The Scottish Dental Clinical Effectiveness Programme (SDCEP) is an initiative of the National Dental Advisory Committee 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.

'The Oral Health Management of Patients Prescribed Bisphosphonates' aims to help dental practitioners minimise the risk of their patients developing bisphosphonate-related osteonecrosis of the jaw (BONJ). This guidance presents clear and practical advice about the treatments which can be performed in primary care as part of a general preventive regime, how to assess a patient's risk of BONJ before any surgery or procedure which may impact on bone, and the management options to follow based on that assessment. Prescribers and dispensers of bisphosphonates, as well as patients may also find the information in this guidance of relevance.
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’

**Oral Health Management of Patients Prescribed Bisphosphonates – Summary Guidance**

**All patients prescribed bisphosphonates**

- As soon as possible, aim to get the patient as dentally fit as feasible:
  - prioritise remedial work, reduce sources of dental infection, adjust poorly fitting dentures.
  - Maximise preventive regimes to minimise risk of subsequent extractions and bone trauma.
  - Give preventive advice, emphasizing the importance of:
    - maintaining good oral hygiene, a healthy diet (reducing sugary snacks and drinks), stopping smoking, limiting alcohol intake, regular dental checks;
    - reporting any symptoms such as loose teeth, pain, or swelling, as soon as possible.
  - Refer to an oral surgery/oral and maxillofacial surgery (OS/OMFS) specialist if there is spontaneous or chronic bone exposure.
  - Treat routinely for scale and polish, simple restorations, recall and radiological review.
  - Avoid extractions or any oral surgery or procedures that may impact on bone (i.e. dento-alveolar, periodontal, periapical, deep root planing, complex restoration, implants) if there is an alternative.
  - If any extraction or any oral surgery or procedure which may impact on bone is necessary:
    - advise the patient that there may be BONJ risk to enable informed consent, but ensure they understand it is an extremely rare condition so that they are not discouraged from taking medication or undergoing treatment. Record that this advice has been given.
    - allocate the patient to a risk group (as below) and follow the recommended management strategy.

**Perform extractions/oral surgery/procedures that may impact on bone in primary care as ‘atraumatically’ as possible; avoid raising flaps; achieve good haemostasis.**

- Review healing at 4 weeks after carrying out any invasive treatment.
- If surgery sites fail to heal within 4 to 6 weeks, refer to an OS/OMFS specialist.

Cover image: Photomicrograph showing normal bone architecture in the 3rd lumbar vertebra of a 30 year old woman. Reproduced with permission of Tim Arnett, Professor of Mineralised Tissue Biology, University College London.
Oral Health Management of Patients Prescribed Bisphosphonates
Dental Clinical Guidance

April 2011
Oral Health Management of Patients Prescribed Bisphosphonates

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Summary Guidance
1 Introduction

This guidance has been developed to inform dental practitioners about how to manage patients prescribed bisphosphonates. Prescribers and dispensers of bisphosphonates, as well as patients may also find the information in this guidance of relevance.

1.1 What Are Bisphosphonates and How Do They Work?

Bisphosphonates are drugs that reduce bone resorption by hindering the formation, recruitment and function of osteoclasts. Appendix 1 presents a list of bisphosphonate drugs currently prescribed in the UK. Bisphosphonates are used most commonly in the management of osteoporosis, but are also used in the management of many other non-malignant and malignant conditions (see Appendix 2). Bisphosphonates can have a significantly positive effect on the quality of life of patients by reducing or delaying onset of disease or treatment complications, such as bone fractures and bone pain. However, bisphosphonates accumulate at sites of high bone turnover, such as in the jaw. This may reduce bone turnover and bone blood supply and lead to death of the bone, termed osteonecrosis. The condition of particular concern for dentists is bisphosphonate–related osteonecrosis of the jaw.

1.2 What is Bisphosphonate-related Osteonecrosis of the Jaw (BONJ)?

BONJ is defined as exposed, necrotic bone in the maxilla or mandible that has persisted for more than eight weeks in patients taking bisphosphonates and where there has been no history of radiation therapy to the jaw. Symptoms include delayed healing following a dental extraction or other oral surgery, pain, soft tissue infection and swelling, numbness, paraesthesia or exposed bone.

There are some factors that may increase BONJ risk and so influence whether a patient on a bisphosphonate (or who has taken a bisphosphonate in the past) should receive all their dental treatment in primary care. These risk factors and how they influence dental management options are detailed in Section 3 of this guidance (see also Appendix 3).

Nevertheless, it should be acknowledged that BONJ is an extremely rare condition, and it is very important that patients are not discouraged from taking bisphosphonate drugs or from undergoing dental treatment.
2 Scope of This Guidance

Dental practitioners are increasingly likely to see patients who are taking bisphosphonates because these drugs are now being prescribed more often to prevent as well as to treat a wider variety of medical conditions. This guidance aims to help minimise the risk of BONJ developing in these patients.

Specialist management of BONJ lesions is not included in this guidance because BONJ is currently not treated in primary care and suspected cases should be referred. A list of oral surgery/oral and maxillofacial surgery specialist contacts is presented in Appendix 4.

Information for prescribers and dispensers of bisphosphonates is presented in Appendix 5.

Appendix 6 presents general information to provide to patients in the form of a leaflet.

The following guidance for dental practitioners in primary care is also summarised at the end of this document.

2.1 Statement of Intent

This guidance is based on a review of the available resources at the time of issue and expert consensus (see Appendix 7). It does not override the clinician’s right, and duty, to make decisions appropriate to each patient, with their informed consent. It is advised that departures from this guidance, and the reasons for this, are fully documented in the patient’s clinical record.
3  **Guidance for Dental Practitioners in Primary Care**

The overall aim is to manage patients prescribed bisphosphonates in a way that maximises preventive regimes and minimises the risk of subsequent extractions and bone trauma, thereby reducing the likelihood of BONJ developing.

### 3.1 All Patients

- Ask about past, current or possible future use of bisphosphonates when taking a medical history.
  - Dentists should be aware that patients may not know that their medication is a bisphosphonate. However, if they are suffering from conditions listed in Appendix 2, in the UK they are likely to be prescribed a bisphosphonate drug.

### 3.2 Patients Prescribed Bisphosphonates

- Before commencement of bisphosphonate therapy, or as soon as possible, aim to get the patient as dentally fit as feasible, prioritising care that will reduce mucosal trauma or may help avoid subsequent extractions or any oral surgery or procedure that may impact on bone:
  - undertake any remedial dental work;
  - focus on reducing periodontal/dental infection or disease;
  - adjust or replace poorly fitting dentures to minimise future mucosal trauma.
- Give preventive advice, emphasizing the importance of:
  - maintaining good oral hygiene;
  - having a healthy diet and reducing sugary snacks and drinks;
  - stopping smoking;
  - limiting alcohol intake;
  - regular dental checks;
  - reporting any symptoms such as loose teeth, pain, or swelling, as soon as possible.
- If a patient has spontaneous or chronic bone exposure, refer to an oral surgery/oral and maxillofacial surgery specialist.
- Treat routinely for scale and polish, simple restorations, recall and radiological review.
Avoid extractions or any oral surgery or procedures which may impact on bone (i.e. dento-alveolar, periodontal, periapical, deep root planing, complex restorations, implants) if there is an alternative treatment option.

- An exception is to consider removal of teeth of poor prognosis if this will avoid extractions or other bone impacting treatments later during the patient’s bisphosphonate therapy. In these circumstances, follow the risk assessment and management recommendations below.

**If any extraction or any oral surgery or procedure which may impact on bone is necessary,** assess whether the patient is at low, or higher risk of BONJ as follows:

- the patient is at **low risk** before they have started taking bisphosphonates for any condition, or are taking bisphosphonates for the prevention or management of osteoporosis.
- the patient is at **higher risk** if any of the following factors is present:
  - previous diagnosis of BONJ;
  - taking a bisphosphonate as part of the management of a malignant condition;
  - other non-malignant systemic condition affecting bone (e.g. Paget’s disease);
  - under the care of a specialist for a rare medical condition (e.g. osteogenesis imperfecta);
  - concurrent use of systemic corticosteroids or other immunosuppressants;
  - coagulopathy, chemotherapy or radiotherapy.

Advise the patient that there may be BONJ risk to enable informed consent, but ensure that they understand that it is an extremely rare condition. It is very important that a patient is not discouraged from taking medication or undergoing dental treatment. Record that this advice has been given.

Follow the management strategies described in Sections 3.2.1 and 3.2.2.

**Note:** There is no supporting evidence that BONJ risk will be reduced if the patient temporarily, or even permanently, stops taking bisphosphonates prior to invasive dental procedures since the drugs may persist in the skeletal tissue for years. If a patient has taken bisphosphonates in the past but is no longer taking them for whatever reason (i.e. completed or discontinued the course, taking a drug holiday), allocate them to a risk group as if they are still taking them.
3  Guidance for Dental Practitioners in Primary Care

3.2.1 Management of Low Risk Patients

When other treatment options are not feasible, perform extractions, oral surgery, or procedures that may impact on bone ‘atraumatically’ as possible; avoid raising flaps; achieve good haemostasis.

- Straightforward extractions and other bone impacting treatments can and should be carried out in primary care. The circumstances for seeking advice from an oral surgery/oral and maxillofacial surgery specialist are the same as for a patient who is not on a bisphosphonate.

After carrying out any invasive treatment, review healing at 4 weeks.

If surgery sites fail to heal within 4 to 6 weeks, refer to an oral surgery/oral and maxillofacial surgery specialist.

Note: There is no evidence supporting antibiotic or topical antiseptic prophylaxis in reducing the risk of BONJ.

3.2.2 Management of Higher Risk Patients

Contact an oral surgery/oral and maxillofacial surgery specialist to determine whether the patient should continue to be treated in primary care for any extraction or any oral surgery or procedure that may impact on bone, or whether referral is appropriate.

- When seeking this advice, include full details of the patient’s medical and dental history, and preferably do so by letter.
## Appendix 1
Bisphosphonate Drugs Prescribed in the United Kingdom*

<table>
<thead>
<tr>
<th>Drug name¹</th>
<th>Trade name</th>
<th>Primary Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>alendronic acid</td>
<td>Fosamax</td>
<td>osteoporosis</td>
</tr>
<tr>
<td></td>
<td>Fosavance</td>
<td></td>
</tr>
<tr>
<td>risedronate sodium</td>
<td>Actonel</td>
<td>osteoporosis</td>
</tr>
<tr>
<td></td>
<td>Paget’s disease</td>
<td></td>
</tr>
<tr>
<td>zoledronic acid</td>
<td>Aclasta</td>
<td>Paget’s disease</td>
</tr>
<tr>
<td></td>
<td>Zometa</td>
<td>skeletal events associated with bone metastases</td>
</tr>
<tr>
<td></td>
<td>Reclast</td>
<td>hypercalcaemia</td>
</tr>
<tr>
<td>etidronate disodium</td>
<td>Didronel</td>
<td>osteoporosis</td>
</tr>
<tr>
<td></td>
<td>Paget’s disease</td>
<td></td>
</tr>
<tr>
<td>tiludronic acid</td>
<td>Skelid</td>
<td>Paget’s disease</td>
</tr>
<tr>
<td>ibandronic acid</td>
<td>Bondronat</td>
<td>osteoporosis</td>
</tr>
<tr>
<td></td>
<td>Bonviva</td>
<td>bone metastases</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hypercalcaemia</td>
</tr>
<tr>
<td>pamidronate disodium</td>
<td>Aredia</td>
<td>Paget’s disease</td>
</tr>
<tr>
<td></td>
<td></td>
<td>bone pain</td>
</tr>
<tr>
<td></td>
<td></td>
<td>skeletal events associated with bone metastases</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hypercalcaemia</td>
</tr>
<tr>
<td>sodium clodronate</td>
<td>Bonefos Loreon</td>
<td>Bone pain</td>
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<tr>
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<td></td>
<td>skeletal events associated with bone metastases</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hypercalcaemia</td>
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</table>

*Correct at the time of publication
² The three most commonly prescribed drugs are listed first
## Appendix 2
### Conditions That May Be Treated With Bisphosphonate Drugs*

<table>
<thead>
<tr>
<th>Non-malignant</th>
<th>Malignant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Osteoporosis</td>
<td>Multiple myeloma</td>
</tr>
<tr>
<td>Paget’s disease</td>
<td>Breast cancer</td>
</tr>
<tr>
<td>Osteogenesis imperfecta</td>
<td>Prostate cancer</td>
</tr>
<tr>
<td>Fibrous dysplasia</td>
<td>Bony metastatic lesions</td>
</tr>
<tr>
<td>Primary hyperparathyroidism</td>
<td>Hypercalcemia of malignancy</td>
</tr>
<tr>
<td>Cystic Fibrosis</td>
<td></td>
</tr>
</tbody>
</table>

*Correct at the time of publication*
Appendix 3
Evidence Supporting BONJ Risk Classification

The epidemiology of ONJ is currently unclear as it is an extremely rare condition. The incidence of ONJ in the general population is unknown. Estimates of ONJ in patients taking bisphosphonates range from 1 in 10,000 to < 1 in 100,000 persons per years’ exposure, although the literature suggests that the true incidence of BONJ cannot be properly quantified because too few cases have been reported. The literature also suggests that all patients taking any bisphosphonate drug are at some, albeit unknown risk of developing BONJ spontaneously. Additionally, since bisphosphonates may persist in the skeletal tissue for years, the duration of effect of bisphosphonates can extend far beyond the duration of treatment. This may be why stopping the drug prior to invasive procedures shows no clear benefit in the evidence available. Although many factors have been associated with BONJ, there is currently no high-quality evidence supporting how much any of them, alone or in combination, may actually contribute to BONJ risk, including drug type or potency. The available evidence and expert consensus currently support assessing risk largely based on the condition for which the bisphosphonate has been prescribed as in Section 3 of this guidance.
Appendix 4
Oral Surgery/Oral and Maxillofacial Surgery Specialist Contacts

Ayrshire and Arran
Crosshouse Hospital
Dept of Oral and Maxillofacial Surgery
Kilmarnock KA2 0BE
Telephone: 01563 521133 / 01563 827488/827293

Dumfries & Galloway
Dumfries and Galloway Royal Infirmary
Department of Oral & Maxillofacial Surgery
Bankend Road
Dumfries DG1 4AP
Telephone: 01387 246246 / 01387 241059
Fax: 01387 241514

Fife
Queen Margaret Hospital
Department of Oral & Maxillofacial Surgery
Whitefield Road
Dunfermline KY11 0SU
Telephone: 01383 623623 / 01383 623623
Fax: 01383 674044

Forth Valley
Falkirk and District Royal Infirmary NHS Trust
Dept of Oral & Maxillofacial Surgery
Major’s Loan
Falkirk FK1 5QE
Telephone: 01324 624000 / 01324 616052/616419
Fax: 01324 678573

Grampian
Aberdeen Royal Infirmary
Dept of Oral & Maxillofacial Surgery
Foresthill,
Aberdeen AB9 2ZB
Telephone: 0845 456 6000 / 01224 552654/553052
Fax: 01224 554865

Greater Glasgow and Clyde
The West of Scotland Regional Maxillofacial Unit
Southern General Hospital
1345 Govan Road
Glasgow G51 4TF
Telephone: 0141 201 1100 / 0142 232 7510
Fax: 0141 232 7508

Glasgow Dental Hospital and School
378 Sauchiehall Street
Glasgow G2 3JZ
Telephone: 0141 211 9644 / 0141 211 9654
Fax: 0141 211 9837

Highland
Raigmore Hospital
Dept of Oral & Maxillofacial Surgery
Old Perth Road
Inverness IV2 3UJ
Telephone: 01463 704000 / 01463 704000
Fax: 01463 704346

Lanarkshire
Monklands Hospital
Dept of Oral & Maxillofacial Surgery
Monkscourt Avenue
Airdrie ML6 0JS
Telephone: 01236 748748 / 01236 712335
Fax: 01236 712692

Lothian
St John’s Hospital
Dept of Oral & Maxillofacial Surgery
Howden Road West,
Livingston EH54 6PP
Telephone: 01506 523000 / 01506 523550
Fax: 01506 523551

Edinburgh Dental Institute
Combined Department of Oral Surgery and
Maxillofacial Surgery and Oral Medicine
3rd floor, Lauriston Building
Lauriston Place
Edinburgh EH3 9HA
Telephone: 0131 536 4923
Fax: 0131 536 4901

Tayside
Ninewells Hospital & Medical School
Oral and Maxillofacial Surgery
Dundee DD1 9SY
Telephone: 01382 660111 / 01382 425593
Fax: 01382 425703

Dundee Dental Hospital & School
Department of Oral Surgery
Park Pace
Dundee DD1 4HR
Telephone: 01382 660111 / 01382 635989
Fax: 01382 425783

Perth Royal Infirmary
Dept of Oral & Maxillofacial Surgery
Jeanfield Road
Perth PH1 1NX
Telephone: 01738 623311 / 01738 473790
Fax: 01738 473306

Note: This list is based on information from the British Association of Oral and Maxillofacial Surgeons website (www.baoms.org.uk) and is correct at the time of publication. The list on this website is updated annually.
You will be aware that bisphosphonate therapy involves an increased risk of impaired wound healing in the mouth and that the patient needs to maintain good oral health to minimise the risk of bisphosphonate-related osteonecrosis of the jaw (BONJ).

Advise the patient:

• That the medication they have just been given is a bisphosphonate and it is associated with a very small risk of BONJ.

• To make an appointment with a dentist as soon as possible to ensure they are dentally fit (this includes patients who have dentures).

• To tell their dentist that they are taking a bisphosphonate.

• If needed, information about how to find a dentist can be found at www.scottishdental.org, or by phoning the local NHS Health Board.
Oral Health Management of Patients Prescribed Bisphosphonates

Appendix 6
Patient Information

Practices might find it helpful to use this leaflet to provide information to patients prescribed bisphosphonates and as the basis for further discussion. This leaflet can be downloaded at www.scottishdental.org/cep.

Dental advice for patients prescribed a bisphosphonate drug

Taking a bisphosphonate drug might affect the way some bones work and so there is a very small risk for developing a condition called bisphosphonate-related osteonecrosis of the jaw (BONJ).

What is the risk for developing BONJ?
The risk of developing BONJ is very low as this is an extremely rare condition. However, some other medical problems that you may have might slightly increase your risk. You should tell your dentist about any health problems that you have and all medicines that you are taking so that the dentist can assess your individual risk.

Should I stop taking the bisphosphonate drug?
No, continue to take your medication. The medical benefits of taking a bisphosphonate far outweigh the risks. Talk with your doctor and dentist if you have any questions.

What are the risks associated with dental treatment?
The risk is very low to nonexistent for most ordinary treatments. If you require treatment that affects bone (like a tooth extraction) and your dentist is concerned about how your medical history might increase your risk, then they may refer you to a specialist.

What are the risks associated with not having dental treatment?
You may be at increased risk of developing other health problems if a dental disease is not treated. Your dentist will be able to discuss alternative treatment options and the risks associated with them. You should also consult with your doctor about any health risks.

Can I decrease my risk of developing BONJ?
There are several things you should do to reduce the risk.

- Visit your dentist for regular dental check ups
- Ensure that you tell your dentist about all the medications you are taking
- Talk to your dentist about oral hygiene, because maintaining good oral hygiene is the best way to prevent oral diseases that may require dental surgery
- Reduce the frequency of sugary snacks and drinks
- Reduce the amount of alcohol you drink
- Do not smoke (call the NHS Stop Smoking Helpline on 0800 022 4332, or go to www.smokefree.nhs.uk).

Are there signs and symptoms I should look out for?
You should contact your dentist immediately if you notice any of the following symptoms:

- feeling of numbness, heaviness or other unusual sensations in your jaw
- pain in your jaw or a bad taste
- swelling of your jaw
- loose teeth
- exposed bone

www.scottishdental.org/cep
A Guidance Development Group comprising individuals from a range of branches of the dental profession and other disciplines and a patient representative was convened to write this guidance (see below). This group works closely with the Programme Development Team which facilitates all aspects of guidance development.

As there is a lack of high quality evidence on which to base recommendations for the oral health management of patients prescribed bisphosphonates, this guidance is largely based on a consensus of opinion of existing guidance for NHS Tayside and NHS Greater Glasgow and Clyde, BDA guidance and guidance produced in Northern Ireland and taking into account international guidance and other literature critically appraised by NHS Evidence (http://www.library.nhs.uk/ORALHEALTH).

Consultation on a draft of this guidance was conducted during October 2010. Copies were distributed to a wide range of individuals and organisations with a particular interest in this topic. All dentists in Scotland were notified and feedback sought from end-users of the guidance. All comments received through the consultation process were considered carefully and the guidance was amended accordingly prior to publication. Further information about SDCEP and guidance development is available at www.scottishdental.org/cep.

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

A review of the context of this guidance (e.g. regulations, legislation, trends in working practices, evidence) will take place three years after publication and, if this has changed significantly, the guidance will be updated accordingly.
Appendix 7
Guidance Development

**Guidance Development Group**

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
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<td>Patient Representative</td>
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<td>Consultant in Oral Surgery, Edinburgh Dental Institute</td>
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<td>Consultant in Oral Surgery, Dundee Dental Hospital and School</td>
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<td>Associate Adviser, NHS Education for Scotland; General Practitioner, Perth</td>
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<tr>
<td>Ario Santini</td>
<td>General Dental Practitioner, West Lothian; Professor, Belgrade University; Chair Research Committee, Faculty of General Dental Practice (UK).</td>
</tr>
</tbody>
</table>

**SDCEP Programme Development Team**

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<thead>
<tr>
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<th>Position</th>
</tr>
</thead>
<tbody>
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<td>Research and Development Manager – Evaluation of Implementation</td>
</tr>
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<td>Elizabeth Payne*</td>
<td>Programme Administrator</td>
</tr>
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<td>Joseph Liu</td>
<td>Senior Research Fellow</td>
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<tr>
<td>Samantha Rutherford</td>
<td>Research and Development Manager – Guidance Development</td>
</tr>
<tr>
<td>Jill Farnham</td>
<td>Programme Administrator</td>
</tr>
<tr>
<td>Trish Graham</td>
<td>Programme Administrator</td>
</tr>
</tbody>
</table>

*Directly involved in the development of this guidance*
References

The following references were reviewed in the development of this guidance.


5. Draft protocol for managing patients with Bisphosphonate Osteonecrosis. NHS Greater Glasgow and Clyde (May 2010)


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**

All patients prescribed bisphosphonates

- As soon as possible, aim to get the patient as dentally fit as feasible:
  - prioritise remedial work, reduce sources of dental infection, adjust poorly fitting dentures.
  - Maximise preventive regimes to minimise risk of subsequent extractions and bone trauma.
  - Give preventive advice, emphasizing the importance of:
    - maintaining good oral hygiene, a healthy diet (reducing sugary snacks and drinks), stopping smoking, limiting alcohol intake, regular dental checks;
    - reporting any symptoms such as loose teeth, pain, or swelling, as soon as possible.
- Refer to an oral surgery/oral and maxillofacial surgery (OS/OMFS) specialist if there is spontaneous or chronic bone exposure.
- Treat routinely for scale and polish, simple restorations, recall and radiological review.
- Avoid extractions or any oral surgery or procedures that may impact on bone (i.e. dento-alveolar, periodontal, periapical, deep root planing, complex restoration, implants) if there is an alternative.
- If any extraction or any oral surgery or procedure which may impact on bone is necessary:
  - advise the patient that there may be BONJ risk to enable informed consent, but ensure they understand it is an extremely rare condition so that they are not discouraged from taking medication or undergoing treatment. Record that this advice has been given.
  - allocate the patient to a risk group (as below) and follow the recommended management strategy.

Low Risk

- Patient is about to start bisphosphonate therapy for any condition
- or
- Patient is taking a bisphosphonate to prevent or manage osteoporosis (with lower risk factors)

Higher Risk

If any of the following is present:

- Previous diagnosis of BONJ
- On bisphosphonates to manage a malignant condition
- Other non-malignant systemic condition affecting bone (e.g. Paget’s disease)
- Under the care of a specialist for a rare medical condition (e.g. osteogenesis imperfecta)
- Concurrent use of systemic corticosteroids or other immunosuppressants
- Coagulopathy, chemotherapy or radiotherapy

Seek advice from an OS/OMFS specialist (preferably by letter) about whether to treat the patient in primary care for any extraction, oral surgery or procedure which may impact on bone, or whether to refer.

Cover image: Photomicrograph showing normal bone architecture in the 3rd lumbar vertebra of a 30 year old woman. Reproduced with permission of Tim Arnett, Professor of Mineralised Tissue Biology, University College London.
The Scottish Dental Clinical Effectiveness Programme (SDCEP) is an initiative of the National Dental Advisory Committee 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.

‘The Oral Health Management of Patients Prescribed Bisphosphonates’ aims to help dental practitioners minimise the risk of their patients developing bisphosphonate-related osteonecrosis of the jaw (BONJ). This guidance presents clear and practical advice about the treatments which can be performed in primary care as part of a general preventive regime, how to assess a patient’s risk of BONJ before any surgery or procedure which may impact on bone, and the management options to follow based on that assessment. Prescribers and dispensers of bisphosphonates, as well as patients may also find the information in this guidance of relevance.