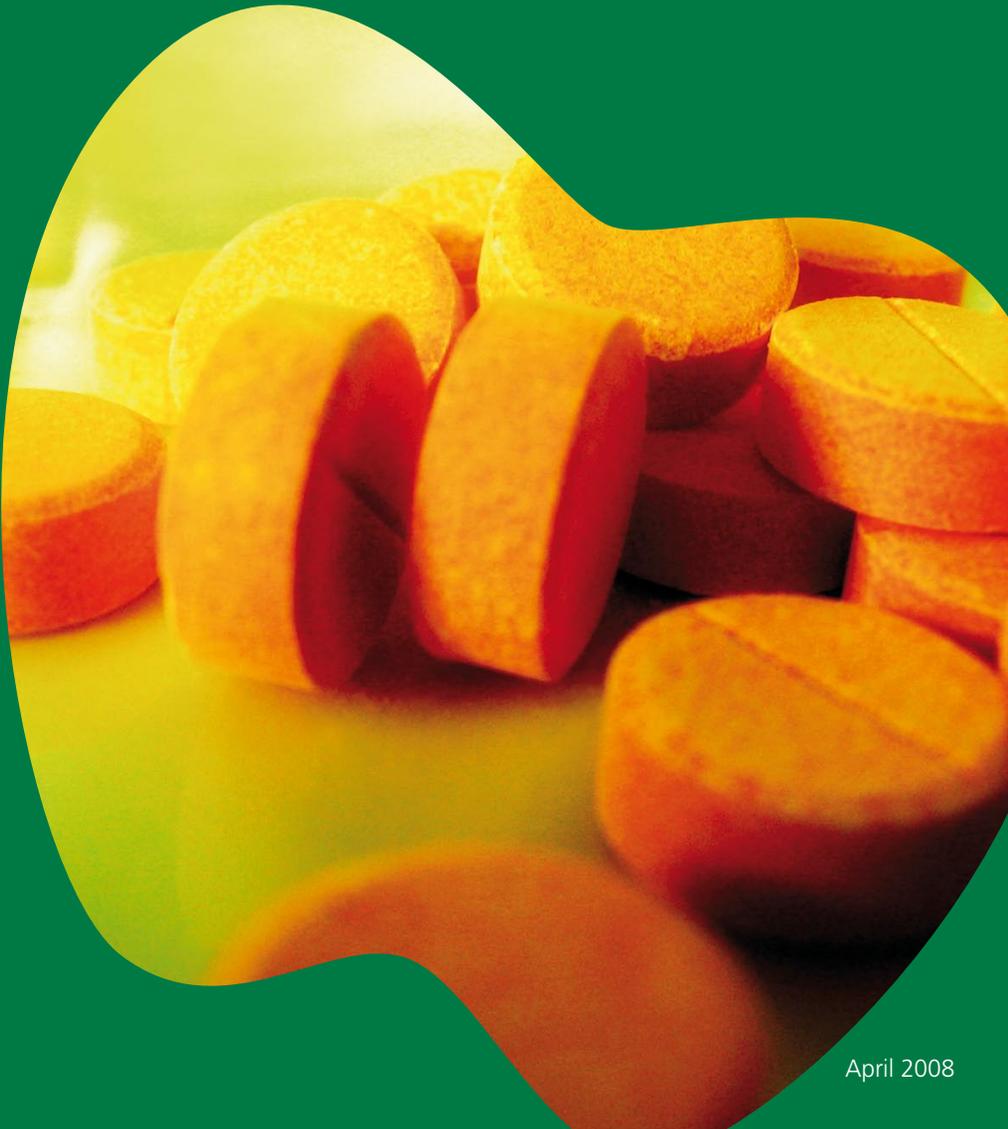


Drug Prescribing For Dentistry

Dental Clinical Guidance



The Scottish Dental Clinical Effectiveness Programme (SDCEP) is an initiative of the National Dental Advisory Committee (NDAC) and is supported by the Scottish Government and NHS Education for Scotland. The Programme aims to provide user-friendly, evidence-based guidance for the dental profession in Scotland.

SDCEP guidance is designed to help the dental team provide improved care for patients by bringing together, in a structured manner, the best available information that is relevant to priority areas in dentistry, and presenting this information in a form that can be interpreted easily and implemented.

'Supporting the dental team to provide quality patient care'



Drug Prescribing For Dentistry

Dental Clinical Guidance

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Drug Prescribing For Dentistry

1	Introduction	1
1.1	Scope of this Guidance	1
1.1.1	Medical Emergency Information	2
1.1.2	Prescribing Information	2
1.1.3	Drug Interactions	3
1.1.4	Prescribing For Specific Patient Groups	3
1.1.5	Local Measures	3
1.2	Statement of Intent	4
1.3	Prescription Writing	4
2	Medical Emergencies in Dental Practice	5
2.1	Anaphylaxis	6
2.2	Asthma	8
2.3	Cardiac Emergencies	9
2.3.1	Angina	9
2.3.2	Cardiac Arrest	10
2.3.3	Myocardial Infarction	11
2.4	Epilepsy	12
2.5	Faint	13
2.6	Hypoglycaemia	14
3	Anxiety	15
4	Bacterial Infections	17
4.1	Infective Endocarditis	17
4.2	Dental Abscess	18
4.3	Acute Necrotising Ulcerative Gingivitis and Pericoronitis	20
4.4	Sinusitis	22
5	Fungal Infections	25
5.1	Pseudomembranous Candidosis and Erythematous Candidosis	25
5.2	Denture Stomatitis	28
5.3	Angular Cheilitis	30
6	Viral Infections	33
6.1	Herpes Simplex Infections	33
6.2	Varicella-zoster Infections	35
7	Odontogenic Pain	37
8	Facial Pain	41
8.1	Trigeminal Neuralgia	41
8.2	Other Facial Pain	41

9	Mucosal Ulceration and Inflammation	43
9.1	Simple Mouthwashes	43
9.2	Antimicrobial Mouthwashes	44
9.3	Mechanical Protection	45
9.4	Local Analgesics	46
9.5	Topical Corticosteroids	48
10	Dry Mouth	51
10.1	Subjective Dryness but Good Saliva Volume	51
10.2	Dry Mouth Induced by Head and Neck Radiotherapy	52
11	Dental Caries	55
12	Clinical Governance, CPD and Training	59
12.1	Recommendations for Audit	59
	Appendix 1 Guidance Development	61
	The Scottish Dental Clinical Effectiveness Programme	61
	The Guidance Development Group	62
	The Programme Development Team	62
	Guidance Development Methodology	63
	Review and Updating	63
	Steering Group	64
	Appendix 2 List of Drugs	65
	Appendix 3 Useful Sources of Information	67
	Index	71
	References	73

1 Introduction

Registered dentists are legally entitled to prescribe from the entirety of the '*British National Formulary*' (BNF; www.bnf.org) and '*BNF for Children*' (BNFC; bnfc.org). However, dental prescribing within the National Health Service (NHS) is restricted to those drugs contained within the 'List of Dental Preparations' in the '*Dental Practitioners' Formulary*' (DPF). Until recently, the DPF was a distinct publication, providing information on prescribing for general dental practitioners. However, it has now been withdrawn and advice on dental prescribing has been incorporated into the body of the BNF and BNFC, making this advice available to both medical and dental practitioners. An updated volume of the BNF is published every six months and a new BNFC is published every year, which enables access to the latest prescribing information in print and online.

To facilitate easy access to information that is most relevant to drug prescribing for dentistry, the Scottish Dental Clinical Effectiveness Programme (SDCEP) convened a Guidance Development Group to produce guidance that brings together the essential information from the BNF and BNFC. Further details about SDCEP and the development of this guidance are given in Appendix 1.

Some drugs recommended in this SDCEP guidance were not previously included in the NHS 'List of Dental Preparations'. However, the list of drugs that can be prescribed by dentists within the NHS in Scotland has been extended (see 'List of Dental Preparations' in BNF 55¹) and now includes all drugs in this guidance. Although dentists can now prescribe additional drugs within the NHS, they still have a duty to prescribe only within their competence and to adhere to guidance from their local formulary committees.

1.1 Scope of this Guidance

This guidance aims to facilitate drug prescribing within primary care dental practice by bringing together advice on dental prescribing from the BNF and BNFC and presenting it in a readily accessible, problem-orientated style. The information on drug prescribing contained in this guidance is based on BNF 55¹ and BNFC 2007², whose advice is constructed from the clinical literature and reflects, as far as possible, an evaluation of the evidence from diverse sources. The drugs recommended in this guidance were identified by the Guidance Development Group as most relevant to primary care dental practice.

Advice on drugs used to manage medical emergencies is also provided. This advice is based on information provided in BNF 55¹ and BNFC 2007², and guidance published by the Resuscitation Council (UK)³.

The guidance is suitable for informing dental practitioners in the primary care sector, and applies to all patients, including adults, children and those with special needs, who would normally be treated in the primary care sector. This guidance does not include advice on prescribing for those in a secondary care environment or for practitioners with special expertise who may prescribe a wider range of drugs.

1 Introduction

Drug regimens with dosages are included but the intention is for this guidance to be used in conjunction with the BNF and BNFC. Consult the most up-to-date volume of the BNF (published every 6 months; www.bnf.org) before prescribing for adults and be aware that prescribing for some patient groups, including the elderly, patients who are pregnant and nursing mothers, might differ (see Section 1.1.4). Consult the most up-to-date volume of the BNFC (published annually; bnfc.org) before prescribing for children.

1.1.1 Medical Emergency Information

All general dental practitioners and dental care professionals are required to be able to manage medical emergencies, which includes the administration of drugs. A list of drugs for use in medical emergencies is included in Section 2, together with information about their administration. This list reflects the emergency drugs recommended in BNF 55¹ and in Resuscitation Council (UK) guidance³, and supersedes the list of emergency drugs included in NDAC guidance⁴ published in 1999. In addition, brief details of the signs and symptoms of medical emergencies that might occur in primary care dental practice are provided.

Information regarding administration of drugs used in medical emergencies is provided in white boxes on the left, with any differences in the doses or formulations for children provided in blue boxes on the right.

This advice is based on information provided in BNF 55¹ and BNFC 2007², and guidance published by the Resuscitation Council (UK)³. Refer to guidance from the Resuscitation Council (UK)³ (www.resus.org.uk/pages/MEdental.pdf) for more-detailed advice on how to recognise, assess and manage medical emergencies and for details of the equipment and training required to be able to deal with medical emergencies and resuscitation effectively.

1.1.2 Prescribing Information

In Sections 3–11, prescribing information is presented for all patients: information is provided for adults in yellow boxes on the left, and differences in the doses and formulations used for different age ranges of children are provided in blue boxes on the right. This advice is based on BNF 55¹ and BNFC 2007². For those drugs where a range in the dose or frequency of administration is provided by the BNF, a dose and frequency of administration that is most relevant to primary care dental practice is recommended based on the opinion of experienced practitioners. Advisory notes and cautions are provided in footnotes to the prescribing boxes to help inform the decision of the practitioner. For more-detailed information on cautions, contraindications and side-effects, refer to the BNF (www.bnf.org) and BNFC (bnfc.org).

1 Introduction

For practical reasons, the frequency of administration of each drug is generally given as 'X times daily'. However, it is advisable to inform patients that they should take the drug at regular intervals that are as spaced out as possible.

In some cases a drug of choice is recommended for a given dental condition. However, in many cases drug regimens are not listed in order of preference so that the choice of the clinical practitioner is not limited. The availability of sugar-free preparations, as indicated in the BNF, is highlighted; for further details, refer to the BNF (www.bnf.org) and BNFC (bnfc.org). A list of all the drugs recommended in this guidance is provided in Appendix 2.

1.1.3 Drug Interactions

Common drug interactions that could have serious consequences are identified within the guidance and include: interactions between antibiotics and oral contraceptives; interaction of non-steroidal anti-inflammatory drugs (NSAIDs),azole antifungals and antibiotics with warfarin; and cardiac problems after prescribing azoles in those taking statins. In addition, asthma can be exacerbated following the use of NSAIDs. It is important that dentists are aware of potential drug interactions. Therefore, please refer to Appendix 1 of the BNF (www.bnf.org) and BNFC (bnfc.org) for comprehensive information on drug interactions.

1.1.4 Prescribing For Specific Patient Groups

Be aware that prescribing for the elderly, patients who are pregnant and nursing mothers might differ from prescribing for the general adult population. Also note that dentists need to be aware of whether any patient suffers from an unrelated medical condition (e.g. renal or liver impairment) and are taking other medication because modification to the management of the patient's dental condition might be required. Refer to the BNF (www.bnf.org) and BNFC (bnfc.org) for further details.

1.1.5 Local Measures

Drug therapy is only part of the management of dental conditions, which also includes surgical and local measures. In some cases, local measures are sufficient to treat a given dental condition, whereas in other cases local measures in addition to drug therapy are necessary. Information regarding common local measures to be used in the first instance is provided in green boxes before prescribing information.

1 Introduction

1.2 Statement of Intent

This guidance is based on information contained in BNF 55¹ and BNFC 2007² and the opinion of experts and experienced practitioners, and reflects current relevant legislation and professional regulations. It should be used in conjunction with the BNF and BNFC and be taken into account when making decisions about a particular clinical procedure or treatment plan in discussion with the patient and/or guardian or carer.

Note that some drugs, although licensed, are recommended for use outside the terms of their licence ('off-label' use). Some of these drugs have been found to be effective in dental practice but their specific use in dentistry has not been licensed. Certain drugs are licensed for use in adults but are not licensed for use in children because drugs are not usually tested on children and therefore the pharmaceutical company cannot apply to license these drugs for paediatric use. The use of these drugs is, however, sometimes necessary in the treatment of children. For more details see the General Medical Council website: www.gmc-uk.org/guidance/current/library/prescriptions_faqs.asp#5c. The responsibility for prescribing drugs 'off-label' and any other drugs lies with the practitioner who signs the prescription. Note that prescribing or administering drugs that are unlicensed for a particular condition or for use in children alters (and probably increases) the practitioner's professional responsibility and potential liability, and the practitioner should be able to justify and feel competent in using such drugs (see BNF; www.bnf.org). For information, these drugs are indicated within the text.

Also note that drug therapy is only part of the management of dental conditions, which also includes surgical and local measures.

As guidance, the information presented here does not override the individual responsibility of the health professional to make decisions appropriate to the individual patient. However, it is advised that significant departures from this guidance be fully documented in the patient's case notes at the time the relevant decision is made.

1.3 Prescription Writing

Write prescriptions on form GP14 when these are part of an NHS treatment. Otherwise, write prescriptions on practice headed notepaper.

There are no clinical indications for controlled drugs to be prescribed in primary dental care.

Prescription pads must be kept secure.

2 Medical Emergencies in Dental Practice

Each dental practice must stock a core list of drugs and equipment for use in medical emergencies. All general dental practitioners and dental care professionals are required to ensure that they are competent in the use of both the drugs and the equipment and are able to recognise medical emergencies^{3,4}.

Brief details of the drugs used in the management of medical emergencies are provided here. Refer to guidance from the Resuscitation Council (UK)³ for more-detailed advice on how to recognise, assess and manage medical emergencies and for details of the equipment and training required to be able to deal with medical emergencies and resuscitation effectively. It is important to undertake regular training in the management of medical emergencies within the dental environment to keep up to date with current guidance. Training in medical emergencies is a core element of continuing professional development (CPD) for dentists. This will also apply to all dental care professionals from 1 August 2008.

The current recommended drugs for medical emergencies are:

- Adrenaline, 1-ml ampoules of 1:1000 solution for intramuscular (i.m.) injection
- Aspirin, 300-mg dispersible tablets
- Glucagon, for i.m. injection of 1 mg
- Glyceryl trinitrate (GTN) spray, 400 µg per metered dose
- Midazolam buccal liquid, 10 mg/ml, or midazolam injection (as hydrochloride), 2 mg/ml 5-ml ampoules or 5 mg/ml 2-ml ampoules, for topical administration[§]
- Oral glucose (there are several alternative forms, including non-diet fizzy drinks, glucose gel, powdered glucose and sugar lumps)
- Oxygen cylinder, two size D or one size E[†]
- Salbutamol inhaler, 100 µg per actuation

[§]Parenteral midazolam is a suitable alternative for use by appropriately trained individuals.

Note that the '*British National Formulary*', Volume 55 (BNF 55)¹ continues to recommend buccal midazolam as an emergency drug for the management of *status epilepticus* in dental practice. However, from 1 January 2008, the legal status of midazolam changed from a schedule 4 controlled drug (CD) to a schedule 3 CD. This means that:

- prescriptions or requisitions for midazolam must comply with the full CD regulations;
- records of midazolam usage do not need to be kept in a CD register;
- invoices for midazolam need to be retained for 2 years;
- midazolam (as other schedule 3 drugs) should be denatured before being placed in waste containers;
- midazolam is exempt from the safe custody requirements and will not legally require storage in a CD cabinet.

BNF 55¹ includes the CD symbol against midazolam preparations. The change in legal status is also shown in the section 'Controlled Drugs and Drug Dependence' in general BNF guidance.

[†]Ensure the supply of oxygen contained in the cylinders will enable adequate flow rates (10 litres/minute) to be maintained until the arrival of the ambulance or the patient recovers fully. A full size D cylinder contains nominally 340 litres of oxygen and therefore should provide oxygen for up to ~30 minutes; a full size E cylinder contains nominally 680 litres of oxygen and therefore should provide oxygen for up to ~60 minutes.

2 Medical Emergencies in Dental Practice

In addition, dental practices might wish to stock the following to aid the management of patients with mild allergic reactions:

- Chlorphenamine, 4-mg tablets or oral solution (2 mg/5 ml)

Use these drugs in the following emergencies in the order stated.

2.1 Anaphylaxis

Signs and symptoms include:

- Generalised itching (urticaria), particularly of hands and feet
- Rhinitis, conjunctivitis
- Abdominal pain, vomiting, diarrhoea, and a sense of impending doom
- Flushing, but pallor might also occur
- Marked upper airway (laryngeal) oedema and bronchospasm, causing stridor and wheezing
- Respiratory arrest leading to cardiac arrest
- Vasodilation causes relative hypovolaemia leading to low blood pressure and collapse; this can also cause cardiac arrest

Management

-  Call for an ambulance.
-  Secure the patient's airway and help to restore their blood pressure by laying the patient flat and raising their feet.

-  Administer adrenaline, 0.5 ml (1:1000), i.m. injection repeated after 5 minutes if needed⁵.

For children:

Adrenaline (1:1000)⁵

6 months – 6 years	0.15 ml
6–12 years	0.3 ml
12–18 years	0.5 ml

2 Medical Emergencies in Dental Practice

 Administer 100% oxygen – flow rate: 10 litres/minute.

For children: _____

As for adults

The priority is to transfer the patient to hospital as an emergency.

For milder forms of allergy:

 Administer 1 chlorphenamine tablet, 4 mg.

For children: _____

Chlorphenamine* Tablet, 4 mg or
Oral Solution, 2 mg/5 ml

6 months – 2 years	1 mg
2–6 years	1 mg
6–12 years	2 mg
12–18 years	4 mg

NB: Chlorphenamine can cause drowsiness. Advise patients not to drive.

*Chlorphenamine tablets are not licensed for use in children under 6 years; chlorphenamine oral solution (syrup) is not licensed for use in children under 1 year (see Section 1.2).

 Refer patient to their general medical practitioner.

2 Medical Emergencies in Dental Practice

2.2 Asthma

Signs and symptoms of acute severe asthma include:

- Inability to complete sentences in one breath
- Respiratory rate >25 per minute
- Tachycardia (heart rate >110 per minute)

Signs and symptoms of life-threatening asthma include:

- Cyanosis or respiratory rate <8 per minute
- Bradycardia (heart rate <50 per minute)
- Exhaustion, confusion, decreased conscious level

Management

 Administer the patient's own bronchodilator (2 puffs); if unavailable, administer a salbutamol inhaler, 4 puffs (100 µg per actuation), through a large-volume spacer, repeated as needed.

For children:

Salbutamol inhaler

2–18 years	1 puff every 15 seconds, as required (max. 10 puffs)
------------	--

 If the patient's response remains unsatisfactory, if further deterioration occurs or if the patient develops tachycardia or becomes distressed or cyanosed, administer 100% oxygen (flow rate: 10 litres/minute) and call for an ambulance.

2 Medical Emergencies in Dental Practice

2.3 Cardiac Emergencies

2.3.1 Angina

Signs and symptoms include:

- Chest pain
- Shortness of breath
- Fast and slow heart rates
- Increased respiratory rate
- Low blood pressure
- Poor peripheral perfusion

Management

 Administer glyceryl trinitrate (GTN) spray, 2 puffs (400 µg per metered dose) sublingually, repeated after 3 minutes if chest pain remains.

For children:

Not relevant for children

 Administer 100% oxygen – flow rate: 10 litres/minute.

For children:

Not relevant for children

 If the patient suffers more-severe attacks of chest pain or if there are sudden alterations in the patient's heart rate, call for an ambulance.

2 Medical Emergencies in Dental Practice

2.3.2 Cardiac Arrest

Signs and symptoms include:

- Loss of consciousness
- Loss of pulse and blood pressure
- Absence of breathing

Management

 Call for an ambulance.

 Initiate CPR[§], using 100% oxygen for ventilation – flow rate: 10 litres/minute.

For children:

As for adults, with minor modifications to CPR for children[§]

[§]Refer to Resuscitation Council (UK) guidance³ for details of CPR for adults and children.

The priority is to transfer the patient to hospital as an emergency.

2 Medical Emergencies in Dental Practice

2.3.3 Myocardial Infarction

Signs and symptoms include:

- Progressive onset of severe, crushing pain in the centre and across the front of chest; the pain might radiate to the shoulders and down the arms (more commonly the left), into the neck and jaw or through to the back
- Skin becomes pale and clammy
- Nausea and vomiting are common
- Pulse might be weak and blood pressure might fall
- Shortness of breath

Management

 Call for an ambulance and allow the patient to rest in a comfortable position.

 Administer 100% oxygen – flow rate: 10 litres/minute.

For children:

Not relevant for children

 Administer GTN spray (400 µg per metered dose), sublingually.

For children:

Not relevant for children

 Administer aspirin, 300-mg dispersible tablet, orally.

For children:

Do not use in children because, rarely, it can cause Reye's syndrome[†]

NB: If aspirin is given, send a note with the patient to inform the hospital staff.

[†]Aspirin is not licensed for use in children under 16 years (see Section 1.2).

 If the patient becomes unresponsive, check for signs of life (breathing and circulation), and if there are no signs of life or no normal breathing, initiate CPR. [Refer to Resuscitation Council (UK) guidance³ for details of CPR for adults and children.]

The priority is to transfer the patient to hospital as an emergency.

2 Medical Emergencies in Dental Practice

2.4 Epilepsy

Signs and symptoms include:

- Brief warning or 'aura'
- Sudden loss of consciousness, the patient becomes rigid, falls, might give a cry and becomes cyanosed (tonic phase)
- After a few seconds, there are jerking movements of the limbs; the tongue might be bitten (clonic phase)
- There might be frothing from the mouth and urinary incontinence
- The seizure typically lasts a few minutes; the patient might then become floppy but remain unconscious
- After a variable time the patient regains consciousness but might remain confused

NB: Fitting might be associated with other conditions (e.g. hypoglycaemia, fainting).

Management

 Do not try to restrain convulsive movements.

 Ensure the patient is not at risk from injury.

 Administer 100% oxygen – flow rate: 10 litres/minute.

For children:

As for adults

If the epileptic fit is repeated or prolonged (5 minutes or longer), continue administering oxygen and:

 administer midazolam buccal liquid* topically (10 mg).

For children:

Midazolam Buccal Liquid[†], 10 mg/ml

6 months – 1 year	2.5 mg
1–5 years	5 mg
5–10 years	7.5 mg
10–18 years	10 mg

NB: Midazolam injection solution can be administered topically instead of midazolam buccal liquid.

*Midazolam buccal liquid and midazolam injection solution are not licensed for use in *status epilepticus* (see Section 1.2).

2 Medical Emergencies in Dental Practice

- ♥ After convulsive movements have subsided place the patient in the recovery position and check the airway. Do not send the patient home until they have recovered fully.
- ♥ Only give medication if convulsive seizures are prolonged (last for 5 minutes or longer) or recur in quick succession. In these cases and if this was the first episode of epilepsy for the patient, the convulsion was atypical, injury occurred or there is difficulty monitoring the patient, call for an ambulance.

2.5 Faint

Signs and symptoms include:

- Patient feels faint, dizzy, light-headed
- Slow pulse rate
- Low blood pressure
- Pallor and sweating
- Nausea and vomiting
- Loss of consciousness

Management

- ♥ Lay the patient flat and, if the patient is not breathless, raise the patient's feet. Loosen any tight clothing around the neck.

- ♥ Administer 100% oxygen – flow rate: 10 litres/minute until consciousness is regained.

For children:
As for adults

2 Medical Emergencies in Dental Practice

2.6 Hypoglycaemia

Signs and symptoms include:

- Shaking and trembling
- Sweating
- Headache
- Difficulty in concentration/vagueness
- Slurring of speech
- Aggression and confusion
- Fitting
- Unconsciousness

Management

If the patient remains conscious and cooperative:

 administer oral glucose (10–20 g), repeated, if necessary, after 10–15 minutes.

For children:
As for adults

If the patient is unconscious:

 administer glucagon, 1 mg, i.m. injection

For children:
Glucagon, i.m. injection

2–18 years body-weight <25 kg	0.5 mg
2–18 years body-weight >25 kg	1 mg

and

 administer oral glucose (10–20 g) when the patient regains consciousness.

For children:
As for adults

 If the patient does not respond or any difficulty is experienced, call for an ambulance.

3 Anxiety

Oral medication may be used for premedication to aid anxiety management before dental treatment. However, note that benzodiazepines are addictive and susceptible to abuse; prescribe only the minimum number of tablets required. Advise the patient that they will require an escort and that they should not drive.

Note that such premedication is not a definitive sedation technique. Guidance on the provision of conscious sedation in dentistry is the subject of separate Scottish Dental Clinical Effectiveness Programme (SDCEP) guidance⁶ and can be downloaded from www.scottishdental.org/cep. Refer to SDCEP guidance '*Conscious Sedation in Dentistry*'⁶ before providing conscious sedation.

An appropriate regimen to produce mild sedation to aid anxiety management is:

Diazepam Tablets, 5 mg

Send: 2 tablets

Label: 1 tablet on night before procedure
and 1 tablet 2 hours before
procedure

For children:

Not recommended because it has an unpredictable effect in children

NB: Halve the adult dose for elderly or debilitated patients.
Advise all patients that they will require an escort and that they should not to drive.

4 Bacterial Infections

Prolonged courses of antibiotic treatment can encourage the development of drug resistance and therefore the prescribing of antibiotics must be kept to a minimum and used only when there is a clear need.

As a first step in the treatment of bacterial infections, use local measures. For example, drain pus if present in dental abscesses by extraction of the tooth or through the root canals, and attempt to drain any soft-tissue pus by incision. Antibiotics are appropriate for oral infections where there is evidence of spreading infection (cellulitis, lymph node involvement, swelling) or systemic involvement (fever, malaise). In addition, other indications for antibiotics are acute necrotising ulcerative gingivitis and sinusitis, and pericoronitis where there is systemic involvement or persistent swelling despite local treatment. Use antibiotics in conjunction with, and not as an alternative to, local measures. Where there is significant trismus, floor-of-mouth swelling or difficulty breathing, transfer patients to hospital as an emergency.

There is no evidence to support the prescription of antibiotics for the treatment of pulpitis or the prevention of dry socket in non-immunocompromised patients undergoing non-surgical dental extractions.

Some broad-spectrum antibiotics, such as amoxicillin and doxycycline, might reduce the efficacy of combined oral contraceptives and contraceptive patches. The advice of the Family Planning Association is to take additional contraceptive precautions during a short course of treatment with broad-spectrum antibiotics and for 7 days after cessation of treatment⁷. The '*British National Formulary*' (BNF) recommends that if these 7 days run beyond the end of a packet of contraceptives the next packet should be started immediately without a break (in the case of everyday tablets, the inactive tablets should be omitted).

Before prescribing antibiotics, refer to the BNF (www.bnf.org) and '*BNF for Children*' (BNFC; bnfc.org) for drug interactions. Advise patients to space out doses as much as possible throughout the day. Review patients who have received a course of antibiotic treatment.

4.1 Infective Endocarditis

Previously, in dentistry, antibiotics were prescribed as prophylactics for the prevention of infective endocarditis. However, the National Institute for Health and Clinical Excellence (NICE) has recently produced guidance⁸ recommending that antibiotic prophylaxis is not used in patients undergoing dental procedures. This updated advice is now reflected in the latest volume of the BNF (BNF 55¹). In addition, there is no evidence that prophylaxis is of any benefit in patients with prosthetic joints and it is unacceptable to expose patients to the potential adverse effects of antibiotics in these circumstances.

4 Bacterial Infections

4.2 Dental Abscess

Dental abscesses are usually infected with viridans *Streptococcus* spp. or Gram-negative organisms that are penicillin sensitive. Treat dental abscesses in the first instance by using local measures to achieve drainage, with removal of the cause where possible (see below). Antibiotics are required only in cases of spreading infection (cellulitis, lymph node involvement, swelling) or systemic involvement (fever, malaise). Amoxicillin is effective at treating such infections, and is as effective as phenoxymethylpenicillin (penicillin V) but is better absorbed. The duration of treatment depends on the severity of the infection and the clinical response but drugs are usually given for 5 days. However, do not prolong courses of treatment unduly because this can encourage the development of resistance. For severe infections the dose of amoxicillin, phenoxymethylpenicillin and erythromycin can be doubled. Severe infections include those cases where there is extra-oral swelling, eye closing or trismus but it is a matter of clinical judgement. Where there is significant trismus, floor-of-mouth swelling or difficulty breathing, transfer patients to hospital as an emergency. If the patient does not respond to the prescribed antibiotic, check diagnosis and consider referral to a specialist.

Local Measures – to be used in the first instance

-  If pus is present in dental abscesses, drain by extraction of the tooth or through the root canals.
-  If pus is present in any soft tissue, attempt to drain by incision.

If drug treatment is required, an appropriate 5-day regimen is a choice of:

Amoxicillin Capsules, 250 mg

Send: 15 capsules

Label: 1 capsule three times daily

For children:

Amoxicillin Capsules, 250 mg, or Oral Suspension*, 125 mg/5 ml or 250 mg/5 ml

6 months – 1 year	62.5 mg three times daily
1–5 years	125 mg three times daily
5–18 years	250 mg three times daily

NB: The dose of amoxicillin can be doubled in severe infection in adults and children. Amoxicillin, like other penicillins, can result in hypersensitivity reactions, including rashes and anaphylaxis, and can cause diarrhoea. Do not prescribe amoxicillin to patients with a history of anaphylaxis, urticaria or rash immediately after penicillin administration as these individuals are at risk of immediate hypersensitivity.

*Sugar-free preparation is available.

or

4 Bacterial Infections

Phenoxymethylpenicillin Tablets, 250 mg

Send: 40 tablets

Label: 2 tablets four times daily

For children:

Phenoxymethylpenicillin Tablets, 250 mg, or Oral Solution, 125 mg/5 ml or 250 mg/5 ml

6 months – 1 year	62.5 mg four times daily
1–6 years	125 mg four times daily
6–12 years	250 mg four times daily
12–18 years	500 mg four times daily

NB: For severe infection in adults, the dose of phenoxymethylpenicillin can be doubled. For severe infection in children up to 12 years, increase dose up to 12.5 mg/kg four times daily. For severe infection in children aged 12–18 years increase dose up to 1 g four times daily.

Phenoxymethylpenicillin, like other penicillins, can result in hypersensitivity reactions, including rashes and anaphylaxis, and can cause diarrhoea. Do not prescribe phenoxymethylpenicillin to patients with a history of anaphylaxis, urticaria or rash immediately after penicillin administration as these individuals are at risk of immediate hypersensitivity.

Metronidazole is a suitable alternative for the management of dental abscess in patients who are allergic to penicillin. It can also be used as an adjunct to amoxicillin in patients with spreading infection or pyrexia. (NB: Both drugs are used in the same doses as when administered alone.)

In patients who are allergic to penicillin, an appropriate 5-day regimen is:

Metronidazole Tablets, 200 mg

Send: 15 tablets

Label: 1 tablet three times daily

For children:

Metronidazole* Tablets, 200 mg, or Oral Suspension, 200 mg/5 ml

1–3 years	50 mg three times daily
3–7 years	100 mg twice daily
7–10 years	100 mg three times daily
10–18 years	200 mg three times daily

NB: Advise patient to avoid alcohol (metronidazole has a disulfiram-like reaction with alcohol). The anticoagulant effect of warfarin might be enhanced by metronidazole.

*Metronidazole is not licensed for use in children under 1 year (see Section 1.2).

4 Bacterial Infections

Erythromycin is an alternative to the penicillins but causes nausea, vomiting and diarrhoea in some patients, and many organisms are resistant to erythromycin.

In patients who are allergic to penicillin, an appropriate 5-day regimen is:

Erythromycin Tablets, 250 mg

Send: 20 tablets

Label: 1 tablet four times daily

For children:

Erythromycin Tablets, 250 mg, or Oral Suspension*, 125 mg/5 ml

6 months – 2 years	125 mg four times daily
2–8 years	250 mg four times daily
8–18 years	250 mg four times daily

NB: The dose of erythromycin can be doubled in severe infection in adults and children. Erythromycin can cause nausea, vomiting and diarrhoea in some patients, and the anticoagulant effect of warfarin might be enhanced by erythromycin.

*Sugar-free preparation is available.

Clindamycin is not recommended for the routine treatment of oral infections because it is no more effective against anaerobes than the penicillins and can cause the serious adverse effect of antibiotic-associated colitis more frequently than other antibiotics.

The empirical use of other antibiotics, such as clindamycin, cephalosporins, co-amoxiclav or other broad-spectrum antibiotics, offer no advantage over amoxicillin, phenoxymethylpenicillin, metronidazole and erythromycin for most dental patients. Their unnecessary use in dentistry will contribute to the development of resistance to these drugs. Use antibiotics other than those mentioned in this guidance only at the direction of a specialist.

4.3 Acute Necrotising Ulcerative Gingivitis and Pericoronitis

As an adjunct to local measures (see below), metronidazole is the drug of first choice in the treatment of acute necrotising ulcerative gingivitis and the treatment of pericoronitis where there is systemic involvement or persistent swelling despite local measures. A suitable alternative is amoxicillin.

4 Bacterial Infections

Local Measures – to be used in the first instance

- ♥ In the case of acute necrotising ulcerative gingivitis, carry out scaling and provide oral hygiene advice.
- ♥ In the case of pericoronitis, carry out irrigation and debridement.

If drug treatment is required, an appropriate 3-day regimen is:

Metronidazole Tablets, 200 mg

Send: 9 tablets

Label: 1 tablet three times daily

For children:

Metronidazole[†] Tablets, 200 mg, or Oral Suspension, 200 mg/5 ml

1–3 years	50 mg three times daily
3–7 years	100 mg twice daily
7–10 years	100 mg three times daily
10–18 years	200 mg three times daily

NB: Advise patient to avoid alcohol (metronidazole has a disulfiram-like reaction with alcohol). The anticoagulant effect of warfarin might be enhanced by metronidazole.

[†]Metronidazole is not licensed for use in children under 1 year (see Section 1.2).

or

Amoxicillin Capsules, 250 mg

Send: 9 capsules

Label: 1 capsule three times daily

For children:

Amoxicillin Capsules, 250 mg, or Oral Suspension*, 125 mg/5 ml or 250 mg/5 ml

6 months – 1 year	62.5 mg three times daily
1–5 years	125 mg three times daily
5–18 years	250 mg three times daily

NB: The dose of amoxicillin can be doubled in severe infection in adults and children. Amoxicillin, like other penicillins, can result in hypersensitivity reactions, including rashes and anaphylaxis, and can cause diarrhoea. Do not prescribe amoxicillin to patients with a history of anaphylaxis, urticaria or rash immediately after penicillin administration as these individuals are at risk of immediate hypersensitivity.

*Sugar-free preparation is available.

4 Bacterial Infections

4.4 Sinusitis

Local Measures – to be used in the first instance

 Advise the patient to use steam inhalation. Do not recommend the use of boiling water for steam inhalation in children.

If drug treatment is required, an appropriate regimen is:

Ephedrine Nasal Drops, 0.5%

Send: 10 ml

Label: 1 drop into each nostril up to three times daily when required

For children:

As for adults

NB: Advise patient to use for a maximum of 7 days. In adults and children, the dose of ephedrine nasal drops can be increased to 2 drops 3 or 4 times daily, if required.

If an antibiotic is required, an appropriate 7-day regimen is a choice of:

Amoxicillin Capsules, 250 mg

Send: 21 capsules

Label: 1 capsule three times daily

For children:

Amoxicillin Capsules, 250 mg, or Oral Suspension*, 125 mg/5 ml or 250 mg/5 ml

6 months – 1 year	62.5 mg three times daily
1–5 years	125 mg three times daily
5–18 years	250 mg three times daily

NB: The dose of amoxicillin can be doubled in severe infection in adults and children. Amoxicillin, like other penicillins, can result in hypersensitivity reactions, including rashes and anaphylaxis, and can cause diarrhoea. Do not prescribe amoxicillin to patients with a history of anaphylaxis, urticaria or rash immediately after penicillin administration as these individuals are at risk of immediate hypersensitivity.

*Sugar-free preparation is available.

or

4 Bacterial Infections

Doxycycline Capsules, 100 mg

Send: 8 capsules

Label: 2 capsules on the first day,
followed by 1 capsule daily

For children:

<12 years	Not recommended for use because it causes intrinsic staining of developing teeth [†]
≥12 years	As for adults

NB: Advise patient to swallow capsules whole with plenty of fluid during meals, while sitting or standing.

For severe infection in adults and children aged 12 years and over, 2 capsules daily can be given.

Use with caution in patients with hepatic impairment or those receiving potentially hepatotoxic drugs. Do not prescribe for pregnant women, nursing mothers or children under 12 years, as it can deposit on growing bone and teeth (by binding to calcium) and cause staining and, occasionally, dental hypoplasia.

Doxycycline can cause nausea, vomiting, diarrhoea, dysphagia and oesophageal irritation, and the anticoagulant effect of warfarin might be enhanced by doxycycline.

[†]Doxycycline is not licensed for use in children under 12 years (see Section 1.2).

5 Fungal Infections

Superficial fungal infections can be treated in a primary care setting. However, chronic hyperplastic candidosis (candidal leukoplakia) is potentially premalignant and therefore refer patients with this condition for specialist treatment. Treatment with topical antifungal agents is effective against superficial infections but compliance with amphotericin or nystatin is poor because of their unpleasant taste. Thus, miconazole or the systemically absorbed drug fluconazole are preferred unless contraindicated.

Note that fluconazole interacts with many drugs, including warfarin and statins, and therefore do not give fluconazole to patients taking these drugs. In addition, avoid the use of miconazole, a topical azole antifungal agent, in such patients because sufficient drug is absorbed to cause similar interactions.

5.1 Pseudomembranous Candidosis and Erythematous Candidosis

Several patient groups are predisposed to pseudomembranous candidosis and erythematous candidosis infections (e.g. patients taking inhaled corticosteroids, cytotoxics or broad-spectrum antibacterials, diabetic patients, patients with nutritional deficiencies, or patients with serious systemic disease associated with reduced immunity such as leukaemia, other malignancies and HIV infection). If the patient does not respond to appropriate local measures and a course of drug treatment, or there is no identifiable cause, refer the patient to a specialist or the patient's general medical practitioner for further investigation. Fungal infections in immunocompromised patients with serious systemic disease are likely to need intravenous systemic treatment; therefore, refer such patients to a specialist or the patient's general medical practitioner.

When these infections are associated with the use of inhaled corticosteroids for lung disease, use local measures in the first instance to try to avoid the problem.

Local Measures – to be used in the first instance

-  Advise patients who use a corticosteroid inhaler to rinse their mouth with water or brush their teeth immediately after using the inhaler.

5 Fungal Infections

If drug treatment is required, an appropriate 7-day regimen is a choice of:

Fluconazole Capsules, 50 mg

Send: 7 capsules

Label: 1 capsule daily

For children:

Fluconazole Oral Suspension, 50 mg/5 ml

6 months – 12 years	3–6 mg/kg on first day and then 3 mg/kg (max. 100 mg) daily
12–18 years	50 mg daily

NB: Fluconazole can be administered for a maximum of 14 days for the treatment of oropharyngeal candidiasis (except in severely immunocompromised patients). Do not prescribe fluconazole for patients taking warfarin or statins.

or

Miconazole Oromucosal Gel*, 24 mg/ml

Send: 80 g tube

Label: 10 ml applied to affected area
after food four times daily

For children:

Miconazole Oromucosal Gel*, 24 mg/ml

6 months – 2 years	2.5 ml twice daily after food
2–6 years	5 ml twice daily after food
6–12 years	5 ml four times daily after food
12–18 years	10 ml four times daily after food

NB: Advise patient to retain gel near lesion and continue use for 48 hours after lesions have healed.

Do not prescribe miconazole for patients taking warfarin or statins.

*Sugar-free preparation is available.

5 Fungal Infections

If fluconazole and miconazole are contraindicated, an appropriate regimen is a choice of:

Amphotericin Lozenges, 10 mg

Send: 40 lozenges

Label: 1 lozenge dissolved slowly in the mouth after food four times daily for 10 days

For children:

As for adults[†]

NB: Advise patient to continue use for 48 hours after lesions have healed. Amphotericin can be given for up to 15 days, and the dose of amphotericin can be doubled in severe infections in adults and children.

[†]Amphotericin lozenges are not licensed for use in children (see Section 1.2).

or

Nystatin Oral Suspension, 100,000 units/ml

Send: 30 ml

Label: 1 ml after food four times daily for 7 days

For children:

As for adults

NB: Advise patient to rinse suspension around mouth and then retain suspension near lesion for 5 minutes before swallowing. Advise patient to continue use for 48 hours after lesions have healed.

5 Fungal Infections

5.2 Denture Stomatitis

Denture stomatitis can be treated effectively by local measures (see below). However, antifungal agents can be used as an adjunct to these local measures, particularly to reduce palatal inflammation before taking impressions for new dentures. Chlorhexidine mouthwash is also effective against fungal infections.

Local Measures – to be used in the first instance

 Advise the patient to:

- clean their dentures thoroughly (by soaking in chlorhexidine mouthwash or sodium hypochlorite for 15 minutes twice daily; note that hypochlorite should only be used for acrylic dentures) and brush their palate daily to treat the condition;
- leave their dentures out as often as possible during the treatment period;
- not wear their dentures at night as a matter of course to prevent recurrence of the problem.

If dentures themselves are identified as contributing to the problem, ensure the dentures are adjusted or new dentures are made to avoid the problem recurring.

If drug treatment is required, an appropriate 7-day regimen is a choice of:

Fluconazole Capsules, 50 mg

Send: 7 capsules

Label: 1 capsule daily

For children:

Fluconazole Oral Suspension, 50 mg/5 ml

6 months – 12 years	3–6 mg/kg on first day and then 3 mg/kg (max. 100 mg) daily
12–18 years	50 mg daily

NB: Fluconazole can be administered for a maximum of 14 days for the treatment of oropharyngeal candidiasis (except in severely immunocompromised patients). Do not prescribe fluconazole for patients taking warfarin or statins.

or

5 Fungal Infections

Miconazole Oromucosal Gel*, 24 mg/ml

Send: 80 g tube

Label: 10 ml applied to affected area
after food four times daily

For children:

Miconazole Oromucosal Gel*, 24 mg/ml

6 months – 2 years	2.5 ml twice daily after food
2–6 years	5 ml twice daily after food
6–12 years	5 ml four times daily after food
12–18 years	10 ml four times daily after food

NB: Advise patient to remove dentures before applying gel and retain gel near lesion. The dentures can be reinserted to keep gel in place.

Advise patient to continue use for 48 hours after lesions have healed.

Do not prescribe miconazole for patients taking warfarin or statins.

*Sugar-free preparation is available.

If fluconazole and miconazole are contraindicated, an appropriate regimen is a choice of:

Amphotericin Lozenges, 10 mg

Send: 40 lozenges

Label: 1 lozenge dissolved slowly in the
mouth after food four times daily
for 10 days

For children:

As for adults[†]

NB: Advise patient to remove dentures before using the drug and continue use for 48 hours after lesions have healed.

Amphotericin can be given for up to 15 days, and the dose of amphotericin can be doubled in severe infections in adults and children.

[†]Amphotericin lozenges are not licensed for use in children (see Section 1.2).

or

5 Fungal Infections

Nystatin Oral Suspension, 100,000 units/ml

Send: 30 ml

Label: 1 ml after food four times daily
for 7 days

For children:

As for adults

NB: Advise patient to remove dentures before using drug, rinse suspension around mouth and then retain suspension near lesion for 5 minutes before swallowing.
Advise patient to continue use for 48 hours after lesions have healed.

5.3 Angular Cheilitis

Angular cheilitis in denture-wearing patients is usually caused by infection with *Candida* spp. and there is an associated denture stomatitis that should be treated concurrently. In those without dentures, angular cheilitis is more likely to be caused by infection with *Streptococcus* spp. or *Staphylococcus* spp.

Miconazole cream is effective against both *Candida* and Gram-positive cocci and is therefore appropriate to use for all patients. Where the condition is clearly fungal in nature nystatin ointment can be used and where it is bacterial in nature sodium fusidate (fusidic acid) ointment can be used. Note that creams are normally used on wet surfaces whereas ointments are normally used on dry surfaces.

Unresponsive cases can be treated with hydrocortisone and miconazole cream or ointment. Continue treatment until clinical resolution is achieved. A lack of clinical response might indicate predisposing factors such as a concurrent haematinic deficiency or diabetes. Refer such cases to a specialist or the patient's general medical practitioner.

If dentures themselves are identified as contributing to the problem, ensure the dentures are adjusted or new dentures are made to avoid the problem recurring.

An appropriate regimen is a choice of:

Miconazole Cream, 2%

Send: 20 g tube

Label: Apply to angles of mouth twice
daily

For children:

As for adults

NB: Advise patient to continue use for 10 days after lesions have healed.

or

Refer to Appendix 1 of the BNF and BNFC for further details of drug interactions.

5 Fungal Infections

Nystatin Ointment (100,000 units per g)

Send: 30 g tube

Label: Apply to angles of mouth four times daily

For children:

As for adults

or

Sodium Fusidate Ointment, 2%

Send: 15 g tube

Label: Apply to angles of mouth four times daily

For children:

As for adults

NB: To avoid the development of resistance, do not prescribe sodium fusidate for longer than 10 days.

An appropriate regimen for unresponsive cases is a choice of:

Hydrocortisone (1%) and Miconazole (2%) Cream

Send: 30 g tube

Label: Apply to angles of mouth twice daily

For children:

As for adults

NB: Advise patient to continue use for a maximum of 7 days.

or

Hydrocortisone (1%) and Miconazole (2%) Ointment

Send: 30 g tube

Label: Apply to angles of mouth twice daily

For children:

As for adults

NB: Advise patient to continue use for a maximum of 7 days.

6 Viral Infections

6.1 Herpes Simplex Infections

Primary herpetic gingivostomatitis [as a result of herpes simplex virus (HSV)] is best managed by symptomatic relief [i.e. nutritious diet, plenty of fluids, bed rest, use of analgesics and antimicrobial mouthwashes (either chlorhexidine or hydrogen peroxide)]. The use of antimicrobial mouthwashes controls plaque accumulation if toothbrushing is painful and also helps to control secondary infection in general.

Treat infections in immunocompromised patients and severe infections in non-immunocompromised patients with a systemic antiviral agent, the drug of choice being aciclovir. Give patients analgesics regularly to minimise oral discomfort; a topical benzydamine hydrochloride spray might provide additional relief from oral discomfort and is particularly helpful in children. Refer immunocompromised patients (both adults and children) with severe infection to hospital.

Mild infection of the lips [herpes labialis (cold sores)] in non-immunocompromised patients is treated with a topical antiviral drug (aciclovir cream or penciclovir cream).

Bell's palsy is sometimes associated with herpes simplex. Refer patients with Bell's palsy to a specialist or the patient's general medical practitioner for treatment.

Local Measures – to be used in the first instance

 Advise the patient to avoid dehydration and alter their diet (to include soft food and adequate fluids) and use analgesics and an antimicrobial mouthwash.

An appropriate mouthwash is a choice of:

Chlorhexidine Mouthwash, 0.2%

Send: 300 ml

Label: Rinse mouth for 1 minute with 10 ml twice daily

For children:

As for adults

NB: Advise patient to spit out mouthwash after rinsing and use until lesions have resolved and patient can carry out good oral hygiene. Chlorhexidine gluconate might be incompatible with some ingredients in toothpaste; advise patient to leave an interval of at least 30 minutes between using mouthwash and toothpaste. Also advise patient that chlorhexidine mouthwash can be diluted 1:1 with water with no loss in efficacy.

or

6 Viral Infections

Hydrogen Peroxide Mouthwash, 6%

Send: 300 ml

Label: Rinse mouth for 2 minutes with 15 ml diluted in half a tumbler of warm water three times daily

NB: Advise patient to spit out mouthwash after rinsing and use until lesions have resolved and patient can carry out good oral hygiene. Hydrogen peroxide mouthwash can be used as a rinse for up to 3 minutes, if required.

For children:

As for adults

For infections in immunocompromised patients and severe infections in non-immunocompromised patients an appropriate 5-day regimen is:

Aciclovir Tablets, 200 mg

Send: 25 tablets

Label: 1 tablet five times daily

NB: In both adults and children the dose can be doubled in immunocompromised patients or if absorption is impaired.

*Sugar-free preparation is available.

For children:

Aciclovir Tablets, 200 mg, or Oral Suspension*, 200 mg/5 ml

6 months – 2 years	100 mg five times daily
2–18 years	200 mg five times daily

Antiviral creams such as aciclovir and penciclovir can be used to treat herpes labialis in non-immunocompromised patients. Administer these topical agents at the prodromal stage of a herpes labialis lesion to maximise their benefit.

An appropriate regimen is a choice of:

Aciclovir Cream, 5%

Send: 2 g

Label: Apply to lesion every 4 hours (five times daily) for 5 days

NB: Aciclovir cream can be applied for up to 10 days, if required.

For children:

As for adults

or

6 Viral Infections

Penciclovir Cream, 1%

Send: 2 g

Label: Apply to lesions every 2 hours during waking for 4 days

For children:

<12 years

Not recommended for use[†]

≥12 years

As for adults

[†]Penciclovir is not licensed for use in children under 12 years (see Section 1.2).

6.2 Varicella-zoster Infections

In patients with herpes zoster (shingles), systemic antiviral agents reduce pain, and reduce the incidence of post-herpetic neuralgia and viral shedding. Aciclovir is the drug of choice. However, valaciclovir and famciclovir are suitable alternatives (although they can only be prescribed using a private prescription). Start treatment ideally at diagnosis or within 72 hours of the onset of the rash; even after this point antiviral treatment can reduce the severity of post-herpetic neuralgia. In addition, refer all patients with herpes zoster to a specialist or their general medical practitioner. Refer immunocompromised patients (both adults and children) with herpes zoster to a specialist or the patient's general medical practitioner for treatment.

An appropriate 7-day regimen is:

Aciclovir Tablets, 800 mg (shingles treatment pack)

Send: 35 tablets

Label: 1 tablet five times daily

For children:

Not relevant for children in dental setting[†]

[†]Aciclovir tablets and oral suspension are not licensed for the treatment of herpes zoster in children (see Section 1.2).

7 Odontogenic Pain

Most odontogenic pain can be relieved effectively by non-steroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen and aspirin, which have anti-inflammatory activity. Paracetamol is also effective in the management of odontogenic or post-operative pain but has no demonstrable anti-inflammatory activity. Aspirin is a potent and useful NSAID but avoid its use in children and those with an aspirin allergy, and do not prescribe following a dental extraction or other minor surgery. Pyrexia in children can be managed using paracetamol or ibuprofen. Both drugs can be given alternately to control ongoing pyrexia without exceeding the recommended dose or frequency of administration for either drug.

Avoid the use of all NSAIDs in patients with a history of 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. All NSAIDs cause gastrointestinal irritation and therefore avoid in patients with previous or active peptic ulcer disease. In addition, use NSAIDs with caution in the elderly, patients with allergic disorders, pregnant women, nursing mothers, those taking oral anticoagulants such as warfarin, those with coagulation defects, and those with an inherited bleeding disorder. NSAIDs might impair renal function and so use with caution in patients with renal, cardiac or hepatic impairment.

The NSAID diclofenac is effective against moderate to severe inflammatory or post-operative pain. The use of dihydrocodeine is not recommended because of the adverse effect of nausea. There is also the potential for abuse of dihydrocodeine; therefore, if the drug is to be used, prescribe only the minimum number of tablets required.

Prescribe analgesics only as a temporary measure for the relief of pain, and ensure the underlying cause is managed. Base the choice of analgesic on its suitability for the patient. If the following regimens are ineffective refer the patient to their general medical practitioner.

7 Odontogenic Pain

For mild to moderate odontogenic or post-operative pain, an appropriate 5-day regimen is:

Paracetamol Tablets, 500 mg

Send: 40 tablets

Label: 2 tablets four times daily

For children:

Paracetamol Tablets or Soluble Tablets, 500 mg, or Oral Suspension*, 120 mg/5 ml or 250 mg/5 ml

6 months – 1 year	60–120 mg four times daily (max. 4 doses in 24 hours)
1–5 years	120–250 mg four times daily (max. 4 doses in 24 hours)
6–12 years	250–500 mg four times daily (max. 4 doses in 24 hours)
12–18 years	500 mg four times daily (max. 4 doses in 24 hours)

NB: Advise patient that paracetamol can be taken at 4-hourly intervals but not to exceed the recommended daily dose (maximum of 4 g for adults). Overdose with paracetamol is dangerous because it can cause hepatic damage that is sometimes not apparent for 4–6 days; as little as 10–15 g taken within 24 hours can cause severe hepatocellular necrosis. Transfer patients who have taken an overdose to hospital (for more information see the '*British National Formulary*'; www.bnf.org).

*Sugar-free preparation is available.

7 Odontogenic Pain

For mild to moderate odontogenic, post-operative or inflammatory pain, an appropriate 5-day regimen is:

Ibuprofen Tablets, 400 mg

Send: 20 tablets

Label: 1 tablet four times daily,
preferably after food

For children:

Ibuprofen* Oral Suspension, 100 mg/5 ml

6 months – 1 year	50 mg four times daily, preferably after food
1–4 years	100 mg three times daily, preferably after food
4–7 years	150 mg three times daily, preferably after food
7–10 years	200 mg three times daily, preferably after food
10–12 years	300 mg three times daily, preferably after food
12–18 years	300–400 mg four times daily, preferably after food

NB: In adults, the dose of ibuprofen can be increased, if necessary, to a maximum of 2.4 g daily.

Avoid use 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 use in patients with previous or active peptic ulcer disease and use with caution in the elderly, patients with allergic disorders, pregnant women, 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.

*Sugar-free preparation is available.

7 Odontogenic Pain

For mild to moderate odontogenic or inflammatory pain, an appropriate 5-day regimen is:

Aspirin Dispersible Tablets, 300 mg

Send: 40 tablets

Label: 2 tablets four times daily

For children:

<16 years	Do not use in children because, rarely, it can cause Reye's syndrome [†]
≥16 years	As for adults

NB: Advise patient that aspirin can be taken at 4-hourly intervals but not to exceed the recommended daily dose. In adults and children of 16 years and over, up to 3 tablets (900 mg) can be given in one dose (maximum daily dose of 4 g).

Do not prescribe aspirin following a dental extraction or other minor surgery.

Avoid use in those with a known allergy to aspirin or 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 use in patients with previous or active peptic ulcer disease and use with caution in the elderly, patients with allergic disorders, pregnant women, 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.

[†]Aspirin is not licensed for use in children under 16 years (see Section 1.2).

In cases where paracetamol or ibuprofen alone is not effective, both paracetamol and ibuprofen can be given alternately (i.e. ibuprofen can be taken first and then paracetamol 2 hours later, and so on, using the normal daily doses given in the prescription boxes above). This regimen controls ongoing pain and pyrexia without exceeding the recommended dose or frequency of administration for either drug.

For moderate to severe inflammatory or post-operative pain, an appropriate 5-day regimen is:

Diclofenac Tablets, 50 mg

Send: 15 tablets

Label: 1 tablet three times daily

For children:

Not recommended for dental pain in children[†]

NB: Advise patient not to exceed the recommended daily dose (maximum of 150 mg). Avoid use 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 use in patients with previous or active peptic ulcer disease and use with caution in the elderly, patients with allergic disorders, pregnant women, 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.

Diclofenac tablets are enteric coated and are therefore slower to act.

[†]Diclofenac tablets of >25 mg are not licensed for use in children.

8 Facial Pain

Before treatment, ensure the pain is not odontogenic in nature. Non-odontogenic facial pain can be organic or neurogenic in nature. Most non-odontogenic organic facial pain requires specialist care.

8.1 Trigeminal Neuralgia

If a patient with trigeminal neuralgia presents in primary care, control quickly by treatment with carbamazepine. A positive response confirms the diagnosis. Make an urgent referral to a specialist or the patient's general medical practitioner for a full blood count and liver function tests to monitor for adverse effects, assess the response and titrate the dose.

An appropriate 10-day regimen is:

Carbamazepine Tablets, 100 mg

Send: 20 tablets

Label: 1 tablet twice daily

For children:

Not relevant for children

NB: Advise patient to space out doses as much as possible throughout the day. Carbamazepine can cause reversible blurring of vision, dizziness and unsteadiness (dose-related).

8.2 Other Facial Pain

Temporomandibular dysfunction usually responds to reassurance and local therapy; advise the patient to have a soft diet and avoid chewing gum, and consider making an occusal splint for the patient. Acute temporomandibular dysfunction might respond to analgesics such as ibuprofen (see Section 7 for drug regimen) or a short course of diazepam as a muscle relaxant (see Section 3 for drug regimen). If the patient does not respond, refer the patient to a specialist or the patient's general medical practitioner.

Chronic neuropathic facial pain and oral dysaesthesia might require to be managed with tricyclic antidepressants. Refer such cases to a specialist or the patient's general medical practitioner.

9 Mucosal Ulceration and Inflammation

Mucosal ulceration and inflammation can arise as a result of several different conditions. A diagnosis must be established because the majority of lesions require specific therapy in addition to topical symptomatic therapy. Such specific therapy usually involves specialist care. Temporary relief using topical, symptomatic therapy involves simple mouthwashes, antimicrobial mouthwashes, mechanical protection, local analgesics or topical corticosteroids. Review patient to assess status of ulcers. If ulcers remain unresponsive to treatment refer patients to a specialist. Any ulcer that persists for more than three weeks must be biopsied.

9.1 Simple Mouthwashes

Local Measures – to be used in the first instance

 Advise the patient to rinse their mouth with a salt solution prepared by dissolving half a teaspoon of salt in a glass of warm water to relieve pain and swelling.

Alternatively, compound sodium chloride mouthwashes made up with warm water can be prescribed.

An appropriate regimen is:

**Sodium Chloride Mouthwash,
Compound**

Send: 300 ml

Label: Dilute with an equal volume of warm water

For children:

As for adults

NB: Advise patient to spit out mouthwash after rinsing.

9 Mucosal Ulceration and Inflammation

9.2 Antimicrobial Mouthwashes

Antimicrobial mouthwashes can reduce secondary infection and are particularly useful when pain limits other oral hygiene measures.

An appropriate regimen is a choice of:

Chlorhexidine Mouthwash, 0.2%

Send: 300 ml

Label: Rinse mouth for 1 minute with 10 ml twice daily

For children:

As for adults

NB: Advise patient to spit out mouthwash after rinsing and use until lesions have resolved and patient can carry out good oral hygiene. Chlorhexidine gluconate might be incompatible with some ingredients in toothpaste; advise patient to leave an interval of at least 30 minutes between using mouthwash and toothpaste. Also advise patient that chlorhexidine mouthwash can be diluted 1:1 with water with no loss in efficacy.

or

Hydrogen Peroxide Mouthwash, 6%

Send: 300 ml

Label: Rinse mouth for 2 minutes with 15 ml diluted in half a glass of warm water three times daily

For children:

As for adults

NB: Advise patient to spit out mouthwash after rinsing and use until lesions have resolved and patient can carry out good oral hygiene. Hydrogen peroxide mouthwash can be used as a rinse for up to 3 minutes, if required.

9 Mucosal Ulceration and Inflammation

Tetracycline mouthwash (now using doxycycline) is effective in some patients with recurrent aphthous stomatitis.

An appropriate regimen is:

Doxycycline Capsules[†], 100 mg

Send: 12 capsules

Label: Contents of 1 capsule stirred into water and rinsed around the mouth for 2 minutes four times daily at the onset of ulceration

For children:

<12 years	Not recommended for use because it causes intrinsic staining of developing teeth [†]
≥12 years	As for adults

NB: Advise patient to spit out mouthwash after rinsing. Doxycycline can be used as rinse for up to 3 minutes, and is usually given for 3 days. Use with caution in patients with hepatic impairment or those receiving potentially hepatotoxic drugs. Do not prescribe for pregnant women, nursing mothers or children under 12 years, as it can deposit on growing bone and teeth (by binding to calcium) and cause staining and, occasionally, dental hypoplasia. The anticoagulant effect of warfarin might be enhanced by doxycycline.

[†]Doxycycline is not licensed for use in children under 12 years, and doxycycline capsules used as a mouthwash are not licensed for oral ulceration in adults or children (see Section 1.2).

9.3 Mechanical Protection

Carmellose gelatin paste can relieve the discomfort of mucosal ulceration by covering the site. Carmellose gelatin paste must be applied to dried mucosa to promote adhesion and is therefore unsuitable for the tongue and oropharynx.

An appropriate regimen is:

Carmellose Gelatin Paste

Send: 30 g

Label: Apply a thin layer to dried mucosa as necessary after meals

For children:

As for adults

9 Mucosal Ulceration and Inflammation

9.4 Local Analgesics

Local analgesics cannot relieve pain continuously but are helpful in severe pain (e.g. major aphthae) to enable eating or sleeping. Lidocaine 5% ointment can be applied to the ulcer or lidocaine 10% solution, as a spray, can be applied to the ulcer using a cotton bud. Benzydamine hydrochloride mouthwash or spray can also reduce mucosal discomfort.

An appropriate regimen is a choice of:

Benzydamine Mouthwash, 0.15%

Send: 300 ml

Label: Rinse or gargle using 15 ml every 1½ hours as required

For children:

<12 years	Not recommended for use because of local anaesthetic properties
≥12 years	As for adults

NB: Advise patient that benzydamine mouthwash can be diluted with an equal volume of water if stinging occurs.
Advise patient to spit out mouthwash after rinsing.
The mouthwash is usually given for not more than 7 days.

or

Benzydamine Oromucosal Spray, 0.15%

Send: 30 ml

Label: 4 sprays onto affected area every 1½ hours

For children:

Benzydamine Oromucosal Spray, 0.15%

6 months – 6 years	1 spray per 4 kg body-weight (max. 4 sprays) every 1½ hours
6–12 years	4 sprays every 1½ hours
12–18 years	4 sprays every 1½ hours

NB: In adults and children of 12 years and over, up to 8 sprays of benzydamine oromucosal spray can be applied at any one time.

or

9 Mucosal Ulceration and Inflammation

Lidocaine Ointment, 5%

Send: 15 g

Label: Rub sparingly and gently on affected areas

For children:

As for adults

NB: Advise patient to take care with the application to avoid producing anaesthesia of the pharynx before meals as this might lead to choking.

or

Lidocaine Spray, 10%[†]

Send: 50 ml

Label: Apply as necessary with a cotton bud

For children:

As for adults

NB: Advise patient to take care with the application to avoid producing anaesthesia of the pharynx before meals as this might lead to choking.

[†]Lidocaine spray, 10%, is not licensed for oral ulceration.

9 Mucosal Ulceration and Inflammation

9.5 Topical Corticosteroids

Topical corticosteroids can be used to treat mucosal ulceration and inflammation. Carefully control chronic use to prevent systemic effects. The choice of preparation depends on the extent and location of the lesions: hydrocortisone oromucosal tablets can be allowed to dissolve next to the lesion; triamcinolone dental paste must be applied to dried mucosa to promote adhesion and is therefore unsuitable for the tongue and oropharynx.

Beclometasone dipropionate inhaler sprayed twice daily onto the affected site is suitable for tongue lesions and accessible areas. Betamethasone tablets, dissolved in water and used as a mouthwash, are suitable for extensive inflammation or ulceration but should not be swallowed to minimise the risks of systemic effects.

An appropriate regimen is a choice of:

Beclometasone Dipropionate Aerosol Inhalation[†], 50 µg/metered inhalation

Send: One 200-dose unit

Label: 2 doses (100 µg) twice daily

For children:

As for adults

[†]Beclometasone dipropionate inhaler is not licensed for oral ulceration (see Section 1.2).

or

Betamethasone Soluble Tablets[†], 500 µg

Send: 100 tablets

Label: 1 tablet dissolved in 20 ml water as a mouthwash four times daily

For children:

<12 years	Not appropriate for use because of risk of swallowing
≥12 years	As for adults

NB: Advise patient to spit out mouthwash after rinsing.

[†]Betamethasone soluble tablets are not licensed for oral ulceration (see Section 1.2).

or

9 Mucosal Ulceration and Inflammation

Hydrocortisone Oromucosal Tablets, 2.5 mg

Send: 20 tablets

Label: 1 tablet dissolved next to lesion
four times daily

For children:

<12 years

Prescribe only on
medical advice

≥12 years

As for adults

or

Triamcinolone Dental Paste

Send: 10 g

Label: Apply a thin layer to dried mucosa
four times daily

For children:

As for adults but use limited to 5 days
for children

NB: Advise patient not to rub paste in.
Short-term use is advised for the elderly.

10 Dry Mouth

The subjective feeling of a dry mouth (xerostomia) can arise as a result of loss of the mucous layer without clinical evidence of dryness. There is usually little relief with artificial saliva preparations or mucosal gel preparations in these patients. Dry mouth can also be caused by drugs that have antimuscarinic effects (tricyclic antidepressants, antipsychotics), diuretic drugs, irradiation of the head and neck region or by damage or disease of the salivary glands (e.g. Sjögren's syndrome). In these cases, artificial saliva preparations can provide useful relief.

10.1 Subjective Dryness but Good Saliva Volume

Simple local measures (see below) might provide symptomatic relief in patients with subjective dryness but good saliva volume. However, usually little relief is provided by artificial saliva preparations or mucosal gel preparations and therefore the use of artificial saliva preparations is discouraged. Furthermore, preparations such as saliva-stimulating tablets (SSTs) or Salivix® pastilles contain citric or malic acid and a very high frequency of use might lead to dental erosion.

Local Measures – to be used in the first instance

-  Advise the patient to take frequent sips of cool drinks, suck pieces of ice or sugar-free fruit pastilles, or use sugar-free chewing gum to provide symptomatic relief.

10 Dry Mouth

10.2 Dry Mouth Induced by Head and Neck Radiotherapy

Patients who have a true saliva deficit such as those undergoing head and neck radiotherapy are at high risk from dental caries and opportunistic infections. These patients should use topical fluoride preparations regularly (e.g. fluoride mouthwash, high-fluoride toothpaste) in addition to a saliva substitute or saliva-promoting medication.

Pilocarpine can stimulate salivary flow in patients with some salivary function. However, this drug should only be prescribed by a specialist.

Symptomatic relief can be obtained from the use of artificial salivas or other proprietary saliva-promoting medication but the effects tend to be of short duration. Where there is a considerable reduction in saliva production the use of lubricant gel preparations, applied to the oral mucosa, can give more-prolonged relief.

Discourage the use of sugar-containing sweets and drinks but sugar-free chewing gum might be helpful.

An appropriate regimen is a choice of:

AS Saliva Orthana® Lozenges
(this preparation does not contain fluoride supplementation)

Send: 30 lozenges

Label: 1 lozenge sucked as required

For children:

Not relevant for children in dental setting

or

AS Saliva Orthana® Oral Spray
(this preparation includes limited fluoride supplementation)

Send: 50 ml

Label: Sprayed three times onto the oral mucosa as required

For children:

Not relevant for children in dental setting

or

10 Dry Mouth

Biotène Oralbalance® Saliva-replacement Gel

Send: 50 g

Label: Apply to oral mucosa as required

For children:

Not relevant for children in dental setting

NB: Avoid use with toothpastes containing detergents (including foaming agents).

or

BioXtra® Gel

Send: 40 ml

Label: Apply to oral mucosa as required

For children:

Not relevant for children in dental setting

or

Salivix® Pastilles*

Send: 50 pastilles

Label: 1 pastille sucked as required

For children:

Not relevant for children in dental setting

*Sugar-free preparation is available.

or

Saliva-stimulating Tablets* (SSTs)

Send: 100 tablets

Label: 1 tablet sucked as required

For children:

Not relevant for children in dental setting

*Sugar-free preparation is available.

and a choice of:

10 Dry Mouth

Sodium Fluoride Toothpaste, 0.619% (2800 ppm)

Send: 75 ml

Label: Brush teeth for 1 minute after meals using 1 cm, before spitting out, twice daily

For children:

≤10 years	Not indicated for use because of risk of swallowing and possible poisoning
>10 years	As for adults

NB: Advise patient to avoid rinsing mouth, drinking or eating for 30 minutes after use, and advise patient that this 2800 ppm sodium fluoride toothpaste is a medicine and is only to be used by the person for whom it is prescribed.

or

Sodium Fluoride Toothpaste, 1.1% (5000 ppm)

Send: 51 g

Label: Brush teeth for 3 minutes after meals using 2 cm, before spitting out, three times daily

For children:

≤16 years	Not indicated for use because of risk of swallowing and possible poisoning
>16 years	As for adults

NB: Advise patient to avoid rinsing mouth, drinking or eating for 30 minutes after use, and advise patient that this 5000 ppm sodium fluoride toothpaste is a medicine and is only to be used by the person for whom it is prescribed.

or

Sodium Fluoride Mouthwash, 0.05%

Send: 250 ml

Label: Rinse mouth once daily with 10 ml for 1 minute and spit out (preferably at a different time from brushing)

For children:

<6 years	Not indicated for use because of risk of swallowing and possible poisoning
≥6 years	As for adults

NB: Advise patient to avoid rinsing mouth, drinking or eating for 15 minutes after use.

11 Dental Caries

Fluoride confers significant resistance to dental caries, with the topical action of fluoride on enamel and plaque considered more important in this effect than the systemic action. Additional fluoride treatment is prescribed for patients who are at increased risk of dental caries or are medically compromised. The decision to prescribe additional fluoride treatment must take into account several factors, including whether the patient lives in an area where water is fluoridated, the concentration of fluoride contained in the toothpaste the patient uses and whether the patient uses fluoride rinses.

In areas where the fluoride content of the drinking water is less than 0.7 ppm (0.7 mg per litre), daily administration of fluoride tablets or drops is a suitable means of supplementation. Do not prescribe systemic fluoride supplements without reference to the fluoride content of the local water supply.

Additional protection can also be provided to patients by the use of fluoride rinses or high-fluoride toothpastes.

If a systemic supplement is prescribed, an appropriate regimen for patients living in areas where the water fluoride content is less than 0.3 ppm (0.3 mg per litre) is:

Sodium Fluoride Tablets, 1.1 mg (contain 0.5 mg F⁻)

Send: 60 tablets

Label: 2 tablets (1 mg F⁻), sucked or dissolved in the mouth daily (preferably in the evening and at a different time from brushing)

For children:

Sodium Fluoride Tablets, 1.1 mg (contain 0.5 mg F⁻) or Oral Drops* (0.37%; contain 36 µg F⁻ per drop)

6 months – 3 years	0.25 mg F ⁻ daily (7 oral drops)
3–6 years	0.5 mg F ⁻ daily (14 oral drops)
6–18 years	1 mg F ⁻ daily (28 oral drops)

NB: There is a risk of fluorosis if more than the recommended dose is taken at one time. Therefore, emphasize to patient (and parent or carer, where appropriate) the need for compliance with the recommended dosing regimen and advise patient not to double the dose if they miss a dose.

Tablets and oral drops are normally prescribed for young children. The instances where tablets are prescribed for adults are rare.

*Sugar-free preparation is available.

11 Dental Caries

If a systemic supplement is prescribed, an appropriate regimen for patients living in areas where the water fluoride content is between 0.3 and 0.7 ppm (0.3–0.7 mg per litre) is:

Sodium Fluoride Tablets, 1.1 mg (contain 0.5 mg F⁻)

Send: 30 tablets

Label: 1 tablet (0.5 mg F⁻), sucked or dissolved in the mouth daily (preferably in the evening and at a different time from brushing)

For children:

Sodium Fluoride Tablets, 1.1 mg (contain 0.5 mg F⁻) or Oral Drops* (0.37%; contain 36 µg F⁻ per drop)

<3 years	None because of risk of fluorosis
3–6 years	0.25 mg F ⁻ daily (7 oral drops)
6–18 years	0.5 mg F ⁻ daily (14 oral drops)

NB: There is a risk of fluorosis if more than the recommended dose is taken at one time. Therefore, emphasize to patient (and parent or carer, where appropriate) the need for compliance with the recommended dosing regimen and advise patient not to double the dose if they miss a dose.

Tablets and oral drops are normally prescribed for young children. The instances where tablets are prescribed for adults are rare.

*Sugar-free preparation is available.

Do not prescribe systemic supplements (tablets, oral drops) for patients living in areas where the water fluoride content is >0.7 ppm (0.7 mg per litre).

If a topical agent is prescribed, an appropriate regimen is a choice of:

Sodium Fluoride Mouthwash, 0.05%

Send: 250 ml

Label: Rinse mouth once daily with 10 ml for 1 minute and spit out (preferably at a different time from brushing)

For children:

Sodium Fluoride Mouthwash, 0.05%

<6 years	Not appropriate because of risk of swallowing and possible poisoning
≥6 years	As for adults

NB: Advise patient to avoid rinsing mouth, drinking or eating for 15 minutes after use.

or

11 Dental Caries

Sodium Fluoride Toothpaste, 0.619% (2800 ppm)

Send: 75 ml

Label: Brush teeth for 1 minute after meals using 1 cm, before spitting out, twice daily

For children:

≤10 years	Not indicated for use because of risk of swallowing and possible poisoning
>10 years	As for adults

NB: Advise patient to avoid rinsing mouth, drinking or eating for 30 minutes after use, and advise patient that this 2800 ppm sodium fluoride toothpaste is a medicine and is only to be used by the person for whom it is prescribed.

or

Sodium Fluoride Toothpaste, 1.1% (5000 ppm)

Send: 51 g

Label: Brush teeth for 3 minutes after meals using 2 cm, before spitting out, three times daily

For children:

≤16 years	Not indicated for use because of risk of swallowing and possible poisoning
>16 years	As for adults

NB: Advise patient to avoid rinsing mouth, drinking or eating for 30 minutes after use, and advise patient that this 5000 ppm sodium fluoride toothpaste is a medicine and is only to be used by the person for whom it is prescribed.

12 Clinical Governance, CPD and Training

It is a requirement of clinical governance and fundamental good clinical practice that all health professionals work to monitor and constantly strive to improve the quality of care that they and their teams provide to patients.

It is recommended that:

- all those involved in dealing with medical emergencies undertake appropriate annual training and continuing professional development;
- general dental practitioners who prescribe drugs seek to audit their practice regularly, and assess prescribing appropriateness and accuracy;
- general dental practitioners who prescribe drugs ensure they are up to date with any changes in prescribing recommendations of the '*British National Formulary*' (BNF) and '*BNF for Children*' (BNFC); these will be highlighted on the Scottish Dental Clinical Effectiveness Programme (SDCEP) website following publication of new editions of the BNF and BNFC, but practitioners should also refer to the BNF (www.bnf.org) and BNFC (bnfc.org) for details;
- general dental practitioners who prescribe drugs carry out significant event analyses (SEAs) as appropriate; further information is available via NHS Education for Scotland (www.nes.scot.nhs.uk/dentistry/general/audit).

12.1 Recommendations for Audit

Topics for audit and review should be chosen carefully to provide information that will improve the quality of drug prescribing within dentistry and ensure patient safety. Examples include:

- the appropriateness of prescribing (i.e. is the prescribed drug appropriate for the condition?);
- the accuracy and completeness of prescriptions (i.e. is the correct dose and frequency included, and are all relevant details included?);
- region-wide analysis of prescribing patterns to identify any drugs that are over-prescribed.

Appendix 1 Guidance Development

The Scottish Dental Clinical Effectiveness Programme

The Scottish Dental Clinical Effectiveness Programme (SDCEP) is an initiative of the National Dental Advisory Committee (NDAC) in partnership with NHS Education for Scotland.

The NDAC comprises representatives of all branches of the dental profession and acts in an advisory capacity to the Chief Dental Officer. It considers issues that are of national importance in Scottish dentistry and also provides feedback to other bodies within the Scottish Government on related, relevant healthcare matters. Periodically, sub-groups of the NDAC have produced publications, including *'Emergency Dental Drugs'*, *'Clinical Governance in Dental Primary Care'* and *'Dental Practice Advisors in Scotland'*.

To give a structured approach to providing clinical guidance for the dental profession, SDCEP was established in 2004 under the direction of the NDAC. The primary aim of the Programme is to support dental teams throughout Scotland by providing guidance developed by the profession for the profession on topics identified as priorities for dentistry in Scotland. SDCEP guidance is designed to help the dental team provide improved care for patients by bringing together, in a structured manner, the best available information that is relevant to priority areas in dentistry, and presenting this information in a form that can be interpreted easily and implemented.

The increasing emphasis within healthcare on the adoption of an evidence-based approach to clinical care and treatment, and changes in the regulatory framework of healthcare provision present significant challenges for dental teams. To help meet these challenges, SDCEP is developing guidance that takes a variety of forms to suit the diverse topics being addressed. Within many areas of dentistry there is a lack of the type of high-quality scientific evidence that usually informs the recommendations within conventional clinical guidelines. Despite this, there is some research evidence and a wealth of expertise and specialist knowledge within dentistry upon which to draw in order to make recommendations. In other areas, documentation, including legislation, policies and guidelines, is not in a readily accessible format for dental teams. A key aim of the Programme is to evaluate the best available information that is relevant to dentistry and to translate it into a form that members of the dental profession will be able to interpret easily and implement.

The methodology used to develop SDCEP guidance mirrors that used to develop high-quality guidelines. It aims to be transparent, systematic and to adhere as far as possible to international standards set out by the Appraisal of Guidelines Research and Evaluation (AGREE) Collaboration (www.agreecollaboration.org/).

SDCEP is funded by the Scottish Government Health Directorates and through its collaboration with NHS Education for Scotland contributes to the implementation of the Scottish Government's Dental Action Plan, which aims to both modernise dental services and improve oral health in Scotland.

Appendix 1 Guidance Development

The Guidance Development Group

A Guidance Development Group, comprising individuals from a range of branches of the dental profession that have a role in dental drug prescribing, was convened to develop and write this guidance.

Prof. David Wray (Chairman)	Professor of Oral Medicine, University of Glasgow Dental School
Mr Eric W. Battison	General Dental Practitioner, Lothian
Mr Tony Coia	General Dental Practitioner, Glasgow
Dr Alex Crighton	Consultant in Oral Medicine, Glasgow Dental Hospital and School
Dr M. Petrina Sweeney	Senior Lecturer in Special Needs Dentistry, University of Glasgow Dental School; Honorary Senior Community Dental Officer, Greater Glasgow and Clyde

The Programme Development Team

The Guidance Development Group works closely with the Programme Development Team, which provides project management and administrative support and is responsible for the methodology of guidance development. The team facilitates all aspects of guidance development by searching and appraising information and evidence, conducting research, liaising with external organisations, editing the guidance, and managing the publication and dissemination of guidance materials.

Dr Jan Clarkson	Programme Director
Dr Douglas Stirling	Programme Manager – Guidance and Programme Development
Dr Gillian MacKenzie	Research and Development Manager – Developmental Editing
Mrs Linda Young	Research and Development Manager – Evaluation of Implementation
Miss Ros Alexander	Clinical Research Fellow
Mrs Jill Farnham	Administrator
Mrs Elizabeth Payne	Administrator

Appendix 1 Guidance Development

Guidance Development Methodology

For this guidance on drug prescribing, the '*British National Formulary*' and '*BNF for Children*' were used as the main sources of information. These publications aim to provide prescribers, pharmacists and other healthcare professionals with sound up-to-date information about the use of medicines. Information about drugs included in these publications is drawn from the manufacturers' product literature, medical and pharmaceutical literature, regulatory authorities and professional bodies. Advice is constructed from the clinical literature and reflects, as far as possible, an evaluation of the evidence from diverse sources. The Guidance Development Group identified information from the BNF and BNFC, and consulted with experts and experienced practitioners to develop guidance of specific relevance to primary care dental practice. For those drugs where a range in the dose or frequency of administration is provided by the BNF, a dose and frequency of administration that is most relevant to primary care dental practice is recommended based on the opinion of experienced practitioners.

Other references used in the production of the current guidance are cited in the reference list.

Consultation was conducted prior to peer review and publication. The consultation draft was distributed to a range of individuals and organisations with particular interests in dental prescribing, and those involved in the organisation of dental services or dental education in Scotland. To obtain feedback from the end-users of the guidance, the consultation draft was also sent to a group of randomly selected dentists to evaluate the guidance, and all dentists in Scotland were notified that the consultation draft was available (on our website www.scottishdental.org/cep or by request) for comment. All comments received through the consultation process were considered carefully by the Guidance Development Group, and the guidance amended accordingly prior to peer review. The revised guidance was sent for peer review to a range of experts comprising general dental practitioners, academic dentists, pharmacists and medical professionals, including paediatricians. Comments received during peer review were considered carefully by the Guidance Development Group and further amendments were made to the guidance before publication.

Further information about the methodology used to develop this guidance is available on our website: www.scottishdental.org/cep.

Declarations of interest are made by all contributors to SDCEP. Details are available on request.

Review and Updating

A review of all aspects of the context of this guidance (regulations, legislation, trends in working practices and evidence) will take place two years after publication and, if this has changed significantly, the guidance will be updated accordingly. In the interim, SDCEP will monitor significant changes within the BNF and BNFC and provide relevant updates on its website (www.scottishdental.org/cep).

Appendix 1 Guidance Development

Steering Group

The Steering Group oversees all the activities of SDCEP and includes representatives of each guidance development group and the dental institutions in Scotland.

Prof. Jeremy Bagg (Chairman)	Chairman of the National Dental Advisory Committee; Head of Glasgow Dental School and Professor of Clinical Microbiology, University of Glasgow
Mr Graham Ball	Consultant in Dental Public Health, Fife
Dr Jan Clarkson	Director, Scottish Dental Clinical Effectiveness Programme; Programme Director, Dental Health Services Research Unit, University of Dundee
Dr Dafydd Evans	Senior Lecturer and Consultant in Paediatric Dentistry, Dundee Dental Hospital and School, University of Dundee
Prof. Richard Ibbetson	Director, Edinburgh Postgraduate Dental Institute, University of Edinburgh
Miss Alice Miller	General Dental Practitioner, Duns, Borders; VT Adviser, NHS Education for Scotland
Prof. Nigel Pitts	Director, Dental Health Services Research Unit, University of Dundee
Mr Derek Richards	Specialist Advisor to the Programme Development Team; Consultant in Dental Public Health, Forth Valley; Director of the Centre for Evidence-Based Dentistry, Oxford
Dr Nigel Robb	Senior Lecturer in Sedation in Relation to Dentistry, University of Glasgow Dental School
Prof. William Saunders	Dean of the Dental School, University of Dundee
Mr Alan Whittet	General Dental Practitioner, Longniddry; Dental Practice Adviser, NHS Lothian
Prof. David Wray	Professor of Oral Medicine, University of Glasgow Dental School

Appendix 2 List of Drugs

The following drugs are included in 'Drug Prescribing For Dentistry'. Some drugs recommended in this guidance were not previously included in the NHS 'List of Dental Preparations'. However, the list of drugs that can be prescribed by dentists within the NHS in Scotland has been extended and now includes all drugs in this guidance (see 'List of Dental Preparations' in BNF 55¹).

Please refer to Appendix 1 of the 'British National Formulary' (BNF; www.bnf.org) and 'BNF for Children' (BNFC; bnfc.org) for further details of drug interactions. Report any suspected adverse interactions to the Medicines and Healthcare products Regulatory Agency (see the BNF for details).

Aciclovir Cream	Carmellose Gelatin Paste
Aciclovir Oral Suspension, 200 mg/5 ml	Chlorhexidine Mouthwash
Aciclovir Tablets, 200 mg	Diazepam Tablets
Aciclovir Tablets, 800 mg	Diclofenac Sodium Tablets
Amoxicillin Capsules	Doxycycline Capsules, 100 mg
Amoxicillin Oral Suspension	Ephedrine Nasal Drops
Amphotericin Lozenges	Erythromycin Ethyl Succinate Oral Suspension
AS Saliva Orthana® Lozenges	Erthromycin Tablets
AS Saliva Orthana® Oral Spray	Fluconazole Capsules, 50 mg
Aspirin Tablets, Dispersible	Fluconazole Oral Suspension, 50 mg/5 ml
Beclometasone Dipropionate Aerosol Inhalation, 50 µg/metered dose	Hydrocortisone Oromucosal Tablets
Benzydamine Mouthwash, 0.15%	Hydrocortisone and Miconazole Cream
Benzydamine Oromucosal Spray, 0.15%	Hydrocortisone and Miconazole Ointment
Betamethasone Soluble Tablets, 500 µg	Hydrogen Peroxide Mouthwash
Biotène Oralbalance® Saliva-replacement Gel	Ibuprofen Oral Suspension, sugar-free
BioXtra® Gel	Ibuprofen Tablets
Carbamazepine Tablets	Lidocaine 5% Ointment

Appendix 2 List of Drugs

Lidocaine Spray 10%	Phenoxymethylpenicillin Tablets
Metronidazole Oral Suspension	Saliva-stimulating Tablets
Metronidazole Tablets	Salivix® Pastilles
Miconazole Cream	Sodium Chloride Mouthwash, Compound
Miconazole Oromucosal Gel	Sodium Fluoride Mouthwash
Nystatin Ointment	Sodium Fluoride Oral Drops
Nystatin Oral Suspension	Sodium Fluoride Tablets
Paracetamol Oral Suspension	Sodium Fluoride Toothpaste 0.619%
Paracetamol Tablets	Sodium Fluoride Toothpaste 1.1%
Paracetamol Tablets, Soluble	Sodium Fusidate (fusidic acid) Ointment
Penciclovir Cream	Triamcinolone Dental Paste
Phenoxymethylpenicillin Oral Solution	

Appendix 3 Useful Sources of Information

The '*British National Formulary*' (BNF) and '*BNF for Children*' (BNFC) have been the main information sources used in the development of this guidance document. In addition to providing information on drug prescribing and drugs used to manage medical emergencies, the BNF also contains other useful information, including:

- Information on drug interactions (Appendix 1 of BNF and BNFC)
- Advice on adverse reactions, including the oral side-effects of drugs, and how to report new adverse reactions to the Medicines and Healthcare products Regulatory Agency
- Contact details for medicines information services (also see overleaf) and poisons information services
- Information on prescription writing
- Details of controlled drugs and drug dependence
- Advice on prescribing for children and the elderly
- A table showing the mean weights of children by age (also see overleaf)
- Information on:
 - liver disease and drugs to be avoided or used with caution in liver disease (Appendix 2 of BNF)
 - renal impairment and drugs to be avoided or used with caution in renal impairment (Appendix 3 of BNF)
 - pregnancy and drugs to be avoided or used with caution in pregnancy (Appendix 4 of BNF)
 - breast-feeding and drugs to be avoided or used with caution when breast-feeding (Appendix 5 of BNF)

Appendix 3 Useful Sources of Information

Medicines Information Services

Information on any aspect of drug therapy can be obtained from regional and local Medicines Information Services. For example, the Information Services can provide advice on the choice of drugs, interactions, adverse reactions and restrictions on drug prescribing.

Details regarding the local services provided within Scotland can be obtained from the directory on the UK Medicines Information website (www.ukmi.nhs.uk) or by telephoning one of the following regional numbers.

Aberdeen: 01224 552 316

Dundee: 01382 632 351 or 01382 660 111 Extn 32351

Edinburgh: 0131 242 2920

Glasgow: 0141 211 4407

Information on drug therapy relating to dental treatment can be obtained by telephoning the North West Medicines Information Centre:

Liverpool: 0151 794 8206

Appendix 3 Useful Sources of Information

Prescribing for Children – Mean Weights

The information in the table below has been extracted from BNFC 2007². The table shows the mean values for weight by children's age. These values can be used to calculate doses in the absence of actual measurements. However, note that the child's actual weight might vary considerably from the values in the table and it is important to see the child to ensure that the value chosen is appropriate. In most cases, the child's actual weight should be obtained as soon as possible and the dose re-calculated.

Age	Weight (kg)
6 months	7.7
1 year	10
3 years	15
5 years	18
7 years	23
10 years	30
12 years	39
14 years	50
Adult male	68
Adult female	56

Index

Principal page references are highlighted in bold (e.g. pages on which prescription boxes for a particular drug are presented and pages on which a particular condition is discussed).

- Abscess, dental..... 17, **18**, 19, 20
- Aciclovir..... 33, **34**, **35**
- Acute necrotising ulcerative
gingivitis 17, **20**, 21
- Adrenaline..... 5, **6**
- Allergy..... 6, **7**
- Amoxicillin..... 17, **18**, 19, 20, **21**, **22**
- Amphotericin..... 25, **27**, **29**
- Analgesics..... 33, **37**, 41
- Anaphylaxis 6, 7
- Angina..... **9**
- Angular cheilitis..... **30**, 31
- Antibiotic prophylaxis..... **17**
- Antibiotics 3, **17**
- Antifungal agents..... 3, **25**
- Antiviral agents..... **33**
- Anxiety **15**
- Aphthous stomatitis..... **45**
- Artificial saliva preparations..... **51**, 52, 53
- AS Saliva Orthana® **52**
- Aspirin..... 5, **11**, 37, 39, **40**
- Asthma..... 3, **8**
- Beclometasone dipropionate..... **48**
- Bell's palsy 33
- Benzodiazepines **15**
- Benzylamine 33, **46**
- Betamethasone..... **48**
- Biotène Oralbalance®..... **53**
- BioXtra®..... **53**
- Candidal leukoplakia..... 25
- Candidosis
Chronic hyperplastic..... 25
Erythematous..... **25**, 26, 27
Pseudomembranous..... **25**, 26, 27
- Carbamazepine..... **41**
- Cardiac arrest **10**
- Cardiac emergencies..... **9**, 10, 11
- Carmellose gelatin paste **45**
- Cellulitis..... 17, 18
- Cephalosporins 20
- Chlorphenamine..... 6, **7**
- Clindamycin..... 20
- Co-amoxiclav 20
- Contraceptives..... 3, 17
- Corticosteroids..... 25, 43, **48**
- Dental caries 52, **55**, 56, 57
- Denture stomatitis **28**, 29, 30
- Diazepam **15**, 41
- Diclofenac..... 37, **40**
- Dihydrocodeine..... 37
- Doxycycline..... 17, **23**, **45**
- Dry mouth **51**, 52, 53, 54
- Dry socket..... 17
- Ephedrine **22**
- Epilepsy 5, **12**, 13
- Erythromycin..... 18, **20**
- Faint 12, **13**
- Famciclovir..... 35
- Fluconazole..... 25, **26**, 27, **28**, 29
- Fluoride 52, **54**, **55**, **56**, **57**
- Fluorosis 55, 56
- Glucagon..... 5, **14**
- Glucose 5, **14**
- Glyceril trinitrate (GTN)..... 5, **9**, **11**
- Herpes labialis..... 33, **34**
- Herpes simplex..... **33**, 34, 35
- Herpes zoster..... **35**
- Herpetic gingivostomatitis..... 33
- Hydrocortisone 48, **49**
- Hydrocortisone and miconazole **30**, **31**

Index

- Hypoglycaemia 12, **14**
- Ibuprofen..... 37, **39**, 40, 41
- Infection
 - Bacterial.....**17**, 18, 19, 20, 21, 22, 23
 - Fungal..... **25**, 26, 27, 28, 29, 30, 31
 - Secondary **33, 44**
 - Viral **33**, 34, 35
- Infective endocarditis 17
- Inflammation
 - Mucosal **43**, 44, 45, 46, 47, 48, 49
 - Palatal **28**
- Interactions..... 3
- Lidocaine 46, **47**
- Local analgesics 43, **46**
- Medical emergencies
 - **5**, 6, 7, 8, 9, 10, 11, 12, 13, 14
- Metronidazole **19**, 20, **21**
- Miconazole..... 25, **26**, 27, **29**, **30**
- Midazolam..... 5, **12**
- Mouthwash
 - Antimicrobial..... 33, 43, **44**
 - Benzydamine..... **46**
 - Chlorhexidine..... 28, **33**, **44**
 - Doxycycline **45**
 - Hydrogen peroxide..... 33, **34**, **44**
 - Simple..... **43**
 - Sodium chloride **43**
 - Sodium fluoride..... **54**, 55, **56**
 - Tetracycline..... **45**
- Myocardial infarction **11**
- NSAIDs 3, **37**
- Nystatin 25, **27**, **30**, **31**
- Oral dysaesthesia 41
- Oxygen..... 5, **7**, **8**, **9**, **10**, **11**, **12**, **13**
- Pain 33, 35
 - Facial..... **41**
 - Inflammatory..... **37**, 39, 40
 - Odontogenic..... **37**, 38, 39, 40
 - Other **41**
 - Post-operative **37**, 38, 39, 40
- Paracetamol..... 37, **38**, 40
- Penciclovir..... 33, 34, **35**
- Penicillin 18, **19**, 20, 21, 22
- Pericoronitis 17, **20**, 21
- Phenoxymethylpenicillin 18, **19**, 20
- Pilocarpine 52
- Premedication..... **15**
- Pulpitis..... 17
- Pyrexia 19, **37**, 40
- Salbutamol 5, **8**
- Saliva-stimulating tablets..... 51, **53**
- Salivix®..... 51, **53**
- Sedation **15**
- Shingles **35**
- Sinusitis 17, **22**, 23
- Sjörgen's syndrome..... 51
- Sodium fusidate (fusidic acid)..... 30, **31**
- Sodium hypochlorite 28
- Steam inhalation..... 22
- Stomatitis
 - Aphthous..... **45**
 - Denture..... **28**, 29
- Swelling..... 17, 18, 20
- Temporomandibular dysfunction..... **41**
- Triamcinolone 48, **49**
- Trigeminal neuralgia **41**
- Trismus 17, 18
- Ulceration, mucosal
 - **43**, 44, 45, 46, 47, 48, 49
- Unlicensed drugs 4
- Valaciclovir..... 35
- Xerostomia (dry mouth) **51**, 52, 53, 54

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The Scottish Dental Clinical Effectiveness Programme (SDCEP) is an initiative of the National Dental Advisory Committee (NDAC) and is supported by the Scottish Government and NHS Education for Scotland. The Programme aims to provide user-friendly, evidence-based guidance for the dental profession in Scotland.

SDCEP guidance is designed to help the dental team provide improved care for patients by bringing together, in a structured manner, the best available information that is relevant to priority areas in dentistry, and presenting this information in a form that can be interpreted easily and implemented.

'Drug Prescribing For Dentistry' aims to facilitate drug prescribing within primary care dental practice by bringing together advice on dental prescribing from the *'British National Formulary'* (BNF) and *'BNF for Children'* and presenting it in a readily accessible, problem-orientated style.

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