Co-ordination difficulties of pMDIs can be partly overcome by using a breath-actuated device such as Easi-Breathe®. Patients initiated on Qvar® were significantly more likely to achieve asthma control vs those receiving Flixotide™ Evohaler™ (absolute percentage controlled on Qvar®=76.1% vs Flixotide™=73.8%; adjusted odds ratio [95% CI] for Qvar®=1.12 vs Flixotide™=1.00), and had significantly lower rates of lower respiratory hospitalisations (absolute percentage for admissions=1.4% for Qvar® vs 2.3% for Flixotide™; adjusted rate ratio=0.60 for Qvar® vs 1.00 for Flixotide™).15

- 80% of patients initiated on Qvar® did not require a step up in therapy.15

Qvar® Easi-Breathe®:
- Use of Qvar® Easi-Breathe® (n=160) was associated with patients achieving significantly better asthma control than patients on BDP pMDI (n=1297) (p<0.0001; NNT=5.6, absolute percentage controlled of 64% [0.64] for Qvar® Easi-Breathe® vs 46% [0.46] for BDP pMDI).17

**Guidance**
- BTS/SIGN asthma guidelines regarding the use of ICS (e.g. Qvar®):18
  - Initiate inhaled steroid use in patients whose asthma is uncontrolled on a reliever alone
  - Inhaled steroids are the first-choice preventer drug (step 2 of the guideline)
  - Recommended starting dose for an inhaled steroid in adults is 400 µg BDP equivalent per day

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**Key points**
- Qvar® is licensed in adults with mild, moderate, and severe asthma, including the elderly.1-6
- Qvar® (HFA beclometasone dipropionate) contains extra-fine particles,1,7 so that more is deposited in the lungs8
- Easi-Breathe® is a breath-actuated pMDI, that is easier for patients to use and for healthcare professionals to teach compared with pMDIs6

**Drug name**

**Qvar® (HFA beclometasone dipropionate)**

**Presentation**
- Qvar® 50 µg or 100 µg1,2
- Delivered via a range of devices:
  - pMDI1,4
  - Easi-Breathe®1,2
  - Autohaler®3,6

**Therapeutic indications and dose**
- Qvar® is licensed in adults with mild, moderate, and severe asthma, including the elderly
- For patients stepping up to regular preventer therapy with an ICS: Qvar® 50 µg first line (two puffs bd)1
- There are no data to date in children under 12 years of age and hence no definitive dosage recommendations can be made
- Qvar® is effective at half the dose of standard dose HFA BDP1-6

**Dosing equivalence table1-6**

<table>
<thead>
<tr>
<th>Current daily dose of ordinary BDP</th>
<th>Daily dose of Qvar®</th>
<th>Rx Qvar®</th>
</tr>
</thead>
<tbody>
<tr>
<td>200–250 µg</td>
<td>100 µg</td>
<td>1 x 50 µg puff bd</td>
</tr>
<tr>
<td>400–500 µg</td>
<td>200 µg</td>
<td>2 x 50 µg puff bd</td>
</tr>
<tr>
<td>400–500 µg</td>
<td>200 µg</td>
<td>1 x 100 µg puff bd</td>
</tr>
<tr>
<td>800–1000 µg</td>
<td>400 µg</td>
<td>2 x 100 µg puff bd</td>
</tr>
</tbody>
</table>

**Place in treatment**
- Qvar®:
  - is appropriate as a first-line treatment for steroid-naive patients requiring more than a reliever2
  - Easi-Breathe®:
    - is a breath-actuated pMDI, which does not require press and breathe co-ordination of traditional pMDIs
  - Qvar® Easi-Breathe®:
    - is appropriate as a first-line treatment for steroid-naive patients requiring more than a reliever
    - is an appropriate alternative for patients who have difficulty taking their ICS via a pMDI, before stepping up to a more costly combination inhaler at step 3 of the BTS/SIGN asthma guidelines.19

**Evidence for use**
- Qvar®:
  - contains extra-fine particles (1.1 µm MMAD HFA BDP) that are smaller than other ICSs1-7 so more is deposited in the lungs
  - achieves 55% lung deposition7 and only 30% oropharyngeal deposition11 without the need for and additional cost of a spacer, which many patients find cumbersome8
  - produces clinically important improvements in asthma-specific quality of life at 12 months vs CFC-BDP12
  - Easi-Breathe®:
    - Patients preferred Easi-Breathe® over six other widely prescribed devices13
    - Co-ordination difficulties of pMDIs can be partly overcome by using a breath-actuated device such as Easi-Breathe®
    - 86% of patients found Easi-Breathe® easier to use correctly compared with pMDIs9
    - 79% of nurses found Easi-Breathe® easier for patients to use and easier to teach compared with pMDIs.9

**Real-life outcome data**
- Qvar®:
  - Patients initiated on Qvar® (n=7526) were significantly more likely to achieve asthma control than patients initiated on Clenil Modulite® (beclometasone dipropionate) pMDI (n=3763) (absolute percentage controlled on Qvar®=76.1% vs Clenil Modulite®=73.8%; adjusted odds ratio [95% CI] for Qvar®=1.12 vs Clenil Modulite®=1.00), and had significantly lower rates of lower respiratory hospitalisations (absolute percentage for admissions=1.4% for Qvar® vs 2.3% for Clenil Modulite®; adjusted rate ratio=0.60 for Qvar® vs 1.00 for Clenil Modulite®).14
  - Patients initiated on Qvar® were significantly more likely to achieve asthma control vs those receiving Flixotide™ Evohaler™ (absolute percentage controlled of 86% [0.86] vs 82.9% [0.829], for Qvar® vs Flixotide™ Evohaler™) respectively; adjusted odds ratio [95% CI] for Qvar®=1.12 vs Clenil Modulite®=1.00, and had significantly lower rates of lower respiratory hospitalisations (absolute percentage for admissions=1.4% for Qvar® vs 2.3% for Clenil Modulite®; adjusted rate ratio=0.60 for Qvar® vs 1.00 for Clenil Modulite®).14
  - 80% of patients initiated on Qvar® did not require a step up in therapy.15

- Qvar® Easi-Breathe®:
  - Use of Qvar® Easi-Breathe® (n=160) was associated with patients achieving significantly better asthma control than patients on BDP pMDI (n=1297) (p<0.0001; NNT=5.6, absolute percentage controlled of 64% [0.64] for Qvar® Easi-Breathe® vs 46% [0.46] for BDP pMDI).17

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This formulary decision guide was developed from content provided by Teva UK Limited in a format developed by Guidelines in Practice. It has been reviewed by a member of the Guidelines in Practice editorial board.

Abbreviated prescribing information can be found overleaf

UK/QV/16/0003 Date of preparation: August 2016
Formulary decision guide: Qvar® (HFA beclometasone dipropionate) Updated August 2016

- BTS/SIGN asthma recommendations regarding the use of inhaler devices:16
  - Check compliance, eliminate trigger factors, and check inhaler technique before changing drug therapy
  - Change to an alternative device if a patient cannot use their device correctly
- University of York Centre for Reviews and Dissemination:19
  - pMDIs (with or without spacer) or the cheapest inhaler the patient can use adequately should be prescribed as first-line treatment in all adults with stable asthma.

Cost comparison

Annual costs for maintaining at step 2 (400 μg BDP or equivalent)

<table>
<thead>
<tr>
<th>Device type</th>
<th>Brand name/device</th>
<th>Strength</th>
<th>Annual cost per patient*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breath actuated</td>
<td>Qvar® Easi-Breathe®</td>
<td>50 μg</td>
<td>£56.50</td>
</tr>
<tr>
<td></td>
<td>Qvar® Autohaler®</td>
<td>50 μg</td>
<td>£57.45</td>
</tr>
<tr>
<td>pMDI (spacer*)</td>
<td>Clenil® MDI—CFC-free BDP (Volumatic® spacer*)</td>
<td>100 μg</td>
<td>£54.17 (61.79)</td>
</tr>
<tr>
<td></td>
<td>Qvar® MDI—CFC-free BDP (Aerochamber®)</td>
<td>50 μg</td>
<td>£57.45 (62.17)</td>
</tr>
<tr>
<td>Dry powder</td>
<td>Fluticortide® Evohaler™—futicasone propionate (Volumatic® spacer)</td>
<td>50 μg</td>
<td>£66.19 (73.87)</td>
</tr>
<tr>
<td></td>
<td>Fluticortide® Accuhaler™—futicasone propionate</td>
<td>50 μg</td>
<td>£155.25 (180.77)</td>
</tr>
</tbody>
</table>

* Costs based on prescription of two spacers per year. BDP=beclometasone dipropionate; CFC=chlorofluorocarbon; pMDI=pressurised metered-dose inhaler

Precautions and side-effects

- Qvar® (HFA beclometasone dipropionate) is contraindicated in case of hypersensitivity to BDP or to any of its excipients
- Please refer to the summary of product characteristics at: www.medicines.org.uk/emc/

References

10. Monthly Index of Medical Specialities. MIMS Online. Available from: www.mims.co.uk

Adverse events should be reported. Reporting forms and information can be found at www.mhra.gov.uk/yellowcard. Adverse events should also be reported to Teva UK Limited on 0207 540 7117 or medinfo@tevauk.com

Please refer to the Summary of Product Characteristics (SmPC) for full details of prescribing information.

Qvar® (beclometasone dipropionate) Aerosol, Autohaler® and Easi-Breathe® Abbreviated prescribing information:

Presentation: Qvar 50 mcg and 100 mcg Autohaler. Qvar 50 mcg and 100 mcg Easi-Breathe Inhaler. Qvar 50 mcg and 100 mcg Aerosol Inhaler. Qvar contains beclometasone dipropionate in solution in propellant HFA-134a resulting in an extrafine aerosol. Indications: Prophylactic management of moderate, mild or severe asthma. Dosage and administration: The dose should be adjusted to individual patient needs. Patients should be instructed in the proper use of their inhaler, including rinsing out their mouth with water after use. Adults, elderly, and children over 12 years: Starting and maintenance dose: Mild asthma: 100 to 200 mcg daily in two divided doses. Moderate asthma: 200 to 400 mcg daily in two divided doses. Severe asthma: 400 to 800 mcg daily in two divided doses. Children under 12 years: No data in children under 12 years of age, hence no dosage recommendation can be made. Contraindications: Hypersensitivity to beclometasone dipropionate or any other ingredients. Precautions and warnings: Patients should be properly instructed on the use of the inhaler to ensure that the drug reaches the target areas within the lungs. Use regularly. When symptoms are controlled, maintenance therapy should be reduced to the minimum effective dose. Not indicated for the immediate relief of asthma attacks or management of status asthmaticus. Advise patients to seek medical attention for review of their maintenance therapy if their asthma seems to be worsening. Patients receiving systemic steroids for long periods and/or at high doses should have stable asthma before transfer to inhaled steroids. Withdrawal of systemic steroids should be gradual. Severe asthma requires regular medical assessment, including lung-function testing, as there is a risk of severe attacks and even death. Patients should be instructed to seek medical attention if short-acting relief bronchodilator treatment becomes less effective, or more relief than usual are required as this may indicates deterioration of asthma control. If this occurs, patients should be assessed and the need for increased anti-inflammatory therapy considered (e.g. higher doses of inhaled corticosteroid or a course of oral corticosteroid). Patients should carry a steroid warning card and have adenocortical function monitored regularly. Monitor height of children regularly. Prolonged treatment with high doses of inhaled corticosteroids, particularly higher than recommended doses, may result in clinically significant adrenal suppression. Additional systemic corticosteroid cover should be considered during periods of stress or elective surgery. Caution in patients with active or latent pulmonary tuberculosis. Interactions: Qvar contains a small amount of ethanol. There is a theoretical potential for interaction in particularly sensitive patients taking disulfiram or metronidazole. Pregnancy and lactation: There is inadequate evidence of safety in human pregnancy. Administration of corticosteroids to pregnant animals can cause abnormalities of foetal development including cleft palate and intra-uterine growth retardation. There may therefore, be a risk of such effects in the human foetus. It should be noted, however, that the foetal changes in animals occur after relatively high systemic exposure. Beclometasone dipropionate is delivered directly to the lungs by the inhaled route and so avoids the high level of exposure that occurs when corticosteroids are given by systemic routes. There is no experience with or evidence of safety of propellant HFA 134a in human pregnancy or lactation. However, studies on the effect of HFA 134a on reproductive function and embryofoetal development in animals have revealed no clinically relevant adverse effects. Effects on ability to drive and use machines: Not relevant. Adverse reactions: A serious hypersensitivity reaction including oedema of the eyes, face, lips and throat (angioedema) has been reported rarely. Paradoxical bronchoconstriction. Systemic effects may occur with inhaled steroids, particularly at high doses prescribed for prolonged periods. Possible systemic effects include Cushing’s syndrome, Cushingoid features, adrenal suppression, growth retardation in children and adolescents, decrease in bone mineral density, cataract, glaucoma, and more rarely, a range of psychological or behavioural effects including psychomotor hyperactivity, sleep disorders, anxiety, depression or aggression (particularly in children). Common: Hoarseness and candidiasis of the mouth and throat may occur. Taste disturbances. Pharyngitis. Consult the Summary of Product Characteristics (SmPC) in relation to other side-effects. Overdose: Acute overdose is unlikely to cause problems. Suppression of HFA function following inhalation of large amounts of the drug over a short period. Excessive doses taken over a prolonged period can produce a degree of atrophy of the adrenal cortex in addition to HFA suppression. In this event treat patient as steroid-dependent and transfer to a suitable maintenance dose of a systemic steroid such as prednisolone. Once the condition is stabilised, the patient should restart Qvar as described in the SmPC. Further information: AeroChamber® Plus™ and AeroChamber™ devices are compatible with Qvar Aerosol Inhalers. Price: Per 200 dose unit: Qvar 50 mcg Aerosol: £7.87, Qvar 100 mcg Aerosol: £17.21 Qvar 50 mcg Autohaler: £7.87, Qvar 100 mcg Easi-Breathe: £7.74, Qvar 100 mcg Easi-Breathe: £16.95. Legal category: POM. Marketing Authorisation Number: Qvar 50 mcg Aerosol: PL 00289/1371, Qvar 100 mcg Aerosol: PL 00289/1372, Qvar 50 mcg Autohaler: PL 00289/1373, Qvar 100 mcg Autohaler: PL 00289/1374, Qvar 50 mcg Easi-Breathe: PL 00289/1375, Qvar 100 mcg Easi-Breathe: PL 00289/1376. Marketing Authorisation Holder: Teva UK Limited, Brampton Road, Hampden Park, Eastbourne, BN22 9AG, United Kingdom. Job Code: UK/MED/16/0001. Date of Preparation: January 2016.