NHS Education for Scotland

Scottish Dental Clinical Effectiveness Programme

Drugs for the Management of Dental Problems During COVID-19 Pandemic

8 April 2020

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This supplement to the SDCEP guide on the *Management of Acute Dental Problems During COVID-19 Pandemic* includes information based on the SDCEP *Drug Prescribing for Dentistry* guidance. It lists the drug regimens that dentists are most likely to remotely advise or prescribe for their patients during the COVID-19 pandemic to support **Advice & Self Help** (see Figure 1).

Current national policy during the COVID-19 pandemic is that primary care dental triage should focus on the provision of the three As:

- **Advice;**
- **Analgesia;**
- **Antimicrobials** (where appropriate).

Patients should be encouraged to manage their symptoms at home where possible as treatment options are severely restricted at this time. Mild and moderate dental symptoms should be managed remotely by providing advice and analgesics and/or antimicrobials where necessary.

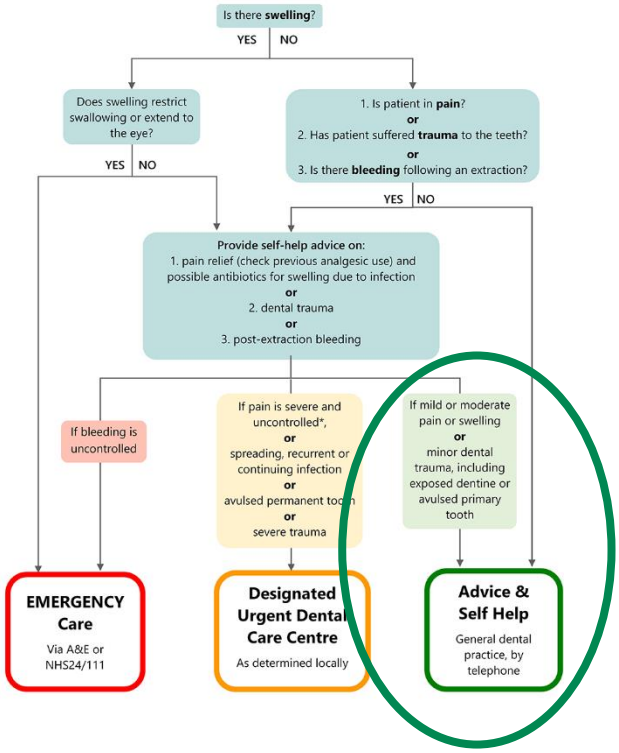

Figure 1 Triage of Commonly Presenting Acute Dental Problems

Patients with dental pain and infection may need to self-manage for longer than normal during the COVID-19 pandemic. If this applies to a patient with a relevant underlying health condition (see both **Contraindications and cautions** sections below), liaison with their general medical practitioner or specialist is advised.

In all cases, if self-management is particularly extended or the patient's symptoms do not resolve, liaison with designated providers of urgent dental care is required to agree whether to refer for urgent care or whether self-management should continue.

General Advice

- Where telephone triage has identified that analgesics and/or antibiotics are necessary, an up-to-date medical history should be obtained from the patient. This should include details of any medical conditions, current medications (including over-the-counter drugs, e.g. analgesics) and allergies that the patient might have.
- Due to self-isolation and shielding policies, patients might have attempted to self-manage symptoms. **It is important to establish the patient's self-management to date to check for possible overdose, particularly paracetamol.**
    - In an adult, more than 8 x 500 mg paracetamol tablets (or equivalent) in 24 hours should raise concern of overdose and medical advice should be sought. Paracetamol is present in many over-the-counter preparations and you should identify all paracetamol-containing medications that a patient has ingested. For further details, see **Contraindications and cautions - analgesics** section below.
- Common drug interactions that could have serious consequences are identified within this document. Refer to the BNF (www.medicinescomplete.com) for comprehensive information on drug interactions and more-detailed information on contraindications, cautions and side effects.
- Be aware that prescribing for some patient groups might differ. Examples include the elderly, patients who are immunocompromised or with hepatic or renal problems, patients who are pregnant and nursing mothers. Refer to the BNF (www.medicinescomplete.com) for further details.
- During the COVID-19 pandemic, it is advisable to liaise with local pharmacy colleagues to ensure that the drugs you are prescribing are available.
- Advise patients to recontact the practice if symptoms persist or worsen.
- If patients are referred for urgent dental care, ensure that details of all drugs already taken to manage the condition (prescribed and over-the-counter) are provided.

Ibuprofen and COVID-19

There has been concern raised about the use of NSAIDs, e.g. ibuprofen, in patients with COVID-19. There is currently no strong evidence indicating that ibuprofen can make COVID-19 infection worse. However, the MHRA have recommended that patients who have confirmed COVID-19, or those who have symptoms of COVID-19, should take paracetamol in preference to ibuprofen/NSAIDs. Ibuprofen is still appropriate for management of dental pain in patients who do not have symptoms of COVID-19 infection.

Analgesics

Most odontogenic pain can be relieved effectively using paracetamol and/or ibuprofen. The SDCEP guide on the *Management of Acute Dental Problems During COVID-19 Pandemic* advises optimal analgesia[1] to manage dental pain.

It is important to first establish the patient's self-management to date **to check for possible overdose of analgesics** – see **Contraindications and cautions - analgesics** section below.

The following analgesics can be recommended for patients with no contraindications. Contraindications and cautions for each drug are listed after the advice on recommended doses. During the COVID-19 pandemic, patients may have to take analgesics for longer than normal and particular caution is required for patients with underlying health conditions.

The analgesic drug regimens presented here can be advised for patients to control their symptoms using over-the-counter drugs or provided by prescription. Instruct patients to take the drugs at regular intervals that are as spaced out as possible.

Recommended analgesic doses for adults

- For moderate dental pain in **adults**, an appropriate 5-day regimen is either:
  - **paracetamol**, 2 x 500 mg tablets **up to four times daily** (i.e. every 4–6 hours)

    or
  - **ibuprofen**, 2 x 200 mg tablets **up to four times daily** (i.e. every 4–6 hours), preferably after food.
- For severe dental pain in **adults**, an appropriate 5-day regimen is either:
  - increase the dose of **ibuprofen** to 3 x 200 mg tablets **up to four times daily,** preferably after food

    or
  - **ibuprofen** and **paracetamol** together, preferably after food, without exceeding the daily dose or frequency for either drug, as above

    or
  - **diclofenac** (1 x 50 mg tablet **three times daily**) and **paracetamol** together, preferably after food, without exceeding the recommended daily dose or frequency for either drug.

N.B. **Maximum drug doses in 24-hour period: 4 g paracetamol; 2.4 g ibuprofen; 150 mg diclofenac**.
Do not prescribe diclofenac or high doses of ibuprofen (i.e. more than 1.6 g daily dose) for patients with moderate or severe asthma, those with hypersensitivity to aspirin or any other NSAID or those with renal impairment.

[1] **Optimal analgesia** is defined as the maximum recommended dose of painkillers that takes into account the patient's age and is within the normal safe limits.

In **adult** patients who have a history of previous or active peptic ulcer disease and require a NSAID for the treatment of odontogenic pain, a proton pump inhibitor (PPI) can be prescribed to prevent gastric problems. Many of these patients will already be taking a PPI and will not require an additional prescription. For those patients who are not currently prescribed a PPI, liaise with their general medical practitioner before prescribing.

- For **adult** patients who require a proton pump inhibitor, an appropriate 5-day is regimen is:
  - **lansoprazole**, 1 x 15 mg capsule daily

    or
  - **omeprazole**, 1 x 20 mg capsule daily.

Recommended analgesic doses for children

- For dental pain in **children**, an appropriate 5-day regimen is either:
  - **paracetamol** (500 mg tablets, or 120 mg/5 ml or 250 mg/5 ml oral suspension*), dose depending on age (see below); **up to four times daily** (max 4 doses in 24 hours):

6-12 months	120 mg	8-9 years	360-375 mg
2-3 years	180 mg	10-11 years	480-500 mg
4-5 years	240 mg	12-15 years	480-750 mg
6-7 years	240-250 mg	16-17 years	500 mg-1 g

    or
  - **ibuprofen** (200 mg tablets or 100 mg/5 ml oral suspension*), dose depending on age (see below), preferably after food, **up to three times daily unless indicated otherwise below:**

6-11 months	50 mg (**4 x daily**)	7-9 years	200 mg
1-3 years	100 mg	10-11 years	300 mg
4-6 years	150 mg	12-17 years	300-400 mg (**4 x daily**)

*Sugar-free preparation is available.

N.B. Combining paracetamol and ibuprofen is not recommended for children without consulting a pharmacist or medical practitioner.

Contraindications and cautions - analgesics

Paracetamol

- Avoid in patients with hypersensitivity to paracetamol.
- Use paracetamol with caution in those with severe hepatic or renal impairment.
- Overdose with paracetamol is dangerous because it can cause hepatic damage that is sometimes not apparent for 4–6 days and can be fatal. Note that a patient who ingests a therapeutic excess (defined as more than the recommended daily dose [8 x 500 mg tablets for adults] **and** more than or equal to 75 mg/kg in any 24-hour period) should be referred for assessment in an emergency department.

NSAIDs (Ibuprofen, diclofenac)

- Do not prescribe ibuprofen or diclofenac for patients taking a low dose of aspirin daily.
- Do not prescribe diclofenac for patients with ischaemic heart disease, cerebrovascular disease, peripheral arterial disease or mild to severe heart failure.
- Avoid ibuprofen and diclofenac in those with a hypersensitivity to aspirin or any other NSAID, including those in whom attacks of asthma, angioedema, urticaria or rhinitis have been precipitated by aspirin or any other NSAID.
- Avoid ibuprofen and diclofenac in pregnant patients.
- Avoid ibuprofen and diclofenac in those with previous or active peptic ulcer disease, unless a proton pump inhibitor is co-prescribed.
- Use diclofenac with caution in patients with a history of cardiac failure, left ventricular disfunction, hypertension, in patients with oedema for any other reason, and in patients with other risk factors for cardiac events.
- Use ibuprofen and diclofenac with caution in the elderly, patients with allergic disorders, 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.
- Restrict ibuprofen and diclofenac use to 5 days or less in patients taking antihypertensive drugs.

Lansoprazole/omeprazole

- Use lansoprazole or omeprazole with caution in patients with liver disease, in pregnancy and in patients who are breastfeeding.

Antibiotics

Where an antibiotic is required to manage a dental infection causing swelling and pain, amoxicillin or phenoxymethylpenicillin are equally effective. Metronidazole is a suitable alternative for patients who are allergic to penicillin. It can also be used as an adjunct to a penicillin in patients with spreading infection or pyrexia. (Note that each drug is used at the same dose as when administered alone.)

Metronidazole is the drug of first choice for pericoronitis and necrotising ulcerative gingivitis/periodontitis.

The first-line antimicrobial management of dental infections is summarised in the table below, along with the recommended duration of treatment for each condition.

Table 1 First-line antimicrobial management of dental infections

Diagnosis	Management
Acute apical abscess, Acute periodontal abscess/perio-endo lesions	Prescribe a **5-day** course of amoxicillin, phenoxymethylpenicillin or metronidazole.
Acute pericoronitis, Necrotising ulcerative gingivitis/periodontitis	Prescribe a **3-day** course of metronidazole or amoxicillin.

The following antibiotics can be recommended for patients with dental infections causing swelling and pain. For severe infections (e.g. extra-oral swelling, eye closing or trismus) in adults, the dose of amoxicillin and phenoxymethylpenicillin can be doubled. See under each individual drug for advice on prescribing for severe infections in children.

Advise patients that they should take the drug at regular intervals that are as spaced out as possible.

Contraindications and cautions for each drug are listed after the advice on recommended doses.

Recommended first-line antibiotic doses for adults (see Table 1 for duration)

- For dental infection in **adults**, either:
  - **amoxicillin**, 1 x 500 mg capsule **3 times daily**,
    or
  - **phenoxymethylpenicillin**, 2 x 250 mg tablets **4 times daily**,
    or
  - **metronidazole**, 1 x 400 mg tablet **3 times daily**.

  N.B. For severe infections (e.g. extra-oral swelling, eye closing or trismus), the dose of amoxicillin and phenoxymethylpenicillin can be doubled.

Recommended first-line antibiotic doses for children (see Table 1 for duration)

- For dental infection in **children**, either:
  - **amoxicillin** (250 mg capsules, or Oral Suspension* 125 mg/5 ml or 250 mg/5 ml) dose depending on age (see below); **three times daily**,

6-11 months	125 mg	5-11 years	500 mg
1-4 years	250 mg	12-17 years	500 mg

For severe infection in children aged 6 months to 11 years, increase the dose of amoxicillin up to 30 mg/kg (max 1 g) three times daily.
For severe infection in children aged 12-17 years, double the dose of amoxicillin.

or

  - **phenoxymethylpenicillin** (250 mg tablets, or Oral Solution*, 125 mg/5 ml or 250 mg/5 ml) dose depending on age (see below); **four times daily**,

6-11 months	62.5 mg	6-11 years	250 mg
1-5 years	125 mg	12-17 years	500 mg

For severe infection in children up to 11 years, increase the dose of phenoxymethylpenicillin up to 12.5 mg/kg four times daily.
For severe infection in children aged 12-17 years, increase the dose up to 1 g four times daily.

or

  - **metronidazole** (200 mg tablets, or Oral Suspension, 200 mg/5 ml) dose depending on age (see below) **three times daily unless indicated below**

1-2 years	50 mg	7-9 years	100 mg
3-6 years	100 mg (**2 x daily**)	10-17 years	200 mg

*Sugar-free preparation is available.

For advice on second-line antibiotics for dental infection, refer to the SDCEP *Drug Prescribing for Dentistry* guidance or the *Dental Prescribing* app.

Contraindications and cautions - antibiotics

Amoxicillin/phenoxymethylpenicillin

- Amoxicillin and phenoxymethylpenicillin can result in hypersensitivity reactions, including rashes and anaphylaxis, and can cause diarrhoea. Do not prescribe amoxicillin or phenoxymethylpenicillin to patients with a history of anaphylaxis, urticaria or rash immediately after penicillin administration as these individuals are at risk of immediate hypersensitivity.
- Amoxicillin and phenoxymethylpenicillin potentially alter the anticoagulant effect of warfarin. Therefore, if amoxicillin or phenoxymethylpenicillin is prescribed for patients taking warfarin, the INR should be checked 4-7 days after the antibiotic course has started.

Metronidazole

- Metronidazole has a disulfiram-like reaction with alcohol therefore advise patients to avoid alcohol.
- Do not prescribe metronidazole for patients taking warfarin.

Refer to the BNF (www.medicinescomplete.com) for comprehensive information on drug interactions, contraindications, cautions and side effects.

It may be necessary to prescribe drugs that are not listed in this document. Refer to the SDCEP *Drug Prescribing for Dentistry* guidance or the *Dental Prescribing* app for more information.

About this supplement

This resource is based on the SDCEP *Drug Prescribing for Dentistry* guidance, adapted for the extraordinary circumstances imposed during the COVID-19 pandemic. It has been developed by the SDCEP guidance development team in consultation with a range of experienced and expert dental professionals.

Please refer to the Disclaimer included *in Drug Prescribing for Dentistry,* available at www.sdcep.org.uk.

As with all SDCEP guidance, the information presented here does not override the individual responsibility of the health professional to make decisions appropriate to the individual patient.