

## SDCEP Clinical Management of Acute Dental Conditions: TRiADS GDP Scoping Survey

### Introduction

The Scottish Dental Clinical Effectiveness Programme (SDCEP) is developing clinical guidance concerning the clinical management of acute dental conditions (CMADC). To inform and support the development of this guidance and its translation into practice, the Translation Research in a Dental Setting (TRiADS) Programme, in partnership with SDCEP, is conducting a diagnostic analysis to understand current practice and attitudes towards the clinical management of patients presenting with acute dental condition in general dental practice, general medical practice and community pharmacy.

To help inform discussions during the first meeting of the CMADC Guidance Development Group this report presents the interim results for general dental practice<sup>1</sup>.

### Methods

An anonymised postal questionnaire was sent to a random sample of 300 General Dental Practitioners (GDPs) (1 GDP per practice) in January 2011. To maximise response rates all non-responders were sent a reminder questionnaire at two weeks and will receive a reminder postcard at four weeks.

The purpose of the questionnaire was to investigate GDPs':

- current behaviour with respect to the incidence of acute dental conditions presenting in general dental practice (presenting symptoms and diagnoses made);
- attitudes towards the level of difficulty experienced in diagnosing and determining appropriate treatment strategies for patients presenting with acute dental conditions;
- attitudes towards the expected usefulness of guidance and training in diagnosing and determining appropriate treatment strategies patients presenting with acute dental conditions;
- views about what they would want from this guidance (conditions covered, level of detail, format etc).

Data collection is ongoing and responses are still being received daily. Accordingly, this report presents the results from an interim analysis. The final analysis will be undertaken when data collection is complete and, therefore, the results presented in the final report may differ.

### Results (14 February 2011)

#### Response Rate

To date, two questionnaires have been returned as undeliverable. One hundred and nine GDPs have returned a completed questionnaire giving an interim response rate of 37% (109/298).

The respondents' average age was 44 years, 73% were male, 66% were principals and, on average, they worked nine sessions per week.

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<sup>1</sup> General medical practice and community pharmacy will be reported separately.

Their average list size was 2,285 patients with 75% of patients being adults. Eighty-five percent of GDPs worked in a multi-handed practice, 51% worked in a practice that employed a hygienist or hygienist therapist and 16% worked in a remote and rural practice.

Incidence

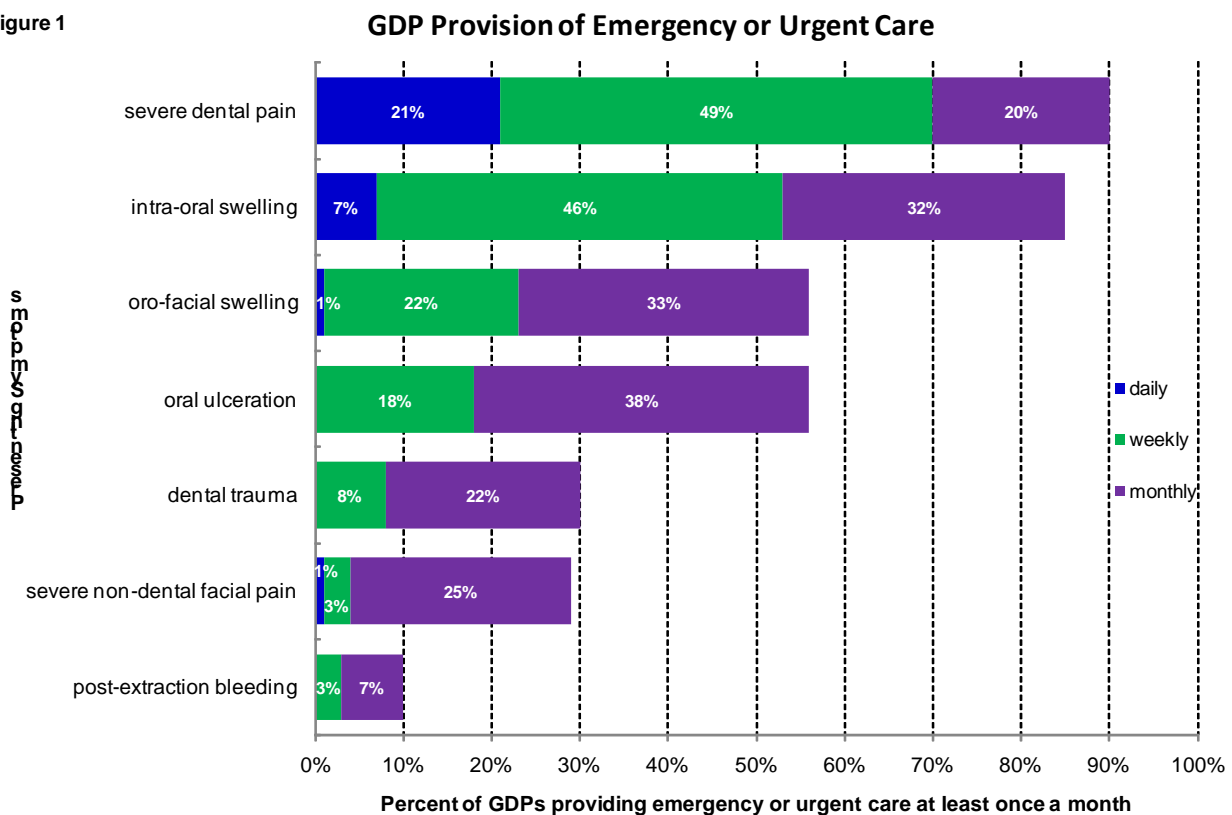
Symptoms: The majority of GDPs provide emergency or urgent care at least once a month to a patient presenting with:

- severe dental pain (every day = 21%; at least 1 x week = 49%; at least 1 x month = 20%);
- intra-oral swelling (every day = 7%; at least 1 x week = 46%; at least 1 x month = 32%);
- ora-facial swelling (every day = 1%; at least 1 x week = 22%; at least 1 x month = 33%);
- oral ulceration (every day = 0%; at least 1 x week = 18%; at least 1 x month = 38%).

In contrast, fewer than 50% provide emergency or urgent care at least once a month to a patient presenting with:

- dental trauma (every day = 0%; at least 1 x week = 8%; at least 1 x month = 22%);
- severe non-dental facial pain (every day = 1%; at least 1 x week = 3%; at least 1 x month = 25%);
- post extraction bleeding (every day = 0%; at least 1 x week = 3%; at least 1 x month = 7%) (Figure 1).

Figure 1



**Conditions:** The common clinical diagnoses made when patients present with these symptoms include:

- severe dental pain – pulpitis, abscess (periapical, periodontal), pericoronitis, caries, dry socket;
- intra-oral swelling – abscess (periapical, periodontal), pericoronitis;
- ora-facial swelling - abscess (periapical, periodontal), pericoronitis, trauma, gross caries, wisdom teeth;
- oral ulceration - aphthous ulcer, lichen planus, trauma (denture, sharp tooth), malignancy;
- dental trauma – fractured teeth, gingival lacerations, avulsed teeth;
- severe non-dental facial pain – TMJD, sinusitis, trigeminal neuralgia, shingles;
- post extraction bleeding – medication related (warfarin, aspirin), trauma, excessive rinsing.

GDPs gave a wide variety of responses when asked about the most unusual condition they had diagnosed in a patient presenting for urgent or emergency care in the previous 12 months including:

- vesiculobullous lesions;
- cystic hygroma;
- burning tongue syndrome;
- primary and secondary malignancies including non-Hodgkin lymphoma, throat cancer, tongue cancer, leukaemia;
- glossopharyngeal neuralgia.

### Attitudes and Beliefs

**Diagnosing a clinical condition:** Overall the majority (82%) of GDPs do not find it difficult to make a diagnosis when a patient presents for emergency or urgent care. Seventeen percent find making a diagnosis neither not difficult nor difficult and one percent find it difficult.

However, when considering each presenting symptom individually, 49% do find it difficult to make a diagnosis when the patient presents with severe non-dental facial pain and 15% experience difficulty when the presenting symptom is oral ulceration. The level of difficulty experienced according to each individual presenting symptom is detailed in Table 1.

**Table 1 GDPs Level of Difficulty in Making a Diagnosis**

Presenting Symptom	Median (Mean)	Not Difficult (%)	Neutral (%)	Difficult (%)
Intra-oral swelling	4.0 (4.4)	93	6	1
Oro-facial swelling	4.0 (4.0)	74	21	5
Severe dental pain	4.0 (3.9)	73	24	4
Severe non-dental facial pain	3.0 (2.6)	21	30	49
Dental trauma	4.5 (4.4)	90	8	2
Post-extraction bleeding	5.0 (4.6)	93	7	1
Oral ulceration	4.0 (3.7)	64	21	15

Likert scale 1 = extremely difficult to 5 = not at all difficult. Grouping Scores: 1 & 2 = difficult; Score 3 = neutral; Scores 4 & 5 = not difficult. Percent totals may not sum to 100 due to rounding.

Overall, 46% of GDPs believe they would find clinical guidance on diagnosing the clinical conditions that might cause these symptoms useful, 32% were neutral and 22% believe they would not find guidance useful. When considering each individual symptom, the majority of GDPs believe that guidance would be useful to support their diagnosis when the presenting symptom is severe non-dental pain (74%) and oral ulceration (57%).

A similar percentage (44%) believe training on diagnosing the clinical conditions that might cause these symptoms would be useful with 31% giving a neutral response and 25% indicating that they believe training would not be useful. Again, the presenting symptoms where training in clinical diagnosis would be considered most useful were severe non-dental pain (67%) and oral ulceration (51%).

Comparison of GDPs' overall attitude towards the usefulness of guidance on diagnosing the clinical conditions that might cause these symptoms with their overall attitude towards the usefulness of training found that guidance was considered to be more useful than training ( $Z = -2.05$ ,  $P = 0.04$ ).

***Determining an appropriate treatment strategy:*** Overall, 75% of GDPs do not find it difficult to determine an appropriate treatment strategy for patients presenting for emergency or urgent care, 23% gave a neutral response and two percent find this difficult.

When considering each presenting symptom individually, 38% do find it difficult to determine an appropriate treatment strategy when the patient presents with severe non-dental facial pain and 16% experience difficulty when the presenting symptom is oral ulceration. The level of difficulty experienced according to each individual presenting symptom is detailed in Table 2

**Table 2 GDPs Level of Difficulty in Determining an Appropriate Treatment Strategy**

Presenting Symptom	Median (Mean)	Not Difficult (%)	Neutral (%)	Difficult (%)
Intra-oral swelling	4.0 (4.4)	93	6	2
Oro-facial swelling	4.0 (4.1)	77	21	2
Severe dental pain	4.0 (4.1)	76	21	3
Severe non-dental facial pain	3.0 (2.8)	22	40	38
Dental trauma	4.0 (3.9)	71	21	7
Post-extraction bleeding	4.0 (4.3)	87	10	3
Oral ulceration	4.0 (3.5)	51	33	16

Likert scale 1 = extremely difficult to 5 = not at all difficult. Grouping Scores: 1 & 2 = difficult; Score 3 = neutral; Scores 4 & 5 = not difficult. Percent totals may not sum to 100 due to rounding.

Overall, 50% of GDPs would find guidance about determining appropriate treatment strategies for patients presenting for emergency or urgent care useful, 32% were neutral and 18% believed this would not be useful. When considering the individual presenting symptoms the majority of GDPs believe that guidance would be useful to help them determine an appropriate treatment strategy when the presenting symptom is severe non-dental pain (70%), oral ulceration (57%) and dental trauma (55%).

Just under half (48%) believe training on determining appropriate treatment strategies for patients presenting with these symptoms would be useful with 28% giving a neutral response and four percent indicating that they believe training would not be useful. The individual presenting symptoms where the majority of GDPs believed training in determining an appropriate treatment strategy would be considered most useful were severe non-dental pain (70%), oral ulceration (55%) and dental trauma (51%).

Comparison of GDP's overall attitude towards the usefulness of guidance on determining appropriate treatment strategies for patients presenting with these symptoms with their overall attitude towards the usefulness of training found that guidance was considered to be more useful than training ( $Z = -3.35, P < 0.01$ ).

### What do GDPs want from guidance?

When asked about what they would want from guidance on the initial management of patients presenting with acute dental conditions, a small number of GDPs did respond that guidance was not necessary. However, the majority of responses gave constructive suggestions.

There was support for inclusion of all symptoms included in the questionnaire including typical and atypical causes. Several GDPs highlighted that they would want guidance on the management of non-dental facial pain, oral ulceration and trauma. A number of GDPs suggested that unusual conditions should also be covered including "*conditions that may present or suggest a dental condition but can be confused with other potentially serious conditions e.g. giant cell arteritis*". Only a small number of GDPs commented on the level of detail that should be provided. Those that did suggested that it should be concise giving no more than a moderate amount of detail.

There was strong support for the use of flow charts presenting systematic pathways from diagnosis to management (including referral pathways) of a condition. Audit tools were also requested.

When considering the format of the guidance there was support for both paper-based and web-based delivery with no clear preference emerging. It was suggested that paper-based guidance should be in a similar format to the SDCEP 'Drug Prescribing for Dentistry' guidance'.

### **Summary**

Patients attend their general dental practice for emergency or urgent care with a wide variety of presenting symptoms. In general, GDPs perceive little difficulty in making a clinical diagnosis or determining an appropriate treatment strategy for patients presenting with acute dental conditions. Exceptions are patients presenting with non-dental facial pain and oral ulceration.

Only a minority of GDPs believe clinical guidance or training on diagnosis of acute dental conditions and determining appropriate treatment strategies would not be useful. Clinical guidance was considered to be more useful than training.

GDPs want guidance that includes all symptoms covered in the questionnaire and there was support for the inclusion of more unusual conditions. Guidance should not be too detailed and there was strong support for the use of flow charts. Both paper-based and web-based guidance was requested.