Conclusions The carbon footprint of Easyhaler show steady decrease between LCAs and is in line with the lower limit of previously reported CF for dry powder inhalers. Climate impact from the protective cover was one-tenth compared to climate impact from the inhaler itself.

P51 SWITCHING INHALER TREATMENT FROM PMDI TO DPI IN REAL-WORLD: REDUCTION OF CARBON FOOTPRINT

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Background EU regulation on F-gases encourages physicians to treat patients with DPIs rather than pMDIs for environmental reasons. However, many fear this may worsen treatment outcomes.

Methods and Aim We performed a post-hoc analysis on clinical outcomes data from a 12-week real-world, non-interventional single arm study of adult patients with asthma, COPD or asthma COPD overlap (ACO) who switched treatment from pMDI to DPI, budesonide-formoterol Easyhaler (B-F EH DPI), according to the treating physician and local guidelines. Clinical end points included ACT, CAT and lung function tests. Range of kg CO2e for one dose as reported in Montreal Protocol was used and as a conservative estimate, for lower range for B-F EH DPI, the average estimate reported (0.004 kg CO2e).

Results Among all 253 patients, clinical improvements were observed after switch. Range of estimated kg CO2e emissions per year was (90–97%) lower for B-F EH DPI (2.9 – 14.6 kg CO2e emissions/year) than for pMDI (91–137 kg CO2e emissions/year) assuming twice daily dosing for pMDI and B-F EH DPI.

Conclusion The study shows that switching from a pMDI to B-F EH DPI may enhance disease control among patients with asthma, COPD and ACO and at the same time have a positive environmental impact by reducing the carbon footprint of inhaler treatment.

REFERENCES
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P52 EFFECTIVENESS OF A NATIONAL RESPIRATORY TOOLKIT TO DRIVE THE GREEN AGENDA IN INHALER PRESCRIBING IN WALES

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Introduction and Objectives Hydrofluorocarbon (HFC) propellants from metered dose inhalers (pMDI) contribute an estimated 3.5% of the total carbon footprint of the NHS. The UK lags far behind the rest of Europe in terms of the proportion of inhalers that are low global warming potential (GWP), with current rates of 30% for this group, compared to 50% as the European average and 76% in Sweden. England has set a target to reduce the carbon footprint from inhalers by 50% by 2030, but in Wales a more stringent target of 69% reduction (A reduction of pMDI inhalers from 70% to less than 20% by 2025). In carbon footprint terms this would equate to a reduction from 65,000 tonnes of CO2 equivalent to less than 20,000 tonnes. Wales has created a national respiratory toolkit, comprising national guidelines for asthma and COPD, national educational modules and patient apps, all promoting low GWP inhalers.

Methods The national respiratory toolkit was created by senior clinicians working in partnership with the Institute for Clinical Science and Technology (ICST). Guidelines for asthma and COPD highlighted the impact of inhalers using green and red footprints for high and low GWP inhalers. Patient apps featured embedded videos on the green agenda, and data
on inhaler choices were available from app users. In addition, webinars for healthcare professionals and patients were created and hosted on the ICST platform.

Results
As of June 29 2023 there are 12,550 patients utilising the respiratory apps in Wales. Uptake of low GWP inhalers—dry powder inhalers (DPI) and smooth mist inhalers (SMI) in Wales has been greater in Wales than in England with a widening gap at each time point measured. However, these represent relatively small changes from 30% to 35% for the whole population in Wales. For those using the app 48% were using low GWP inhalers.

These outcomes were achieved through the national implementation of a comprehensive population behaviour change system utilising patient apps and a broader respiratory toolkit, including live events, email communications, and tutorials.

P53 PATIENT GROUP EDUCATION SESSIONS: AN EFFECTIVE WAY OF MAKING ASTHMA TREATMENT GREENER?

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Introduction
The NHS aims to achieve net zero by 2040. Inhalers cause 3% of NHS emissions. Compared to metered-dose inhalers (MDI), dry powder inhalers (DPI) are much greener yet 70% of UK inhalers prescribed are MDIs. Inhaler sustainability and asthma care were incentivised in England in 2022–23 to support net zero and improve clinical outcomes.

Aims
To assess if patient education sessions in a London Primary Care Network improve the sustainability and clinical outcomes of asthma care.

Methods
Between December 22 and March 23, adult asthma patients on Fostair®, Clenil® and salbutamol MDIs were identified and invited to attend a group session. All sessions followed the same format: signing confidentiality forms, brief inhaler-focused asthma education and inhaler technique demonstrations with Fostair®, beclomethasone or salbutamol DPIs. Patients practiced on training devices and indicated willingness to switch to DPIs. Prescriptions were then generated. A 2-week follow-up text allowed patients to revert to MDIs.

Baseline and 3-month post-switch Asthma Control Test (ACT) scores, and baseline adherence rates calculated using Medicines Possession Ratio (MPR), were collected.

Results
115 participants attended overall. Baseline MPR was calculated for 114; ACT was collected for 104. 42/114 (37%) patients had good adherence; 71 were suboptimal/poor. 90% (104/115) patients opted for DPI switch, 41 (39%) of whom had good adherence.

96% (102/104) opted to remain on DPIs at 2 weeks. 3-month post-switch inhaler data was collected for 96/102 patients; 96% (92/96) remained on DPIs.

Mean baseline ACT was 19. 56/104 (54%) were well controlled, 36/104 (35%) poorly controlled and 12/104 (12%) very poorly controlled. At 3 months, ACT was collected for 58/92 patients who remained on DPIs. Mean score was 18.6. 33/58 (57%) were well controlled, 10/58 (17%) poorly controlled and 15/58 (26%) very poorly controlled.

Conclusion
Most patients switched to and remained on greener inhalers following the group sessions. Baseline adherence rates were similar in the overall group and switch group. Longer-term post-switch adherence rates remain unknown. Regarding symptom control, 3-month post-switch ACT scores remain similar to baseline. Nonetheless, device switch rates suggest group sessions offer a potential strategy for improving sustainability of inhaled asthma treatments.

P54 TRENDS IN INHALER USE AND ASSOCIATED CARBON FOOTPRINT: A SALES DATA-BASED STUDY IN EUROPE

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Introduction
Physicians are being encouraged to favor dry powder inhalers (DPI) over pressurized metered dose inhalers (pMDI) on environmental grounds. The EU is reviewing the F-gas regulation to accelerate emission cut-down targets (EU Climate Action).