settings frequently omit items of key information.<sup>1-11</sup>

Part of the challenge for referring practitioners may be the lack of universally adopted guidelines indicating what a referral letter should contain. General recommendations on referral practices have been highlighted in the dental literature for many years,<sup>12</sup> and are included in general dental texts,<sup>13,14</sup> but these are not uniformly and consistently utilised by professionals. The challenge extends across clinical disciplines; a previous review of referral letters



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to an oral medicine department in the UK highlighted that fewer than half contained a list of problems or a provisional diagnosis.<sup>15</sup> The Scottish Dental Clinical Effectiveness Programme (SDCEP) has provided clinical guidelines on the management of periodontal diseases in primary dental care, which include suggestions on what a periodontal referral letter should contain.<sup>16</sup> The British Society of Periodontology (BSP) has also published helpful guidelines on periodontal patient referrals,<sup>17</sup> although these focus principally on case and complexity features that may be relevant in making referral decisions rather than the content of referral communications themselves.

Dublin Dental University Hospital (DDUH) accepts patient referrals for educational purposes, with the majority of care being provided in undergraduate student clinics. The school has an obligation to balance the number and complexity of referrals accepted against its teaching and research requirements. Triaging referrals in respect of their complexity and urgency can prove difficult if appropriate information is not supplied.

The use of proforma letters/forms has been shown to improve the standard and quality of referrals in dentistry<sup>2,6,8</sup> but, despite this, they are often not utilised by the referring practitioner.<sup>4,6</sup> A previous audit of referrals to the Department of Oral and Maxillofacial Surgery at the DDUH concluded that, in general, referral letters required modification and did not provide required information to the receiving clinician.<sup>1</sup> These authors suggested a template for use in future referrals. The Division of Restorative Dentistry and Periodontology in the DDUH developed a proforma letter several years ago to assist practitioners referring patients for restorative and periodontal assessment or treatment. Proformas are hosted on the hospital website under the 'For Health Professionals' tab. Summary acceptance criteria and editable Word document versions of the proformas are provided ([www.dentalhospital.ie/clinical-services](http://www.dentalhospital.ie/clinical-services)). Consultants triaging periodontology referrals noted that the proforma was not uniformly used and recounted multiple anecdotal episodes where significant relevant medical or treatment factors missing from referral letters were noted at time of initial assessment. Consequently, an audit was proposed to assess the quality and completeness of referrals to the periodontology department to identify any possible areas where the referral pathway could be improved for referring clinicians.

## Aims

The aims of the audit were:

1. To assess the quality of external referrals to the DDUH periodontology department.
2. To identify how frequently the current referral proforma was used.
3. To establish if proforma use was associated with a higher quality of referral information.

## Method

The standard of the audit was determined using the existing DDUH referral proforma for the Division of Restorative Dentistry and Periodontology to define the required information. This referral proforma requests 22 unique information points including patient details, referring practitioner details, and medical, dental and problem-specific content (Figure 1).

A pilot audit of 20 referral letters was undertaken to assess the data collection parameters. This was reviewed and minor adjustments made to these parameters. Thereafter, 150 external referrals to the DDUH periodontology department were assessed. Referrals were sampled at four-monthly intervals

Referral to Division of Restorative Dentistry and Periodontology		
Date of Referral: _____		
Referring clinician (qualification, address, telephone number)		
Patient Name Address Mobile phone number Date of Birth		
Reason for referral / patient complaint		
Preliminary Diagnosis	Periodontal Screening Record: ____/____/____ Plaque Score:     %     Bleeding Score:     % Comment:	
Previous treatment provided & response		
Your treatment plan (RPD, FPD, implant)		
Relevant medical history		
Relevant social history (occupation, motivation, smoker/non smoker)		
Relevant family history		
Indicate suitable level of care	Undergraduate	Postgraduate     Consultant
Level of urgency of treatment		
Enclose copy of relevant radiographs	Yes     No	
Radiographs will be copied and returned		

FIGURE 1: Existing DDUH proforma.

(August 2019, January 2020, and May 2020) to provide a broad sample. Referrals were assessed individually from the start of the relevant month, with only internal referrals being excluded. Fifty consecutive external referrals were obtained from each of the selected months.

Individual information items did not need to be comprehensively completed to be classified as being provided. Where the referring practitioner placed a dash next to a required item on the proforma, it was inferred that the practitioner had determined there was no applicable information to add. Such items were classified as a completed response. If a required item was left blank with no comment, it was classified as incomplete.

Supplemental information was also gathered from the referrals to identify possible areas of improvement to the current referral pathway. This information included:

- type of referral (if not on proforma);
- financial reason for referral (if stated);
- type of radiograph enclosed (if any);
- age of patient at time of referral;
- location of referring practice; and,
- other miscellaneous information.

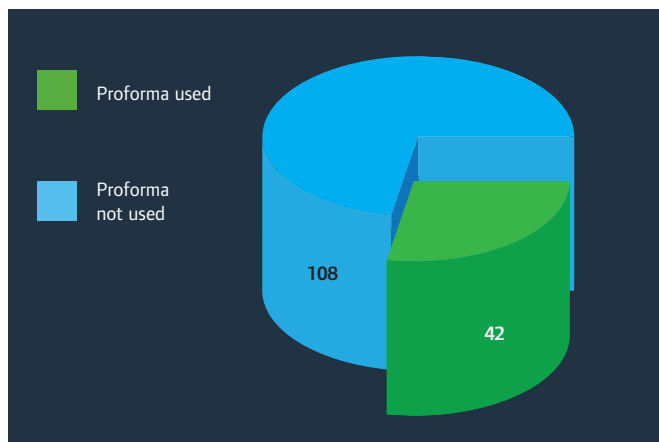


FIGURE 2(a): Frequency of appropriate proforma use.

This information was gathered and inserted into a Microsoft Excel spreadsheet for analysis.

Finally, the current divisional proforma was compared to proforma referral forms used by 10 peer dental hospitals/NHS Trusts (see Appendix) across Ireland and the UK to investigate if a similar level of detail is being sought from referring clinicians elsewhere. These proformas were accessed via hospital websites or direct correspondence, and were assessed for the 22 information points requested by the DDUH.

### Results

Of the 150 external referrals assessed, 42 utilised the appropriate DDUH proforma. A wide variety of other types of referral was evident, with the most common being a handwritten letter on headed paper ( $n=83$ ) (Figure 2). The referrals were analysed according to the 22 information points requested by the existing proforma (Figure 3). Referrals were initially assessed as an entire group (i.e., proforma and non-proforma referrals;  $n=150$ ). When the entire cohort was assessed collectively it was demonstrated that the referrals contained an average of 59.2% of the required information items. Only three of the 150 referrals (2%) addressed all of the 22 information points. The most commonly omitted information was bleeding score (16.7% provided), plaque score (16% provided), and family history (14.7% provided).

Referrals were then grouped based on whether or not they used a proforma. When the non-proforma referrals ( $n=108$ ) were assessed, it was discovered that they contained an average of 51.2% of the required information. The most commonly omitted information was bleeding score (3.7% provided), family history (2.8% provided), and plaque score (1.9% provided). No referral provided all of the required information.

When the proforma referrals ( $n=42$ ) were assessed, an average of 79.9% of the required information was provided. The most commonly omitted information in such cases was bleeding score (50% provided), family history (46.2% provided), and referrer's qualification (41.5% provided). Three of the 42 proforma referrals (7.1%) were fully completed.

The majority ( $n=112$ ) of the referrals were from the Dublin area, with the Dublin 6 area accounting for the highest number of referrals by locality ( $n=16$ ). As expected, the neighbouring counties accounted for the majority of referrals outside Dublin, with Kildare ( $n=10$ ) accounting for the most referrals outside Dublin. Three referrals did not contain the address of the referrer and one referral was from overseas (London, UK) (Figure 4).

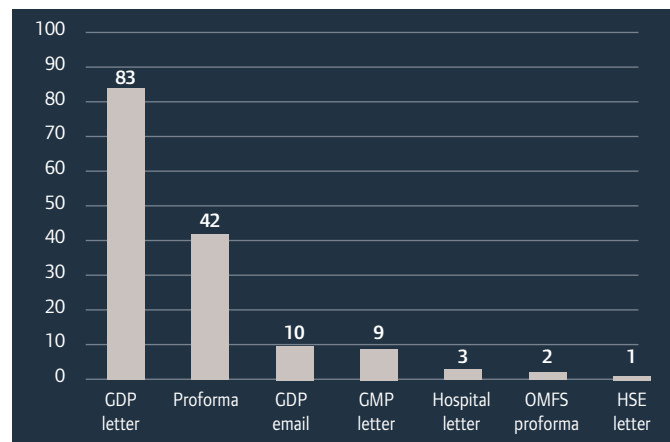


FIGURE 2(b): Type of external referral form utilised.

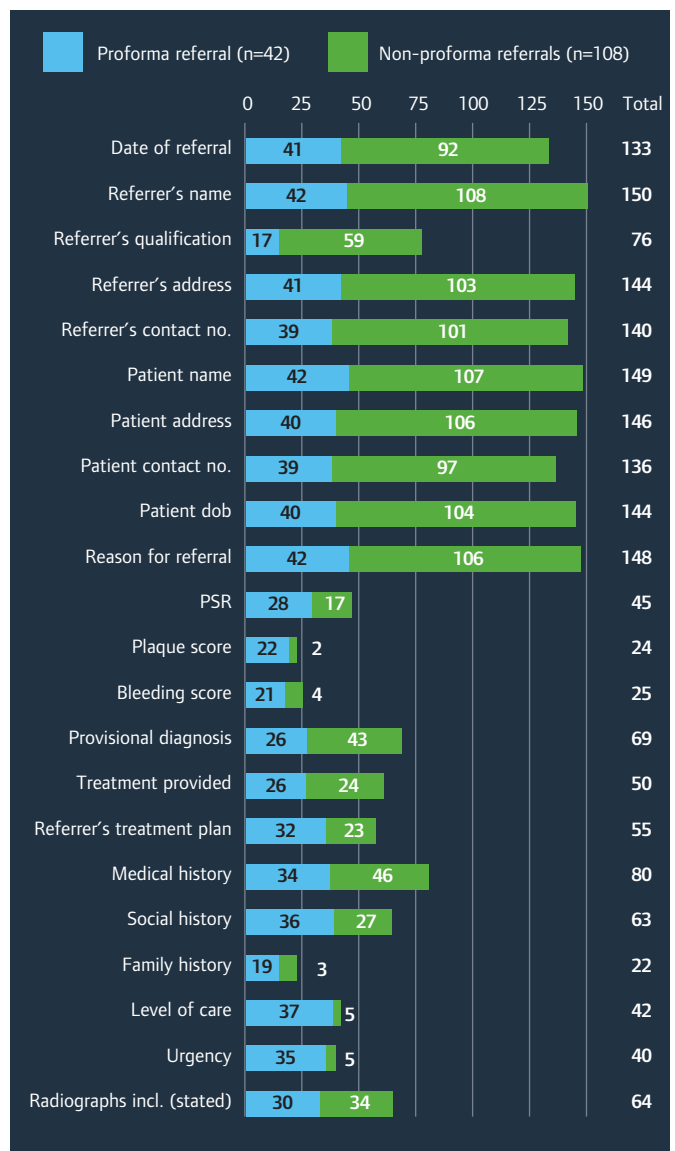


FIGURE 3: Referral analysis.



audit, wherein slightly over half (53%) of referrals included some comment on the patient's medical history. Detailed knowledge of a patient's medical condition is paramount when providing any dental care.<sup>11</sup>

Fewer than one-third of referrals included radiographs. Radiographic assessment is an important component in establishing individual patient diagnoses in practice,<sup>18</sup> and every effort should be made by the referring dentist to include any relevant previous radiographs in the referral in order to minimise patient exposure to radiation and conserve clinical resources.

A comparison of the DDUH proforma with those from 10 peer dental hospitals/NHS Trusts revealed that the DDUH is among a minority of institutions requesting referrer's qualification, and details of patient plaque and bleeding scores. However, while the DDUH does not currently request details of the patient's medical practitioner, seven of the 10 peer institutions request this information. Since it has been suggested that including GMP details in referrals is good practice,<sup>1,2,10</sup> this should be considered in future iterations of the DDUH referral proforma.

It must be recognised that patient opinions, practitioner-related factors and non-disease factors such as socioeconomic status and proximity to specialist services may affect the decisions of practitioners and patients regarding periodontal referral.<sup>19,20</sup> One-fifth of the patient referral letters to the periodontology department were referred from a county outside of Dublin. It can be inferred from this that a percentage of patients are travelling a significant distance to receive care at the DDUH. Since more detailed referral letters will allow more accurate triaging, this would in turn decrease the number of patients who are not accepted for care following their assessment appointment, which may be particularly important for patients who may have mobility issues or have to travel greater distances. The practice of clinical audit represents a valuable opportunity to evaluate institutional practices and establish areas for possible service improvement. The findings of this audit have implications for clinicians and educators, and a number of measures can be recommended. In the short term, a divisional review of the existing proforma is in progress. Items of information such as plaque score or bleeding score – which are not requested by peer institutions – may be modified or removed; a comment on overall patient compliance with oral hygiene may be a simpler alternative. Staff may also wish to request GMP details on the proforma. At an institutional level, drafting referral criteria and circulating them to referring dentists has been shown to improve referral quality in restorative dentistry<sup>8</sup> and periodontology.<sup>10</sup> In the medium term, the authors strongly recommend that the DDUH provide guidance to referring general dental practitioners on both the information required by individual departments and to periodically highlight the availability of its referral proforma. Shaffie and Cheng<sup>2</sup> demonstrated a marked increase in referral quality following distribution of guidance letters to their most common referring general dental practices.

In the longer term, implementation of a mandatory online referral proforma system should be considered. This could be tailored to require referrers to complete all information before the referral is accepted for triage, as suggested by Björkeborn *et al.*<sup>21</sup> This would expedite the referral pathway and offer reduced environmental impact but would have additional implications for management of personal data. Re-audit following implementation of the appropriate changes will be indicated to evaluate their effect, as well as completing the audit cycle (Figure 6).

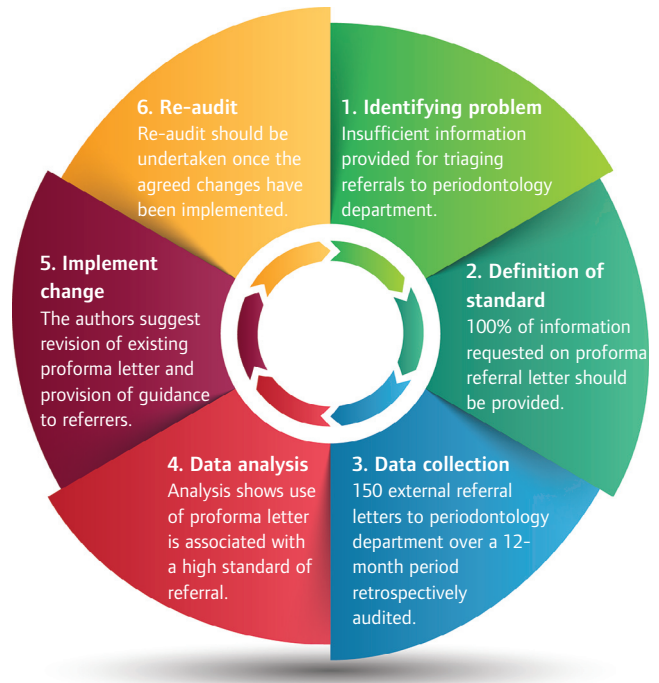


FIGURE 6: Audit cycle.

## Conclusion

Many current referrals to the DDUH periodontology department are incomplete. Use of the current departmental referral proforma was associated with a marked increase in referral quality. A reduction in the number of information items requested from the referrer and the provision of education to referrers may enhance compliance with proforma use in the future.

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## CPD questions

To claim CPD points, go to the MEMBERS' SECTION of [www.dentist.ie](http://www.dentist.ie) and answer the following questions:

1. Why is it important to include any available radiographs when submitting a periodontal referral?

- ☐ A: Facilitate making a diagnosis
- ☐ B: Minimise need for further radiation exposure of the patient
- ☐ C: Conserve clinical resources
- ☐ D: All of the above

2. Overall, the most commonly omitted information seen in this audit was:

- ☐ A: Bleeding score
- ☐ B: Family history
- ☐ C: Referrer's qualification
- ☐ D: Medical history

3. The most common referral type seen in this audit was:

- ☐ A: Referral proforma form
- ☐ B: Handwritten letter
- ☐ C: Email
- ☐ D: Hospital referrals

