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Männystrie O Poustie
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Carbon Footprint from Inhalers

June 2022





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Inhaler Impact on Carbon Footprint

- Inhalers have a **disproportionate effect** on global warming
- Inhalers account for approximately **13%** of the total carbon footprint related to NHS delivery of care.
- Pressurised metered dose inhalers (pMDIs) contain hydrofluoroalkane (HFA) propellants which are potent greenhouse gases (1300 – 3350 times more potent than carbon dioxide).
- Current NI annual prescribing of salbutamol pMDI inhalers is equivalent to **2 million car journeys from Belfast to Dublin**



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Commitment to Net Zero

- **All 4 UK health services** united and committed to net zero greenhouse gas emissions by 2040.
- The **Energy Strategy for Northern Ireland** December 2021- aims to deliver a 56% reduction in our energy-related emissions.
- Scotland, England and Wales have already issued **guidance on reducing carbon footprint from inhalers**

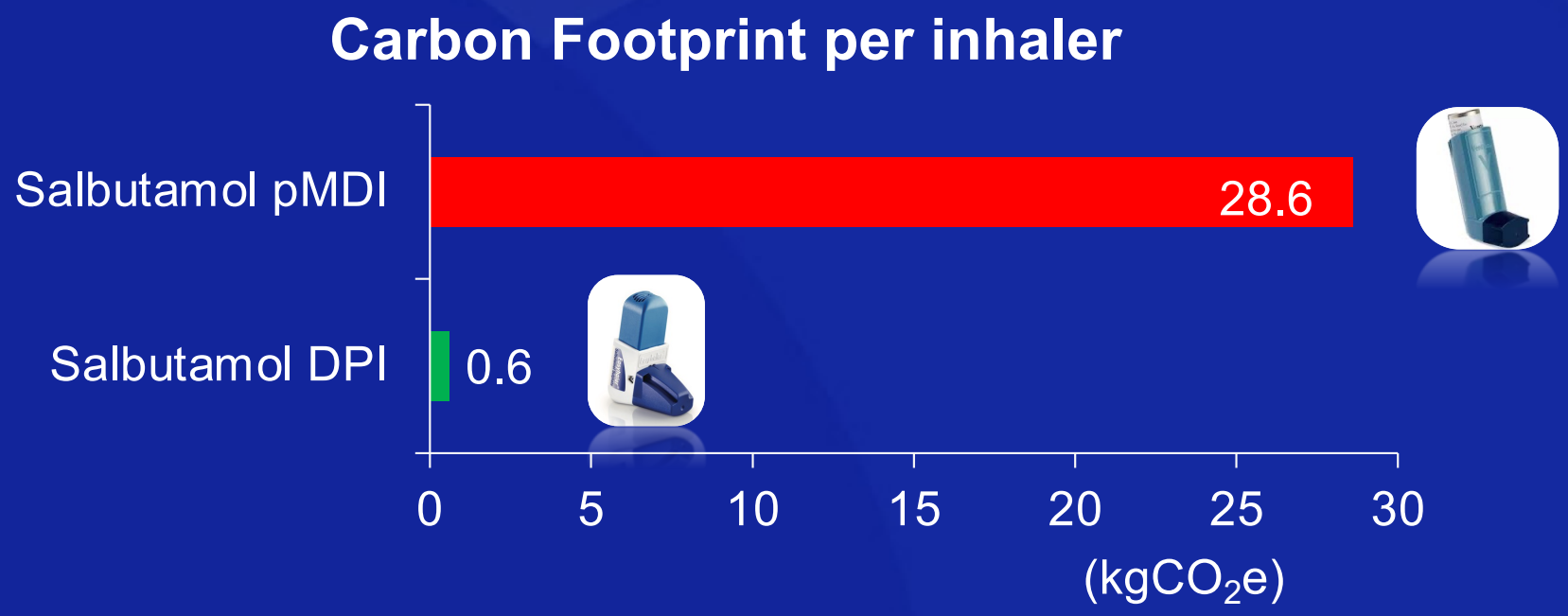


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All inhalers are not the same

- Different inhalers create a different carbon footprint
- pMDI inhalers contain HFAs and therefore have a significantly higher carbon footprint



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All inhalers are not the same

Type of Salbutamol Inhaler	Device Type	Carbon emissions per inhaler (kg CO2e)
Ventolin Accuhaler 200microgram	DPI	0.58
Easyhaler Salbutamol 100 microgram	DPI	0.62
Easyhaler Salbutamol 200 microgram	DPI	0.62
Salbulin Novolizer 100 microgram	DPI	3.75
Airomir 100 microgram	pMDI	9.72
Salamol CFC Free 100 microgram	pMDI	11.95
Salbutamol CFC Free 100 microgram	pMDI	25.24
Ventolin Evohaler	pMDI	28.26

Note: Saying inhalers are CFC free is very misleading !



All inhalers are not the same

- **DPI inhalers can be used by most patients** but some patients may still require a pMDI
- If needed, there is the option to choose a pMDI that:
  - low volume inhaler (less propellant per inhaler)
  - a lower carbon propellant (different HFA)
- e.g. Ventolin Inhaler pMDI has more than double the carbon footprint of some other Salbutamol pMDIs e.g. Salamol



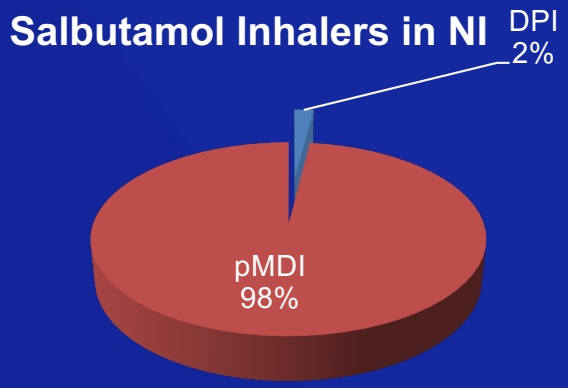
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Current prescribing in NI

- In NI approx. 60% of all inhalers dispensed are pMDIs
- Of Salbutamol inhalers (blue reliever) 98% are pMDIs
- Sweden prescribes only 13% of inhalers as pMDIs.





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Actions required:

1. **Choose** low carbon inhalers whenever possible

2. **Use** inhalers to best effect and optimise treatment

3. **Return** inhalers for greener disposal - (Used & Unused)



Why greener disposal of inhalers is important



- When pMDIs are disposed of in domestic waste, the residual HFAs are released into the atmosphere.
- Used inhalers typically have approx. 30% of the original propellant remaining in the canister.
- In the UK less than 1% of inhaler devices are returned for green disposal.
- Inhalers returned to community pharmacies can be incinerated at high temperature which destroys propellants.

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To safely change inhalers (QoF)

- Focus on **finding the right medication and device for each individual** in consultation with them and their carers, through shared decision making.
- **Assess and optimise inhaler technique** at every opportunity.
- **Follow patients up** to ensure suitability of device and disease control.
- DO NOT undertake blanket switching if changing the device type or medication.



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To safely change inhalers (QoF)

- "*Essentially this is about evolution, not revolution*.
- In discussion with patients, healthcare professionals should have a conversation about the environmental footprint of their inhalers,".



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Asthma

14 February 2022

By Julia Robinson

Some patients switched to 'greener' inhalers without consultation, say experts

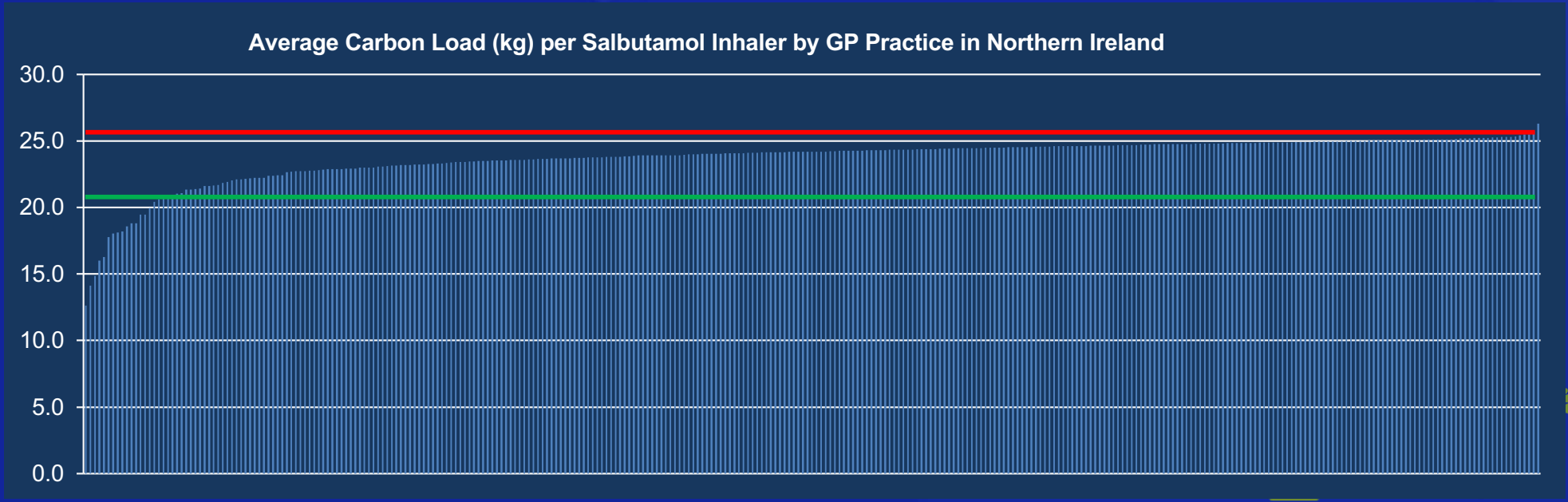
Exclusive: Experts warn that non-consented inhaler switches pose risks to patients' health and advise physicians to carry out individual inhaler checks to avoid this.

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How much do I need to change ?

- QoF – thresholds are 22.1- 25.1
  At or below 22.1 will achieve full QoF points (14)
- Remember - 1 DPI is equivalent to 41 pMDIs.



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Resources Available

- **Greener Practice Document** (NHSE & Asthma UK)
- **PrescQIPP** – Inhaler carbon Footprint
- **NHS Inhaler Carbon Footprint** - Comparison Tool


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PrescQIPP
Community Interest Company

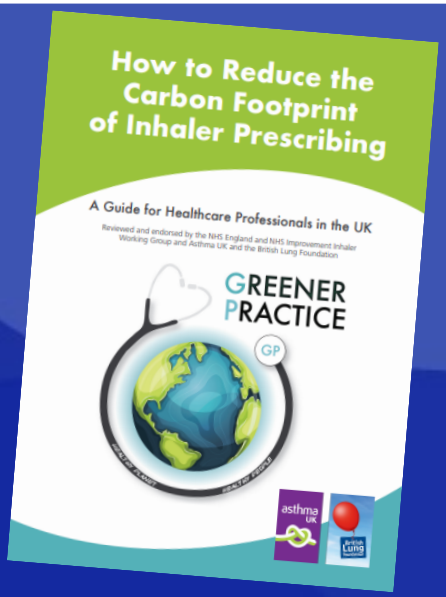
Inhaler carbon footprint

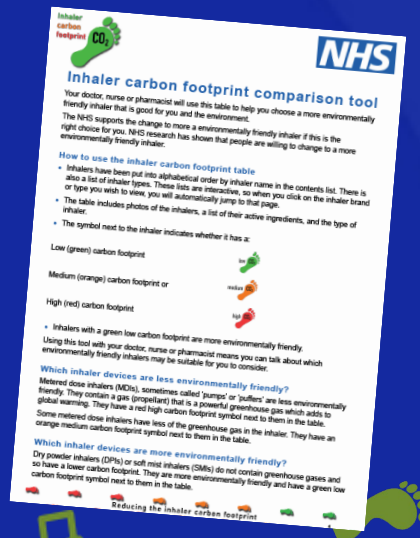
Recommendations

- Determine how local or practice prescribing data on the inhaler carbon footprint compares to the national or local average and identify where local improvements can be made using the PrescQIPP inhaler carbon footprint data tool and visual data pack.
- Agree, through an appropriate group such as the Area Prescribing Committee, a range of strategies to support the NHS commitment to lower the inhaler carbon footprint.
- Agree medicines optimisation strategies to lower the inhaler carbon footprint which optimise prescribing by:
  - Getting or maintaining good control of asthma and COPD through reviewing patients regularly and treating in line with NICE asthma and COPD treatment pathways.
  - Agreeing local respiratory pathways and medicines formulary choices which take into account lower inhaler carbon footprint options.
  - Demonstrating and checking inhaler technique.
  - Identifying and reducing short-acting beta-2 agonist (SABA) overuse.
  - Changing to combination inhalers where clinically appropriate.
  - Prescribers discussing, with individual patients, lower carbon footprint inhalers during patient reviews or when a change in treatment is clinically necessary.
- Support prescribers to start new patients on, or switch existing patients to, lower carbon inhaler alternatives. Examples of support include:
  - Prescriber education on lowering the inhaler carbon footprint.
  - Providing practice level inhaler carbon footprint prescribing data.
  - Producing local respiratory prescribing guidelines which include lower carbon footprint inhalers and how to optimise prescribing.
  - Ensuring lower carbon footprint inhaler options are included in medicines formularies.
  - Providing examples of locally preferred switches from high to lower carbon footprint inhalers.
  - Undertaking audits to identify respiratory patients suitable for review to improve clinical outcomes and reduce the inhaler carbon footprint.
  - Providing patient information resources to explain the change to low carbon footprint inhalers.
  - Ensuring stock availability of any alternative inhaler switches locally recommended through discussions with pharmacies, suppliers and/or manufacturers.
- Reduce the environmental impact of inhaler waste by:
  - Encouraging patients to return their used or unwanted inhalers to a pharmacy for either recycling where available or environmentally safe disposal.
  - Encouraging patients to look after their inhalers and not over-order.
  - Ensuring that patients know how to tell when their inhaler is empty.
  - Increasing the use of re-usable inhalers.

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Inhaler carbon footprint

NHS

Inhaler carbon footprint comparison tool

Your doctor, nurse or pharmacist will use this table to help you choose a more environmentally friendly inhaler that is good for you and the environment.

The NHS supports the change to more a environmentally friendly inhaler if this is the right choice for you. NHS research has shown that people are willing to change to a more environmentally friendly inhaler.

How to use the inhaler carbon footprint table

- Inhalers have been put into alphabetical order by inhaler name in the contents list. There is also a list of inhaler types. These lists are interactive, so when you click on the inhaler brand or type you wish to view, you will automatically jump to that page.
- The table includes photos of the inhalers, a list of their active ingredients, and the type of inhaler.
- The symbol next to the inhaler indicates whether it has a:

Low (green) carbon footprint

Medium (orange) carbon footprint or

High (red) carbon footprint

- Inhalers with a green low carbon footprint are more environmentally friendly.

Using this tool with your doctor, nurse or pharmacist means you can talk about which environmentally friendly inhalers may be suitable for you to consider.

Which inhaler devices are less environmentally friendly?

Metered dose inhalers (MDIs), sometimes called 'pumps' or 'puffers' are less environmentally friendly. They contain a gas (propellant) that is a powerful greenhouse gas which adds to global warming. They have a red high carbon footprint symbol next to them in the table.

Some metered dose inhalers have less of the greenhouse gas in the inhaler. They have an orange medium carbon footprint symbol next to them in the table.

Which inhaler devices are more environmentally friendly?

Dry powder inhalers (DPIs) or soft mist inhalers (SMIs) do not contain greenhouse gases and so have a lower carbon footprint. They are more environmentally friendly and have a green low carbon footprint symbol next to them in the table.

Reducing the inhaler carbon footprint

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Cost Implications

£££

- Prescribing more Salbutamol DPI inhalers with a low carbon footprint will have additional costs.
- E.g. Salbutamol Easyhaler DPI = £3.31 compared to Salbutamol pMDI = £1.50.
- Low volume pMDIs:
  - Salamol pMDI (Teva) = £1.46
  - Airomir pMDI (Teva) = £1.97
- NOTE: Avoid selecting ‘Autohaler’ by mistake



Carbon Implications

- A switch from Salbutamol pMDI to Salbutamol DPI would reduce carbon emissions by **20,910 tonnes** each year



Carbon Implications

- *Changing all Salbutamol pMDI inhalers to Salbutamol DPIs would have the effect of reducing the carbon effect of* ***2,000,000 car journeys from Belfast to Dublin to 40,000*** *(98% reduction)*



Carbon Implications

- *Salbutamol pMDI*
  to
  Salbutamol DPI

  has the same effect as installing wall insulation a home.



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Carbon Emissions are Important – The NHS has it's part to play



Any Questions ?

