

Patient Label Here

# CLIMATE CONSCIOUS INHALER PRACTICES IN TRANSITIONS OF CARE



Inhalers contribute disproportionately to climate change. Outpatient inhaler prescriptions in a single BC Health Authority contribute 9,822 tCO<sub>2</sub>e per year. This is equivalent to driving around the circumference of the earth 979 times (1)

Small changes in prescribing practices can have a big impact on lowering carbon emissions



## INHALERS ON ADMISSION

## INHALERS ON DISCHARGE

Special authority:

submitted in hospital

not yet submitted

not needed

Patient is discharged on a climate-conscious inhaler regimen

## RECOMMENDATIONS

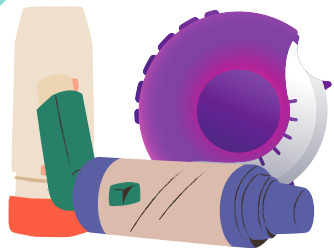
- We couldn't find spirometry or PFTs on file - please review whether you have any in your EMR. If not, consider ordering to clarify diagnosis.
- Once acute exacerbation improves and patient finishes current MDI inhaler, consider changing to lower-carbon alternative such as DPI or SMI
- Consider reviewing inhaler technique with your patient, or ask the pharmacist to review technique on your next prescription. Excellent educational videos can be found at [www.lung.ca/lung-health/how-use-you-inhaler](http://www.lung.ca/lung-health/how-use-you-inhaler)
- Other:

Document prepared by:

Signature:

Date:

# KEY FACTS



Metered-dose inhalers (MDIs) contain hydrofluoroalkane propellants (HFAs). This potent greenhouse gas expels the medication from the canister. Each MDI has the carbon footprint equivalent of driving up to 139km by car (2)

Dry-powdered inhalers (DPIs) and soft mist inhalers (SMI) have a significantly lower carbon footprint, ranging between 2-5km by car (2). They can still have other environmental impacts (2)

80% patients consider the carbon footprint of their inhaler therapy to be an important consideration (3)

DPIs are safe and effective in adults and children over the age of 12. Switching to DPIs in appropriate patients through shared decision making leads to similar or improved health outcomes (5,6,7)



## Interested in learning more?

<https://cascadescanada.ca/resources/all-topics/inhalers/>

1 Liang KE, Yao JA, Hui P, Quantz D. The Climate Impact of Inhaler Therapy in the Fraser Health Authority Region from 2016 to 2021. BCMJ. [Pending publication]

2. Stoyanova V, Culley C. 2022. Detailed Inhaler Carbon Footprint Chart. Retrieved from <https://cascadescanada.ca/resources/tools-templates/#inhalers>

3. Dhand R, Eicher J, Hänsel M, Jost I, Meisenheimer M, Wachtel H. Improving usability and maintaining performance: human-factor and aerosol-performance studies evaluating the new reusable Respimat inhaler. Int J Chron Obstruct Pulmon Dis. 2019 Mar 5;14:509–23.

4. 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.

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6. Price DB, Román-Rodríguez M, McQueen RB, Bosnic-Anticevich S, Carter V, Gruffydd-Jones K, et al. Inhaler Errors in the CRITIKAL Study: Type, Frequency, and Association with Asthma Outcomes. The Journal of Allergy and Clinical Immunology. In Practice. 2017 Jul 1;5(4):1071–1081.e9.

7. Gálffy G, Szilasi M, Tamási L. P227 Clinical effectiveness, health-related quality of life and patient satisfaction after switch from metered dose inhaler to easyhaler dry powder inhaler in patients with asthma and COPD; a real-life study. Thorax. 2019 Dec 1;74(Suppl 2):A212–3.

8. Yang CL, Hicks EA, Mitchell P, Reisman J, Podgers D, Hayward KM, et al. Canadian Thoracic Society 2021 Guideline update: Diagnosis and management of asthma in preschoolers, children and adults. Canadian Journal of Respiratory, Critical Care, and Sleep Medicine. 2021 Nov 2;5(6):348–61.