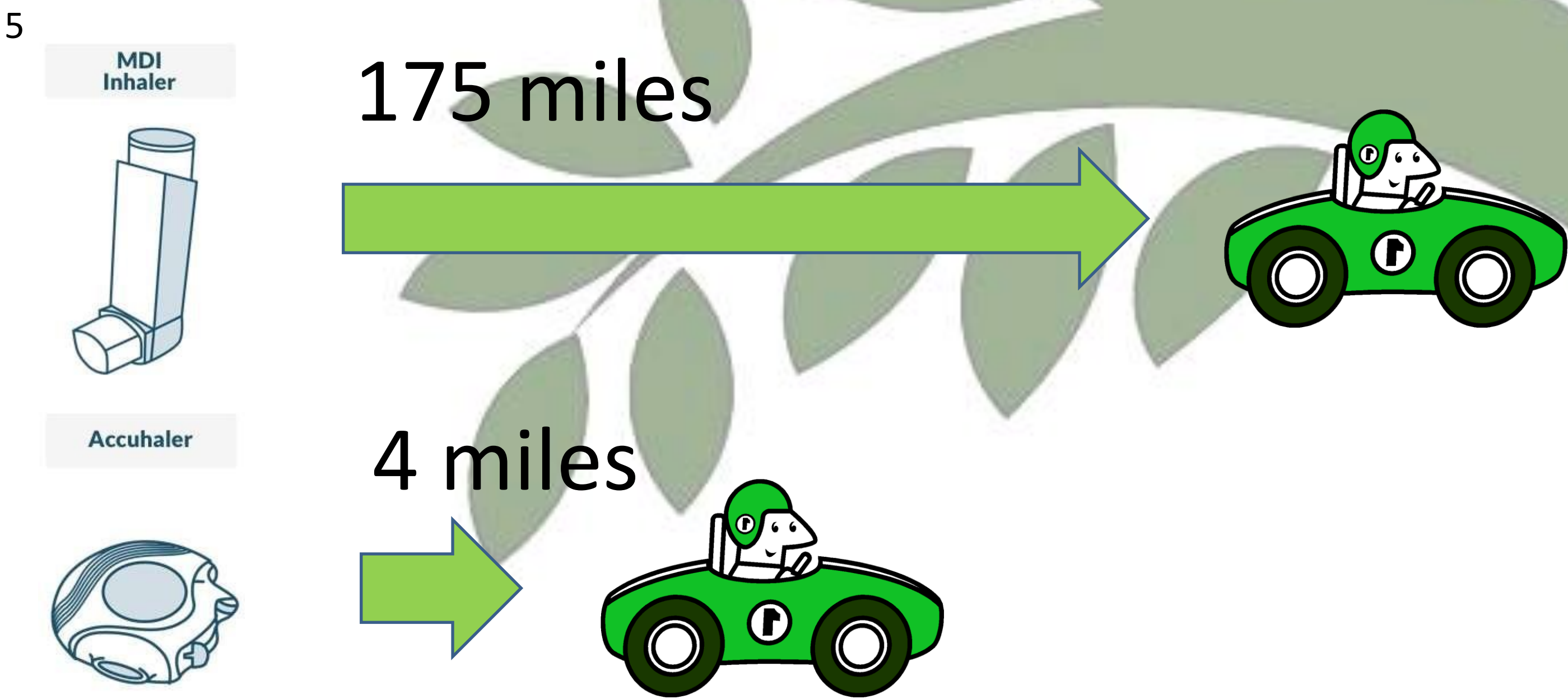


Greener Inhaler Prescriptions in Primary Care

Dr Alfred Ball

Background

- The NHS accounts for 3% of the total emissions of the UK and has committed to reducing its carbon footprint by 51% by 2025 to meet targets set by the climate change act.^{1,2}
- Dry powder inhalers (DPIs) produce approximately 20-30 times less emissions than traditional metered dose inhalers (MDIs).³ It is estimated that a shift from MDIs to DPIs would deliver a reduction in 4% of total NHS carbon emissions.²
- Many patients can achieve the same effect from DPIs as MDIs.
- The NHS lags far behind other European countries, prescribing 58% MDI inhalers in primary care in May 2021 compared to 13% in Sweden for example.^{1,4}



Aims

To reduce repeat total MDI prescriptions at a GP surgery by 5% (excluding salbutamol).

Method

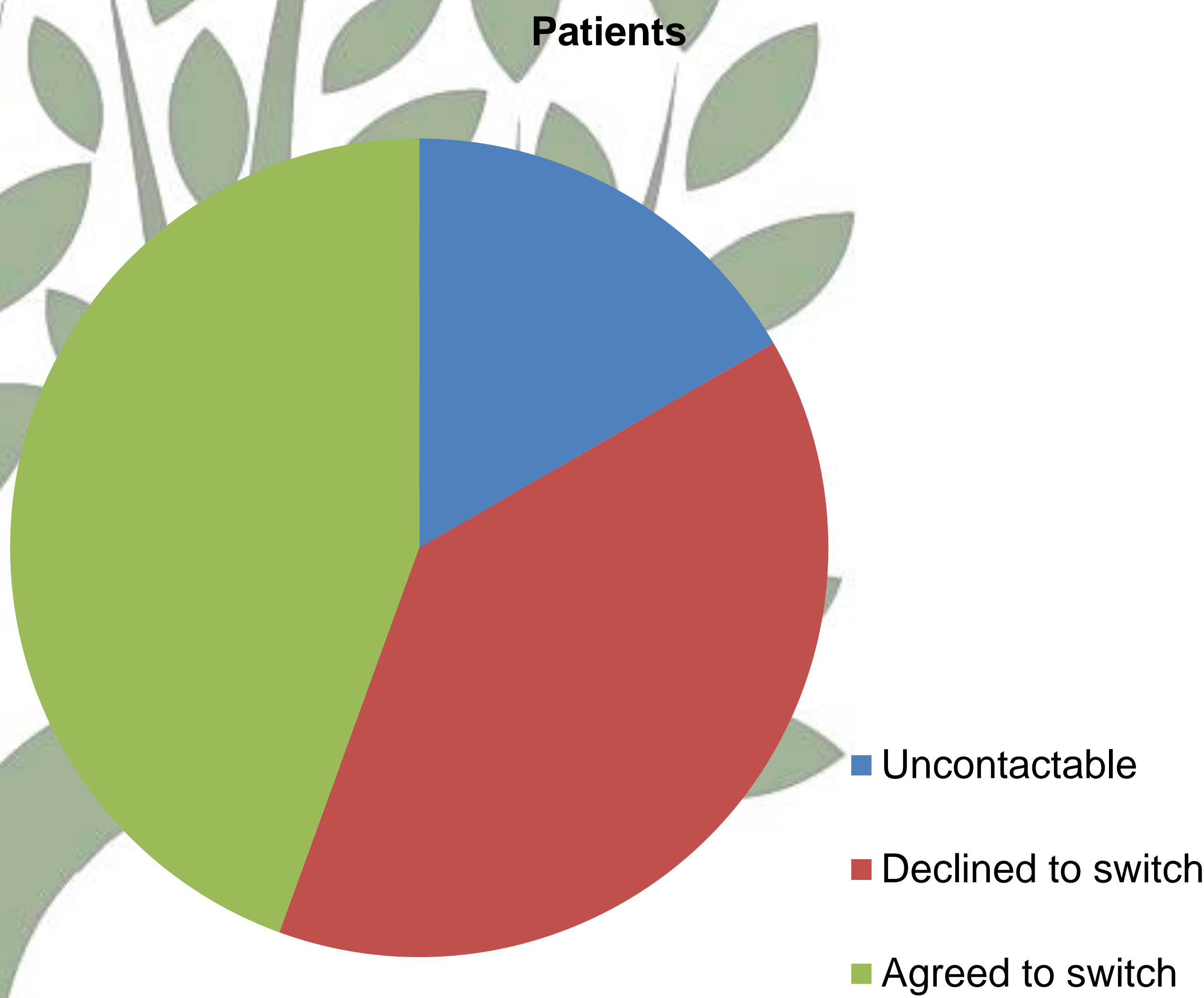
EMIS was searched for patients with repeat Fostair®MDI prescriptions. Inclusion criteria were:

- Age <65
- Not requiring spacer for drug delivery
- Inhaler used for asthma

This yielded 18 patients. Patients were offered to switch to a lower global warming potential (GWP) inhaler. Their inspiratory flow rate and current treatment efficacy were assessed, before being taught DPI technique.

Results

- Of the 18 patients, 3 (16.6%) were uncontactable, 8 (44%) agreed to switch inhalers and 7 (38.9%) declined.
- Additionally, 4 had insufficient control from their treatment regime and required stepping up.
- The total MDI prescriptions (excluding salbutamol) initially fell by 12.8%, remaining at 6.8% after 3 months.



Conclusion

- Asthma review provides an excellent opportunity to assess inhaler technique as well as asthma control.
- 53% of patients contacted were keen and willing to switch inhalers after being educated of their GWPs.
- 27% of patients contacted required stepping up of their asthma treatment.
- Many patients achieve the same treatment efficacy from DPIs as MDIs and both pharmacologically and cost equivalent inhalers are available, enabling easy switching.
- Inhaler technique with MDIs remains poor; thus where appropriate, a switch from MDIs to DPIs may reduce the number of critical errors made with inhalers.
- DPIs produce significantly less carbon emissions when compared with MDIs.⁶ These switches can be most easily made in primary care.
- Changing one patient from a MDI to DPI will save roughly 162,000g CO₂ equivalent per annum.³
- The switches achieved from this project will save 1,296,000g CO₂ per annum.

Citations

[1] Hillman T, Mortimer F, Hopkinson NS. Inhaled drugs and global warming: time to shift to dry powder inhalers. *BMJ* 2013;346

[2] NHS. The NHS long term plan. 2019. <https://www.longtermplan.nhs.uk/>

[3] <https://greeninhaler.org/the-problem-with-inhalers/>

[4] https://openprescribing.net/measure/environmental_inhalers/ccg/00X/

[5] <https://patient.info/chest-lungs/chronic-obstructive-pulmonary-disease-leaflet/inhalers-for-copd-including-inhaled-steroids>

[6] Janson C, Henderson R, Löfdahl M, *et al* Carbon footprint impact of the choice of inhalers for asthma and COPD, *Thorax* 2020;**75**:82-84.