

GM Asthma Guideline 2022

Update notes:

- This is an update of the former **GMMMG Asthma Management Plan**.
- The guideline has been updated in response to a request from GMHSCP to produce an updated asthma management plan to support the move to lower carbon inhalers. This includes consciously reducing the propellants contained in metered-dose inhalers which is a significant contributor to enabling the Greater Manchester Combined Authority's and Greater Manchester Joint Commissioning Board's commitment to sustainability.
- Therefore, the most significant change in this version is the emphasis on environmental sustainability:
 - The Management Plan explicitly offers two suggested treatment pathways: dry powder inhalers in preference, with metered dose / soft mist inhalers as a less preferred alternative.
 - Colour coding of pathways
 - Addition of car mileage symbols to represent carbon footprint of inhalers
 - Addition of corticosteroid dose equivalence chart
- Other key changes in the update include:
 - Greater emphasis on MART (Maintenance and Reliever Therapy).
 - Expanded detail in all areas
 - Inclusion of notes regarding inhaler technique and inhaler resistance.
- This guideline is intended to provide detailed guidance on asthma pharmacotherapy and therefore detailed diagnostic detail is outwith its scope. For guidance on diagnosis, consult NICE [NG80](#).

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The support of Professor Nawar Bakerly, Consultant Respiratory Physician, SRFT, is also gratefully acknowledged.

Document Control

Revision History:

The latest version will be held on the GMMMG website.

Date	Actioned by	Comments/Summary of changes	Version
July 2021	Asthma Guideline working group	Production of new guidance	V1
July 2021	Andrew Martin	Amendments after comments received	V2
August 2021	Andrew Martin	Inhaler choices across steps confirmed	V3
August 2021	Murugesan Raja, Andrew Martin	Minor amendments to phraseology	V4
August 2021	Andrew White	Green and red colours added to steps. Insertion of car mileage equivalents for inhalers	V5
August 2021	Murugesan Raja, Andrew Martin	Minor amendments to make fit for web consultation	V6a/b/c
October 2021	Murugesan Raja, Andrew Martin	Amendments made as a result of comments received from consultation	V7a/b/c
January 2022	Working group	Finalisation as a result of comments received from consultation. Car mileages amended according to latest PresQIPP values.	V7d/e
April 2022	Andrew Martin	Addition of version control, authorship and formatting as a GMMMG guideline for web publication after approval. Content is as per V7e.	V8

Approval:

This document must be approved by the following before distribution:

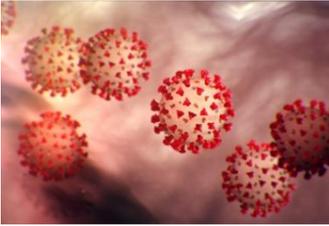
Name	Title	Date of Approval	Version
MGSG Approval for consultation	GM Asthma guideline	20 th September 2021	V6c
MGSG Approval to go forward to GMMMG	GM Asthma guideline	28 th February 2022	V7e
GMMMG Clinical approval only	GM Asthma guideline	11 th March 2022	V7e
GM Directors of Finance Final approval	GM Asthma guideline	20 th April 2022	V7e

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Greater Manchester Asthma Guideline for all adults 18 and over

Non-pharmacological considerations for ALL patients at ALL stages

 <p>Ensure diagnosis is correct</p>	 <p>Smoking Cessation</p>	 <p>Coronavirus and Flu Vaccinations</p>	 <p>Self-management Plan</p>
 <p>Check adherence, especially picking up sufficient ICS prescriptions</p>	 <p>Check reliever prescriptions for over-ordering</p>	 <p>Check for exacerbations and oral steroid use</p>	 <p>Check inhaler technique</p>

Important principles to guide treatment:

<p>Diagnosis</p> <p>Ensure diagnosis is correct; perform objective tests wherever possible. These are likely to include spirometry, peak flow variability and FeNO testing.</p>	
<p>Environmental sustainability</p> <p>In line with the NHS Long Term Plan, GM Sustainability Plans and the PCN Investment and Impact Fund choose carbon-friendly options whenever possible.</p> <ul style="list-style-type: none"> • Inhalers make up 3% of all NHS carbon emissions. Use dry powder inhalers wherever possible to avoid the environmental impact of MDI inhalers. • The annual use of inhalers are ranked by Carbon Dioxide equivalent (CO₂e) impact according to www.gov.uk/ expressed as mileage in an average car using the icon e.g.  25 miles for one year's daily use of long term inhalers - or two SABA inhalers per year. • Wherever possible, avoid <i>Flutiform</i>  1556, <i>Symbicort</i>  1513 and <i>Ventolin</i>  199 <u>Metered-Dose</u> Inhalers as these have a very high carbon footprint. • Short acting beta agonists (SABA) MDI inhalers have large environmental impact due to high prescribing levels and may be reflective of poor control. • All used inhalers should be returned to a pharmacy once empty for recycling (where available) or be disposed of safely to destroy the greenhouse gases. 	
<p>Initiation</p> <ul style="list-style-type: none"> • Prescribe by <u>BRAND</u> and <u>DEVICE</u>. • Use of a Spacer device is recommended for all pMDIs: e.g. A2A, Aerochamber Plus or Volumatic; check SPCs for device and spacer compatibility. • Use the In-check Dial G16 device Inhaler resistance icons are listed to assist selection of inhalers with similar technique. e.g.  This will ensure patients have sufficient inspiratory flow to use selected inhalers. • Consider the use of whistles (where available) to help teach patients how to use their inhaler correctly e.g. Ellipta, Turbohaler device 	<p>Assessment of response</p> <ul style="list-style-type: none"> • Assess response to any change in therapy over 6 to 12 weeks. • Consider how to assess response to treatment. Options include <ul style="list-style-type: none"> ○ Asthma Control Test ○ Exacerbation rate ○ Spirometry (if available) ○ Peak flow • Stop treatments after an unsuccessful trial. • Agree a self-management plan • Promote use of regular ICS prevention in newly diagnosed individuals.
<p>Review</p> <ul style="list-style-type: none"> • Carefully review persons using 3 or more SABA inhalers per year and / or a course of oral steroids as these are markers of poor control. <ul style="list-style-type: none"> ○ Consider Maintenance and Reliever therapy (MART) with ICS/LABA combination inhalers for such individuals wherever possible. • Consider trigger factors including IgE & allergens. Manage allergies, including self-management when appropriate especially nasal symptoms, e.g. hayfever. • Consider occupational influences and refer if suspected. • Step down inhaled corticosteroids <ul style="list-style-type: none"> ○ e.g. when stable for 6 months reduce corticosteroid dose by 25-50% but not to less than equivalent of beclometasone 200mcg daily. 	
<p>Criteria for referral to a specialist centre: <i>Please check adherence before referring</i></p> <ul style="list-style-type: none"> • Unclear diagnosis • Two or more courses of oral steroids in a 12-month period • Still exacerbating or symptomatic or uncontrolled after addition of add-on therapies 	

Dry Powder Inhaler Pathway (preferred route to minimising carbon footprint)



<p>Regular preventer</p> <p>Low dose ICS</p> <p>Inhaler options:</p>	<p>Initial add-on therapy*</p> <p>Add: montelukast 10mg daily in the evening*</p> <p>OR inhaled LABA, as a combination inhaler*:</p>	<p>Additional add-on therapies</p> <p>If benefit from LTRA / LABA but control still inadequate: Continue LTRA / LABA and increase ICS to medium dose:</p>	<p>High dose therapies AND Refer to Specialist Centre</p> <p>Consider trial of: Increasing ICS up to high dose</p>	<p>Continuous or frequent use of oral steroids</p> <p>Should be managed in a specialist centre</p> <p><i>Following steps to be initiated only by specialist:</i></p> <p>Consider daily steroid tablet in lowest dose providing adequate control</p> <p>Maintain high dose ICS</p> <p>Consider other treatments to minimise use of steroid tablets</p> <p>Consider biologics</p> <p>Provide a steroid warning card.</p>
<p>Easyhaler Budesonide 200</p> <p>1 puff bd¹ 9 </p>	<p>Fobumix Easyhaler 160/4.5[^]</p> <p>1 puff bd 21 </p>	<p>Fobumix Easyhaler 160/4.5</p> <p>2 puff bd 21 </p>	<p>Fobumix Easyhaler 320/9</p> <p>2 puffs bd 11 </p>	
<p>Pulmicort Turbohaler 200</p> <p>1 puff bd 37 </p>	<p>Symbicort Turbohaler 100/6[^]</p> <p>2puffs bd 25 </p>	<p>Symbicort Turbohaler 200/6</p> <p>2 puffs bd 35 </p>	<p>Symbicort Turbohaler 400/12</p> <p>2 puffs bd 46 </p>	
<p>Where possible use the same inhaler device that a patient is confident to use. Easyhaler and Turbohalers are the only devices with options at each stage of the asthma pathway.</p>	<p>Atecura Breezhaler 125/62.5</p> <p>1 puff once daily 17 </p>	<p>Atecura Breezhaler 125/127.5</p> <p>1 puff once daily 17 </p>	<p>Atecura Breezhaler 125/260</p> <p>1 puff once daily 17 </p>	
<p>Alternatives:</p> <p>Easyhaler Beclometasone 200</p> <p>1 puff bd 49 </p>	<p>No response to LTRA / LABA: stop and try the other option</p> <p>Partial response to LTRA / LABA: continue and add the other option (i.e. LABA / LTRA)</p> <p>If poorly controlled, MART could be advised[^] see page 5</p>	<p>Fostair NEXThaler 100/6[^]</p> <p>1 puff bd 39 </p> <p>Relvar Ellipta 92/22</p> <p>1 puff once daily 34 </p> <p>If control still inadequate, consider a 3-month trial of additional therapy:</p> <p>Add-on:</p> <p>Spiriva Respimat</p> <p>2 puffs once daily 34 </p>	<p>Fostair NEXThaler 200/6</p> <p>2 puffs bd 39 </p> <p>Relvar Ellipta 184/22</p> <p>1 puff once daily 34 </p> <p>Addition of a third / fourth drug:</p> <p>Triple inhaler:</p> <p>Enerzair Breezhaler 114/46/136</p> <p>1 puff once daily 16 </p> <p>Oral: Uniphyllin 200mg bd (measure levels after one month and adjust dose as necessary)</p>	
<p>¹ - If well controlled, may step down to half dose:</p> <p>Easyhaler budesonide 200</p> <p>1 puff od 25 </p>				

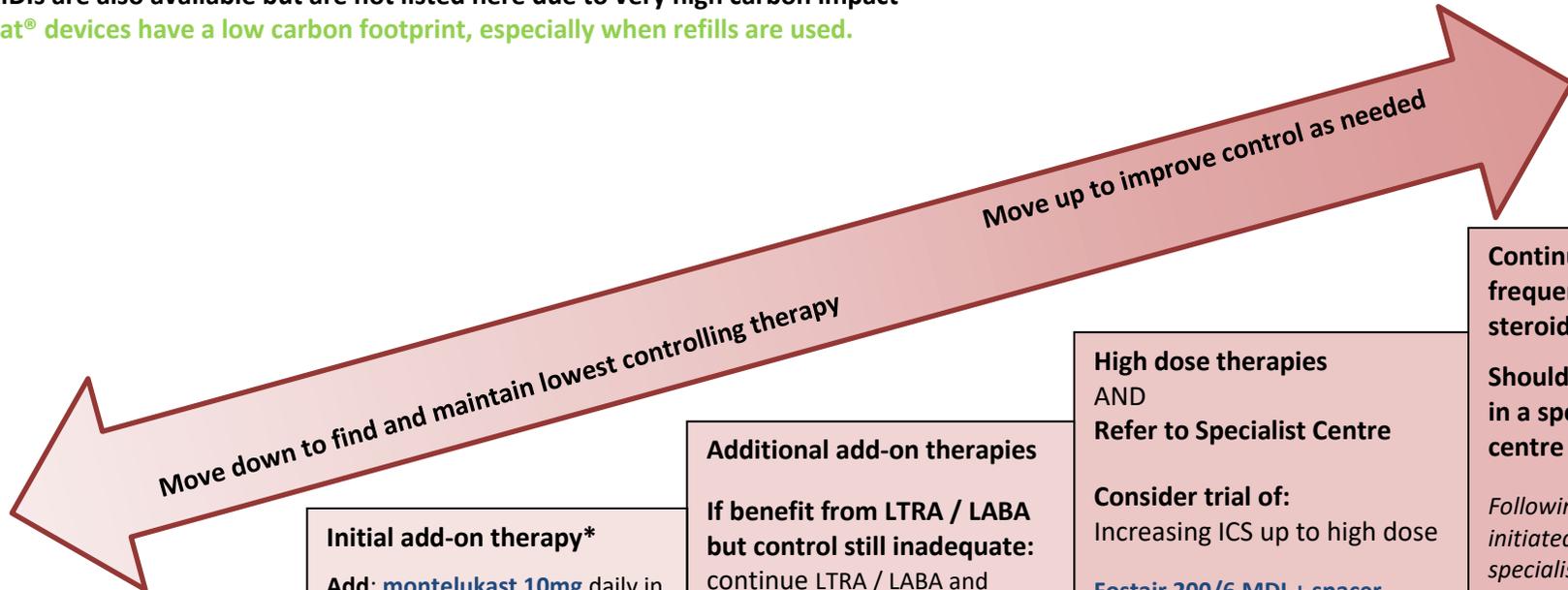
Inhaled short-acting beta agonist option to be used at all stages: **Easyhaler Salbutamol 100 or 200** 1-2 puffs as required or **Bricanyl Turbohaler** 1 puff every 6 hours as required. [^]

Carefully review people using 3 or more SABA inhalers per year 4 3

Metered Dose Inhaler Pathway (less preferred route due to high carbon footprint)

other MDIs are also available but are not listed here due to very high carbon impact

Respimat® devices have a low carbon footprint, especially when refills are used.



Regular preventer
Low dose ICS
Inhaler options:

Qvar Easi-Breathe 50 (or MDI) + spacer
 2 puffs bd 🚗²⁶⁸  **Low**

Clenil 100 MDI + spacer
 2 puffs bd 🚗⁴³⁷  **Low**

If well controlled, may step down to 1 puff bd

Initial add-on therapy*

Add: montelukast 10mg daily in the evening*
OR inhaled LABA, as a combination inhaler*

Inhaler option:
Fostair 100/6 MDI + spacer
 1 puff bd 🚗²⁴⁸  **Low**

No response to LTRA / LABA: stop and try the other option
Partial response to LTRA / LABA: continue and add the other option (i.e. LABA / LTRA)

If poorly controlled, MART could be advised[^] see page 5

Additional add-on therapies

If benefit from LTRA / LABA but control still inadequate: continue LTRA / LABA and increase ICS to medium dose:

Inhaler option:
Fostair 100/6 MDI + spacer
 2 puffs bd 🚗⁴⁹⁵  **Low**

If control still inadequate, consider trial of additional therapy:
 Add : **Spiriva Respimat**
 2 puffs once daily 🚗³⁴  **Low**

Or change to:
Trimbow 87/5/9 2 puffs bd 🚗⁶²⁴  **Low**

High dose therapies AND Refer to Specialist Centre

Consider trial of: Increasing ICS up to high dose

Fostair 200/6 MDI + spacer
 2 puffs bd 🚗⁶²²  **Low**

May include addition of a third / fourth drug from previous step: e.g. add on:

Spiriva Respimat
 2 puffs once daily 🚗³⁴  **Low**

Oral: **Uniphyllin** 200mg bd (measure levels after one month and adjust dose as necessary)

Continuous or frequent use of oral steroids

Should be managed in a specialist centre

Following steps to be initiated only by specialist:

Consider daily steroid tablet in lowest dose providing adequate control

Maintain high dose ICS

Consider other treatments to minimise use of steroid tablets

Consider biologics

Provide a steroid warning card.

Inhaled short-acting beta agonist option to be used at all stages: **Airomir Inhaler** 1-2 puffs as required **or Salamol inhaler** 1-2 puffs as required. [^]

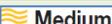
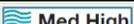
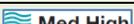
Carefully review people using 3 or more SABA inhalers per year 🚗⁶⁹  **Low** 🚗⁸⁵  **Low**

Maintenance and Reliever Therapy (MART)[^]

[^] - NICE 2017 and GINA 2021 guidelines on the management of asthma place significant focus on Maintenance and Reliever Therapy regimens (*MART / SMART*) and therefore they are suitable alternatives for some patients. MART regimes can help overcome poor concordance with ICS inhalers and historic over reliance on beta₂ agonist reliever therapy. There is also evidence these regimes can reduce exacerbation frequency by reducing the number of inhalers this also can reduce the environmental impact.

If moving a person to a MART regime, withdraw the “blue” (SABA) inhaler and ensure this is correctly coded on clinical systems.

Table of licensed MART dosages.

Inhaler	Dosage	Maximum daily number of puffs	Carbon impact	Inhaler resistance
Fostair Nexthaler 100/6	1 puff twice daily plus PRN	8	 39	 Med High
Fostair MDI 100/6	1 puff twice daily plus PRN	8	 248	 Low
Duoresp Spiromax 160/4.5	Either 1 puff twice daily plus PRN or 2 puffs twice daily plus PRN	12	 18-36	 Medium
Fobumix Easyhaler 160/4.5	Either 1 puff twice daily plus PRN or 2 puffs twice daily plus PRN	12	 11-22	 Med High
Symbicort Turbohaler 100/6 and 200/6	Either 1 puff twice daily plus PRN or 2 puffs twice daily plus PRN	12	 25-70	 Med High

- In persons using a MART regime, a persistent requirement for PRN doses of their inhaler more than twice per week indicates poor asthma control and should prompt a review of therapy.
- Persons using a MART regime may require prescribing of a greater number of MART inhalers, (but no SABA).

* Initial add on therapies

Consider montelukast where:

- High FeNO (fractional exhaled nitric oxide)
- Atopic individual
- Allergic rhinitis
- Exercise-induced asthma
- Patient willing to take a tablet *as well as* an inhaler. N.B. must be confident patient will not *substitute* the tablet for the inhaler.
- Discontinue montelukast after 6 weeks if no benefit

Consider ICS / LABA combination inhaler where:

- Don't wish to take a tablet
- Extra prescription charge presents a financial burden
- Requires relief from tight / wheezy chest with excessive use of SABA

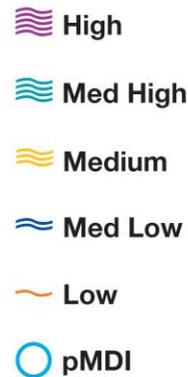
These choices should be a discussed carefully with the patient and agreement reached as to the best initial add-on therapy.

Notes

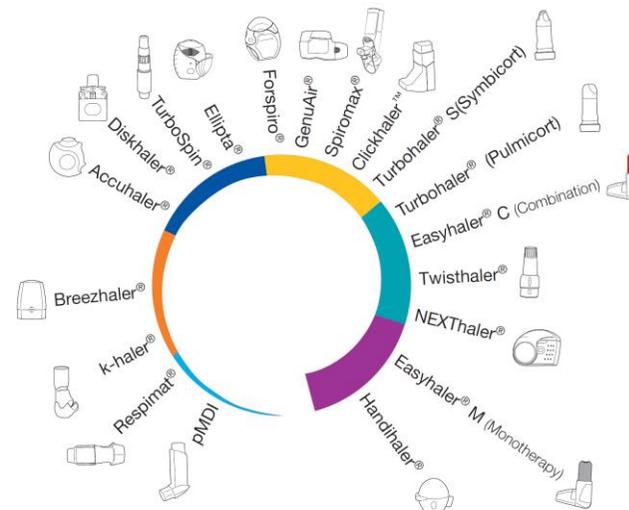
- These treatment recommendations are suitable for newly diagnosed asthma patients.
- For asthma patients already established on treatment, then the recommendations here may also be used in cases where symptoms and / or exacerbations require a change in treatment, the patient wishes to change for environmental reasons, or cost reduction is being considered.
- The aim is good control of asthma - This list of inhaler therapy options is not intended to be used to change therapy if it is working well nor to completely rule out any device the patient has been using and is controlling symptoms.
- Certain devices not in the plan above may be more suitable for persons with problems of dexterity.
- Promote use of regular ICS prevention in newly diagnosed individuals as mainstay of treatment. Limited use of SABA is a marker of good control.
- If high dose steroid inhaler doses are being used, patients should be issued with a steroid emergency card. (See table of corticosteroid doses at end)
- An example Self-Management Plan is available [here](#)
- For some inhaler dosing regimes e.g. Fobumix Easyhaler 160/4.5 and 320/9, Fostair 100/6 MDI and NEXThaler, Symbicort range, a “greener” option to use one puff bd of a higher strength instead of two puffs bd of a lower strength is available. Note that this may alter the dose of LABA (formoterol).

Inhaler technique

- Where possible select the fewest number of inhalers, usually by using combination inhalers, that controls the patient’s asthma.
- Wherever possible do not mix DPIs and pMDIs due to very different technique required e.g.
 - Instruction for inhaling via a DPI should be “forceful and deep”
 - Instruction for inhaling via an MDI should be “Use a Spacer with gentle and deep inspiration”
- Wherever possible stick to the same device type for different inhalers. Where this is not possible, use devices with similar inhaler resistance, and so similar technique.
- Consider the use of whistles (where available) to help teach patients how to use their inhaler correctly e.g. Ellipta, Turbohaler devices These are for individual patients and useful for virtual consultations and to reinforce technique.



Inhaler Resistance Range



International

- Handihaler®
- Easyhaler®
- NEXThaler®
- Twisthaler®
- Turbohaler®
- Turbohaler®, Flexhaler®
- Clickhaler™
- RespiClick®, Spiromax®
- Novolizer®, Genuair®, Pressair®
- Forspiro®
- Ellipta®
- TurboSpin®
- Diskhaler®
- Diskus®
- Breezhaler®, Aerolizer®, Neohaler®
- k-haler®
- Respiimat®

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Part no. 3109306 Issue no. 7 Aug 2019



Full details available at: <https://www.haag-streit.com/>

Disposal/ Recycling:

Patients should be encouraged to ensure that:

- Inhalers are empty before disposal. Most Dry Powder Inhalers and many MDIs have dose counters which patients should be made aware of.
- Most Dry Powder inhalers contain 30 days' supply. However, many Metered Dose Inhalers last longer. Repeat prescribing intervals should take account of these.
- All used inhalers should be returned to a pharmacy once empty for recycling (where available) or be disposed of safely to destroy the greenhouse gases.
- Where Soft-mist devices are used, inhaler refills are available which can further lower carbon footprint when used.

List of abbreviations

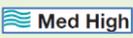
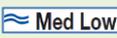
ICS – inhaled corticosteroids
 LABA – long-acting beta-agonist
 LTRA – leukotriene receptor antagonist
 MDI – metered dose inhaler
 pMDI – pressurised metered dose inhaler
 SABA – short-acting beta-agonist
 SMI – Soft Mist Inhaler
 Air symbols  Low,  Med High etc
 – Inhaler resistance: see page 5
 Car symbol ,  etc
 – Carbon impact: See page 2

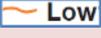
References:

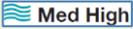
BTS/ SIGN. British Guideline on the Management of Asthma. 2019 www.brit-thoracic.org.uk/
 NICE NG 80. Asthma: diagnosis, monitoring and chronic asthma management. 2017 www.nice.org.uk/guidance/ng80
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 GM Greener NHS Programme - Update Report. 2021 democracy.greatermanchester-ca.gov.uk/
 Five-Year Environment Plan for Greater Manchester. GMCA. 2019. www.greatermanchester-ca.gov.uk/
 Primary Care Network Investment and Impact Fund: 2021/22 and 2022/23 www.england.nhs.uk/
 Government conversion factors for company reporting of greenhouse gas emissions. HM Government. 2020 www.gov.uk/
 Inhaler resistance Range – In-Check Dial G16. Clement Clarke International 2016. Reproduced with kind permission.
 Pharmacy Quality Scheme www.gov.uk/
 CO2 equivalent (CO2e) and mileages are calculated based on [PresQIPP data, 2022](#)

Inhaled Corticosteroid Doses (from BTS/ SIGN 2019, [updated 2021](#))

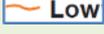
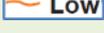
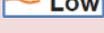
List not comprehensive. [§] product launched after BTS or not previously included

Brand	Inhaler resistance	Low dose	Medium dose	High dose (only use after referral to specialist care)
Preferred products in Bold				
DRY POWDER INHALERS - ICS				
Beclometasone				
Non-proprietary/ Easyhaler	 Med High	200 mcg 1 puff bd  4 miles	200 mcg 2 puffs bd  8 miles	-
Budesonide				
Non-proprietary/ Easyhaler	 Med High	100 mcg 2 puffs bd  17 miles	200 mcg 2 puffs bd  9 miles	400 mcg 2 puffs bd  9 miles
Budelin Novolizer	 Medium	-	200 mcg 2 puffs bd  49 miles	200 mcg 4 puffs bd  98 miles
Pulmicort Turbohaler	 Med High	100 mcg 2 puffs bd, or 200 mcg 1 puff bd  18 miles	200 mcg 2 puffs bd or  18 miles 400 mcg 1 puff bd  25 miles	400 mcg 2 puffs bd  90 miles
Fluticasone propionate				
Flixotide Accuhaler	 Med Low	100 mcg 1 puff bd  37 miles	250 mcg 1 puff bd  37 miles	500 mcg 1 puff bd  37 miles
Mometasone				
Asmanex Twisthaler	 Med High	200 mcg 1 puff bd  49 miles	400 mcg 1 puff bd  49 miles	-

PRESSURISED METERED DOSE INHALERS - ICS				
Beclometasone dipropionate				
Clenil Modulite	 Low	100 mcg 2 puffs bd  437 miles	200 mcg 2 puffs bd  215 miles	250 mcg 2 puffs bd, or  425 miles 250 mcg 4 puffs bd  850 miles
Kelhale	 Low	50 mcg 2 puffs bd  458 miles	100 mcg 2 puffs bd  229 miles	100 mcg 4 puffs bd  458 miles
Qvar (extrafine)/ Autohaler/ Easi- breathe	 Low	50 mcg 2 puffs bd  268 miles	100 mcg 2 puffs bd  268 miles	100 mcg 4 puffs bd  536 miles
Soprobec	 Low	100 mcg 2 puffs bd  185 miles	200 mcg 2 puffs bd  183 miles	250 mcg 2 puffs bd, or  183 miles 250 mcg 4 puffs bd  366 miles
Ciclesonide				
Alvesco	 Low	80 mcg 2 puffs od  137 miles	160 mcg 2 puffs od  137 miles	160 mcg 2 puffs bd  274 miles
Fluticasone propionate				
Flixotide Evohaler	 Low	50 mcg 2 puffs bd  537 miles	125 mcg 2 puffs bd  537 miles	250 mcg 2 puffs bd  537 miles

DRY POWDER INHALERS - COMBINATION INHALERS – ICS / LABA MART[^]				
Beclometasone dipropionate (extrafine) + formoterol				
Fostair NEXThaler	 Med High	100/6 1 puff bd  20 miles	100/6 2 puffs bd[^]  39 miles	200/6 2 puffs bd  39 miles
Fluticasone furoate + vilanterol				
Relvar Ellipta	 Med Low	-	92/22 1 puff od  34 miles	184/22 1 puff od  34 miles
Budesonide + formoterol				
Fobumix Easyhaler	 Med High	80/4.5 2 puffs bd, or 160/4.5 1 puff bd  11 miles	160/4.5 2 puffs bd[^] or 320/9 1 puff bd  11 miles	320/9 2 puffs bd  22 miles
DuoResp Spiromax	 Medium	160/4.5 1 puff bd  18 miles	160/4.5 2 puffs bd[^] or  36 miles 320/9 1 puff bd  18 miles	320/9 2 puffs bd  36 miles
Symbicort Turbohaler	 Medium	100/6 2 puffs bd,  25 miles or 200/6 1 puff bd  18 miles	200/6 2 puffs bd[^] or  35 miles 400/12 1 puff bd  23 miles	400/12 2 puffs bd  46 miles
WockAIR	 Medium	-	160/4.5 2 puffs bd  53 miles	320/9 1-2 puffs bd  26-53 miles
Indacaterol acetate + mometasone furoate				
Aectura Breezhaler [§]	 Low	125/62.5 1 puff od  17 miles	125/127.5 1 puff od  17 miles	125/260 1 puff od  17 miles
Fluticasone propionate + salmeterol				
AirFluSal Forspiro	 Medium	-	-	500/50 1 puff bd  26 miles
Fusacomb Easyhaler	 Med High	-	250/50 1 puff bd  25 miles	500/50 1 puff bd  25 miles
Seretide Accuhaler	 Med Low	100/50 1 puff bd  40 miles	250/50 1 puff bd  40 miles	500/50 1 puff bd  40 miles
Stalpex	No data	-	-	500/50 1 puff bd  49 miles

PRESSURISED METERED DOSE INHALERS - COMBINATION INHALERS – ICS / LABA MART				
Beclometasone dipropionate (extrafine) + formoterol				
Fostair MDI	 Low	100/6 1 puff bd 🚗 248 miles	100/6 2 puffs bd[^] 🚗 495 miles	200/6 2 puffs bd 🚗 622 miles
Budesonide + formoterol				
Symbicort MDI [§]	 Low	-	200/6 2 puffs bd 🚗 1513 miles	-
Fluticasone propionate + formoterol				
Flutiform MDI	 Low	50/5 2 puffs bd 🚗 1556miles	125/5 2 puffs bd 🚗 1556 miles	250/10 2 puffs bd 🚗 1556 miles
Fluticasone propionate + salmeterol				
AirFluSal MDI	 Low	-	125/25 2 puffs bd 🚗 848 miles	250/25 2 puffs bd 🚗 848 miles
Aloflute MDI	 Low	-	125/25 2 puffs bd 🚗 863 miles	250/25 2 puffs bd 🚗 863 miles
Combisal MDI	 Low	50/25 2 puffs bd 🚗 707 miles	125/25 2 puffs bd 🚗 707 miles	250/25 2 puffs bd 🚗 707 miles
Sereflo MDI	 Low	-	125/25 2 puffs bd 🚗 714 miles	250/25 2 puffs bd 🚗 723 miles
Seretide Evohaler MDI	 Low	50/25 2 puffs bd 🚗 855 miles	125/25 2 puffs bd 🚗 855 miles	250/25 2 puffs bd 🚗 855 miles
Sirdupla MDI	 Low	-	125/25 2 puffs bd 🚗 863 miles	250/25 2 puffs bd 🚗 863 miles

DRY POWDER INHALERS - TRIPLE COMBINATION INHALERS – ICS / LABA / LAMA				
Indacaterol acetate + glycopyrronium bromide + mometasone				
Energair Breezhaler[§]	 Low	-	-	114/46/136 1 puff od 🚗 17 miles
Energair Breezhaler + Sensor[§]	 Low	-	-	114/46/136 1 puff od 🚗 22 miles
PRESSURISED METERED DOSE INHALERS – TRIPLE COMBINATION INHALERS – ICS / LABA / LAMA				
Beclometasone + formoterol + glycopyrronium				
Trimbow MDI[§]	 Low	-	87/5/9 2 puffs bd 🚗 624 miles	-