

North East London (NEL) Paediatric Respiratory Inhaler Formulary

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Introduction

This formulary has been developed with stakeholders across NEL to support consistent high-quality respiratory care when used in conjunction with the NEL paediatric guidelines (yet to be developed). The list includes associated carbon footprint and device type listed alongside with links to the product specifications and video links for inhaler technique demonstrations. Please prescribe only by brand and device.

Types of inhalers and other devices:

- All Dry Powder Inhalers (DPIs) have a lower carbon footprint but require patients to have a deep and fast inspiratory effort technique (of various degrees, depending on device) to use them optimally.

- Metered Dose Inhalers (MDIs) currently have a higher carbon footprint due to the propellant used in MDI canisters. MDI devices however will be suitable for patients who are unable to take deep and fast inspiratory breaths rendering DPI devices unsuitable.
- MDI and Soft Mist Inhalers (SMI) devices require a slow steady breath to inhale their medication optimally.
- Use an In-check dial[®] device to assess inspiratory flow rate where possible. In-check dial devices may be ordered via this [link](#) and the one-way inspiratory disposable mouthpieces are available to order, for example via this [link](#).
- Spacers should be used with pMDI's to optimise inhaler technique and enhance drug deposition.

When separate inhalers are required, select devices that require the same inspiratory technique for the patient to optimise their technique.

Patients who are currently stable on any non-formulary inhalers should not be switched without a face-to-face consultation if this requires a change of device or regime. All patients should be reviewed and be part of a shared decision-making consultation before any changes to inhaler prescribing takes place.

Nebulised medicines are NOT recommended outside of acute/inpatient hospital care (i.e during an exacerbation) and therefore are not included in the tables contained within this formulary. They may be required in other indications e.g cystic fibrosis.

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Key and abbreviations

	First-line option (may be started in primary or secondary care)	
	Second-line/not routinely used option (may be started in primary or secondary care after first-line option has been considered inappropriate or unsuitable)	
	Specialist initiation only and may be continued in primary care	
	Low carbon footprint inhaler	
	Medium carbon footprint inhaler	
	High carbon footprint inhaler	
pMDI	Pressurised metered dose inhaler	
DPI	Dry powder inhaler	
SMI	Soft mist inhaler	
BDP	Beclometasone dipropionate	
MART	Maintenance and reliever therapy	
AIR	Anti-Inflammatory Reliever	
ICS	Inhaled corticosteroid	
ICS/LABA	Inhaled corticosteroid and Long acting beta ₂ agonist combined inhaler	
LAMA	Long acting muscarinic antagonist	
SABA	Short acting beta ₂ agonist	
*	Asterisk to refer to off-label/unlicensed table on page 10	
£	Products costing <£10 per inhaler	Check DM+D or Drug tariff for most up to date price
££	Products costing between £10-£25 per inhaler	
£££	Products costing >£25 per inhaler	









Spacers

All brands of spacer/holding chamber devices are on formulary and accepted to be prescribed across NEL.
 To find a full list of spacer devices please refer to the latest [drug tariff](#) (under part IXA – appliance – spacer/holding chamber devices)
 Below represents examples of the most commonly prescribed inhalers in NEL.



Device name and accepted age range	Image	Comments/features
Aerochamber plus flow-vu anti-static		Compatible with most pMDI devices
<ul style="list-style-type: none"> With small mask – infant (0-12 months*) 		Prescribe a facemask version only if patients are unable to use a mouthpiece version, and for younger children under 5 years of age.
<ul style="list-style-type: none"> With medium mask – child (1-5 years) 		Clinicians should use their clinical judgement on selecting a suitable mask/spacer size.
<ul style="list-style-type: none"> Youth (no mask) (> 5 years) 		Prescribe a compatible spacer for use in ALL patients using pMDI devices – check RightBreathe for spacer-inhaler compatibility.
<ul style="list-style-type: none"> Adult (no mask) (> 12 years*) 		Replace annually.
Easychamber		Easychamber provide whistling sound feedback if inspiratory flow is too fast. (This feature is only available in adult sizes for the Aerochamber Plus spacer).
<ul style="list-style-type: none"> With infant mask (0-24 months) 		<p>Instructions for using a spacer with a mask for a baby or child</p> <p>Instructions for using a spacer for tidal breathing and single breath and hold for a child without a mask</p>
<ul style="list-style-type: none"> With child mask (2-6 years) Include mouthpiece picture 		
<ul style="list-style-type: none"> With adult mouthpiece (> 6 years) 		

*see off-label/unlicensed table

ICS					
Active ingredients	Inhaler brand name/type	Status	Image	Licensing relevant to asthma	Further information
Beclometasone dipropionate	Soprobe pMDI 50mcg, £ 100mcg, £ *200mcg ££ (200 doses)	1		Asthma all age groups *see off-label table	NO dose counter MDI inhaler technique video with mask MDI inhaler technique video without mask Prescribe spacer
Beclometasone dipropionate	Clenil Modulite pMDI 50mcg, £ 100mcg, £ *200mcg ££ (200 doses)	1		Asthma all age groups * see off-label table	Includes dose counter MDI inhaler technique video with mask MDI inhaler technique video without mask Prescribe spacer
Budesonide	Pulmicort Turbohaler DPI 100mcg ££ (200 doses) 200mcg ££ (100 doses)	1		Asthma ≥ 5yrs old	Includes dose counter Turbohaler Inhaler technique video

ICS/LABA	Active ingredients	Inhaler brand name/type	Status	Image	Licensing relevant to asthma	Further information
Budesonide and formoterol	Symbicort Turbohaler DPI 100 mcg/6 mcg £££ (120 doses)	1 		Asthma: Fixed dose ≥6 yrs MART: ≥12 yrs * see off-label table	Includes dose counter Turbohaler Inhaler technique video	
Budesonide and formoterol	Symbicort Turbohaler DPI 200 mcg/6 mcg £££ (120 doses)	1 		Asthma fixed dose and MART: ≥12 yrs * see off-label table ≥12 yrs reliever therapy in mild asthma (AIR)	Includes dose counter Turbohaler Inhaler technique video	
Budesonide and formoterol	Symbicort pMDI 100 mcg/3 mcg ££ (120 doses)	1 		Asthma fixed dose and MART: ≥12 yrs * see off-label table	Includes dose counter MDI inhaler technique video with mask MDI inhaler technique video without mask Prescribe spacer	
Budesonide and formoterol	DuoResp Spiromax DPI 160 mcg/ 4.5 mcg £££ (120 doses)	1 		Asthma: fixed dose ≥ 12 yrs MART: ≥ 12 yrs * see off-label table ≥12 yrs reliever therapy in mild asthma (AIR)	Includes dose counter Spiromax Inhaler technique video	

ICS/LABA	Inhaler brand name/type	Status	Image	Licensing relevant to asthma	Further information
Fluticasone propionate and salmeterol	Combisal pMDI 50 mcg/25 mcg ££ (120 doses)			Asthma fixed dose ≥4 yrs old	NO dose counter MDI inhaler technique video with mask MDI inhaler technique video without mask Prescribe spacer
Fluticasone propionate and salmeterol	Combisal pMDI 125 mcg/25 mcg ££ 250 mcg/25 mcg ££ (120 doses)			Asthma fixed dose ≥12 yrs old * see off-label table	NO dose counter MDI inhaler technique video with mask MDI inhaler technique video without mask Prescribe spacer
Fluticasone propionate and formoterol	Flutiform pMDI 50 mcg/5 mcg ££ (120 doses)			Asthma fixed dose ≥ 5 yrs old	Includes dose counter MDI inhaler technique video with mask MDI inhaler technique video without mask Prescribe spacer
Fluticasone propionate and formoterol	Flutiform pMDI 125 mcg/5 mcg £££ (120 doses)			Asthma fixed dose ≥ 12 yrs old	Includes dose counter MDI inhaler technique video with mask MDI inhaler technique video without mask Prescribe spacer

ICS/LABA	Inhaler brand name/type	Status	Image	Licensing relevant to asthma	Further information
Fluticasone furoate and vilanterol	<p>Relvar Ellipta DPI</p> <p>92 mcg/22 mcg ££</p> <p>184 mcg/22 mcg £££</p> <p>(30 doses)</p>			Asthma fixed dose ≥12 yrs old	<p>Includes dose counter</p> <p>Ellipta Inhaler technique video</p>

LAMA					
Active ingredients	Inhaler brand name/type	Status	Image	Licensing relevant to asthma	Further information
Tiotropium	Spiriva Respimat SMI 2.5mcg ££ (60 doses)			Asthma ≥ 6yrs old	Includes dose counter Respimat inhaler technique video

SABA					
Active ingredients	Inhaler brand name/type	Status	Image	Licensing relevant to asthma	Further information
Salbutamol	Salamol pMDI <u>100mcg £</u> (200 doses)	1		≥ 4yrs old * see off-label table	NO dose counter MDI inhaler technique video with mask MDI inhaler technique video without mask Prescribe spacer
Salbutamol	Salamol Easi-breathe breath-actuated pMDI <u>100mcg £</u> (200 doses)	S		≥ 4yrs old * see off-label table	NO dose counter Easi-Breathe inhaler technique video Spacers cannot be used with this device
Terbutaline	Bricanyl Turbohaler DPI <u>500mcg £</u> (120 doses)	2		Asthma all age groups	Includes dose counter Turbohaler Inhaler technique video

*Off-label/ Unlicensed details	
Product	
Spacers	<p>The age recommendations for commonly used infant spacers, such as Aerochamber Plus Flow-Vu® anti-static with small mask is 0-18 months. Local specialists have requested that the age range offered for the infant type of spacer is for infants 0-12 months of age.</p> <p>The age recommendation for the small adult spacer is 5 years and over, however due to a difference in resistance between the youth spacer and adult, to guide clinicians, the adult spacer has been recommended in this formulary for age 12 and over.</p>
Beclometasone (Soprobec 200mcg and Clenil 200mcg pMDI)	The 200mcg strength inhaler is licensed for age 16 years and over, however may be prescribed for younger children on specialist recommendation.
Budesonide and formoterol (DuoResp Spiromax 160/4.5mcg, Symbicort Turbohaler 100/6mcg, 200/6mcg, Symbicort pMDI 100/3mcg)	Licensed for MART in children >12 yrs. Use in children <12 years may be considered and is accepted in appropriately assessed individuals.
Fluticasone propionate and salmeterol (Combisal 125/25mcg pMDI)	The 125/25mcg strength inhaler is licensed for age 12 and over, however may be prescribed for younger children on specialist recommendation.
Salbutamol (Salamol pMDI and Salamol Easi-breathe breath-actuated pMDI)	The Summary of Product Characteristics (SPC) states that salbutamol is licensed for use in children > 4 years of age. However, in the SPC it also states that paediatric clinical studies conducted at the recommended dose in patients < 4 years with bronchospasm associated with reversible obstructive airways disease, show that Salbutamol CFC-Free Inhaler has a safety profile comparable to that in children ≥ 4 years, adolescents and adults. Use is established and accepted in children under 4 years of age.