

High dose inhaled corticosteroids (ICS) in asthma

**Support for education and learning:
Academic detailing aid**

2nd Edition July 2012

This 'High dose inhaled corticosteroids (ICS) in asthma' academic detailing aid is designed to be used by experienced prescribing and medicines management personnel to support discussions with prescribers on the key prescribing and medicines optimisation messages from the 'NPC Key Therapeutic Topics – medicines management options for local implementation' document. This academic detailing aid is not NICE guidance.

Issue date: 2012

2nd Edition issued July 2012

Changes to the 2nd edition – information from Lipworth BJ. Arch Intern Med 1999; 159: 941–55 on page 6 has been removed.

Implementation of NICE guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement NICE guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in NICE guidance should be interpreted in a way that would be inconsistent with compliance with those duties.

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Supporting notes for the use of NICE academic detailing aids:

High dose inhaled corticosteroids (ICS) in asthma

- NICE academic detailing aids (ADAs) are designed to be used by experienced prescribing and medicines management personnel to support discussions with prescribers on the key prescribing and medicines optimisation messages from the 'NPC Key Therapeutic Topics – medicines management options for local implementation' document (available from www.npc.nhs.uk/qipp/).
- Before using any NICE ADA, users must familiarise themselves with the content of the relevant QIPP Key Slides and accompanying notes (available to download from www.npc.nhs.uk/qipp/).
- Users are also advised to access the QIPP comparator data on this topic and familiarise themselves with local and national prescribing variations at www.nhsbsa.nhs.uk/PrescriptionServices/3334.aspx.
- The principles that support the use of academic detailing to improve clinical decision-making have been documented widely. As far back as 1990, Soumerai and Avorn described how ADAs had been used to reduce inappropriate prescribing as well as unnecessary health care expenditure.¹ The authors highlighted the following techniques as being particularly important to successful academic detailing:
 1. *Conducting interviews to investigate baseline knowledge and motivations for current prescribing patterns.*
 2. *Focusing programmes on specific categories of physicians as well as on their opinion leaders.*
 3. *Defining clear educational and behavioural objectives.*
 4. *Establishing credibility through a respected organisational identity, referencing authoritative and unbiased sources of information, and presenting both sides of controversial issues.*
 5. *Stimulating active physician participation in educational interactions.*
 6. *Using concise graphic educational materials.*
 7. *Highlighting and repeating the essential messages.*

8. *Providing positive reinforcement to improved practices in follow-up visits.*

- The National Audit Office's 2007 publication, '**Influencing Prescribing Cost and Quality – a suggested communication plan for prescribing advisers**', suggests further ways to increase the impact of communication with clinicians². This includes sections on visiting clinicians, building a relationship, the relationship process, getting agreement, getting your plans adopted, and supporting activities, as well as follow up and monitoring.

Acronyms used in this ADA include: **ICS**: inhaled corticosteroid(s)

References:

1. Soumerai SB, Avorn J. Principles of educational outreach ('academic detailing') to improve clinical decision making. *JAMA* 1990;263:549–56
2. The National Audit Office. Influencing Prescribing Cost and Quality – a suggested communication plan for prescribing advisers. National Audit Office. 2007

Academic detailing aid

High dose inhaled corticosteroids in asthma

Prescribing considerations



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What are the issues here?

- High doses of inhaled corticosteroids (ICS) are associated with an increased risk of systemic side effects, including adrenal suppression and growth retardation in children¹⁻⁴.
- Stepping down therapy once asthma is controlled is recommended, but often not implemented leaving some patients over-treated¹.

What would good practice look like?

- All patients should be maintained on the lowest possible dose of ICS which effectively controls their asthma symptoms¹.
- Use of high dose ICS should be considered in only a small proportion of patients with asthma¹.
- Reductions in ICS dose should be considered every three months, decreasing the dose by 25 to 50% each time, where clinically appropriate¹.
- Children's growth (height and weight centile) should be monitored annually¹.

Why is this important?

- Safety warnings have been issued about the use of high dose ICS, particularly in children and in relation to fluticasone²⁻⁵.
- UK primary care data suggest that although prescribing of high dose ICS in children has reduced, high doses are still used in a minority of children, including children classified as having mild or intermittent asthma⁶.
- Adverse effects associated with long-term ICS use are rarely monitored⁷.
- Stepping down ICS dose can be achieved without compromising asthma control⁸.

What can we do?

- Inform all patients (and their carers) about the important benefits and safety issues of ICS (see overleaf).
- Review the use of ICS routinely in patients with asthma, particularly in children and those on high doses.
- Step down the dose and use of ICS where clinically appropriate in patients with asthma. Review patients regularly as they step down.
- Provide steroid cards routinely for patients on prolonged treatment with high doses of ICS⁴.

Note: 'High dose ICS' refers to doses used at Step 4 of the SIGN/BTS asthma guideline¹ i.e. 800–2000 micrograms/day* in adults; 400–800 micrograms/day* in children aged 5–12 years (* beclometasone or equivalent).

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A framework for decision-making

Efficacy <ul style="list-style-type: none">Standard dose ICS (200–800 micrograms/day* in adults; 200–400 micrograms/day* in children ≤12 years) are the first choice preventer drug for both adults and children¹.In mild to moderate asthma, starting at very high doses of ICS and stepping down is not beneficial¹.Doubling the dose at time of exacerbation is not recommended¹.	Safety <ul style="list-style-type: none">High dose ICS carries a risk of systemic side-effects e.g. adrenal suppression, growth retardation, decrease in bone mineral density, cataract and glaucoma^{1–4}.Psychological or behavioural effects may also occur e.g. hyperactivity, depression and aggression (particularly in children)⁵.Fluticasone potency is double that of beclometasone or budesonide¹.
Cost <ul style="list-style-type: none">Higher strength ICS formulations typically attract higher acquisition costs within single or combination inhaler brands.If a combination inhaler is chosen, the least costly device that is suitable for the individual is recommended^{9,10}.Stepping down to lower strength inhalers may bring cost-savings, in addition to reducing the risk of dose-related ICS adverse effects.	Patient factors <ul style="list-style-type: none">When stepping down, consider the severity of asthma, side-effects, time on current dose, beneficial effect achieved and patient preference¹.Choice of inhaler device — ICS metered dose inhalers (MDI) are as effective as ICS dry powder inhalers¹. A spacer should be used for high dose ICS delivered via MDI¹.Combination inhalers may offer less flexibility for dose titration and stepping down, but may improve compliance.
References: <ol style="list-style-type: none">1. SIGN/BTS. British guideline on the management of asthma. May 2008, revised May 20112. MHRA/CSM. Current Problems in Pharmacovigilance. August 20013. MHRA/CSM. Current Problems in Pharmacovigilance. October 20024. MHRA/CSM. Current Problems in Pharmacovigilance. May 20065. MHRA/CHM. Drug Safety Update. September 20106. Thomas M, et al. BMC Pulmonary Medicine 2010;10:297. Ducharme FM, et al. Cochrane Database of Systematic Reviews 2010, Issue 4. DOI: 10.1002/14651858.CD005533.pub28. Hawkins G, et al. BMJ 2003;326:1115–209. NICE. Technology appraisal 131. November 200710. NICE. Technology appraisal 138. March 2008	

Related NICE guidance:

- Asthma (in children) — corticosteroids. NICE technology appraisal 131 (2007) accessible at <http://guidance.nice.org.uk/TA131>
- Asthma (in adults) — corticosteroids. NICE technology appraisal 138 (2008) accessible at <http://guidance.nice.org.uk/TA138>