

DRUG UPDATE

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CFC-FREE INHALED BECLOMETASONE

The availability of CFC-containing devices is declining and it is necessary to consider the use of newer CFC-free products. There are currently two brands of CFC-free beclometasone pressurised metered dose inhaler (pMDI) available; these are not equipotent and should be prescribed using their brand names. It is essential that patients are made aware of the changes and what to expect from the new inhaler product.

Practice points:

- The two available CFC-free beclometasone pMDIs are not equipotent
- Branded prescribing of CFC-free beclometasone pMDI is recommended by the MHRA
- Review patients at next routine appointment and switch where possible
- Patients must be aware of the changes, know how to order their prescriptions, and what to expect when using CFC-free pMDIs
- Prescribers should be aware of the differences in licensed patient groups for each of the CFC-free beclometasone pMDIs
- CFC-containing pMDIs will be phased out, therefore it is important an action plan is agreed prior to supplies becoming limited
- Patient information leaflets are available from Asthma UK (www.asthma.org.uk)

What are they?

The Montreal protocol was initiated in 1987 to limit the production and consumption of ozone-depleting substances including chlorofluorocarbons (CFCs).¹ It was recognised that continued use of CFC propellants in pressurised metered dose inhalers (pMDIs) was necessary until alternative propellants became available.¹ Until recently there has been a limited number of corticosteroid-containing pMDIs using non-CFC propellants. However, the manufacture of CFC-containing devices is now being reduced and it is expected that such devices will soon be phased out. However, it is as yet unclear when CFC-containing pMDI devices will stop being available.

Beclometasone

There are two brands of CFC-free beclometasone pMDI in the UK (Clenil Modulite[®]▼ and Qvar[®]). These devices are not equipotent, and in order to avoid confusion and limit prescribing errors, the MHRA advises that CFC-free beclometasone pMDI inhalers should be prescribed by brand name.²

Qvar[®] contains beclometasone in solution and has been shown to deliver the drug as an extra-fine aerosol.³ Studies have shown a relatively high deposition of drug in the lungs resulting in a 2 to 2.5 fold greater potency compared with other CFC-containing beclometasone pMDIs.^{3,4} When switching a patient with well-controlled asthma from another corticosteroid inhaler, initially a 100 microgram dose of Qvar[®] should be prescribed for:

- 200-250 micrograms of beclometasone or budesonide
- 100 micrograms of fluticasone propionate⁴

When switching a patient with poorly controlled asthma from another corticosteroid inhaler, initially a 100 microgram metered dose of Qvar[®] should be prescribed for 100 micrograms of beclometasone, budesonide or fluticasone propionate.⁴ Qvar[®] is also available in CFC-free breath-activated devices.

Clenil Modulite[®]▼ is equipotent to the currently available CFC-containing beclometasone dipropionate pMDIs. Therefore, a straightforward substitution of doses can be performed.^{4,5} The manufacturers of this brand have recently launched a CFC-free pMDI which combines beclometasone 100 micrograms and formoterol 6 micrograms (Fostair[®]▼).⁶ This device delivers beclomethasone in an extra-fine aerosol and is not equipotent to CFC-containing beclometasone pMDIs (see table for further information). Patients switched to this formulation from CFC-containing beclometasone pMDIs should initially receive a lower dose of beclometasone and the dose then tailored to the individual needs of the patient.⁶

How safe are they?

Adverse effects of inhaled corticosteroids include hoarseness, candidiasis of the mouth and, at high doses, systemic effects (adrenal suppression, reduction in bone mineral density and potential growth retardation in children and adolescents)⁴. It is therefore important to review treatment regularly to ensure the lowest effective dose of corticosteroid is used.

Methods of limiting adverse effects include:

- Use a spacer device⁴ (N.B. different spacers fit different inhaler mouth pieces.)
- Rinse out mouth after inhalation to minimise risk of candidiasis⁴
- Use lowest effective dose of inhaled corticosteroid to minimise effect on bone and adrenal cortex

The safety of inhaled corticosteroids has been reviewed as part of the Safer Medication Use series, which provides guidance on the reporting of adverse effects.⁷

What should patients be aware of?

CFC-free pMDIs may have a different taste and sensation on inhalation, compared with the CFC-containing pMDIs. Patients should be made aware of these issues and reassured that differences are to be expected. Branded prescribing of beclometasone will affect prescription ordering and the change in name must be made clear to the patient.¹ Patients must also be aware they should not switch between brands of CFC-free beclometasone pMDI unless instructed by the prescriber.

What other options are there?

Dry powder inhalers (DPIs) are also available and are not affected by the withdrawal of CFCs as they do not contain

any propellant. It is important that the choice of inhaler device is tailored to the patient, they can use the device correctly and they have sufficient respiratory inspiration to activate it (can be higher for DPIs than pMDIs).

At equivalent doses there are no differences in clinical effectiveness among the available inhaled corticosteroids.⁸ Other CFC-free pMDIs include fluticasone propionate alone (Flixotide Evohaler[®]) and in combination with salmeterol (Seretide[®]).⁴ Ciclesonide pMDI (Alvesco[®]▼) is also CFC-free as it uses a hydrofluoroalkane (HFA) propellant.⁹

When should they be used?

Eventually all inhaled corticosteroid devices will have to contain a non-CFC propellant. Now there are two different formulations of CFC-free beclometasone available manufacturers of CFC-containing beclometasone products have indicated they will be running down stocks. Therefore, patients should have their medication switched from CFC-containing beclometasone to a suitable CFC-free alternative prior to stocks becoming unavailable. It is important to ensure regular medication reviews are in place.

How much do they cost?

Cost comparison charts are available at http://www.nyrdtc.nhs.uk/Services/presc_supp/presc_supp.html.

Prescribing information for CFC-free beclometasone pMDIs

Product	Dose equivalence ³⁻⁶ (CFC-free: CFC-containing beclometasone)	Licensed recommended dosage for adults ³⁻⁶	Licensed for children ³⁻⁶	Spacer device ^{3,5,6}
Clenil Modulite [®] ▼	1:1	200 micrograms twice daily. In more severe cases initially 600-800 micrograms daily. Maximum 2000 microgram daily.	50-100 micrograms 2-4 times daily	Volumatic [®]
Qvar [®]	1:2 to 1:2.5	50-200 micrograms twice daily, to a maximum of 400 micrograms twice daily.	Age ≥ 12 years	Aero Chamber [®] plus
Fostair [®] ▼ (beclometasone 100 micrograms and formoterol 6 micrograms per inhalation)	1:2.5	One to two inhalations twice daily, to a maximum of four inhalations daily.	Age ≥ 18 years	Not recommended for use with any spacing device

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KEY R – review, G – guideline

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