



## Complete Summary

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### GUIDELINE TITLE

Inhaled corticosteroids for the treatment of chronic asthma in children under the age of 12 years.

### BIBLIOGRAPHIC SOURCE(S)

National Institute for Health and Clinical Excellence (NICE). Inhaled corticosteroids for the treatment of chronic asthma in children under the age of 12 years. London (UK): National Institute for Health and Clinical Excellence (NICE); 2007 Nov. 35 p. (Technology appraisal guidance; no. 131).

### GUIDELINE STATUS

This is the current release of the guideline.

## COMPLETE SUMMARY CONTENT

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## SCOPE

### DISEASE/CONDITION(S)

Chronic asthma

### GUIDELINE CATEGORY

Assessment of Therapeutic Effectiveness  
Management  
Treatment

### CLINICAL SPECIALTY

Allergy and Immunology  
Family Practice  
Pediatrics  
Pharmacology

### **INTENDED USERS**

Advanced Practice Nurses  
Nurses  
Physician Assistants  
Physicians

### **GUIDELINE OBJECTIVE(S)**

To evaluate the clinical effectiveness and cost-effectiveness of inhaled corticosteroids for the treatment of chronic asthma in children under the age of 12 years

### **TARGET POPULATION**

Children under the age of 12 years with chronic asthma

### **INTERVENTIONS AND PRACTICES CONSIDERED**

1. Inhaled corticosteroids (ICSs) (beclomethasone dipropionate, budesonide, fluticasone propionate)
2. ICS in combination with a long-acting beta 2 agonist (LABA)
3. Use of a combination inhaler device as an option

### **MAJOR OUTCOMES CONSIDERED**

- Clinical effectiveness
  - Objective measures of lung function (e.g., forced expiratory volume in 1 second [FEV<sub>1</sub>], peak expiratory flow rate [PEFR])
  - Symptoms (e.g., symptom-free days and nights)
  - Incidence of mild and severe acute exacerbations
  - Use of systemic corticosteroids
  - Adverse effects of treatment
  - Health-related quality of life
  - Mortality
- Cost-effectiveness

## **METHODOLOGY**

### **METHODS USED TO COLLECT/SELECT EVIDENCE**

Hand-searches of Published Literature (Primary Sources)  
Hand-searches of Published Literature (Secondary Sources)  
Searches of Electronic Databases  
Searches of Unpublished Data

## **DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE**

**Note from the National Guideline Clearinghouse (NGC):** The National Institute for Health and Clinical Excellence (NICE) commissioned an independent academic centre to perform a systematic literature review on the technology considered in this appraisal and prepare an assessment report. The assessment report for this technology appraisal was prepared by the Peninsula Technology Assessment Group (PenTAG), Peninsula Medical School and by the Southampton Health Technology Assessment Centre (SHTAC), Wessex Institute for Health Research and Development (WIHRD), University of Southampton (see the "Availability of Companion Documents" field).

### **Clinical Effectiveness**

#### **Identification of Studies**

A search strategy for electronic bibliographic databases was devised and tested by an experienced information scientist (refer to Appendix 3 of the Assessment Report [see the "Availability of Companion Documents" field]). Once finalised it was applied to a number of databases including: The Cochrane Database of Systematic Reviews (CDSR); The Cochrane Central Register of Controlled Trials; Database of Abstracts of Reviews of Effectiveness (DARE); the National Health Service Economic Evaluation Database (NHS EED); Medline (Ovid); Embase (Ovid); National Research Register; Current Controlled Trials; ISI Proceedings (Web of Knowledge); Science Citation Index (Web of Knowledge); and BIOSIS.

Searches were run up to February/March 2006, and were restricted to studies published in English. An update search was conducted in October 2006 to identify any relevant studies published since the original search.

The drug manufacturers' submissions to NICE, which were received in August 2006, were also searched for potentially relevant trials.

All identified studies were downloaded into a Reference Manager database for storage and retrieval as necessary. A keywording system was devised to enable each reference to be categorised according to pre-specified inclusion and exclusion criteria.

#### **Inclusion and Exclusion Criteria**

The inclusion and exclusion criteria were specified a priori based on the scope issued by NICE, as agreed in the published protocol.

#### *Intervention*

Trials reporting evaluations of the following inhaled corticosteroids (ICSs) were included:

- Beclometasone dipropionate (BDP)
- Budesonide (BUD)
- Fluticasone propionate (FP)

Trials reporting evaluations of the following ICSs combined with long-acting beta 2 agonists (LABAs) in the same inhaler (i.e. combination inhalers) were included:

- BUD/formoterol fumarate (FF) (in children over six years)
- FP/salmeterol (SAL) (as xinafoate) (in children over four years)

Trials reporting ICS delivered by pressured metered dose inhalers (pMDIs) and dry powder inhalers (DPIs) were included; those using nebulisers were excluded.

To be included the intervention had to last for more than four weeks.

### *Comparators*

The ICSs were compared with each other.

The combination inhalers were compared with: each other; and with ICS only. They were also compared with ICSs and LABAs administered in separate inhalers.

### *Types of Studies*

Fully published randomised controlled trials (RCTs) or systematic reviews of RCTs. Double blinding was not a pre-requisite for inclusion, although blinding was assessed as part of critical appraisal.

Trials reported in abstracts or conference presentations from 2004 onwards were retrieved, however their details were not extracted, critically appraised or analysed (however, details were extracted where an abstract was available which provided data supplementary to a fully published trial report of a particular study; this occurred in a handful of cases).

Where unpublished full trial reports were available (e.g., as supplied by the drug manufacturers in their submissions to NICE) these were included.

### *Population*

Children aged under 12 years diagnosed with chronic asthma (the mean age of the study population had to be 12 years or under). Studies in which the patient group was asthmatics with a specific related co-morbidity (e.g., cystic fibrosis) were not included.

Studies reporting the treatment of acute exacerbations of asthma were not included.

Trials reporting the effectiveness of ICSs with LABAs were only included if the patients had been previously treated with an ICS.

### *Outcomes*

At the screening stage studies reporting one or more of the following outcomes were included:

- Objective measures of lung function
- Symptoms
- Incidence of mild and severe acute exacerbations
- Use of systemic corticosteroids
- Adverse effects of treatment
- Health-related quality of life
- Mortality

A list of specific measures for each of these outcomes was devised for the data analysis (refer to Section 5.1.5.1 of the Assessment Report [see the "Availability of Companion Documents" field]).

Titles and abstracts of studies identified by the searches were screened by one reviewer based on the above inclusion/exclusion criteria. A second reviewer checked a random 10% of these. Any discrepancies were resolved through discussion and involvement of a third reviewer where necessary.

Full papers of studies included on title or abstract were requested for further assessment. All full papers were screened independently by one reviewer and checked by a second. Any discrepancies were resolved by discussion with involvement of a third reviewer where necessary.

All included papers were keyworded in the Reference Manager database as to their intervention and comparator, and were coded for the synthesis framework (see Section 5.1.5 in the Assessment Report [see "Availability of Companion Documents" field]) to enable efficient retrieval of sub-sets of studies for analysis.

## **Economic Analysis**

### **Search Strategy and Critical Appraisal Methods**

MEDLINE, EMBASE, and the Cochrane Library (Issue 1, 2006) were searched for cost-effectiveness studies that assessed the cost-effectiveness of BDP, BUD, and FP dipropionate used alone or in combination with a LABA, SAL or FF within their licensed indications and the appropriate step of the British Thoracic Society/Scottish Intercollegiate Guidelines Network (BTS/SIGN) guidelines. The full search strategy is displayed in Appendix 3 of the Assessment Report (see the "Availability of Companion Documents" field).

#### *Inclusion and Exclusion Criteria*

Cost-effectiveness analyses, cost-utility analyses, cost-benefit analyses and cost-consequence analyses were eligible for inclusion in the cost-effectiveness review. In addition, separate submissions were received from GlaxoSmithKline, AstraZeneca, Meda Pharmaceuticals Ltd, and Trinity-Chiesi Pharmaceuticals Ltd as part of the NICE technology appraisals process.

## **NUMBER OF SOURCE DOCUMENTS**

### **Clinical Effectiveness**

A total of 34 records describing 25 studies were included.

Of the 25 studies:

- 3 were conference abstracts published from 2004 onwards
- 6 were systematic reviews (of which 5 were Cochrane reviews)
- 16 were fully published randomized controlled trials (RCTs) (of which 12 had been included in the Cochrane reviews)

### **Economic Analysis**

- No cost-effectiveness studies for the relevant comparators in the treatment of chronic asthma in children less than 12 years of age were identified in the literature.
- Four cost-effectiveness studies were provided by industry.

### **METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE**

Expert Consensus

### **RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE**

Not applicable

### **METHODS USED TO ANALYZE THE EVIDENCE**

Meta-Analysis  
Review of Published Meta-Analyses  
Systematic Review with Evidence Tables

### **DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE**

**Note from the National Guideline Clearinghouse (NGC):** The National Institute for Health and Clinical Excellence (NICE) commissioned an independent academic centre to perform a systematic literature review on the technology considered in this appraisal and prepare an assessment report. The assessment report for this technology appraisal was prepared by the Peninsula Technology Assessment Group (PenTAG), Peninsula Medical School and by the Southampton Health Technology Assessment Centre (SHTAC), Wessex Institute for Health Research and Development (WIHRD), University of Southampton (see the "Availability of Companion Documents" field).

### **Clinical Effectiveness**

#### **Data Extraction Strategy**

All trials, except those included in the relevant Cochrane reviews, were fully data extracted. Data were entered into a structured template by one reviewer and checked by a second. Any discrepancies between the data extracted and the original trial report were resolved and the data extraction finalized (refer to

Appendix 4 of the Assessment Report [see the "Availability of Companion Documents" field]).

### **Critical Appraisal Strategy**

The methodological quality of the trials supplemental to the Cochrane reviews was assessed according to criteria specified by the Centre for Reviews and Dissemination (CRD) (see Appendix 4 of the Assessment Report [see the "Availability of Companion Documents" field]). Quality was assessed by one reviewer and their judgements were checked by a second. Where there was disagreement a third reviewer was consulted and a final judgement agreed.

### **Methods of Data Synthesis**

Results of the included trials were synthesised narratively with use of meta-analyses where possible and appropriate. A framework was devised for the analysis and presentation of results, based on the step wise approach recommended in the British Thoracic Society/Scottish Intercollegiate Guidelines Network (BTS/SIGN) guidelines.

The review questions were:

1. Which inhaled corticosteroid (ICS) is the most effective at low doses (200 to 400 micrograms per day beclometasone dipropionate/budesonide (BDP/BUD) equivalent) (Step 2 of the guidelines)
2. Which ICS is the most effective at high doses (400 to 800 micrograms per day BDP/BUD equivalent) (Step 4 of the guidelines)
3. Which is more effective – an ICS or a combination inhaler containing an ICS and a long-acting beta 2 agonist (LABA)? (Step 2/Step 3 of the guidelines)

This question is sub-divided based on two categories of trials:

- 3a. Where the dose of the ICS is higher when used alone, compared to the dose in the combination inhaler.
- 3b. Where the dose of the ICS is the same/similar in both treatments
4. Which is more effective – an ICS and a LABA administered in separate inhalers or in a combination inhaler?
5. Which is the more effective – a combination inhaler containing formoterol fumarate (FF) and BUD, or a combination inhaler containing salmeterol (SAL) and fluticasone propionate (FP)?

Each review question was stratified according to a number of pair-wise comparisons of the inhaled steroids and, where relevant, LABAs (where evidence allows). In addition, some trials were included in more than one pair-wise comparison as they evaluated two or more ICSs (e.g., a three arm trial comparing FP with BUD and BDP).

Trials were also divided according to whether or not a parallel-group or cross-over design was used. Where necessary trials were then further divided according to the nominal dose ratio employed, following the approach used in the Cochrane review of FP compared to BUD or BDP.

In summary, the framework comprised sets of trials grouped according to which review question, pair-wise comparison, study design, and dose ratio they related to.

### **Narrative Synthesis**

Within each pair-wise comparison all included trials were tabulated for their key characteristics, and described in the text (e.g., trial duration, patient profile, outcome measures, methodological quality). In addition, more detailed data on the trials are available in Appendix 5 of the Assessment Report (see the "Availability of Companion Documents" field).

### **Meta-Analysis**

The feasibility and appropriateness of meta-analysis was considered once narrative syntheses had been completed. The decision to pool was influenced by the likelihood that the trials were clinically homogeneous, and that the necessary data were available. Potential clinical heterogeneity was assumed if there were differences between trials in dose, disease severity, or treatment duration.

### **Economic Analysis**

#### **Systematic Review of Cost-Effectiveness Studies**

No published economic evaluations were identified that had assessed the use of the inhaled corticosteroids -- BDP, BEC or FP, used alone or in combination with a LABA -- SAL or FF in children. Additionally the review of the industry submissions highlighted a number of further concerns.

Four submissions to NICE included cost-effectiveness analysis. Two of these included cost-effectiveness analysis (CEA) and two included cost minimisation analysis (CMA). Submissions were made by GlaxoSmithKline (GSK), Astra-Zeneca (AZ), Meda Pharmaceuticals, and Trinity-Chiesi. Table 20 of the Assessment Report (see the "Availability of Companion Documents" field) shows a summary of the submissions received by industry through the appraisal process.

The Assessment Group developed their own model to address the specific research questions, in the context of a United Kingdom (UK) paediatric population and of the BTS/SIGN guidelines.

Refer to Sections 6.10 and 6.11 of the Assessment Report (see the "Availability of Companion Documents" field) for detailed information on economic analysis.

## **METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Expert Consensus

## **DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS**

### **Considerations**

Technology appraisal recommendations are based on a review of clinical and economic evidence.

### **Technology Appraisal Process**

The National Institute for Health and Clinical Excellence (NICE) invites 'consultee' and 'commentator' organisations to take part in the appraisal process. Consultee organisations include national groups representing patients and carers, the bodies representing health professionals, and the manufacturers of the technology under review. Consultees are invited to submit evidence during the appraisal and to comment on the appraisal documents.

Commentator organisations include manufacturers of the products with which the technology is being compared, the National Health Service (NHS) Quality Improvement Scotland and research groups working in the area. They can comment on the evidence and other documents but are not asked to submit evidence themselves.

NICE then commissions an independent academic centre to review published evidence on the technology and prepare an 'assessment report'. Consultees and commentators are invited to comment on the report. The assessment report and the comments on it are then drawn together in a document called the evaluation report.

An independent Appraisal Committee then considers the evaluation report. It holds a meeting where it hears direct, spoken evidence from nominated clinical experts, patients and carers. The Committee uses all the evidence to make its first recommendations, in a document called the 'appraisal consultation document' (ACD). NICE sends all the consultees and commentators a copy of this document and posts it on the NICE website. Further comments are invited from everyone taking part.

When the Committee meets again it considers any comments submitted on the ACD; then it prepares its final recommendations in a document called the 'final appraisal determination' (FAD). This is submitted to NICE for approval.

Consultees have a chance to appeal against the final recommendations in the FAD. If there are no appeals, the final recommendations become the basis of the guidance that NICE issues.

### **Who is on the Appraisal Committee?**

NICE technology appraisal recommendations are prepared by an independent committee. This includes health professionals working in the NHS and people who are familiar with the issues affecting patients and carers. Although the Appraisal Committee seeks the views of organisations representing health professionals,

patients, carers, manufacturers and government, its advice is independent of any vested interests.

## **RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS**

Not applicable

## **COST ANALYSIS**

Submissions were received from four manufacturers and each was specific to the manufacturer's product(s). The submissions from Trinity Chiesi and Meda Pharmaceuticals specifically compared their products with devices containing the same drug, whereas the submissions from AstraZeneca and GlaxoSmithKline compared their products with different inhaled corticosteroids (ICSs). All submissions included some analyses that assumed equal efficacy between drugs and products and compared the costs of different products. Two of the submissions also included cost-utility analyses (AstraZeneca and GlaxoSmithKline). The Assessment Group did not model the cost-utility of ICSs because of incomplete trial evidence; it carried out cost-comparison analyses if it was considered appropriate to assume equal efficacy between the drugs, and it otherwise conducted exploratory cost-offset analyses.

Neither the Assessment Group nor consultees identified any existing published cost-effectiveness studies with the relevant comparator for the population of children younger than 12 years with chronic asthma.

To compare the different ICSs, the Assessment Group calculated the mean annual treatment cost per child for each specific preparation. The doses of each ICS were calculated based on 200 micrograms per day, 400 micrograms per day, and 800 micrograms per day of chlorofluorocarbon (CFC)-containing beclometasone dipropionate (or equivalent). For each of the above, an unweighted average (based on the number of products) and a weighted average (based on annual quantities sold) were calculated. Products were categorised as pressurized metered dose inhaler (pMDI) with CFC, pMDI with hydrofluoroalkane (HFA), or dry powder inhaler (DPI), with separate analyses including and excluding CFC-propelled products.

Refer to sections 4.2 of the original guideline document for more information.

## **METHOD OF GUIDELINE VALIDATION**

External Peer Review

## **DESCRIPTION OF METHOD OF GUIDELINE VALIDATION**

Consultee organizations from the following groups were invited to comment on the draft scope, Assessment Report and the Appraisal Consultation Document (ACD) and were provided with the opportunity to appeal against the Final Appraisal Determination.

- Manufacturer/sponsors

- Professional/specialist and patient/carer groups
- Commentator organisations (without the right of appeal)

In addition, individuals selected from clinical expert and patient advocate nominations from the professional/specialist and patient/carer groups were also invited to comment on the ACD.

## RECOMMENDATIONS

### MAJOR RECOMMENDATIONS

This guidance should be read in conjunction with "Inhaler devices for routine treatment of chronic asthma in older children (aged 5 to 15 years)" (see the National Guideline Clearinghouse [NGC] summary of the National Institute for Health and Clinical Excellence (NICE) [technology appraisal guidance 38](#)), and "Guidance on the use of inhaler systems (devices) in children under the age of 5 years with chronic asthma, NICE technology appraisal guidance 10" (see the [NICE Web site](#)). The future discontinuation of chlorofluorocarbon (CFC)-containing inhaler devices will affect the range of devices available but does not affect the guidance.

For children under the age of 12 years with chronic asthma in whom treatment with an inhaled corticosteroid (ICS) is considered appropriate, the least costly product that is suitable for an individual child (taking into consideration technology appraisal guidance 38 and 10), within its marketing authorisation, is recommended.

For children under the age of 12 years with chronic asthma in whom treatment with an ICS and long-acting beta-2 agonist (LABA) is considered appropriate, the following apply.

- The use of a combination device within its marketing authorisation is recommended as an option.
- The decision to use a combination device or the two agents in separate devices should be made on an individual basis, taking into consideration therapeutic need and the likelihood of treatment adherence.
- If a combination device is chosen then the least costly device that is suitable for the individual child is recommended.

### CLINICAL ALGORITHM(S)

None provided

## EVIDENCE SUPPORTING THE RECOMMENDATIONS

### TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence supporting the recommendations is not specifically stated.

## BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

### POTENTIAL BENEFITS

Appropriate use of inhaled corticosteroids for the treatment of chronic asthma in children under the age of 12 years

### POTENTIAL HARMS

- The side effects of inhaled corticosteroids (ICSs) may be local (following deposition in the upper airways) or systemic (following absorption into the bloodstream). Local adverse effects may include dysphonia, oropharyngeal candidiasis, cough, throat irritation, and reflex bronchospasm. Local adverse effects can be minimised by optimising inhaler technique and using a spacer with the inhaler device.
- Systemic adverse effects may include suppression of the hypothalamic-pituitary-adrenal axis, osteoporosis, skin thinning and easy bruising, cataract formation and glaucoma, and growth retardation in children and adolescents. Systemic adverse effects tend to be associated with higher doses of corticosteroids and can differ depending on both the drug and the delivery system.

For full details of side effects and contraindications, see the summaries of product characteristics available at <http://emc.medicines.org.uk/>.

## QUALIFYING STATEMENTS

### QUALIFYING STATEMENTS

- This guidance represents the view of the Institute, which was arrived at after careful consideration of the available evidence. Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. The guidance does not, however, override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.
- There is very limited evidence available for the efficacy and safety of inhaled corticosteroids (ICSs) and long-acting beta 2 agonists (LABAs) in children. There is a lack of evidence comparing ICS at a higher dose with ICS and LABA in combination and comparing the combination products with each other. In the absence of any evidence concerning the effectiveness of ICS at higher dose with ICS and LABA, a cost consequence analysis gives mixed results.

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

- The Healthcare Commission assesses the performance of National Health Service (NHS) organisations in meeting core and developmental standards set by the Department of Health in "Standards for better health" issued in July

2004. The Secretary of State has directed that the NHS provides funding and resources for medicines and treatments that have been recommended by National Institute for Health and Clinical Excellence (NICE) technology appraisals normally within 3 months from the date that NICE publishes the guidance. Core standard C5 states that healthcare organisations should ensure they conform to NICE technology appraisals.

- "Healthcare standards for Wales" was issued by the Welsh Assembly Government in May 2005 and provides a framework both for self-assessment by healthcare organisations and for external review and investigation by Healthcare Inspectorate Wales. Standard 12a requires healthcare organisations to ensure that patients and service users are provided with effective treatment and care that conforms to NICE technology appraisal guidance. The Assembly Minister for Health and Social Services issued a Direction in October 2003 which requires Local Health Boards and NHS Trusts to make funding available to enable the implementation of NICE technology appraisal guidance, normally within 3 months.
- NICE has developed tools to help organisations implement this guidance (listed below). These are available on NICE website ([www.nice.org.uk/TA131](http://www.nice.org.uk/TA131); see also the "Availability of Companion Documents" field).
  - Audit criteria to monitor local practice
  - A costing statement explaining the resource impact of this guidance

## **IMPLEMENTATION TOOLS**

Audit Criteria/Indicators  
Patient Resources  
Quick Reference Guides/Physician Guides  
Resources

For information about [availability](#), see the "Availability of Companion Documents" and "Patient Resources" fields below.

## **INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES**

### **IOM CARE NEED**

Living with Illness

### **IOM DOMAIN**

Effectiveness  
Patient-centeredness

## **IDENTIFYING INFORMATION AND AVAILABILITY**

### **BIBLIOGRAPHIC SOURCE(S)**

National Institute for Health and Clinical Excellence (NICE). Inhaled corticosteroids for the treatment of chronic asthma in children under the age of 12 years. London

(UK): National Institute for Health and Clinical Excellence (NICE); 2007 Nov. 35 p. (Technology appraisal guidance; no. 131).

## **ADAPTATION**

Not applicable: The guideline was not adapted from another source.

## **DATE RELEASED**

2007 Nov

## **GUIDELINE DEVELOPER(S)**

National Institute for Health and Clinical Excellence (NICE) - National Government Agency [Non-U.S.]

## **SOURCE(S) OF FUNDING**

National Institute for Health and Clinical Excellence (NICE)

## **GUIDELINE COMMITTEE**

Appraisal Committee

## **COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE**

*Committee Members:* Dr Jane Adam, Radiologist, St George's Hospital, London; Professor AE Ades, MRC Senior Scientist, MRC Health Services Research Collaboration, Department of Social Medicine, University of Bristol; Anne Allison, Nurse Clinical Adviser, Healthcare Commission; Dr Tom Aslan, General Practitioner, Stockwell, London; Professor David Barnett (Chair) Professor of Clinical Pharmacology, University of Leicester; Mrs Elizabeth Brain, Lay Member; Dr Karl Claxton, Health Economist, University of York; Dr Richard Cookson, Senior Lecturer in Health Economics, School of Medicine Health Policy and Practice, University of East Anglia; Mrs Fiona Duncan, Clinical Nurse Specialist, Anaesthetic Department, Blackpool Victoria Hospital, Blackpool; Professor Christopher Eccleston, Director Pain Management Unit, University of Bath; Dr Paul Ewings, Statistician, Taunton & Somerset NHS Trust, Taunton; Professor John Geddes, Professor of Epidemiological Psychiatry, University of Oxford; Mr John Goulston, Director of Finance, Barts and the London NHS Trust; Mr Adrian Griffin, Health Outcomes Manager, Johnson & Johnson Medical Ltd; Ms Linda Hands, Clinical Reader in Surgery, University of Oxford; Dr Rowan Hillson, Consultant Physician, Diabeticare, The Hillingdon Hospital; Professor Philip Home (Vice Chair) Professor of Diabetes Medicine, University of Newcastle upon Tyne; Dr Terry John, General Practitioner, The Firs, London; Professor Richard Lilford, Professor of Clinical Epidemiology, Department of Public Health and Epidemiology, University of Birmingham; Dr Simon Maxwell, Senior Lecturer in Clinical Pharmacology and Honorary Consultant Physician, Queens Medical Research Institute, University of Edinburgh; Dr Alec Miners, Lecturer in Health Economics, London School of Hygiene and Tropical Medicine; Ms Judith Paget, Chief Executive, Caerphilly Local Health Board, Wales; Dr Ann Richardson, Lay Member; Mr Mike Spencer, General

Manager, Clinical Support Services, Cardiff and Vale NHS Trust; Dr Simon Thomas, Consultant Physician, General Medicine and Clinical Pharmacology, Newcastle Hospitals NHS Trust; Mr David Thomson, Lay Member; Dr Norman Vetter, Reader, Department of Epidemiology, Statistics and Public Health, School of Medicine, Cardiff University, Cardiff; Dr Paul Watson, Director of Commissioning, East of England Strategic Health Authority

## **FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST**

Committee members are asked to declare any interests in the technology to be appraised. If it is considered there is a conflict of interest, the member is excluded from participating further in that appraisal.

## **GUIDELINE STATUS**

This is the current release of the guideline.

## **GUIDELINE AVAILABILITY**

Electronic copies: Available in Portable Document Format (PDF) format from the [National Institute for Health and Clinical Excellence \(NICE\) Web site](#).

## **AVAILABILITY OF COMPANION DOCUMENTS**

The following are available:

- Inhaled corticosteroids for the treatment of chronic asthma in children under the age of 12 years. Quick reference guide. London (UK): National Institute for Health and Clinical Excellence (NICE); 2007 Nov. 2 p. (Technology appraisal 131). Available in Portable Document Format (PDF) from the [National Institute for Health and Clinical Excellence \(NICE\) Web site](#).
- Inhaled corticosteroids for the treatment of chronic asthma in children under the age of 12 years. Audit criteria. London (UK): National Institute for Health and Clinical Excellence (NICE); 2007 Nov. 10 p. (Technology appraisal 131). Available in Portable Document Format (PDF) from the [NICE Web site](#).
- Costing statement: inhaled corticosteroids for the treatment of chronic asthma in children under the age of 12 years. London (UK): National Institute for Health and Clinical Excellence (NICE); 2007 Nov. 4 p. (Technology appraisal 131). Available in Portable Document Format (PDF) from the [NICE Web site](#).
- Inhaled corticosteroids and long-acting beta2-agonists for the treatment of chronic asthma in children under the age of 12 years: systematic review and economic analysis. Assessment report. 2006 Dec 20. 261 p. Available in Portable Document Format (PDF) from the [NICE Web site](#).

Print copies: Available from the National Health Service (NHS) Response Line 0870 1555 455. ref: N1400. 11 Strand, London, WC2N 5HR.

## **PATIENT RESOURCES**

The following is available:

- Inhaled corticosteroids for the treatment of chronic asthma in children under the age of 12 years. Understanding NICE guidance - Information for people who use NHS services. London (UK): National Institute for Health and Clinical Excellence (NICE); 2007 Nov. 4 p. (Technology appraisal 131).

Electronic copies: Available in Portable Document Format (PDF) from the [National Institute for Health and Clinical Excellence \(NICE\) Web site](#).

Print copies: Available from the NHS Response Line 0870 1555 455. ref: N1401. 11 Strand, London, WC2N 5HR.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

## **NGC STATUS**

This NGC summary was completed by ECRI Institute on January 25, 2008.

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