NHS
Hampshire and Isle of Wight

Improving Sustainability of Respiratory Care in Hampshire and Isle of Wight

Practice / PCN name:

Date:

Objectives:

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1. support NHS deliver Climate Change Act
   - 51% reduction in carbon footprint by 2025
   - 4% reduction by shifting to Dry Powder Inhalers (DPIs)
2. improve patient outcomes and reduce environmental impact
3. share resources to effect changes to prescribing inhaled therapies
4. waste management and recycling inhalers

Background:

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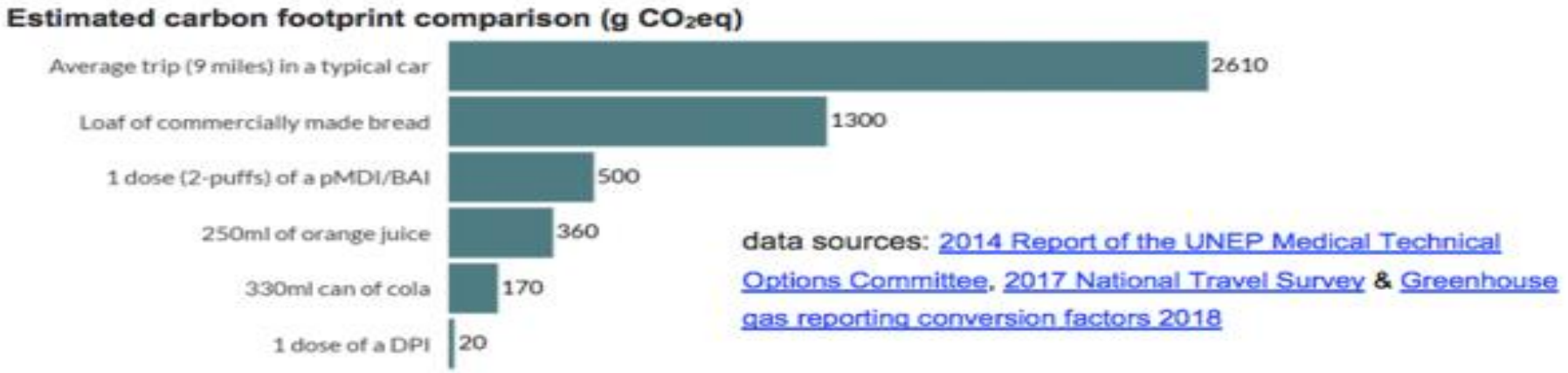
- *NHS Long Term Plan:* reduce the NHS carbon footprint by 51% by 2025
- *Delivering a 'net zero' NHS:* reach net zero carbon emissions by 2040
- Inhalers responsible for 3% NHS carbon footprint
- Most inhaler emissions come from the propellants used in metered dose inhalers (MDIs)
- Optimise therapy and consider switch to inhalers with lower carbon emissions (e.g. DPIs and soft mist inhalers)
- Blanket switches of MDI to DPI inhalers are not appropriate
- Device choice should be based on shared decision making

DPI v MDI



data sources: 2014 Report of the UNEP Medical Technical Options Committee, 2017 National Travel Survey & Greenhouse gas reporting conversion factors 2018

1 dose of a pMDI device is approximately equivalent to the same carbon footprint as driving 1.7 miles in the average car compared to 0.07miles for 1 dose of a DPI device.

Where do we start?

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Identify patients whose medication regime is not optimised:

- Frequent exacerbations / hospital admissions
- Oral courses of steroids
- Over-using / ordering SABAs (> 6 per year)
- SABA with no inhaled ICS
- Patients prescribed both MDIs and DPIs
- Patients prescribed > 1 single component MDI (use combination device)
- Patients not attending annual respiratory reviews

Work with respiratory nurses / pharmacists

Discuss with patients at annual respiratory review

Consider MART regimes, where appropriate

Salbutamol inhalers – should we switch?

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- Included in Investment and Impact Fund (IIF)
  ES-02: Mean carbon emissions per salbutamol inhaler prescribed (Kg CO2e)

- ✓ AccuRx (SMS) message to patients: *Current Ventolin inhaler has higher carbon footprint to other alternatives (e.g. Salamol) - contact us if you would like to change to 'greener' inhaler*
- ✓ Discuss this with patients during their annual reviews (avoid wholesale switches)
- ✓ Greener Practice developed an 'opt out' leaflet (next slide) SALAMOL (pcdn.co)

- **Tackle over-use of SABAs alongside switching to greener alternatives**
- **Liaise with your local community pharmacies BEFORE switching to ensure stock availability**

SALAMOL (pcdn.co)

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DO YOU USE A BLUE INHALER?

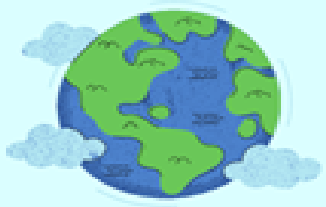
Spray inhalers (pressurised metered dose inhalers) contain powerful greenhouse gases and contribute to global warming. This is referred to as their carbon footprint.

That is why we have decided to prescribe all blue "spray" salbutamol inhalers as the brand **Salamol** which has a lower carbon footprint.

It has a lower carbon footprint because the Salamol canister **is smaller than Ventolin®** so it contains less propellant. which is why it is better for the environment. You still get the same number of doses.

Your prescription for Salbutamol or Ventolin® inhaler may change to Salamol.

Salamol contains the same medicine, salbutamol, and works in the same way as Ventolin®.



Salamol salbutamol inhaler

1 inhaler =  → 56.4 miles

Ventolin salbutamol inhaler

1 inhaler =  → 132 miles

Gov.co.uk 2015 new car emissions dat

WHAT ELSE CAN I DO TO HELP THE ENVIRONMENT?

Use all the doses up – don't discard inhalers with doses left in

Return used inhalers to the pharmacy to dispose of, in an environmentally safe way this way they will be incinerated rather than sent to land fill

Speak to your health care professional who can review your existing inhalers and suggest even more environmentally friendly options like dry powder inhalers

If you have asthma and are using more than 2 blue inhalers in a year this may suggest your condition is not well controlled. Please speak to your GP practice to book a review

SENTINEL Plus Project to look at SABA overuse

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- Previously offered to practices across HIOW
- Linked to PCN DES IIF indicators 2022-23
- Supported by Interface Clinical Services (ICS)
- Now closed for practices to sign up.
- Resources for practices and patients can still be accessed online. Contact ICS for advice on further support they may be able to offer.
- Introductory video:

https://youtu.be/kGs4KVU1c1g

COPD Project for therapy review

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Recharge COPD – Re evaluate COPD patients, Review therapy in line with local guidelines, Reduce carbon

NHS Hampshire, Southampton and Isle of Wight Clinical Commissioning Group and GSK joint working project *(N.B. not adopted in Portsmouth and South East Hants locality)*

Aims:

- Optimise therapy
- Align to local COPD guidelines
- Reduce exacerbations
- Align prescribing to IIF
- Create more sustainable NHS
- Increase engagement with the local respiratory network

Project will run April 2022 – December 2022

Do not run both the SENTINEL PLUS & RECHARGE COPD projects concurrently

[WAN_Guidelines_Full.pdf (westhampshireccg.nhs.uk)]

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Wessex Adult Asthma Guidelines 2021

Wessex Asthma Network

Where possible use DPI instead of pMDI due to environmental concerns

Reliever

- Bricanyl Turbohaler (DPI) 500 — 1 puff prn. £8.30. 490gCO2Eq
- Salbutamol Easyhaler (DPI) 100 — 2 puffs prn. £3.31. 620gCO2Eq
- Ventolin Accuhaler (DPI) 200 — 1 puff prn. £3.60. 600gCO2Eq
- Salamol Easi-Breathe (pMDI) 100 — 2 puffs prn. £6.30. 12080gCO2Eq
- ■ Salamol (pMDI) 100 — 2 puffs prn. £1.46. 11960gCO2Eq

Low Dose ICS	Low dose ICS/LABA	Medium dose ICS/LABA	High Dose ICS/LABA
	Use as MART where appropriate O		Ensure a steroid alert card is issued
Dry Powder Inhaler (DPI) – Inhale Quick and Deeply in 2-3 Seconds			
Budesonide Easyhaler 100 — 2 puffs bd/od. £5.32. 390/195gCO2Eq	O Fobumix Easyhaler 160/4.5 — 1 puff bd. £10.75. 240gCO2Eq	O Fobumix Easyhaler 160/4.5 — 2 puffs bd. £21.50. 480gCO2Eq	Fobumix Easyhaler 320/9 — 2 puffs bd. £43.00. 480gCO2Eq
Pulmicort Turbohaler 100 — 2 puffs bd. £8.55. 840gCO2Eq	O Symbicort Turbohaler 200/6 — 1 puff bd. £14.00. 336gCO2Eq	O Symbicort Turbohaler 200/6 — 2 puffs bd. £28.00. 672gCO2Eq	Symbicort Turbohaler 400/12 — 2 puffs bd. £56.00. 2100gCO2Eq
	O DuoResp Spiromax 160/4.5 — 1 puff bd. £13.99. 408gCO2Eq	O DuoResp Spiromax 160/4.5 — 2 puffs bd. £27.97. 816gCO2Eq	DuoResp Spiromax 320/9 — 2 puffs bd. £55.94. 816gCO2Eq
Beclometasone Easyhaler 200 — 1 puff bd. £4.48. 183gCO2Eq	O ♦ Fostair Nexthaler 100/6 — 1 puff bd. £14.66. 458gCO2Eq	O ♦ Fostair Nexthaler 100/6 — 2 puffs bd. £29.32. 916gCO2Eq	♦ Fostair Nexthaler 200/6 — 2 puffs bd. £29.32. 917gCO2Eq
Flixotide Accuhaler 100 — 1 puff bd. £8.00. 840gCO2Eq	Relvar Ellipta 92/22 — 1 puff od. £22.00. 754gCO2Eq	Relvar Ellipta 92/22 — 1 puff od. £22.00. 754gCO2Eq	Relvar Ellipta 184/22 — 1 puff od. £22.00. 754gCO2Eq
	Atectura Breezhaler 62.5/125 — 1 puff od. £17.49. 390gCO2Eq	Atectura Breezhaler 127.5/125 — 1 puff od. £21.50. 390gCO2Eq	Atectura Breezhaler 260/125 — 1 puff od. £27.97. 390gCO2Eq
Pressurised Meter Dose Inhaler (pMDI) – Inhale Slow and Steady in 4-5 Seconds			
✷ Soprobec 100/Clenil 100 — ■ 2 puffs bd. £3.34. 7675gCO2Eq	♦ O ■ ✷ Fostair 100/6 — 1 puffs bd. £14.66. 5665gCO2Eq	♦ O ■ ✷ Fostair 100/6 — 2 puffs bd. £29.32. 11330gCO2Eq	♦ ■ ✷ Fostair 200/6 — 2 puffs bd. £29.32. 14227gCO2Eq
♦ ✷ ■ Kelhale 50/Qvar 50 — 2 puffs bd. £3.12. 10440gCO2Eq	■ Flutiform 50/5 — 2 puffs bd. £14.40. 35400gCO2Eq	■ Flutiform 125/5 — 2 puffs bd. £28.00. 35400gCO2Eq	■ Flutiform 250/10 — 2 puffs bd. £45.56. 35400gCO2Eq
		Medium dose ICS/LABA/LAMA	High dose ICS/LABA/LAMA
		Trimbow (pMDI) 87/5/9 — ■ 2 puffs bd. £44.50. 14280gCO2Eq	Enerzair Breezhaler (DPI) 36/114/46 — 1 puff od. £44.50. 360gCO2Eq

Phenotypic assessment and referral to secondary care**

Low dose ICS/LABA combination inhalers as reliever therapy can be considered in appropriate patients[3].

Where available carbon footprint data is expressed as grams of CO_2 equivalent (gCO_2Eq) for 30 days of treatment at the stated dose other than for reliever inhalers which reflects the carbon footprint per inhaler.

O Maintenance and Reliver Therapy (MART) Consider for patients on low or medium dose ICS/LABA who have a good understanding of their personalised asthma action plan and are compliant with their treatment. This regime is only compatible with 'O' inhalers'.

Consider Alvesco 80 2 puffs od if patient unable to tolerate ICS. It is a pro-drug that is activated in the lungs reducing oro-pharyngeal side effects.

Key

- ♦ Extra Fine Particle
- O MART Regime
- ■ Use a Spacer with pMDI. Wash monthly, replace annually
- ✷ Generic Alternatives

Additional controllers should be trialled for 3-months and continued only if effective

- LTRA-Montelukast 10mg — 1 tab od. Pk 28 £1.61
- LAMA Soft Mist Inhaler – Spiriva Respimat 2.5mcg — 2 puffs od. £23.00. 780gCO2Eq (Should not be used in conjunction with Trimbow or Enerzair.)

Inhaler prices correct at time of print. Prices may be subject to change. Prices based on 30 day inhaler use other than reliever inhalers which reflect unit cost. Prescribe by brand. Cheaper generic alternatives may be recommended.

Wessex Adult Asthma Guidelines 2021

RESPIACTION a social business for respiratory education
Wessex Asthma Network

Diagnosis

- Typical asthma symptoms include wheeze, shortness of breath, chest tightness and cough which vary over time and in intensity, often being worse at night and early in the morning
- Asthma triggers may include infections, exercise, exposure to allergens or irritants, changes in weather and some medications including Aspirin/NSAIDs/ß-Blockers
- Wheeze should be confirmed by a healthcare professional
- Remember to record and code:
  - Triggers
  - Atopic history and family history
  - Occupational exposure and smoking history
  - Quality assured spirometry using lower limits of normal to ascertain obstruction
  - FeNO level where this is available
- Check for variable and/or reversible air flow obstruction:
  - Average diurnal Peak Expiratory Flow (PEF) variation of >20%. (calculator available @ http://wessex-asthma.com/)
  - FEV_1 ≥12% and 200 ml increase after Short Acting ß-Agonist (e.g. Salbutamol 400 mcg by pMDI with spacer), or after a 14 day Prednisolone trial (30mg/day)
- Normal spirometry does not rule out asthma
- Check for evidence of T2 inflammation (steroid sensitive):
  - FeNO level ≥40ppb is supportive of a diagnosis of asthma
  - Review full blood count for evidence of raised eosinophils (≥0.3 $x10^9$/L)
- Assess asthma control using ACQ, ACT or RCP 3 questions
- Start all patients on ICS appropriate to level of severity and step up incrementally if symptoms are not controlled after 6 weeks
- Where diagnosis is not clear exclude alternative cause of symptoms (e.g. rhinitis, Asthma COPD overlap, GORD)

Think Carbon

- 1 mile driven by an average car is equivalent to 290gCO_2Eq[1]
- DPIs have a lower carbon footprint than pMDIs
- Minimise the number of inhalers required e.g. 1-puff twice a day regime of a higher dose ICS may be more cost-effective and environmentally friendly
- SABA overuse is a major contributor to the NHS carbon footprint
- Encourage patients to return their used inhalers to their Pharmacy for recycling or appropriate disposal. Inhalers put in household waste will end up in landfill

Asthma Reviews

- Provide a written **personalised asthma action plan** to empower self-management (using PEFR monitoring and symptoms):
  - PEFR < 80% best – consider increasing ICS
  - PEFR < 60% best – start oral steroids and seek advice
  - PEFR < 40% best – seek urgent medical attention
- Assess symptom control (RCP 3 questions, ACT, ACQ) and frequency of reliever medication usage (including additional doses in a MART regime)
- Features of poor control include:
  - Daytime symptoms ≥ 3 times per week
  - Night-time awakening ≥ 1 per week
  - The use of rescue medication ≥ 3 times per week or using ≥3 SABA inhalers/year
  - Asthma attacks ≥ 1 per year
- Document frequency and severity of asthma attacks and time off work
- Assess lung function (PEFR or FEV_1) and FeNO (where possible) to guide treatment. Lung function should be recorded at diagnosis, 3-6 months after starting treatment and then at least every 1-2 years after that
- Advise on trigger avoidance and the difference between good and poor asthma control
- Check patients' understanding of their treatment
- Check and demonstrate inhaler technique and adherence at every opportunity. If appropriate ensure using spacer with pMDI and cleaning/storing correctly
- Minimise numbers/type of inhaler devices where clinically available
- Use devices with dose counters where appropriate
- Encourage to stop smoking where relevant and offer help at every opportunity
- Assess and treat associated comorbidities (e.g. GORD, rhinitis)
- Offer dietary advice for overweight patients
- Offer annual flu vaccine
- If patient is well controlled for 3-6 months, consider stepping down treatment
- Listen and answer any questions or concerns from patients and carers
- All patients on high-dose ICS should be issued with a steroid alert card

Remember to check adherence to treatment, inhaler technique and provide a written asthma action plan prior to any treatment change.

Refer to Secondary Care**

- Persistent poor asthma control despite medium dose ICS/LABA
- ≥6 SABA inhalers in last 12 months despite primary care review
- ≥2 asthma attacks requiring oral steroids in last 12 months
- Hospital admission or life threatening asthma attack
- Suspected occupational asthma
- Poorly controlled asthma in pregnancy
- The diagnosis is unclear or unexpected clinical findings e.g. finger clubbing, stridor, crackles in the chest, monophonic wheeze
- Persistent productive cough (especially if recurrent bacterial infections are confirmed on sputum cultures)
- Unexplained restrictive spirometry or abnormalities on chest CXR
- Complex comorbidity preventing accurate assessment of asthma control
- Poor response to treatment or unable to tolerate treatment
- Non-acceptance of diagnosis or persistent non-adherence
- When referring to secondary care on medium dose ICS/LABA:

Is there evidence of T2 high disease?

  - Blood eosinophils ≥0.3 $x10^9$/L
  - FeNO ≥25ppb
  - Nasal polyps
  - Allergic, associated atopic conditions (e.g. allergic rhinitis, eczema) or childhood onset of asthma

Yes → Trial high dose ICS/LABA combination

No → Trial LAMA alongside medium dose ICS/LABA

- If there is diagnostic doubt do not increase treatment where possible as may affect subsequent diagnostic tests
- When making a referral please include details of the prescription pick-up for ICS or ICS/LABA, OCS courses and SABA use in the last 12 months for adherence assessment

Useful Links

1. NICE patient decision aid: www.nice.org.uk/guidance/ng80/resources/inhalers-for-asthma-patient-decision-aid-pdf-6727144573
2. BTS/SIGN asthma guidelines: www.brit-thoracic.org.uk/standards-of-care/guidelinesbtssign-british-guideline-on-the-management-of-asthma/
3. Gina (Global Initiative for asthma): ginasthma.org/pocket-guide-for-asthma-management-and-prevention/
4. Right Breathe: www.rightbreathe.com
5. Smoke free Hampshire: www.smokefreehampshire.co.uk
6. Asthma UK: www.asthma.org.uk

Version 1.2. Created by: WAN October 2021 – Review date annually

[COPD-Management-and-Prescribing-Guidelines-2022.pdf (westhampshireccg.nhs.uk)]

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COPD Management and Prescribing Guidelines

Investigations checklist

- Post-bronchodilator spirometry
- Chest x-ray
- Full blood count
- Oxygen saturation
- 12 lead ECG +/- Pro-BNP

Symptom burden assessed by:

MRC breathlessness score
Or CAT: catestonline.org

MRC Grade 1	I only get breathless with strenuous exercise
MRC Grade 2	I get short of breath when hurrying on the level or walking up a slight hill
MRC Grade 3	I walk slower than people of the same age on the level because of breathlessness, or I have to stop for breath when walking on my own pace on the level
MRC Grade 4	I stop for breath after walking about 100 meters or after a few minutes on the level
MRC Grade 5	I am too breathless to leave the house or I am breathless when dressing or undressing

Core principles

- confirm diagnosis with quality assured spirometry and use eosinophil count and exacerbation history to guide drug choice
- check inhaler technique before prescribing any inhaler
- choose device on individual assessment thinking of the environmental impact

Step 1: Assessment

Suspect COPD in over 35 year old smoker/ex-smoker, with:

- progressive persistent exertional breathlessness
- chronic cough
- sputum production
- frequent winter bronchitis

Step 2: Diagnosis

Perform quality assured post-bronchodilator spirometry looking for FEV1/FVC or FEV1/VC of <0.7 (or less than LLN if available)

Step 3: Refer

- Influenza and pneumococcal vaccination
- Smoking cessation support (if smoker)
- Pulmonary rehabilitation for education and exercise training (especially if MRC ≥3)
- Oxygen assessment if sats are less than 92% on air

Red flags

- Haemoptysis
- Chest pain
- Unexplained weight loss
- Clubbing
- Abnormal chest x-ray

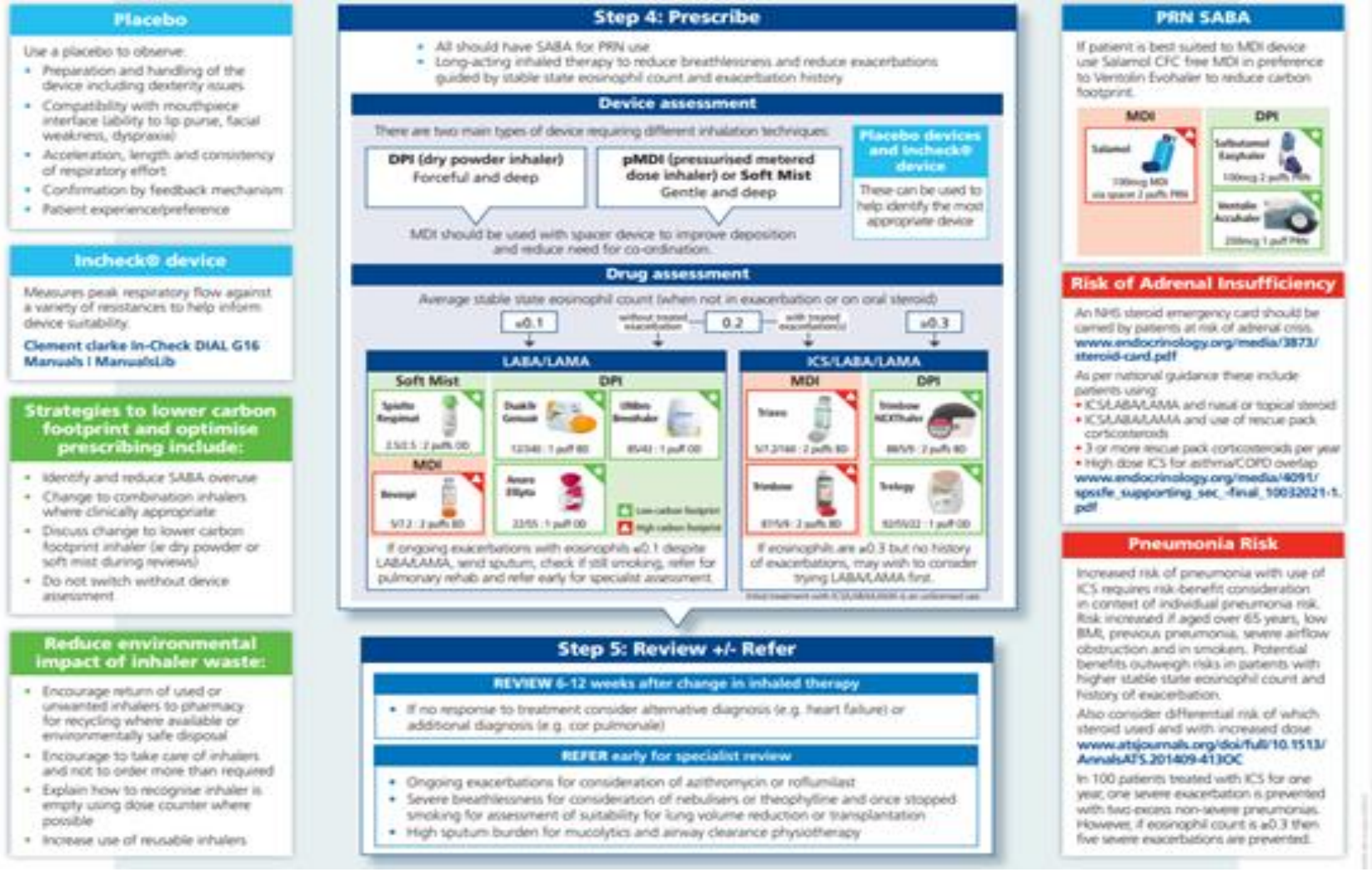
Asthma

If co-existent asthma refer to asthma guidelines. When asthma and COPD co-exist it is important to identify the predominant disease.

Seek specialist advice if response to treatment is not satisfactory.

Local Referral Details (Southampton City)

- **Smoking Cessation via PCN or local pharmacy scheme**
  www.southampton.gov.uk/health-social-care/health/stopping-smoking
- **Pulmonary Rehabilitation to Southampton Integrated COPD Team**
  SolentwestICOPD@nhs.net
  0300 1233794
- **Home Oxygen Service, UHS**
  UHS.HomeOxygenCentre@nhs.net
  023 8120 8119/4325


Placebo
Use a placebo to observe:
Preparation and handling of the device including dexterity issues
Compatibility with mouthpiece interface (ability to lip purse, facial weakness, dyspraxia)
Acceleration, length and consistency of respiratory effort
Confirmation by feedback mechanism
Patient experience/preference
Incheck® device
Measures peak respiratory flow against a variety of resistances to help inform device suitability.
Clement clarke In-Check DIAL G16 Manuals | ManualsLib
Strategies to lower carbon footprint and optimise prescribing include:
Identify and reduce SABA overuse
Change to combination inhalers where clinically appropriate
Discuss change to lower carbon footprint inhaler (ie dry powder or soft mist during reviews)
Do not switch without device assessment
Reduce environmental impact of inhaler waste:
Encourage return of used or unwanted inhalers to pharmacy for recycling where available or environmentally safe disposal
Encourage to take care of inhalers and not to order more than required
Explain how to recognise inhaler is empty using dose counter where possible
Increase use of reusable inhalers
Step 4: Prescribe
All should have SABA for PRN use
Long-acting inhaled therapy to reduce breathlessness and reduce exacerbations guided by stable state eosinophil count and exacerbation history
Device assessment
There are two main types of device requiring different inhalation techniques:
DPI (dry powder inhaler) Forceful and deep
pMDI (pressurised metered dose inhaler) or Soft Mist Gentle and deep
Placebo devices and Incheck® device
These can be used to help identify the most appropriate device
MDI should be used with spacer device to improve deposition and reduce need for co-ordination.
Drug assessment
Average stable state eosinophil count (when not in exacerbation or on oral steroid)
≥0.1
0.2
≥0.3
LABA/LAMA
Soft Mist
DPI
MDI
Low-carbon footprint
High-carbon footprint
If ongoing exacerbations with eosinophils ≥0.1 despite LABA/LAMA, send sputum, check if still smoking, refer for pulmonary rehab and refer early for specialist assessment.
ICS/LABA/LAMA
MDI
DPI
If eosinophils are ≥0.3 but no history of exacerbations, may wish to consider trying LABA/LAMA first.
Step 5: Review +/- Refer
REVIEW 6-12 weeks after change in inhaled therapy
If no response to treatment consider alternative diagnosis (e.g. heart failure) or additional diagnosis (e.g. cor pulmonale)
REFER early for specialist review
Ongoing exacerbations for consideration of azithromycin or roflumilast
Severe breathlessness for consideration of nebulisers or theophylline and once stopped smoking for assessment of suitability for lung volume reduction or transplantation
High sputum burden for mucolytics and airway clearance physiotherapy
PRN SABA
If patient is best suited to MDI device use Salamol CFC free MDI in preference to Ventolin Evohaler to reduce carbon footprint.
MDI
DPI
Risk of Adrenal Insufficiency
An NHS steroid emergency card should be carried by patients at risk of adrenal crisis.
www.endocrinology.org/media/3873/steroid-card.pdf
As per national guidance these include patients using:
ICS/LABA/LAMA and nasal or topical steroid
ICS/LABA/LAMA and use of rescue pack corticosteroids
3 or more rescue pack corticosteroids per year
High dose ICS for asthma/COPD overlap
www.endocrinology.org/media/40911/spsfe_supporting_sec_-final_10032021-1.pdf
Pneumonia Risk
Increased risk of pneumonia with use of ICS requires risk-benefit consideration in context of individual pneumonia risk. Risk increased if aged over 65 years, low BMI, previous pneumonia, severe airflow obstruction and in smokers. Potential benefits outweigh risks in patients with higher stable state eosinophil count and history of exacerbation.
Also consider differential risk of which steroid used and with increased dose
www.atsjournals.org/doi/full/10.1513/AnnalsATS.201409-413OC
In 100 patients treated with ICS for one year, one severe exacerbation is prevented with two excess non-severe pneumonias. However, if eosinophil count is ≥0.3 then five severe exacerbations are prevented.

Intervention Brief:

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Clinical Commissioning Group

Medicines Optimisation intervention brief

TITLE

Reducing the environmental impact of inhalers

WHAT?

- Proactively identify patients that would benefit from a review of their asthma or COPD and consider switching to lower carbon footprint inhalers
- Review inhalers during a patient's annual respiratory review and consider suitability for switch as above.
- Initiate new patients on lower carbon footprint inhalers where appropriate.
- Encourage patients to reduce inhaler waste and return inhalers to pharmacies for recycling or safe destruction.

WHY?

- The propellants in pressurised metered dose inhalers (pMDIs or MDIs) are responsible for around 3% of all NHS emissions.
- The NHS has committed to reducing its carbon footprint by 51% by 2025 to meet Climate Change Act targets, including a shift to dry powdered inhalers (DPIs) to deliver a reduction of 4%.
- Dry powder inhalers (DPIs) and soft mist inhalers generally have a lower carbon footprint compared to pMDIs.
- 1 dose of a pMDI device is approximately equivalent to the same carbon footprint as driving 1.7 miles in the average car compared to 0.07miles for 1 dose of a DPI device.
- Hampshire, Southampton and Isle of Wight CCG has a high percentage of MDIs compared to DPIs (excluding salbutamol). Pressurised metered dose inhalers (pMDIs) account for 71.6% of all inhaler device types prescribed in England (76.45% for HSI CCG)
- If an inhaler recycling scheme is not in place, incinerating and safely destroying remaining propellants in inhalers is less damaging to the environment than disposing of them in household waste (resulting in them degrading in landfill).
- The PCN DES requires PCNs to 'actively work with their CCG to optimise the quality of prescribing of metered dose inhalers, where a low carbon alternative may be appropriate'
- 'Metered Dose Inhaler (MDI) prescriptions as a percentage of all non-salbutamol inhaler prescriptions' and 'Mean carbon emissions per salbutamol inhaler prescribed (kg CO2e)' are included as measures in the Investment and Impact Fund of the PCN DES for 2022/23 (up to 71 points available).

WHO?

- All patients at their annual COPD or asthma review.
- All patients identified as using more inhalers than expected.
- Patients prescribed both DPIs and MDIs (excluding salbutamol)
- Patients with a confirmed diagnosis of asthma who are prescribed a short-acting beta agonist (SABA) without an inhaled corticosteroid (ICS)
- Patients prescribed salbutamol pMDIs containing more propellant gas (Ventolin) and HFA227 propellant containing pMDIs (Flutiform and Symbicort)

TIPS?

- Make sure you (and anyone involved in respiratory care) are confident teaching inhaler technique to patients
- Target patients who are already prescribed a combination of pMDIs and DPIs as they may be most suitable for switching pMDI to DPI.
- Patients with asthma ordering more than 3 SABA inhalers per year may be poorly controlled and at increased risk of exacerbations and may require a review of treatment.
- If a patient is using separate single component pMDIs and unsuitable for a switch to a DPI, consider a combination pMDI device. This will reduce overall numbers of inhaler items used.
- Environmental impact of inhalers is a prescribing measure on the Open Prescribing site and prescribing data is available here: https://openprescribing.net/measure/environmental_inhalers/

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- Videos instructing patients how to use their inhalers which can be sent as text message links are available from:
  - https://www.asthma.org.uk/inhalervideos
  - https://www.rightbreathe.com/
- Instructional videos that can be embedded into a practice website are available from: https://www.prescqipp.info/our-resources/webkits/respiratory-care/. These cannot be texted directly to the patient, as a registration to the website is required.

HOW?

- Establish links with practice nurses and healthcare professionals conducting reviews
- Any changes to patient's inhaler device should be done in conjunction with the patient using the principles of shared decision making
- Interface Clinical Services can be approached to review high risk patients as part of the Sentinel Plus project. Contact your medicines optimisation team for more details
- Using clinical searches provided by the Medicines Optimisation team, target reviews at
  - Patients using more than 13 x 120-dose MDIs or 9 x 200-dose MDIs in a 12 month period
  - Patients using more than 1 single component MDI
  - Patients already on a DPI that also have MDIs prescribed (excluding salbutamol)
- Clinical system searches to identify patients for review are also available from UCL Partners and PrescQIPP
- Encourage asthma patients to read the NICE patient decision aid prior to their annual review.
- Consider switch from pMDI to DPI if the patient can breathe in through their mouth quickly and deeply over 2 to 3 seconds. Use an In-Check device and/or placebo devices and training devices where available to confirm suitability.
- Encourage patients to return their inhalers to a pharmacy participating in a recycling scheme if available, otherwise advise patients to return used inhalers to their local pharmacy for safe destruction
- Use inhalers with integral dose counters where available, otherwise ensure patients are aware of how many doses are contained within their inhaler and how long this is expected to last, to avoid discarding inhalers that still contain doses

SO WHAT?

- Optimises patients' therapy and reduces carbon footprint from inhaler use.

FURTHER INFORMATION

1. Hampshire Southampton and Isle of Wight Asthma Prescribing Guidelines WAN_Guidelines_Full.pdf (westhampshireccg.nhs.uk)
2. Hampshire Southampton and Isle of Wight COPD Prescribing Guidelines COPD-Management-and-Prescribing-Guidelines-2022.pdf (westhampshireccg.nhs.uk)
3. NICE patient decision aid: Inhalers for asthma: https://www.nice.org.uk/guidance/ng80/resources/inhalers-for-asthma-patient-decision-aid-pdf-6727144573
4. NICE patient decision aid user guide and data sources: https://www.nice.org.uk/guidance/ng80/resources/inhalers-for-asthma-patient-decision-aid-user-guide-pdf-6727144574
5. PrescQipp Bulletin 295 Lowering the carbon footprint – October 2021 (Subscription required to access): Bulletin 295: Inhaler carbon footprint | PrescQIPP C.I.C
6. UCL Partners risk stratification tools https://uclpartners.com/proactive-care/search-and-risk-stratification-tools/
7. Greener Inhalers website https://greeninhaler.org/
8. Sentinel project website https://sentinelplus.info/ (contact Medicines Optimisation Team for password to access)
9. RightBreathe: Information for clinicians on different kinds of inhalers https://www.rightbreathe.com/
10. Wilkinson AJK, Braggins R, Steinbach I, Smith J. Costs of switching to low global warming potential inhalers. An economic and carbon footprint analysis of NHS prescription data in England. BMJ Open. 2019 Oct;9(10):e028763. DOI: 10.1136/bmjopen-2018-028763. https://bmjopen.bmj.com/content/9/10/e028763
11. How to reduce the carbon footprint of inhaler prescribing. https://www.greenerpractice.co.uk/greener-practice-guide-to-inhaler-prescribing

Produced by South West Hampshire and North and Mid Hampshire Medicines Optimisation Teams for local use
Date of preparation: March 2022 Date for review: March 2024

Practical Ways to Reduce the Carbon Impact of Inhalers:

NHS
Hampshire and Isle of Wight

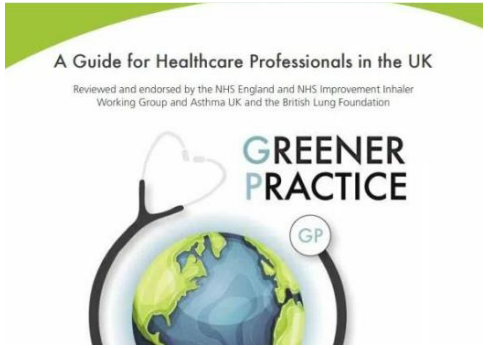
Area of Work	Issue Identified	Possible solutions	Supporting Resources
High carbon footprint MDIs	Use of HFA227 pMDIs (Flutiform and Symbicort)	Identify patients and consider switching to DPI versions of same inhaler or other suitable treatment	Clinical system searches Patient letters/information
High carbon footprint MDIs	Use of salbutamol inhalers with higher volumes of propellant gas (Ventolin)	Identify patients and consider switching to other suitable treatments or lower volume salbutamol inhalers Increase use of MART regime Remove salbutamol inhalers from repeat templates Reduce the number of inhalers available on repeat templates Set dose intervals on salbutamol inhalers to 180 days to allow easier monitoring of overuse	Clinical system searches Personalised Asthma Action Plans
Poor asthma control	Ordering more than 3 salbutamol inhalers per year	Review medication, compliance, inhaler technique Consider MART regime Switch to lower carbon inhalers if clinically appropriate at review	Sentinel Plus project support Inhaler technique videos Greener Practice patient messages: Resources – Greener Practice
Poor asthma control	Patients prescribed SABA without ICS	Confirm asthma diagnosis Review treatment, adding ICS for patients with asthma as per guidelines	Asthma | British Thoracic Society | Better lung health for all (brit-thoracic.org.uk) Wessex AHSN FeNO project Community Pharmacy New Medicines Service NHS England » NHS New Medicine Service https://psnc.org.uk/wp-content/uploads/2021/08/NMS-patient-leaflet-Aug-2021.pdf

Inhaler device choice	Patients prescribed separate LABA/ICS	Review treatment and consider prescribing as combined inhalers (moving to DPI if appropriate)	Clinical system searches Personalised Asthma Action Plans
Inhaler device choice	Patients prescribed a mixture of pMDIs and DPIs (excluding salbutamol)	Review treatment and inhaler technique and consider prescribing all devices as the same type of device (moving to DPI if appropriate)	Clinical system searches Personalised Asthma Action Plans
Inhaler device choice	Patients prescribed inhaled corticosteroid pMDIs	• For patients prescribed e.g. 2puffs BD beclomethasone 50mcg pMDI, consider switching to 1 puff BD beclomethasone 100mcg pMDI • Review treatment, consider whether MART regime is appropriate	
Waste	Increasing use of reusable inhaler devices (e.g. refills)	• Search for all patients with refillable devices and replace repeat medication with refill device • Only have refill devices on repeat prescriptions (or limit the number of issues of the device plus refill) • Patient education	Searches for refillable devices Respimat® inhaler | Official product site | Boehringer Ingelheim
Waste	Recycling of inhalers and returning to pharmacies for environmentally safe disposal	• Social media information and promotion • Patient audits • Community pharmacy quality scheme • Ensure patients know how to tell when their inhalers are empty • Add 'return your inhaler to a pharmacy for environmentally safe disposal' to the dose directions for inhalers	PSNC-Patient-Briefing-sheet-inhaler-disposal.pdf index (prescqipp.info) Greener Practice patient messages: Resources – Greener Practice Chiesi scheme in Leicestershire 732_take-air-a4-poster-approved.pdf (chiesi.uk.com)

Greener Practice

About us

We're a network of people encouraging action on sustainability in primary care by providing information, convening groups to share learning and speaking up on the national stage.

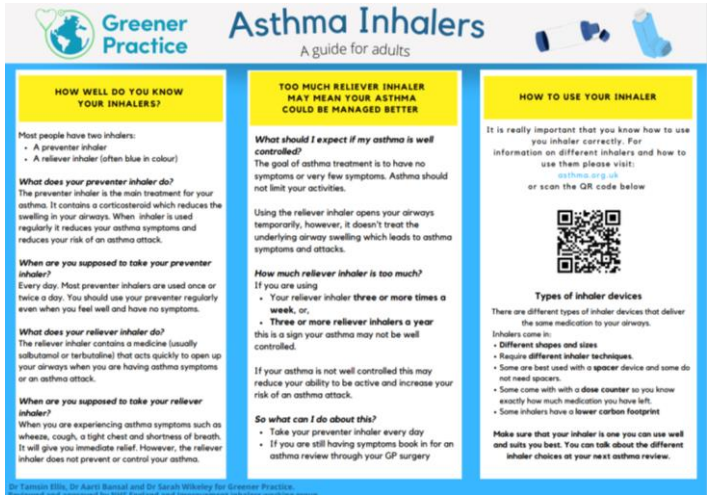


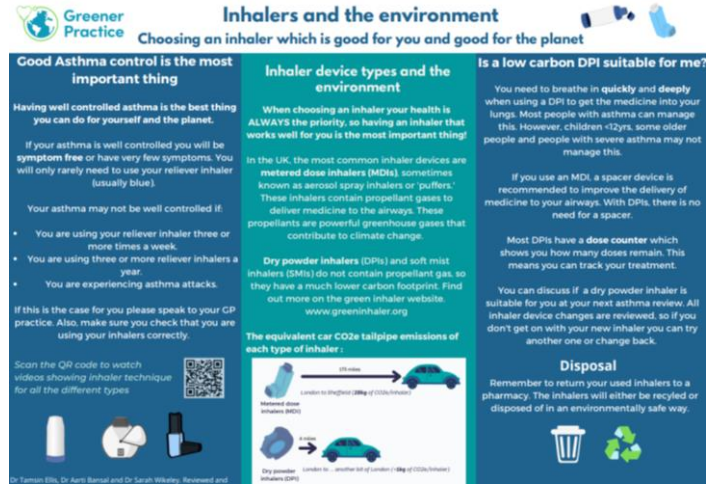
- Greener Practice Asthma Toolkit: High Quality and Low Carbon Asthma Care – Greener Practice
- 'How to reduce the carbon footprint of inhaler prescribing? A guide for healthcare professionals'
  - ✓ Endorsed by NHSE, Asthma UK & British Lung Foundation
  - ✓ Funded by NHS England & NHS Improvement

Introductory video: https://youtu.be/aJoQqz4MyTg

Asthma Toolkit Overview:

- Introduction
- Educational videos
  - Introduction
  - Diagnosis
  - Disease Control
  - Device Choice
  - Disposal
  - **Approach to consultations**
- Projects – Step by step guide to QI projects
- Resources
  - Templates
  - Patient leaflets
  - SMS messages
  - Patients letters
  - Posters
  - Searches
  - Educational videos

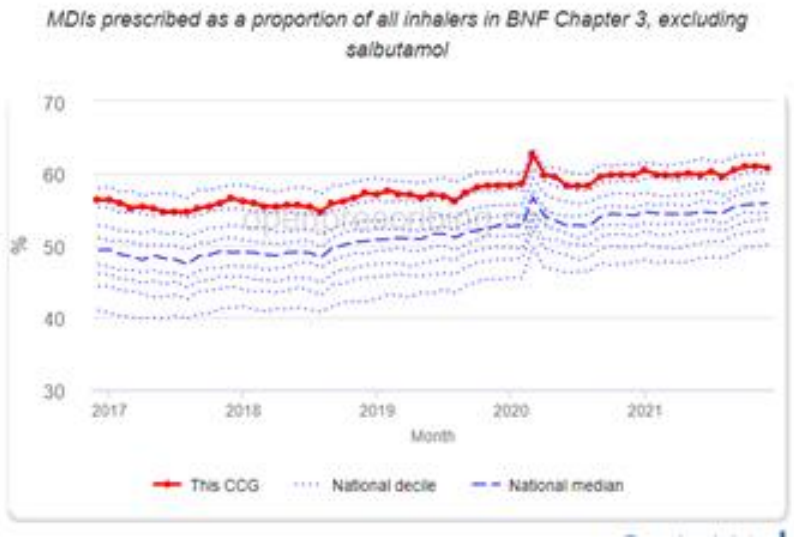




How can we measure progress?

NHS
Hampshire and Isle of Wight

Open Prescribing



[Home | OpenPrescribing]
This is HSI CCG Data, but can be viewed at PCN and practice level

- ePACT 2
- Practice searches
- NHSBSA scorecard expected soon
- Arden's searches (IIF)

Resources supporting all areas of work:

NHS
Hampshire and Isle of Wight

https://www.greenerpractice.co.uk/greener-practice-guide-to-inhaler-prescribing

Other resources – from future NHS Greener Knowledge Hub

- NICE patient decision aid - Information and guidance for patients and clinicians when choosing an inhaler, including consideration of the environmental impact of devices alongside clinical benefits
- The suite of PrescQIPP resources on inhaler carbon footprints, including a detailed data table on current estimates of inhaler emissions (listed as 'Attachment 1' on the webpage)
- RightBreathe website and app (available through the website) - Information for clinicians on different kinds of inhalers
- Primary Care Respiratory Society position statement on the environmental impact of inhalers - Detail about the Primary Care Respiratory Society's official position on, and commitment to, addressing environmental issues, published in February 2020
- British Thoracic Society Position Statement: The environment and lung health, 2020 – Statement from the British Thoracic Society on climate change and the role healthcare and respiratory care in particular can play in combatting it
- UKIG inhaler standards and competency document (including 7 steps to inhaler success) - Standards set by the UK Inhaler Group designed to provide guidance on optimal inhaler technique

Resources specifically tailored for patients:

- Asthma UK/British Lung Foundation: What does good asthma control look like - Information and advice for patients to manage their asthma
- Asthma UK/British Lung Foundation advice and videos on inhaler technique - Multimedia providing examples of how to use inhalers effectively
- Asthma UK/British Lung Foundation: Your personalised asthma action and support plan - A two page template for developing a personalised asthma management plan
- Asthma UK/British Lung Foundation: Asthma review - Guidance on how to use your inhaler most effectively, tailored to your device

Note: Resources listed have been recommended by members of the NHS England and NHS Improvement Inhaler Group. Third party resources have not been formally endorsed by NHS England and NHS Improvement

Key messages for patients:

NHS
Hampshire and Isle of Wight

If you are using your SABA inhaler more than three times a week, or using more than three SABA inhalers a year, your condition may not be properly controlled, so see your GP, respiratory nurse or pharmacist for a review

Inhaler technique is important, so attend your annual review for a check

If you are using several individual devices to manage your condition, it may be safer and more effective to move to a combination device

Make sure you use your inhaler fully before returning to the pharmacy for safe disposal (some include a dose counter to show how much medication is left inside)

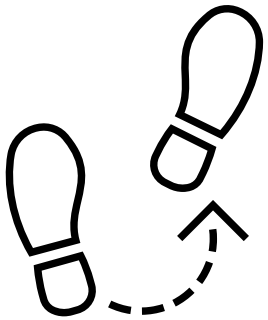
Only order what you need

Inhalers are NOT suitable to be put in your household waste

Please return used inhalers to your local pharmacy (for safe destruction of greenhouse gasses/ recycling)

Next steps:

NHS
Hampshire and Isle of Wight



1. Discuss focus at practice/ PCN level
2. Create an action plan, with regular review

- ❖ Encourage patients to return inhalers to their local pharmacy
- ❖ Train / signpost to resources for practice teams
- ❖ Optimise medication regimes via respiratory reviews
- ❖ Run practice searches to identify patients to prioritise for review
- ❖ SABA over-use: SENTINEL Plus project
- ❖ COPD project
- ❖ Green GP QI projects
- ❖ Switch Ventolin to lower carbon alternative where appropriate

“It always seems impossible until it’s done”