Stepping down asthma treatment guidelines

The BTS/SIGN guidance recommends that patients are prescribed the lowest inhaled corticosteroid (ICS) dose that controls their asthma as this minimises the potential for side-effects (see appendix 1). Therefore the guidelines recommend increasing and decreasing ICS doses according to the patient’s asthma symptoms. However whilst patients often have their ICS stepped-up when their symptoms worsen, stepping down doses can be trickier. The aim of this guidance is to facilitate this “stepping down” process. The following patients should be considered for a reduction of ICS dose during their asthma review:

Include patients:
- with a confirmed diagnosis of asthma who have been free of asthma symptoms for 3 months or more.

Exclude patients:
- with ongoing symptoms, or needing to use Short Acting Beta Agonist (SABA) e.g. salbutamol, terbutaline three times a week or more [N.B. some patients are still incorrectly directed to use SABAs on a regular basis e.g. QDS not PRN]
- who have had an exacerbation, oral corticosteroid course, or visit to GP or hospital because of worsening asthma, in preceding three months.
- with serious illness, substance misuse, or pregnancy.
- who cannot use a peak flow meter.

Method:
- Check with the patient that their asthma is well controlled i.e. in the last few weeks:
  - have they had difficulty sleeping because of your asthma symptoms (including cough)?
  - have they had your usual asthma symptoms during the day (cough, wheeze, chest tightness or breathlessness)?
  - has asthma interfered with their usual activities (e.g. housework, work/school etc.)? and ask if they agree to try stepping-down their treatment.
- Record objective measurements of their current lung function e.g. Peak flow or spirometry, and check inhaler technique by asking the patient to demonstrate.
- Check the patient’s adherence to the prescription for both ICS and SABA; look at the prescription history and calculate usage to see how it matches with expected usage. This will enable you make a better judgement of how or whether to reduce the dose. Check the patient understands the need for daily preventative therapy.
- The usual protocol is to decrease the ICS dose by 25% to 50% per 3-month visit. However with middle range fluticasone preparations e.g. Seretide 125 Evohaler or Flutiform 125/5 pMDI a step-down to a lower dose of Seretide or Flutiform represents a 60% reduction in ICS dose. Whilst stepping down for appropriate patients is still recommended, additional care is required. See Stepping Down Flow Charts on Pathfinder
- Ideally the dose of LABA (long-acting beta-agonist) should remain constant during this process, so only one drug element is reduced at a time, but this is not always possible when stepping down using combination inhalers.
- For prescribing information please refer to the individual product’s Summary of Product Characteristics (SPC). You can view and download SPCs and Patient Information Leaflets (PILs) from the electronic Medicine Compendium (eMC) available at http://emc.medicines.org.uk/

Patient information
- Make sure the patient has an up-to-date written personalised asthma action plan. This should include:
  - When to increase treatment (as defined by symptoms or peak expiratory flow rate).
  - How to change treatment in case of deterioration and when to go back to maintenance medication.
  - When to seek medical help.
- If the ICS total daily dose is 800-1,000microgram BDP equivalent, a steroid card is recommended.
- If the ICS total daily dose is 1,000microgram BDP equivalent or greater, a steroid card is required.
- Agree a review date for 3 months’ time.
Appendix 1  Dose response curve for inhaled corticosteroids in asthma

The x-axis shows the total daily dose of fluticasone propionate (FP), which is approximately equivalent in clinical effect to microfine particle beclometasone and approximately twice as potent as budesonide and standard Beclometasone Dipropionate (BDP).

Steroid warning cards:

If the ICS total daily dose is 800-1,000 microgram BDP equivalent (400-500 microgram FP), a steroid card is recommended.\(^5\)

If the ICS total daily dose is 1,000 microgram BDP equivalent (500 microgram FP) or greater, a steroid card is required.\(^5\)
Table 1: Low dose (up to 500 microgram BDP equivalent) ICS/LABA combination inhaler product and price comparison

<table>
<thead>
<tr>
<th>Product</th>
<th>ICS/LABA quantity per puff</th>
<th>Beclometasone (BDP) equivalent daily dose</th>
<th>Dose</th>
<th>Type of inhaler device</th>
<th>Cost for 30 days</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fostair® 100/6 Inhaler</strong></td>
<td>Extra-fine particle</td>
<td>500 micrograms</td>
<td>1 puff twice daily</td>
<td>MDI</td>
<td>£14.66</td>
</tr>
<tr>
<td></td>
<td>Beclometasone 100 micrograms (equivalent to 250 micrograms BDP non extra fine)/formoterol 6 micrograms</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fostair 100/6 NEXThaler®</strong></td>
<td>Extra-fine</td>
<td>500 micrograms</td>
<td>1 puff twice daily</td>
<td>Breath actuated dry powder inhaler</td>
<td>£14.66</td>
</tr>
<tr>
<td></td>
<td>Beclometasone 100 micrograms (equivalent to 250 micrograms BDP non extra fine)/formoterol 6 micrograms</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DuoResp Spiromax® 160/4.5 inhaler</strong></td>
<td>Budesonide 200 micrograms/formoterol 6 micrograms (expressed as delivered dose on strength)</td>
<td>400 micrograms</td>
<td>1 puff twice daily</td>
<td>Breath actuated dry powder inhaler</td>
<td>£14.99</td>
</tr>
<tr>
<td><strong>Flutiform® 50/5 inhaler</strong></td>
<td>Fluticasone 50 micrograms/formoterol 5 micrograms</td>
<td>400 micrograms</td>
<td>2 puffs twice daily</td>
<td>MDI</td>
<td>£18.00</td>
</tr>
<tr>
<td><strong>Seretide® 50 Evohaler</strong></td>
<td>Fluticasone 50 micrograms/salmeterol 25 micrograms</td>
<td>400 micrograms</td>
<td>2 puffs twice daily</td>
<td>MDI</td>
<td>£18.00</td>
</tr>
<tr>
<td><strong>Seretide® 100 Accuhaler</strong></td>
<td>Fluticasone 100 micrograms/salmeterol 50 micrograms</td>
<td>400 micrograms</td>
<td>1 puff twice daily</td>
<td>Breath-actuated</td>
<td>£18.00</td>
</tr>
<tr>
<td><strong>Symbicort® 200/6 Turbohaler</strong></td>
<td>Budesonide 200 micrograms/formoterol 6 micrograms</td>
<td>400 micrograms</td>
<td>1 puff twice daily</td>
<td>Breath-actuated dry powder</td>
<td>£19.00</td>
</tr>
<tr>
<td><strong>Symbicort® 100/6 Turbohaler</strong></td>
<td>Budesonide 100 micrograms/formoterol 6 micrograms</td>
<td>400 micrograms</td>
<td>2 puffs twice daily</td>
<td>Breath-actuated dry powder</td>
<td>£33.00</td>
</tr>
</tbody>
</table>
Table 2: Moderate dose (up to 800microgram BDP equivalent) ICS/LABA combination inhaler product and price comparison

<table>
<thead>
<tr>
<th>Product</th>
<th>ICS/LABA quantity per puff</th>
<th>BDP equivalent daily dose</th>
<th>Dose</th>
<th>Type of inhaler device</th>
<th>Cost for 30 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>DuoResp Spiromax® 160/4.5 inhaler</td>
<td>Budesonide 200 micrograms/formoterol 6 micrograms (expressed as delivered dose in product strength)</td>
<td>800 micrograms</td>
<td>2 puffs twice daily</td>
<td>Breath actuated dry powder inhaler</td>
<td>£29.97</td>
</tr>
<tr>
<td>DuoResp Spiromax® 320/9 inhaler</td>
<td>Budesonide 400 micrograms/formoterol 12 micrograms (expressed as delivered dose in product strength)</td>
<td>800 micrograms</td>
<td>1 puff twice daily</td>
<td>Breath actuated dry powder inhaler</td>
<td>£29.97</td>
</tr>
<tr>
<td>Symbicort® 200/6 Turbohaler</td>
<td>Budesonide 200 micrograms/formoterol 6 micrograms</td>
<td>800 micrograms</td>
<td>2 puffs twice daily</td>
<td>Breath actuated dry powder</td>
<td>£38.00</td>
</tr>
<tr>
<td>Symbicort® 400/12 Turbohaler</td>
<td>Budesonide 400 micrograms/formoterol 12 micrograms</td>
<td>800 micrograms</td>
<td>1 puff twice daily</td>
<td>Breath actuated dry powder</td>
<td>£38.00</td>
</tr>
</tbody>
</table>
### Table 3: High dose (greater than 800 micrograms BDP equivalent) ICS/LABA combination inhaler product and price comparison<sup>6, 7</sup>

<table>
<thead>
<tr>
<th>Product</th>
<th>ICS/LABA quantity per puff</th>
<th>Beclometasone (BDP) equivalent daily dose</th>
<th>Dose</th>
<th>Type of inhaler device</th>
<th>Cost for 30 days</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Greater than 800 microgram and up to 1000 microgram BDP equivalent:</strong> Steroid warning card recommended&lt;sup&gt;6&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flutiform® 125/5 inhaler</td>
<td>Fluticasone 125 micrograms/formoterol 5 micrograms</td>
<td>1000 micrograms</td>
<td>2 puffs twice daily</td>
<td>MDI</td>
<td>£29.26</td>
</tr>
<tr>
<td>Fostair® 100/6 Inhaler</td>
<td>Extra-fine Beclometasone 100 micrograms (equivalent to 250 micrograms BDP non extra fine)/formoterol 6 micrograms</td>
<td>1000 micrograms</td>
<td>2 puffs twice daily</td>
<td>MDI</td>
<td>£29.32</td>
</tr>
<tr>
<td>Fostair 100/6 NEXThaler®</td>
<td>Extra-fine Beclometasone 100 micrograms (equivalent to 250 micrograms BDP non extra fine)/formoterol 6 micrograms</td>
<td>1000 micrograms</td>
<td>2 puffs twice daily</td>
<td>Breath actuated dry powder inhaler</td>
<td>£29.32</td>
</tr>
<tr>
<td>Seretide®125 Evohaler</td>
<td>Fluticasone 125 micrograms/salmeterol 25 micrograms</td>
<td>1000 micrograms</td>
<td>2 puffs twice daily</td>
<td>MDI</td>
<td>£35.00</td>
</tr>
<tr>
<td>Seretide® 250 Accuhaler</td>
<td>Fluticasone 250 micrograms/salmeterol 50 micrograms</td>
<td>1000 micrograms</td>
<td>1 puff twice daily</td>
<td>Breath actuated</td>
<td>£35.00</td>
</tr>
</tbody>
</table>
### 1000 to 2000 microgram BDP equivalent: Steroid warning card required

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Dose</th>
<th>Administration</th>
<th>Device</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fostair® 200/6 Inhaler</strong></td>
<td>Extra-fine Beclometasone 200 micrograms (equivalent to 500 micrograms BDP non-extra fine)/formoterol 6 micrograms</td>
<td>2000 micrograms</td>
<td>2 puffs twice daily</td>
<td>MDI</td>
<td>£29.32</td>
</tr>
<tr>
<td><strong>Fostair 200/6 NEXThaler®</strong></td>
<td>Extra-fine Beclometasone 200 micrograms (equivalent to 500 micrograms BDP non-extra fine)/formoterol 6 micrograms</td>
<td>2000 micrograms</td>
<td>2 puffs twice daily</td>
<td>Breath actuated</td>
<td>£29.32</td>
</tr>
<tr>
<td><strong>Flutiform® 250/5 inhaler</strong></td>
<td>Fluticasone 250 micrograms/formoterol 5 micrograms</td>
<td>2000 micrograms</td>
<td>2 puffs twice daily</td>
<td>MDI</td>
<td>£45.56</td>
</tr>
<tr>
<td><strong>Seretide® 500 Accuhaler</strong></td>
<td>Fluticasone 500 micrograms/salmeterol 50 micrograms</td>
<td>2000 micrograms</td>
<td>1 puff twice daily</td>
<td>Breath actuated</td>
<td>£40.92</td>
</tr>
<tr>
<td><strong>Seretide® 250 Evohaler</strong></td>
<td>Fluticasone 250 micrograms/salmeterol 25 micrograms</td>
<td>2000 micrograms</td>
<td>2 puffs twice daily</td>
<td>MDI</td>
<td>£59.48</td>
</tr>
<tr>
<td><strong>DuoResp Spiromax® 320/9 inhaler</strong></td>
<td>Budesonide 400 micrograms/formoterol 12 micrograms (expressed as delivered dose in product strength)</td>
<td>1600 micrograms</td>
<td>2 puff twice daily</td>
<td>Breath actuated dry powder inhaler</td>
<td>£59.94</td>
</tr>
<tr>
<td><strong>Symbicort® 400/12 Turbohaler</strong></td>
<td>Budesonide 400 micrograms/formoterol 12 micrograms</td>
<td>1600 micrograms</td>
<td>2 puffs twice daily</td>
<td>Breath actuated dry powder</td>
<td>£76.00</td>
</tr>
</tbody>
</table>

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7. MIMS online. November 2013 [http://www.mims.co.uk/](http://www.mims.co.uk/)
Seretide 100 Accuhaler 1 puff BD

Pt has asthma?

Yes

Ready for Step Down?

Yes

Is patient 12 years or older?

Yes

Consider step down to QVAR Easi-Breathe 100 microgram BD

[STEP 2]

No

Consider step down to Clenil pMDI + spacer 200 microgram BD

[STEP 2]

No

No

Seek advice, as Seretide 100 Accuhaler only licensed for asthma.

No

Is patient 18 years or older?

Yes

Consider switch to Fostair 100/6 NEXThaler 1 puff BD

No

Is patient 12 years or over?

Yes

Is patient 5 years or older?

Yes

No change

No

No change

No

Seek advice as Seretide 100 Accuhaler is not licensed for children under 5 years of age.
Seretide 250 Accuhaler 1 puff BD

Pt has asthma?

Yes

Ready for Step Down?

Yes

Is patient 18 years or older?

Yes

Consider step down to Fostair 100/6 NEXThaler 1 puff BD

No

Is patient 12 years or older?

Yes

Consider switch to Fostair 100/6 NEXThaler 2 puffs BD

No

Is patient 5 years or older?

Yes

Consider step down to Seretide 100 Accuhaler 1 puff BD

No

Exclude and seek advice as Seretide 250 Accuhaler is not licensed for children under 12 years of age. No Seretide product is licensed for children under 5.

No

Exclude and seek advice, as Seretide 250 Accuhaler is only licensed for asthma

No

Is patient 18 years or older?

Yes

Consider switch to Fostair 100/6 NEXThaler 2 puffs BD

No

Is patient 12 years or over?

Yes

No Change

No

Is patient 5 years or older?

Yes

Consider step down to Seretide 100 Accuhaler 1 puff BD

No

Exclude and seek advice as Seretide 250 Accuhaler is not licensed for children under 12 years of age. No Seretide product is licensed for children under 5.
Seretide 500 Accuhaler 1 puff BD

**Asthma**
- Is patient ready for Step Down?
  - Yes
    - Is patient 18 years or older?
      - Yes: Consider step down to Fostair 100/6 NEXThaler 2 puffs BD
      - No: Consider step down to Seretide 250 Accuhaler 1 Puff BD
  - No

**COPD**
- Consider reducing ICS dose by switching to Fostair 100/6 NEXThaler 2 puffs BD. See guidance on Pathfinder [link]
  - No
    - Is patient 18 years or older?
      - Yes: Consider switch to Fostair High Strength 200/6 NEXThaler 2 puffs BD
      - No: Seek advice as Seretide 500 and 250 Accuhalers are not licensed for children under 12 years.
    - No
      - Is patient 12 years or older?
        - Yes: No Change
        - No: No Change
Seretide 50 Evohaler 2 puffs BD

Pt has asthma?

Yes

Ready for Step Down?

Yes

Is patient 12 years or older?

Yes

Consider step down to
1) QVAR 100 microgram BD, or
2) Clenil 200 microgram BD, or
3) Fluticasone 100 microgram BD
[STEP 2]

No

Seek advice as Seretide 50 Evohaler is not licensed for children under 5 years of age.

No

Seek advice, as Seretide 50 Evohaler only licensed for asthma.

No

Consider switch to Fostair 100/6 pMDI 1 puff BD

Is patient 18 years or older?

Yes

Is patient 12 years or older?

Yes

Consider switch to Fostair 100/6 pMDI 1 puff BD

No

Is patient 12 years or older?

No

Is patient 5 years or older?

Yes

No change

No

Seek advice as Seretide 50 Evohaler is not licensed for children under 5 years of age.

No Change

No

Seek advice as Seretide 50 Evohaler is not licensed for children under 5 years of age.

No

Seek advice as Seretide 50 Evohaler is not licensed for children under 5 years of age.

No

Seek advice as Seretide 50 Evohaler is not licensed for children under 5 years of age.
**Seretide 125 Evohaler 2 puffs BD**

Pt has asthma?

- **Yes**
  - Ready for Step Down?
    - **Yes**
      - Is patient 18 years or older?
        - **Yes**
          - Consider step down to **Fostair 100/6 pMDI 1 puff BD**
        - **No**
          - Is patient 12 years or older?
            - **Yes**
              - Is patient 5 years or older?
                - **Yes**
                  - Consider step down to **Seretide 50 Evohaler 2 puffs BD**
                - **No**
                  - No Change
            - **No**
              - No Change
    - **No**
      - Include and seek advice, as Seretide 125 Evohaler is only licensed for asthma

- **No**
  - Exclude and seek advice, as Seretide 125 Evohaler is only licensed for asthma

Ready for Step Down?

- **Yes**
  - Consider switch to **Fostair 100/6 pMDI 2 puffs BD**
    - Is patient 12 years or over?
      - **Yes**
        - No Change
      - **No**
        - No Change
  - No Change

- **No**
  - Consider switch to **Fostair 100/6 pMDI 2 puffs BD**
    - Is patient 12 years or over?
      - **Yes**
        - No Change
      - **No**
        - No Change

Is patient 18 years or older?

- **Yes**
  - Consider switch to **Fostair 100/6 pMDI 2 puffs BD**
    - Is patient 12 years or over?
      - **Yes**
        - No Change
      - **No**
        - No Change
  - No Change

- **No**
  - No Change
Seretide 250 Evohaler 2 puffs BD

Asthma

Is patient ready for Step Down?

Yes

Is patient 18 years or older?

Yes

Consider step down to Fostair 100/6 pMDI 2 puffs BD

No

Consider step down to Seretide 125 Evohaler 2 Puffs BD

No Change

COPD

Consider switch to Seretide 500 Accuhaler 1 puff BD

Is patient 18 years or older?

Yes

Consider switch to Fostair High Strength 200/6 pMDI 2 puffs BD

No

Seek advice as Seretide 250 and 125 Evohalers are not licensed for children under 12 years.