



*National Institute for  
Clinical Excellence*

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*Guidance on*  

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*the Extraction of*  

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*Wisdom Teeth*  

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**This document has been circulated to the following:**

**For Action by**

- Health Authority Chief Executives - England and Wales
- NHS Trusts Chief Executives - England and Wales
- PCG Chief Executives
- Local Health Group General Managers
- General Dental Practitioners - England and Wales
- Regional NHS Executive Directors

**For Information**

- Special Health Authority Chief Executives
- Community Health Councils England and Wales
- Commission for Health Improvement
- Local Clinical Governance Support Team
- SIGN
- SCHAT
- CRAG
- Chief Medical, Nursing and Dental Officers in England and Wales
- NHS Director Wales
- Chief Executive NHS
- Medical Director & Head of NHS Quality - Wales
- Chief Pharmaceutical Officer - England and Wales
- Welsh Clinical Effectiveness Unit
- Representative bodies for Health Services, professional organisations and statutory bodies, Royal Colleges, health advocacy groups

**Note**

This guidance represents the view of the Institute's Appraisal Committee, the membership of which is set out in Appendix A, which was arrived at after careful consideration of the available evidence. Health professionals are expected to take it fully into account when exercising their clinical judgement about the circumstances in which it is appropriate to consider the extraction of wisdom teeth. This guidance does not, however, override the individual responsibility of health professionals to make the appropriate decisions in the circumstances of the individual patient, in consultation with the patient and/or guardian/carer.

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# Guidance on the Extraction of Wisdom Teeth

## 1. Guidance

**1.1 The practice of prophylactic removal of pathology-free impacted third molars should be discontinued in the NHS.**

**1.2 The standard routine programme of dental care by dental practitioners and/or paraprofessional staff, need be no different, in general, for pathology free impacted third molars (those requiring no additional investigations or procedures).**

**1.3 Surgical removal of impacted third molars should be limited to patients with evidence of pathology. Such pathology includes unrestorable caries, non-treatable pulpal and/or periapical pathology, cellulitis, abscess and osteomyelitis, internal/external resorption of the tooth or adjacent teeth, fracture of tooth, disease of follicle including cyst/tumour, tooth/teeth impeding surgery or reconstructive jaw surgery, and when a tooth is involved in or within the field of tumour resection.**

**1.4 Specific attention is drawn to plaque formation and pericoronitis. Plaque formation is a risk factor but is not in itself an indication for surgery. The degree to which the severity or recurrence rate of pericoronitis should influence the decision for surgical removal of a third molar remains unclear. The evidence suggests that a first episode of pericoronitis, unless particularly severe, should not be considered an indication for surgery. Second or subsequent episodes should be considered the appropriate indication for surgery.**

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Section 1 constitutes the Institute's Guidance on the Extraction of Wisdom Teeth. The remainder of the document provides information on the following:

- |                            |   |
|----------------------------|---|
| 1 Guidance (above)         | 7 Clinical Audit Advice                 |
| 2 Clinical need            | 8 Review of Guidance                    |
| 3 Evidence                 | ● Appendix A: Appraisal Committee       |
| 4 Implications for the NHS | ● Appendix B: Sources of Evidence       |
| 5 Further Research         | ● Appendix C: Information for patients. |
| 6 Implementation           |   |

The full document and a Summary of Evidence are available from our website at [www.nice.org.uk](http://www.nice.org.uk) or by contacting 0541 555 455

This section (section 1) is also available in Welsh from our web site, or by contacting the number above

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## 2

### Clinical Need and Practice

- 2.1 Permanent molar teeth normally erupt from the age of six onwards, with the third molars (wisdom teeth) being the last to erupt, usually between the ages of eighteen and twenty four years. Wisdom teeth may erupt normally into correct dental alignment and function or conversely develop in non- or minimally functional positions. Impaction occurs when there is prevention of complete eruption due to lack of space, obstruction or development in an abnormal position. This may result in a tooth erupting partially or not at all. Wisdom teeth can also be impacted, either erupting partially or not at all. Impaction may be associated with pathological changes including pericoronitis, an increased risk of caries and periodontal disease in adjacent teeth, and orthodontic problems in later life.
- 2.2 Removal of wisdom teeth is one of the most common surgical procedures performed in the UK. Current practice includes both the removal of impacted third molars causing pathological changes as well as the early prophylactic removal of pathology-free impacted third molars. Wide variations in the rates of this latter procedure across the country, which suggest that in the past, up to 44% of wisdom teeth removals and prophylactic surgery may have been inappropriate, have been reported. However, in recent years, changes in the practice of removal of wisdom teeth may have taken place in response to Faculty of Dental Surgery, Royal College of Surgeon's guidelines.<sup>1</sup> Even so, some 22% of procedures may still be inappropriate. In 1994/95 there were approximately 36,000 inpatient and 60,000 day case admissions in England. More recent figures (1998/99) for Wales indicate that there were up to 3000 procedures. It is estimated that the total cost to the NHS in England and Wales of wisdom teeth extractions is up to £12 million per year.

## 3

### Evidence

- 3.1 There is no reliable research evidence to support a health benefit to patients from the prophylactic removal of pathology-free impacted third molar teeth.
- 3.2 Every procedure for the removal of an impacted third molar carries risk for the patient, including temporary or permanent nerve damage, alveolar osteitis, infection and haemorrhage as well as temporary local swelling, pain and restricted mouth opening. There are also risks associated with the need for general anaesthesia in some of these procedures, including rare and unpredictable death. Such patients are therefore being exposed to the risk of undertaking a surgical procedure unnecessarily.

<sup>1</sup> *Current clinical practice and parameters of care: The management of patients with third molar teeth.* Faculty of Dental Surgery of the Royal College of Surgeons September 1997.

## 4

### Implications for the NHS

- 3.3 A list of the source documentation and opinion made available to the Appraisal Committee is attached as Appendix B.
- 4.1 Given the uncertainty in current rates of prophylactic removal of pathology-free impacted third molars, it is difficult to precisely quantify the budget impact of discontinuation of this practice. However, based on 1994/95 data, this could result in an opportunity to release capacity in the specialty with a value of up to £5 million (NHS in England & Wales)
- 4.2 The number of patients waiting for this operation, in England and Wales might change, if waiting lists are reviewed using this guidance.

## 5

### Further Research

- 5.1 There are two ongoing randomised controlled trials (in the United States and in Denmark) comparing prophylactic extraction of wisdom teeth with management by deliberate retention. The results of these trials will be reviewed by the Institute to establish whether they have a material impact on this guidance.

## 6

### Implementation

- 6.1 NHS trusts and dental practitioners should review their current practice against this guidance and use the audit advice set out below to prospectively collect data on individual practitioners' performance.
- 6.2 The position of individual patients, currently scheduled for extraction of wisdom teeth, should be reviewed. This may be possible through a case note review but there may be circumstances in which patients will need to be invited to attend a review clinic.
- 6.3 The patient information, attached to this guidance as Appendix C, can be drafted into local information leaflets and could also be used to help inform patients, if it is necessary to issue invitations to attend review clinics.

## 7

### Clinical Audit Advice

- 7.1 To enable dental practitioners to audit their own compliance with this guidance, it is recommended that all those who perform wisdom teeth extraction, should routinely record the indication for surgery and the diagnosis (see 1.3)
- 7.2 It is recommended that this information be incorporated into manual recording systems and consideration given to the establishment of appropriate categories in electronic record keeping systems in general practices and hospitals.
- 7.3 Prospective clinical audit programmes should record the proportion of extractions adhering to the criteria described in this guidance. Such programmes are likely to be more effective in improving patient care when they form part of the organisation's formal clinical governance arrangements and where they are linked to specific post-graduate activities.

8.1 This guidance will be reviewed in March 2003.

**Andrew Dillon**  
**Chief Executive**

**March 2000**

## APPENDIX A

### Appraisal Committee Members

**Professor R. L. Akehurst**

*Dean, School of Health Related  
Research  
Sheffield University*

**Professor David Barnett  
(Chairman)**

*Professor of Clinical Pharmacology  
University of Leicester*

**Professor Sir Colin Berry**

*Professor of Morbid Anatomy  
London Hospital Medical College*

**Professor Martin Buxton**

*Director of Health Economics  
Research Group  
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**Professor Yvonne Carter**

*Professor of General Practice and  
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**Dr Karl Claxton**

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University of Southampton*

**Professor Sarah Cowley**

*Professor of Community Practice  
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**Dr Nicky Cullum**

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**Mr Chris Evennett**

*Chief Executive  
Mid-Hampshire Primary Care Group*

**Ms Jean Gaffin**

*Formerly Executive Director  
National Council for Hospice and  
Specialist Palliative Care Service*

**Mrs Sue Gallagher**

*Chief Executive*

*Merton, Sutton and Wandsworth  
Health Authority*

**Dr Trevor Gibbs**

*International Medical Operations  
Director  
Glaxo-Wellcome R&D Ltd*

**Dr Sheila Bird**

*MRC Biostatistics Unit, Cambridge*

**Mr John Goulston**

*Director of Finance  
The Royal Free Hampstead NHS  
Trust*

**Professor Philip Home**

*Professor of Diabetes Medicine  
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*General Practitioner  
St James Health Centre, London*

**Dr Diane Ketley**

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**Mr M Mughal**

*Consultant Surgeon  
Chorley and South Ribble NHS Trust*

**Mr James Partridge**

*Chief Executive  
Changing Faces*

**Dr L.J. Patterson**

*Consultant Physician and Medical  
Director*

**Professor Philip Routledge**

*Professor of Clinical Pharmacology  
University of Wales*

**Professor Andrew Stevens**

*Professor of Public Health  
University of Birmingham*



## APPENDIX B

### Documentation and Opinion Available to the Appraisal Committee

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|---|--|
| <p>i) The following documentation was made available to the Appraisal Committee:</p> <p>a) <b>Assessment Report</b><br/>Song F, O’Meara S, Wilson P, Kliejnen J, Golder S. <i>The effectiveness and cost effectiveness of the prophylactic removal of wisdom teeth</i>. NHS Centre for Reviews and Dissemination, University of York; November 1999;</p> <p>b) <b>Professional/Specialist group submissions;</b><br/>The Faculty of Dental Surgery, The Royal College of Surgeons of England.<br/>Birmingham Dental Hospital<br/>British Dental Association<br/>British Medical Association<br/>Dentistry 2000 – The British Dental Industry Association<br/>Royal College of Nursing</p> | <p>ii) The following experts were invited to make submissions to the Committee:</p> <p>a) Mr David Kramer, Dental Surgeon &amp; Principle, Marchgate Dental Practice.</p> <p>b) Professor Robin Seymour, Head of Department of Restorative Surgery, Dental School, Newcastle upon Tyne.</p> <p>c) Mr John Lowry, the Department of Maxillofacial Surgery at the Royal Bolton Hospital.</p> |
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## APPENDIX C

### Wisdom Teeth Removal – Patient Notes

The patient information in this appendix has been designed to support the production of your own information leaflets; you can download it from our web site ([www.nice.org.uk](http://www.nice.org.uk)) it is available in English and Welsh. A printed version of this text is available in English/Welsh or English alone. If you would like copies of the leaflet please contact 0541 555455, and ask for *Guidance on the Extraction of Wisdom Teeth - Information for Patients*.

#### What is NICE Guidance?

The National Institute for Clinical Excellence (NICE) is a part of the NHS. It has a team of experts who produce guidance for both the NHS and patients on medicines, medical equipment and clinical procedures.

When the Institute evaluates these things, it is called an appraisal.

Each appraisal takes around 12 months to complete and involves the manufacturers of the technology, patient groups and professional organisations.

NICE was asked to look at wisdom teeth removal and provide guidance to the NHS which will help dentists and surgeons decide when wisdom teeth should be removed.

#### What are Wisdom Teeth and why are they operated on?

Adult teeth normally come through from the age of 6 upwards, with the wisdom teeth being the last to arrive (usually between the ages of 18 & 24 years).

Sometimes, as wisdom teeth come through they cause problems. The term used to describe wisdom teeth that don't come through normally is impacted wisdom teeth. Two reasons for this are a lack of space, or other teeth being in the way.

For most people, impacted wisdom teeth cause no problems at all, but some people can suffer problems such as inflammation of the surrounding gum, a higher risk of tooth decay, gum disease in other teeth, and possibly problems with teeth in later life.

Removal of wisdom teeth is one of the most common operations carried out in the UK. Impacted wisdom teeth have sometimes been removed whether or not they were causing problems.

There is no reliable evidence to suggest that operating on impacted wisdom teeth that are not causing problems has any benefit for the patient.

In fact every operation has some risk.

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**What do NICE recommend about the removal of Wisdom Teeth?**

Based on the evidence, NICE has recommended to the NHS that:

1. Impacted wisdom teeth that are free from disease (healthy) should not be operated on. There are two reasons for this
  - a There is no reliable research to suggest that this practice benefits patients
  - b Patients who do have healthy wisdom teeth removed are being exposed to the risks of surgery.

These can include:

- nerve damage
- damage to other teeth
- infection
- bleeding and, rarely, death

Also, after surgery to remove wisdom teeth, patients may:

- have swelling and pain
  - be unable to open their mouth fully
2. Patients who have impacted wisdom teeth that are not causing problems should visit their dentist for their usual check-ups.
  3. Only patients, who have diseased wisdom teeth, or other problems with their mouth, should have their wisdom teeth removed.

Your dentist or oral surgeon will be aware of the sort of disease or condition which would require you to have surgery.

Examples include:

- untreatable tooth decay
- abscesses
- cysts or tumours
- disease of the tissues around the tooth
- if the tooth is in the way of other surgery

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**What should I do?**

If you or a member of your family or someone you care for are having problems with their wisdom teeth you should discuss this with your dentist or surgeon.

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**Will NICE review its guidance?**

Yes. The guidance will be reviewed in March 2003.

There is further research underway in this area. The results of this will be reviewed by NICE to decide if this guidance needs to be updated before 2003.

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**Further Information**

Further information on NICE, and the full guidance issued to the NHS, is available on the NICE web site ([www.nice.org.uk](http://www.nice.org.uk)).

It can also be requested from 0541 555 455

