

Medicines Optimisation intervention brief

TITLE
Reducing the environmental impact of inhalers
WHAT?
<ul style="list-style-type: none"> 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?
<ul style="list-style-type: none"> 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?
<ul style="list-style-type: none"> 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?
<ul style="list-style-type: none"> 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/

- 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>