

### Minimising the environmental impact of inhaler prescribing

Nottinghamshire APC supports the prescribing of inhalers with lower carbon impact such as dry powder inhalers (DPIs) and Soft Mist inhalers (SMIs), for all inhaled medications, wherever clinically appropriate and acceptable to the patient.

Use of combination inhalers (inhalers containing more than one medicine) is also supported to reduce the carbon impact of inhaler prescribing where all the medicinal components of the inhaler are clinically indicated for the individual patient.

Where an aerosol metered dose inhaler is considered the most clinically appropriate salbutamol inhaler, the carbon impact of prescribing can be reduced by prescribing a lower volume propellant salbutamol inhaler such as Salamol and encouraging appropriate non-wasteful use.

### Appropriate prescribing of Salbutamol Inhalers to reduce carbon (environmental) impact

(Salbutamol pMDI account for 55% of all pMDIs dispensed in Nottinghamshire in 2021-22)

1. Ensure appropriate inhaler technique. Aim for asthma control where average usage is not greater than 4 puffs per week (= 1 inhaler per 12 months!).
2. Agree with the patient an appropriate number of salbutamol inhalers per 12 months (2-4 inhalers per 12 months).
3. Discuss the patient's use of their salbutamol inhaler. This could include the need to have an inhaler at more than one location. But it does not mean that they need to renew every inhaler monthly. The shelf life of a salbutamol inhaler (pMDI) is 24 months.
4. Set up salbutamol inhaler with an agreed number of issues for 12 months. Use 'irregular repeat' or 'acute' to help monitor this.
5. Few, if any, asthmatics should require a regular monthly repeat of salbutamol inhaler.
6. Consider one inhaler per prescription (1 inhaler in reserve).
7. Explain benefit of a greener alternative: DPI appropriate Salbutamol Easyhaler or Salamol pMDI.
8. Whenever a patient's inhaler is changed, provide training in inhaler technique (also applies if changing from Ventolin or salbutamol to Salamol pMDI because of the smaller volume per puff).
9. Prioritise review of patients using more than 6 salbutamol inhalers per year.
10. Prescribe the appropriate salbutamol inhaler by brand (Salamol). (Nationally 80% of generic salbutamol prescriptions are dispensed as Ventolin).
11. A patient's salbutamol / Ventolin inhaler is potentially their life saver. Resistance to change is natural. It is important to reach an agreed shared decision.
12. Encourage return of used inhalers to pharmacies for appropriate disposal. The inhalers will either be recycled or disposed of in an environmentally safe way
13. Frequent salbutamol use suggests poor asthma control and the need to seek medical advice (for review of condition and treatment).
14. COPD patients may need to use salbutamol inhaler more than those with asthma.

### All asthmatics should have a salbutamol inhaler (or other SABA, or LABA/ICS combination inhaler if using for maintenance and relief of symptoms) available for use at all times.

Appropriate prescribing of salbutamol inhaler requires the prescriber to have systems in place to monitor the number of salbutamol inhalers issued. Salbutamol inhaler requests exceeding an agreed number/frequency should be flagged to a healthcare professional to instigate review.

The individual's need for salbutamol inhalers at more than one location does not negate this process

Reaching an agreed number of issues, should not result in a patient being denied a necessary salbutamol inhaler. Nor should the issue of a prescription for a salbutamol inhaler in such circumstances undermine the importance and urgency of a review.

Other alerting factors include recent use of rescue steroids and or antibiotics, attendance at A&E, hospital admission, emergency supply, and failure to attend previous reviews

Dear All

In a drive to simplify which are the greener short acting beta agonist (SABA) inhalers, I have compiled the attach list. I hope you find it helpful.

You will see that Salamol is a greener MDI alternative to Ventolin, but it has a smaller delivery volume and this will need to be explained to patients who are used to Ventolin.

A DPI is always greener than a MDI but, with SABAs, it is the more expensive alternative.

### CO<sub>2</sub> Impact of Salbutamol Inhalers

Inhaler	MDI/DPI	CO <sub>2</sub> impact*	Family saloon in miles equivalent.	Cost (£)
Ventolin Evohaler 100micrograms	MDI	28.26kg CO <sub>2</sub> e	175	1.50
Salamol CFC-Free inhaler 100micrograms	MDI	11.95kg CO <sub>2</sub> e	75	1.46
Salamol Easi-Breathe 100micrograms	MDI	12.08kg CO <sub>2</sub> e	75	6.30
Easyhaler Salbutamol 100micrograms	DPI	0.62kg CO <sub>2</sub> e	4	3.31

\*Mean carbon emissions per salbutamol inhaler prescribed (kg CO<sub>2</sub>e)

Carbon emissions per (salbutamol) inhaler p91-2 [IIF 2022/23](#) Also [Green Inhaler](#)

### Optimising SABA use

1. Remember step one the asthma ladder is *no longer SABA alone* (see overleaf)
2. Ensure appropriate inhaler technique. Aim for asthma control where average usage is *not greater than 4 puffs per week* (= 1 inhaler per 12 months!)
3. One inhaler per repeat (1 inhaler in reserve)
4. *Explain benefit of a greener alternative: Salamol MDI or if DPI appropriate Salbutamol Easyhaler*
5. Whenever a patient's inhaler is changed provide training in inhaler technique (this also applies if changing from Ventolin to Salamol pMDI because of the smaller volume per puff)
6. Prioritise review of patients prescribed Ventolin Evohaler or using more than 6 salbutamol inhalers per year (Nationally 80% of generic salbutamol prescriptions are dispensed as Ventolin)
7. A patient's salbutamol / Ventolin inhaler is potentially their life saver. Resistance to change is natural. But ensure appropriate non-wasteful use and return used inhalers to pharmacies for appropriate disposal
8. COPD patients may need to use salbutamol inhaler more than those with asthma

## Useful Information Sources

Salbutamol Notts APC Formulary

[High Quality and Low Carbon Asthma Care Toolkit \(Greener Practice Website\)](#)

Treatment summaries from [BTS\SIGN Asthma Guideline Quick Reference Guide 2019](#)

