



North Central London
Joint Formulary Committee

Adult Asthma Inhaler Choice

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Document control

Date	Version	Amendments
03Jun16	V1	New document
01Feb17	V1.1	Relvar added Drug prices updated
30Jun17	V1.2	Flutiform 250/10 inhaler strength corrected
15Mar18	V1.3	Budesonide Turbohaler price updated DuoResp price update Symbicort price updated Relvar® changed to Relvar® Ellipta Email address on template updated

Document management

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Step One
Occasional relief bronchodilator

Inhaled SABA as required
Move to **Step Two** if needed more than twice per week, or if night-time symptoms at least one per week or if exacerbation in last two years

Salbutamol 100 mcg/inh
One to two puffs PRN
£1.50/200 doses **MDI**

Terbutaline 500 mcg/inh (Turbohaler®)
One puff PRN
£6.92/100 doses **DPI**

Salbutamol 200 mcg/inh (Accuhaler®)
One puff PRN
£3.60/60 doses **DPI**

Step Two
Regular inhaled preventer therapy

Add in:
regular standard-dose ICS
(BDP 200 to 400 mcg/day)
Start ICS at dose appropriate to disease severity

Beclometasone dipropionate (Clenil® Modulite®) 100 mcg/inh
Two puffs BD £4.16/month
(BDP 400 mcg/day) **MDI**

Budesonide 200 mcg/inh
Turbohaler®
1 puff BD £7.98/month
(BDP 400 mcg/day) **DPI**

Step Three
Initial add-on therapy

(3a) Add in regular inhaled LABA with ICS
(3b) If benefit from ICS/LABA (but inadequate response) increase ICS to BDP 800 mcg/day
(3c) If no response to LABA, stop and increase ICS to BDP 800 mcg/day
See BTS guidance for information on oral therapies

Fostair® (beclometasone dipropionate and formoterol fumarate) 100 + 6 mcg/inh MDI or NEXThaler®
One puff BD £13.68/month
(BDP 500 mcg/day) **MDI or DPI**

DuoResp® Spiromax® (budesonide and formoterol fumarate) 160mcg/4.5 mcg
One puff BD £13.05/month
(BDP 400 mcg/day) **DPI**

Symbicort® Turbohaler® (budesonide and formoterol fumarate) 200mcg/6 mcg
One puff BD £13.07/month
(BDP 400 mcg/day) **DPI**

Flutiform® (fluticasone propionate and formoterol fumarate) 50 mcg/5 mcg
Two puffs BD £13.44/month
(BDP 400 mcg/day) **MDI**

Fostair® (beclometasone dipropionate and formoterol fumarate) 100 + 6 mcg/inh MDI or NEXThaler®
Two puffs BD £27.37/month
(BDP 1000 mcg/day) **MDI or DPI**

DuoResp® Spiromax® (budesonide and formoterol fumarate) 160mcg/4.5 mcg
Two puffs BD £26.11/month
(BDP 800 mcg/day) **DPI**

Symbicort® Turbohaler® (budesonide and formoterol fumarate) 200mcg/6 mcg
Two puffs BD £26.13/month
(BDP 800 mcg/day) **DPI**

Relvar® Ellipta (fluticasone furoate and vilanterol) 92 mcg/ 22 mcg
One puff OD £20.53/month
(BDP 1000 mcg/day) **DPI**

Flutiform® (fluticasone propionate and formoterol fumarate) 125 mcg/5 mcg
Two puffs BD £26.13/month
(BDP 1000 mcg/day) **MDI**

Step Four
Persistent poor control * (see next page)

Increase ICS dose:
to regular high-dose ICS
and see BTS guidance for add in therapies

Fostair® (beclometasone dipropionate & formoterol fumarate) 200 + 6 mcg/inh MDI or NEXThaler®
Two puffs BD £27.37/month
(BDP 2000 mcg/day) **MDI or DPI**

DuoResp® Spiromax® (budesonide and formoterol fumarate) 320mcg/9 mcg
Two puffs BD £52.21/month
(BDP 1600 mcg/day) **DPI**

Symbicort® Turbohaler® (budesonide and formoterol fumarate) 400mcg/12 mcg
Two puffs BD £52.27/month
(BDP 1600 mcg/day) **DPI**

Relvar® Ellipta (fluticasone furoate and vilanterol) 184 mcg/ 22 mcg
One puff OD £27.53/month
(BDP 2000 mcg/day) **DPI**

Flutiform® (fluticasone propionate and formoterol fumarate) 250 mcg/10 mcg
Two puffs BD £42.52/month
(BDP 2000 mcg/day) **MDI**

SABA – short acting B2 agonist
LABA – long acting B2 agonist
ICS – inhaled corticosteroid
Low dose ICS – BDP equivalent 200 – 800 mcg/day
Intermediate dose ICS – BDP equivalent 800 mcg to 1000 mcg/day
High dose ICS – BDP equivalent > 1000 mcg
BDP – Beclometasone dipropionate equivalent
MDI – Metered dose inhaler
DPI – Dry powder inhaler

- Where an MDI is prescribed, consider also prescribing a spacer device (see page 5)
- Combination inhalers and beclomethasone-based inhalers should be prescribed by brand
- For uncontrolled patients at step 2 where considering adding in another drug, first check adherence and inhaler technique.
- When prescribing or supplying an inhaler, you must ensure the patient has been shown how to use the device and has demonstrated satisfactory technique. When device is changed, patient needs to be monitored (e.g. peak flow at home and reviewed by Respiratory/Practice Nurse)
- Switching inhalers may be suitable for many patients, but it is important to discuss this with the patient beforehand and to ensure they know how to use their new device.
- Consider the beclomethasone dipropionate equivalence when switching between inhalers. The beclomethasone in Fostair® is more potent than that in Clenil® Modulite(100 mcg in Fostair® ≡ 250 mcg in Clenil® Modulite)
- Review treatment every 3 months; if control is achieved, stepwise reduction may be possible. Reduce dose of inhaled corticosteroid slowly (up to 50% reduction every 3 months)
- Monthly prices represent 28 days of treatment

Make every contact count

- Quit Smoking as a treatment for tobacco dependence. Ask every asthmatic if they smoke and offer referral and support to stop
- Review diagnosis and proactively 'step down' therapy in line with BTS guidelines whenever clinically appropriate - provide an Inhaled Corticosteroid (ICS) safety card for every patient on high dose ICS
- Discuss inhaler concordance before changing therapy. Over or under use may be a sign of poor control and inhalers are a leading cause of medicines waste
- Review and optimise inhaler technique – work with patients on choice and technique - no MDI without a spacer.
- Every patient should have a Personal Asthma Action Plan

* Step Four (continued)

Some patients referred to the Severe Asthma Service may be transferred to a therapeutically appropriate dose of ICS and LABA using Seretide Accuhaler® or Flixotide Accuhaler® devices. This device will allow an INCA device to be attached, which can be used to monitor the patient's use of the inhaler device and inform inhaler device technique training. GPs will be asked to continue prescribing of this inhaler device for these patients. To ensure patients receive one inhaler type, it would be sensible that these patients receive a salbutamol Accuhaler.

Use of LABA/ICS combinations as maintenance and reliever

Some LABA/ICS combination inhalers are licensed for use as maintenance and reliever therapy. These may be recommended at BTS step 3 and above by a specialist, GP with Specialist Interest or Practice Nurse with recognised asthma qualification, with continuation of prescribing in primary care.

NHS England Inhaled Corticosteroid Cards

The London Respiratory Network has designed safety cards to issue to patients on high doses of inhaled corticosteroids. Guidance and information on ordering these cards can be found here:

<https://www.networks.nhs.uk/nhs-networks/london-lungs/documents/inhaled-corticosteroids-in-adults>

<https://www.networks.nhs.uk/nhs-networks/london-lungs/documents/high-dose-inhaled-corticosteroid-alert-card-order-form>

The beclomethasone dipropionate equivalent dose should be considered when switching inhalers containing inhaled corticosteroid

<https://www.networks.nhs.uk/nhs-networks/london-respiratory-network/key-documents/responsible-respiratory-prescribing/LRT%20Inhaled%20steroid%20clinician%20guidance.pdf>

Spacer device information

Inhaler type	Spacer type
Standard MDI	Aerochamber Plus £4.81 Volumatic £3.81
Flutiform	Aerochamber Plus £4.81
Fostair MDI	Aerochamber Plus £4.81

Steroid and LABA Inhaler Comparative Costs

Drug Name (Brand)	Device Name	Device Type	Patent Expiry	Device Cost	Number of Doses	Indicative dose	Cost per Day	Cost per 28 days
Fluticasone propionate 50mcg and formoterol 5mcg/inh (Flutiform [®])		MDI	01/08/2024	£14.40	120	2 puffs BD	£0.48	£13.44
Fluticasone propionate 125mcg and formoterol 5mcg/inh (Flutiform [®])		MDI	01/08/2024	£28.00	120	2 puffs BD	£0.93	£26.13
Beclomethasone dipropionate 100mcg and formoterol 6mcg/inh (Fostair [®])	NEXThaler [®]	DPI	13/07/2021	£29.32	120	2 puffs BD	£0.98	£27.37
Beclomethasone dipropionate 100mcg and formoterol 6mcg/inh (Fostair [®])		MDI	13/07/2021	£29.32	120	2 puffs BD	£0.98	£27.37
Beclomethasone dipropionate 200mcg and formoterol 6mcg/inh (Fostair [®])		MDI		£29.32	120	2 puffs BD	£0.98	£27.37
Beclomethasone dipropionate 200mcg and formoterol 6mcg/inh (Fostair [®])	NEXThaler [®]	DPI		£29.32	120	2 puffs BD	£0.98	£27.37
Budesonide 160mg and formoterol 4.5mcg/inh (DuoResp Spiromax [®])	Spiromax [®]	DPI		£29.97	120	2 puffs BD	£1.00	£27.97
Budesonide 320mg and formoterol 9mcg/inh (DuoResp Spiromax [®])	Spiromax [®]	DPI		£29.97	60	1 puff BD	£1.00	£27.97
Budesonide 100mcg and formoterol 6mcg/inh (Symbicort [®])	Turbohaler [®]	DPI		£33.00	120	2 puffs BD	£1.10	£30.80
Budesonide 200mcg and formoterol 6mcg/inh (Symbicort [®])	Turbohaler [®]	DPI		£38.00	120	2 puffs BD	£1.27	£35.47
Budesonide 400mcg and formoterol 12mcg/inh (Symbicort [®])	Turbohaler [®]	DPI		£38.00	60	1 puff BD	£1.27	£35.47
Fluticasone propionate 250mcg and formoterol 10mcg/inh (Flutiform [®])		MDI	01/08/2024	£45.56	120	2 puffs BD	£1.52	£42.52
Fluticasone furoate 92mcg and vilanterol 22mcg/inh (Relvar [®])	Ellipta [®]	DPI		£22.00	30	1 puff OD	£0.73	£20.53
Fluticasone furoate 184mcg and vilanterol 22mcg/inh (Relvar [®])	Ellipta [®]	DPI		£29.50	30	1 puff OD	£0.98	£27.53

Doses are presented for indicative price purposes only; this does **not** indicate therapeutic equivalence.