

BTS Information: Respiratory Inhalers

At present in the UK there is significant demand in the supply chain for Respiratory Inhaler products and this is leading to wholesalers suffering from out of stock situations. There may be a number of reasons for this including increased demand due to Covid-19 but also due to issues with the supply chains.

We appeal to all Health Care Professionals involved in prescribing inhalers to help maintain supply:

- (1) Continue to write **monthly** repeat prescriptions rather than writing a prescription for several months, or ensure the prescription duration corresponds to dosage and number of doses in inhaler.
- (2) Encourage patients **not** to stock pile inhalers at home and to order prescriptions as per their advice from their medical practice.
- (3) Discuss with those patients who have not ordered a repeat prescription for an inhaler for more than 4 months if this is still clinically required. It is important that good control is maintained especially for our asthma patients. Patients should be assessed on an individual basis. For example, if the patient is receiving regular short-acting beta-2 agonist inhalers (e.g. salbutamol) and now requesting an inhaled corticosteroid (ICS) then is most likely to be an appropriate issue, compared to those who have had no type of inhaler at all.
- (4) Order supplies through the wholesalers for prescriptions that require dispensing and to replace stocks to minimal levels – please do not stock pile inhalers
- (5) Ensure patients are aware of dose counters on inhalers (where applicable), know approximately how long one inhaler should last (e.g. 1 or 2 months) and to know how to recognise if their inhaler requires replacing.

To find up to date and accurate information of inhaler supplies please consult the individual pharmaceutical company websites.

Switching inhalers to manage the supply chain

- Avoid switching between different types of inhalers unless essential to ensure continuity of patient treatment.
 - If an alternative inhaler is required try and prescribe an equivalent inhaler (same drug and dose) ideally with the same inhaler device. This may mean a different colour device is dispensed, in which case patient's should be informed of the change.
 - If this is not possible consider a similar strength ICS based on the dose equivalent table below (low, moderate and high ICS doses – these are not strict dose equivalences but are a guide to similar clinical effectiveness) if possible using the same device.
 - If a change in device is the only option prescribe an inhaler device in the same class of inhaler (i.e Aerosol (e.g MDI, Easibreathe, Autohaler) or Dry powder inhalers).
- Promote optimisation of inhaler technique. Consult Asthma UK website for inhaler technique videos <https://www.asthma.org.uk/advice/inhaler-videos/> or RightBreathe <https://www.rightbreathe.com>
- The BTS/SIGN Asthma Guideline inhaler dose comparison chart (see Figure 1 and 2) can support if alternative inhalers need to be prescribed. Switching patients may put additional strain onto the alternate inhaler supply chain. <https://www.brit-thoracic.org.uk/quality-improvement/guidelines/asthma/>
- RightBreathe app or website <https://www.rightbreathe.com> is a useful resource to support inhaler prescribing

- Consult the SPC (www.medicines.org.uk) for products, particularly to confirm licensing and indication.
- Any adverse events should be reported to the MHRA using the yellow card reporting website (<https://yellowcard.mhra.gov.uk/>)
- Alternative versions of branded inhalers may enter the supply chain (e.g. may be slightly different coloured or different features compared to original) – professionals should be vigilant to this and counsel and reassure any patients affected to avoid duplication or undue concern.

Professor Anna Murphy

British Thoracic Society

15/1/2021

Updated by the British Thoracic Society Pharmacist SAG December 2020

This document will be updated as any new information becomes available.

BTS/SIGN Guideline for the Management of Asthma, 2019

<https://www.brit-thoracic.org.uk/quality-improvement/guidelines/asthma/>

Figure 1 Categorisation of inhaled corticosteroids by dose – Adults

(BTS/SIGN Asthma guideline 2019: Table 12 Categorisation of inhaled corticosteroids by dose – adults*)

See below

ICS	Dose		
	Low dose	Medium dose	High dose#
Pressurised metered dose inhalers (pMDI)			
Beclometasone dipropionate			
Non-proprietary	100 micrograms two puffs twice a day	200 micrograms two puffs twice a day	200 micrograms four puffs twice a day
Clenil Modulite pMDI	100 micrograms two puffs twice a day	200 micrograms two puffs twice a day	250 micrograms two puffs twice a day 250 micrograms four puffs twice a day
Kelhale pMDI (extrafine)	50 micrograms two puffs twice a day	100 micrograms two puffs twice a day	100 micrograms four puffs twice a day
Qvar pMDI (extrafine) Qvar Autohaler (extrafine) Qvar Easi-Breathe (extrafine)	50 micrograms two puffs twice a day	100 micrograms two puffs twice a day	100 micrograms four puffs twice a day
Soprobeq pMDI	100 micrograms two puffs twice a day	200 micrograms two puffs twice a day	250 micrograms two puffs twice a day 250 micrograms four puffs twice a day
Ciclesonide			
Alvesco pMDI	80 micrograms two puffs once a day	160 micrograms two puffs once a day	160 micrograms two puffs twice a day
Fluticasone propionate			
Flixotide Evohaler	50 micrograms two puffs twice a day	125 micrograms two puffs twice a day	250 micrograms two puffs twice a day
Dry powder inhalers (DPI)			
Beclometasone			
Non-proprietary Easyhaler	200 micrograms one puff twice a day	200 micrograms two puffs twice a day	n/a
Budesonide			
Non-proprietary Easyhaler	100 micrograms two puffs twice a day	200 micrograms two puffs twice a day	400 micrograms two puffs twice a day
Budelin Novolizer	n/a	200 micrograms two puffs twice a day	200 micrograms four puffs twice a day
Pulmicort Turbohaler	100 micrograms two puffs twice a day	200 micrograms two puffs twice a day	400 micrograms two puffs twice a day
	200 micrograms one puff twice a day	400 micrograms one puff twice a day	
Fluticasone propionate			
Flixotide Accuhaler	100 micrograms one puff twice a day	250 micrograms one puff twice a day	500 micrograms one puff twice a day
Mometasone			
Asmanex Twisthaler	200 micrograms one puff twice a day	400 micrograms one puff twice a day	n/a

ICS	Dose		
	Low dose	Medium dose	High dose#
Combination inhalers			
Beclometasone dipropionate (extrafine) with formoterol			
Fostair (pMDI)	100/6 one puff twice a day	100/6 two puffs twice a day	200/6 two puffs twice a day
Fostair (NEXThaler)	100/6 one puff twice a day	100/6 two puffs twice a day	200/6 two puffs twice a day
Budesonide with formoterol			
DuoResp Spiromax	160/4.5 one puff twice a day	160/4.5 two puffs twice a day 320/9 one puff twice a day	320/9 two puffs twice a day
Symbicort Turbohaler	100/6 two puffs twice a day 200/6 one puff twice a day	200/6 two puffs twice a day 400/12 one puff twice a day	400/12 two puffs twice a day
Fobumix Easyhaler	80/4.5 two puffs twice a day 160/4.5 one puff twice a day	160/4.5 two puffs twice a day 320/9 one puff twice a day	320/9 two puffs twice a day
Fluticasone propionate with formoterol			
Flutiform MDI	50/5 two puffs twice a day	125/5 two puffs twice a day	250/10 two puffs twice a day
Flutiform K-haler	50/5 two puffs twice a day	125/5 two puffs twice a day	n/a
Fluticasone propionate with salmeterol			
Aerivio Spiromax	n/a	n/a	500/50 one puff twice a day
AirFluSal Forspiro	n/a	n/a	500/50 one puff twice a day
AirFluSal pMDI	n/a	125/25 two puffs twice a day	250/25 two puffs twice a day
Aloflute pMDI	n/a	125/25 two puffs twice a day	250/25 two puffs twice a day
Combisal pMDI	50/25 two puffs twice a day	125/25 two puffs twice a day	250/25 two puffs twice a day
Fusacomb Easyhaler	n/a	250/50 one puff twice a day	500/50 one puff twice a day
Sereflo pMDI	n/a	125/25 two puffs twice a day	250/25 two puffs twice a day
Seretide Accuhaler	100/50 one puff twice a day	250/50 one puff twice a day	500/50 one puff twice a day
Seretide Evohaler	50/25 two puffs twice a day	125/25 two puffs twice a day	250/25 two puffs twice a day
Sirdupla pMDI	n/a	125/25 two puffs twice a day	250/25 two puffs twice a day
Stalpex Orbicel	n/a	n/a	500/50 one puff twice a day
Fluticasone furoate with vilanterol			
Relvar Ellipta	n/a	92/22 one puff once a day	184/22 one puff once a day

* Different products and doses are licensed for different age groups and some are not licensed for use in children. Prior to prescribing, the relevant summary of product characteristics (SPC) should be checked (www.medicines.org.uk/emc).

High doses (shaded boxes) should only be used after referring the patient to specialist care.

Figure 2 Categorisation of inhaled corticosteroids by dose – Children

(BTS/SIGN Asthma Guideline Table 13: Categorisation of inhaled corticosteroids by dose – children*)

ICS	Dose		
	Very low dose	Low dose	Medium dose#
Pressurised metered dose inhalers (pMDI) with spacer			
Beclometasone dipropionate			
Non-proprietary	50 micrograms two puffs twice a day	100 micrograms two puffs twice a day	200 micrograms two puffs twice a day
Clenil Modulite	50 micrograms two puffs twice a day	100 micrograms two puffs twice a day	200 micrograms two puffs twice a day
Qvar (extrafine) Qvar autohaler Qvar Easi-breathe	n/a	50 micrograms two puffs twice a day	100 micrograms two puffs twice a day
Soprobec	50 micrograms two puffs twice a day	100 micrograms two puffs twice a day	200 micrograms two puffs twice a day
Ciclesonide			
Alvesco Aerosol inhaler	n/a	80 micrograms two puffs once a day	160 micrograms two puffs once a day
Fluticasone propionate			
Flixotide Evohaler	50 micrograms one puff twice a day	50 micrograms two puffs twice a day	125 micrograms two puffs twice a day
Dry powder inhalers (DPI)			
Budesonide			
Non-proprietary Easyhaler	n/a	100 micrograms two puffs twice a day	200 micrograms two puffs twice a day
Pulmicort Turbohaler	100 micrograms one puff twice a day	100 micrograms two puffs twice a day 200 micrograms one puff twice a day	200 micrograms two puffs twice a day 400 micrograms one puff twice a day
Fluticasone propionate			
Flixotide Accuhaler	50 micrograms one puff twice a day	100 micrograms one puff twice a day	250 micrograms one puff twice a day
Mometasone			
Asmanex Twisthaler	n/a	200 micrograms one puff twice a day	n/a
Combination Inhalers			
Budesonide with formoterol			
Symbicort Turbohaler	100/6 one puff twice a day	100/6 two puffs twice a day 200/6 one puff twice a day	n/a
Fluticasone propionate with salmeterol			
Combisal MDI	n/a	50/25 two puffs twice a day	n/a
Seretide Accuhaler	n/a	100/50 one puff twice a day	n/a
Seretide Evohaler	n/a	50/25 two puffs twice a day	n/a

* Different products and doses are licensed for different age groups and some are not licensed for use in children. Prior to prescribing, the relevant summary of product characteristics (SPC) should be checked (www.medicines.org.uk/emc).

Medium doses (shaded boxes) should only be used after referring the patient to specialist care.