British Endodontic Society Information and Advice on Triage and Management for Primary Dental Care and other healthcare providers during the COVID-19 Pandemic

Advice, Analgesia and Antibiotics

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INTRODUCTION

Following the announcements from the four Chief Dental Officers of the home nations in response to the COVID-19 pandemic, primary dental care in the UK has moved into unprecedented waters.

All primary care dentists have been instructed to restrict patient contact and provide in the first instance a triage service based on the principles of **Advice, Analgesia and Antibiotics**.

This document, produced by the British Endodontic Society aims to provide members and the wider dental profession, advice on how best to undertake this, based on current best available evidence.

It should be clearly understood that this document provides advice to be considered during the period of the COVID-19 pandemic only and the unusual circumstances attached to it. The inability to examine patients creates a huge challenge for dentists used to applying their clinical skill, experience and judgement to understand and diagnose dental disease. This advice, we hope, reflects that challenge and the departure from normal recognised best practice that it demands.

This advice is also aimed squarely at managing those patients who present with pain, likely to be of endodontic origin. Diagnosing and advising on the more complex non-odontogenic facial pain syndromes is out of the scope of this document, as is advice on prevention of dental disease, both of which are of course of high importance given how long the longer the pandemic may last. There are many other sources that can be accessed on these issues and we would encourage dental care professionals to consider offering advice on these matters to their patients where possible.

Given the current limitations on the ability of people to access healthcare services in a normal way and the guidance on unnecessary travel, consideration should be given to local arrangements for the prescription and dispensing of necessary drugs. Practices should consider contacting local pharmacies to discuss what arrangements can be put into place to operate remote prescription services.

As the situation, and our understanding of the disease, is constantly changing this should be considered a dynamic document which will change as new evidence comes to light. If you choose to consider this advice as part of your new patient management protocols please ensure that you revisit the document regularly to check for updates.

ADVICE

When dealing with a patient complaining of dental pain, dentists are used to being able to take a history, examine a patient, undertake special tests including radiographs and arrive at a diagnosis.

From that stage to actively managing the patient's problem with clinical treatment often takes very little time and as a profession we are adept at managing dental emergencies.

The current situation, where dentists are not unable to deploy many of the diagnostic tools presents a challenge, which is compounded further by the inability to undertake active clinical intervention to relieve the patient's pain. The 3Ds of pain management (Hargreaves and Abbott, 2005) - Diagnosis, Dental treatment and Drugs cannot be applied during the present phase of COVID-19 pandemic.

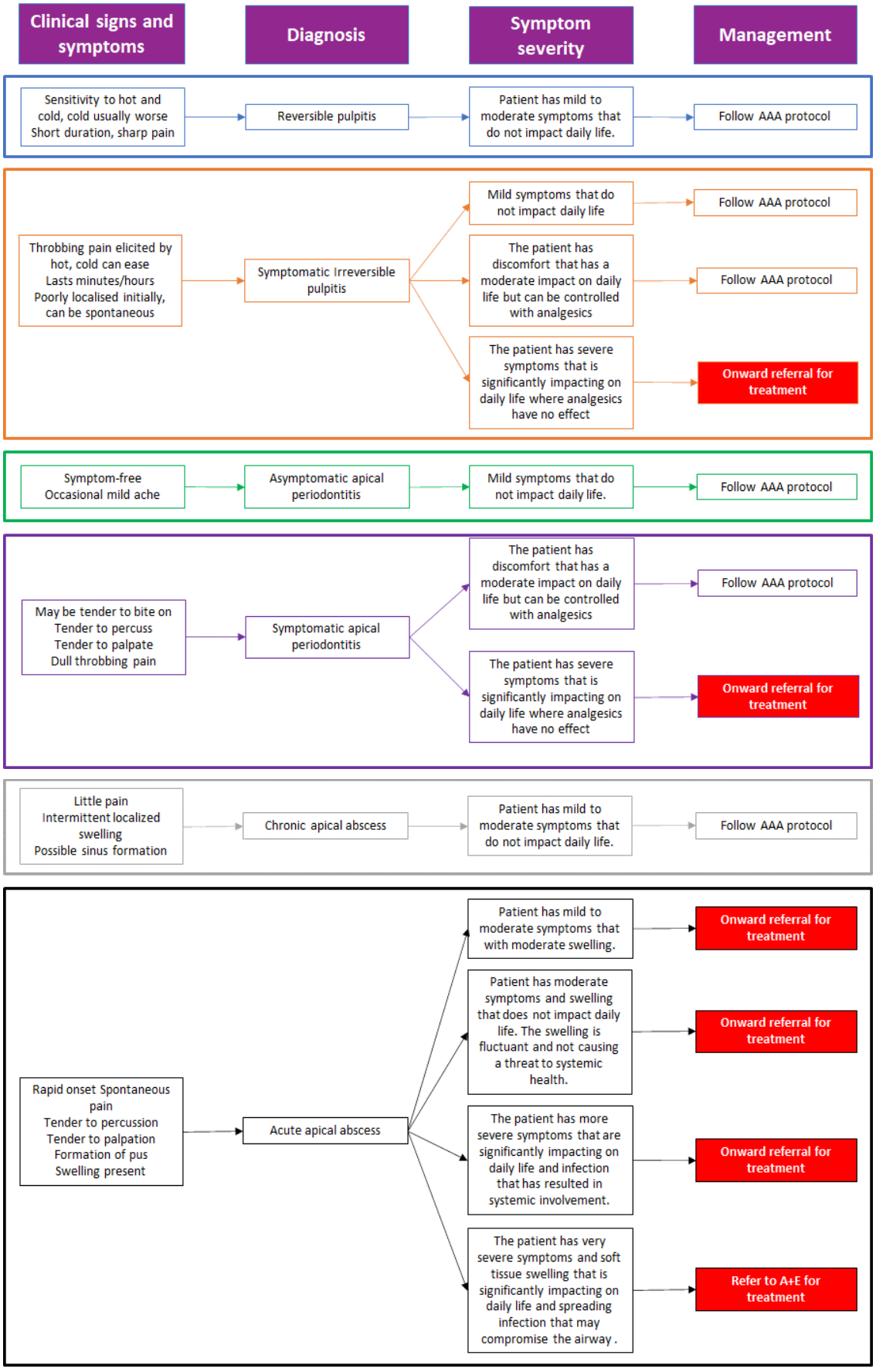
Much of the research on remote pain management and designing coping strategies comes from those patients suffering from chronic pain conditions and whilst not directly applicable to the current situation does show us that when patients are given a good understanding of the nature of their problem, its likely course and what steps can be taken to mitigate it, their anxiety reduces and they report being able to cope much more easily.

Applied to the current situation, listening to the patient's problem, taking a good pain history and if possible, connecting with the patient over a video call to assess for any obvious facial swelling are the first steps in arriving at a diagnosis.

The classic symptoms of endodontic disease can be seen in Figure 1 in this document and in the COVID-19 pandemic most of these conditions will need to be managed without clinical intervention.

Specific advice on analgesia and the prescription of antibiotics is offered Figure 2 in this document, but dentists should not underestimate the value of explaining the cause of the problem, how the suggested analgesic regime will help, and advise patients on the likely course of their pain. The latter is recommended so patients understand that the pain is likely to have a limited timeframe, it will reduce with the use of the prescribed regime thus making it easier for them to manage. The biopsychosocial model of pain (Engel, 1977), whilst only one of the theories in this area, offers strong support for this approach. It reduces anxiety and allows people to return more readily to normal life activities.

Figure 1 Diagnosis and Management of Endodontic Problems



ANALGESIA

Following telephone or video triaging a decision may be made that analgesics are necessary. It is essential prior to giving advice on analgesia or prescribing analgesics, that the triaging clinician has conducted and documented a complete **medical history**. **Current medications, including over the counter medications** and any **allergies** should be considered and recorded.

Most odontogenic pain can be relieved effectively using **paracetamol** and/or **non-steroidal anti-inflammatory drugs** (NSAIDs) such as **ibuprofen**. Both paracetamol and ibuprofen can be given alternately to extend the period of effect without exceeding the recommended dose.

There has been concern raised about the use of NSAIDs in patients with COVID-19. In light of this and the lack of definitive evidence for there being no impact on disease progression, it has been recommended by NHS England that in patients with confirmed COVID-19 or those that may have COVID-19, that only paracetamol is used. Please consult the link below to check the current status
https://www.gov.uk/government/news/ibuprofen-use-and-covid19coronavirus

Adult Patients

Figure 2 Analgesic Use According to Pain Level modified after SDCEP – Drug Prescribing for Dentistry

Pain Level	Analgesic Options (5-day regimen)
Mild	Paracetamol Tablets, 500mg. 2 tablets **4** times daily ***(max 4.0g in 24 hours)*** *or* Ibuprofen Tablets, 400 mg. 1 tablet **4** times daily (preferably after food)**
Moderate	Ibuprofen Tablets 400 mg (600 mg*). 1 tablet **4** times daily (preferably after food)** ***(max 2.4g in 24 hours)*** *and then up to 2 hours later* Paracetamol Tablets, 500 mg. 2 tablets **4** times daily
	Diclofenac Sodium Tablets, 50mg. 1 tablet **3** times daily ***(max 150mg in 24 hours)****
Severe	If pain prevents normal life activities consider referral to LUDC Centre

***For pain unresponsive to 400mg doses, Ibuprofen dose can be increased to 600mg four times daily up to a maximum dose of 2.4g daily.**

****In patients who have a history of previous or active peptic ulcer disease co-prescribe: Gastro-resistant omeprazole capsules, 20mg. 1 capsule daily. (Use caution in liver disease, pregnancy and breast feeding).**

Paediatric Patients

Figure 3 Analgesic Use According to Pain Level modified after SDCEP – Drug Prescribing for Dentistry

Pain Level	Analgesic Options (5-day regimen)
Mild	**Paracetamol Tablets (500mg) or Solution 120 or 250mg/5 ml** • 6-12 months - 120mg, **4** times daily • 2-3 years - 180mg, **4** times daily • 4-5 years - 240mg, **4** times daily • 6-7 years – 240-250mg, **4** times daily ***(max 4 doses in 24 hours)*** • 8-9 years - 360-375mg, **4** times daily • 10-11 years - 480-500mg, **4** times daily • 12-15 years - 480-750mg, **4** times daily • 16-17 years - 500mg-1g, **4** times daily *or* **Ibuprofen Tablets (400 mg) or Oral Suspension 100mg/5ml** • 6-11 months 50mg, **4** times daily ***(max 30mg/kg per day)*** • 1-3 years 100mg, **3** times daily ***(max 30mg/kg per day)*** • 4-6 years 150mg, **3** times daily ***(max 30mg/kg per day)*** • 7-9 years 200mg, **3** times daily ***(max 30mg/kg per day up to max 2.4g in 24 hours)*** • 10-11 years 300mg, **3** times daily ***(max 30mg/kg per day up to max 2.4g in 24 hours)*** • 12-17 years initially 300–400 mg **3–4** times a day; increased if necessary up to 600 mg **4** times a day; maintenance 200–400 mg **3** times a day, may be adequate ***(max 2.4g in 24 hours)***
Moderate	Ibuprofen as per instructions above *and then 2 hours later* Paracetamol as per instructions above
Severe	If pain prevents normal life activities consider referral to LUDC Centre

Cautions

Avoid paracetamol in patients:

- With **hypersensitivity** to paracetamol

Use paracetamol with caution:

- In those with **severe hepatic** or **renal impairment**

Avoid ibuprofen in patients:

- With **hypersensitivity** to aspirin or any other NSAID, including those with a history of asthma, angioedema, urticaria or rhinitis precipitated by aspirin or another NSAID
- Taking **aspirin** or other NSAIDs During **third trimester** of pregnancy
- With **severe heart failure**
- With active **peptic ulcer disease** or a history of NSAID associated ulcer disease unless co-prescribed with proton pump inhibitor

Use ibuprofen with caution:

- In the **elderly**, patients with allergic disorders
- During first 6 months of **pregnancy** and **nursing mothers**
- In those taking oral anticoagulants such as **warfarin**, those with **coagulation defects**, those with an inherited bleeding disorder
- In those with **renal**, cardiac or **hepatic impairment**

Restrict ibuprofen use to 5 days or less in those patients taking antihypertensive drugs

Avoid diclofenac in patients:

- With **ischaemic heart disease**, **cerebrovascular disease**, **peripheral arterial disease** and mild to severe **heart failure**
- With **hypersensitivity** to aspirin or any other NSAID, including those with a history of asthma, angioedema, urticaria or rhinitis precipitated by aspirin or another NSAID
- Taking **aspirin** or other NSAIDs During pregnancy
- With active **peptic ulcer disease** or a history of NSAID associated ulcer disease unless co-prescribed with proton pump inhibitor
- Also avoid in the **elderly**, patients with allergic disorders, during first 6 months of **pregnancy** and **nursing mothers**, those taking oral anticoagulants such as **warfarin**, those with **coagulation defects**, those with an inherited bleeding disorder, and those with **renal**, cardiac or **hepatic impairment**.

Use diclofenac with caution:

- In patients with a history of **cardiac failure**, **left ventricular dysfunction**, **hypertension**
- In patients with **oedema** for any other reason, and in patients with other risk factors for cardiac events

ANTIBIOTICS

In recent years a considerable body of research has been published supporting the appropriate prescribing of antibiotics in dental practice (Lewis 2008, Sweeney et al 2004). This has been with the aim of reducing the number of antibiotic prescriptions, management of antibiotic resistance and limiting use to conditions where a demonstrable benefit is present. Whilst this approach is correctly supported by the dental community and is an excellent and vital initiative to reduce anti-microbial resistance, it is predisposed on the ready availability of alternative therapy, which is generally a clinical intervention. In the current pandemic, such alternative interventions may be very limited in availability and this advice should be considered in the light of that position.

Prescribing for Endodontic Problems

Antimicrobials are indicated for the following situations:

- Where there is evidence of spreading infection
- Where there is systemic involvement due to a dental infection
- Where immediate drainage of infection cannot be achieved

Suggested Antibiotic Regime

As with all prescriptions, a full medical history should be taken, allergies to any medication should be established and the patient's current medication should be recorded and considered before other medications are issued.

Figure 4 shows the recommended antibiotic regimes based on several evidence-based sources, including the FGDP, SCDEP and BNF guidelines. The backbone drugs of dental prescribing are Amoxicillin and Metronidazole as such these are described as first line drugs, Figure 5 shows a secondary regime which should be considered where allergy or drug interactions contra-indicate their use.

The BNF should be consulted to check for drug interactions, contra-indications and to advise patients of any complications or side-effects with the medication you have prescribed them.

Figure 4 First Line Antibiotics

Amoxicillin

For adults:	For children:	
Amoxicillin Capsules, 500 mg **Duration:** 5 days **Frequency:** 1 capsule three times daily	Amoxicillin Capsules, 250 mg or Oral Suspension, 125 mg/5 mL or 250 mg/5 mL	
	6 – 11 months	125 mg three times daily
	1 – 4 years	250 mg three times daily
	5 – 11 years	500 mg three times daily
	12 – 17 years	500 mg three times daily

* sugar-free preparation is available

Phenoxymethylpenicillin (PenV)

For adults:	For children:	
Phenoxymethylpenicillin Tablets, 250 mg **Duration:** 5 days **Frequency:** 2 tablets four times daily	Phenoxymethylpenicillin Tablets, 250 mg or Oral Solution, 125 mg/5 mL or 250 mg/5 mL	
	6 – 11 months	62.5 mg four times daily
	1 – 5 years	125 mg four times daily
	6 – 11 years	250 mg four times daily
	12 – 17 years	500 mg four times daily

* sugar-free preparation is available

Metronidazole

For adults:	For children:	
Metronidazole Tablets, 200 mg **Duration:** 5 days **Frequency:** 1 tablet three times daily	Metronidazole Tablets**, 200 mg or Oral Suspension, 200 mg/5 mL	
	1 – 2 years	50 mg three times daily
	3 – 6 years	100 mg twice daily
	7 – 9 years	100 mg three times daily
	10 – 17 years	200 mg three times daily

** metronidazole is not licensed for use in children under 1 year

Figure 5 Second Line Antibiotics

Clindamycin

For adults:	For children:	
Clindamycin Capsules, 150 mg **Duration:** 5 Days **Frequency:** 1 capsule four times daily, swallowed with water	12 – 17 years	As for adults

Co-amoxiclav (Augmentin)

For adults:	For children:	
Co-amoxiclav 250/125mg Tablets **Duration:** 5 days **Frequency:** 1 tablet three times daily	12 – 17 years	As for adults

Clarithromycin

For adults:	For children:	
Clarithromycin Tablets, 250 mg **Duration:** 7 days **Frequency:** 1 tablet two times daily	Clarithromycin Tablets, 250 mg or Oral Suspension, 125 mg/5 mL or 250 mg/5 mL	
	1 – 11 years Body weight 8 to 11 kg	62.5 mg twice daily
	1 – 11 years Body weight 12 to 19 kg	125 mg twice daily
	1 – 11 years Body weight 20 to 29 kg	187.5 mg twice daily
	1 – 11 years Body weight 30 to 40 kg	250 mg twice daily
	10 – 17 years	250 mg twice daily

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