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.

National Institute for Health and Clinical Excellence

MidCity Place, 71 High Holborn, London WC1V 6NA  www.nice.org.uk

© National Institute for Health and Clinical Excellence, 2012. All rights reserved. This material may be freely reproduced for educational and not-for-profit purposes. No reproduction by or for commercial organisations, or for commercial purposes, is allowed without the express written permission of NICE.
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.*
  7. *Highlighting and repeating the essential messages.*

¹ Academic detailing aid: High dose inhaled corticosteroids in asthma. July 2012
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 clinicians\(^2\). 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

### Academic detailing aid
High dose inhaled corticosteroids in asthma

**Prescribing considerations**

<table>
<thead>
<tr>
<th>What are the issues here?</th>
<th>What would good practice look like?</th>
</tr>
</thead>
</table>
| - High doses of inhaled corticosteroids (ICS) are associated with an increased risk of systemic side effects, including adrenal suppression and growth retardation in children\(^1\)\(^-\)\(^4\).  
- Stepping down therapy once asthma is controlled is recommended, but often not implemented leaving some patients over-treated\(^1\). | - All patients should be maintained on the lowest possible dose of ICS which effectively controls their asthma symptoms\(^1\).  
- Use of high dose ICS should be considered in only a small proportion of patients with asthma\(^1\).  
- Reductions in ICS dose should be considered every three months, decreasing the dose by 25 to 50% each time, where clinically appropriate\(^1\).  
- Children's growth (height and weight centile) should be monitored annually\(^1\). |

<table>
<thead>
<tr>
<th>Why is this important?</th>
<th>What can we do?</th>
</tr>
</thead>
</table>
| - Safety warnings have been issued about the use of high dose ICS, particularly in children and in relation to fluticasone\(^2\)\(^-\)\(^5\).  
- 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 asthma\(^6\).  
- Adverse effects associated with long-term ICS use are rarely monitored\(^7\).  
- Stepping down ICS dose can be achieved without compromising asthma control\(^8\). | - 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 ICS\(^4\). |

Note: ‘High dose ICS’ refers to doses used at Step 4 of the SIGN/BTS asthma guideline\(^1\) i.e. 800–2000 micrograms/day\(^*\) in adults; 400–800 micrograms/day\(^*\) in children aged 5–12 years (\(^*\) beclometasone or equivalent).
# High dose inhaled corticosteroids in asthma

## A framework for decision-making

### Efficacy
- 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 children\(^1\).
- In mild to moderate asthma, starting at very high doses of ICS and stepping down is not beneficial\(^1\).
- Doubling the dose at time of exacerbation is not recommended\(^1\).

### Safety
- 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 budesonide\(^1\).

### Cost
- 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
- When stepping down, consider the severity of asthma, side-effects, time on current dose, beneficial effect achieved and patient preference\(^1\).
- Choice of inhaler device — ICS metered dose inhalers (MDI) are as effective as ICS dry powder inhalers\(^1\). A spacer should be used for high dose ICS delivered via MDI\(^1\).
- Combination inhalers may offer less flexibility for dose titration and stepping down, but may improve compliance.

## References:
1. SIGN/BTS. British guideline on the management of asthma. May 2008, revised May 2011
2. MHRA/CSM. Current Problems in Pharmacovigilance, August 2001
3. MHRA/CSM. Current Problems in Pharmacovigilance, October 2002
5. MHRA/CHM. Drug Safety Update, September 2010
Related NICE guidance: