

The feasibility and impact of implementing a maintenance and reliever (MART) prescribing strategy in Leeds

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Introduction

- Overuse of short-acting beta2 agonist (SABA) relievers is associated with adverse asthma outcomes, including an increased risk of exacerbations and mortality.¹
- Despite repeated efforts over several years, many people with asthma continue to use their SABA inhalers excessively.
- A maintenance and reliever therapy (MART) prescribing strategy reduces asthma exacerbations and avoids the need for SABA compared to traditional fixed-dose ICS/LABA maintenance treatment.²
- This approach may also have a positive environmental impact.

Aim

To assess the feasibility and impact of implementing a MART prescribing strategy across a health system

Methods

- Adults with a diagnosis of asthma using ≥ 6 SABA, ≥ 1 oral corticosteroid courses, ≥ 1 asthma attacks, or ≥ 1 admissions within the past 12 months were invited for an asthma review at 20 GP practices in Leeds, between March to December 2023.
- Consultations were performed by pharmacists from Interface Clinical Services and IQVIA business, either in person (preferably) or via telephone. Recommendations were approved by practice leads.
- Changes to inhaler prescriptions were made through a shared decision making process with patients according to local formulary, after inhaler technique assessment.

Results

- The 20 GP practices had an asthma register of 13,126 patients. 5,256 met the eligibility criteria and were invited for review.
- 811 people (15%) attended pharmacist-led clinics (Table 1).
- 555 (68.4%) people were prescribed MART after the consultation compared to 37 (4.6%) people before review.
- Prescribing of MART regimens (most commonly beclomethasone/formoterol NEXThaler, budesonide/formoterol Easyhaler, budesonide/formoterol Turbohaler and beclomethasone/formoterol pMDI) increased from 37 (5%) at baseline to 555 (68%) post-reviews.
- 531 patients stopped their SABA reliever, despite using at least 6 inhalers in the previous year.
- Dry powder preventer inhalers were more likely to be prescribed after clinic review, increasing from 44% to 62% of patients compared to pMDI preventers (reducing from 57% to 38%). (Figure 2)
- The total projected reduction in carbon footprint is estimated at a minimum of 102,000 kg CO₂e; approximately 13,000 kg CO₂e from increased DPI use and 89,000 kg CO₂e from removal of SABA. (Figure 3)

Figure 1. Number of patients receiving MART regimen at baseline vs. on review completion

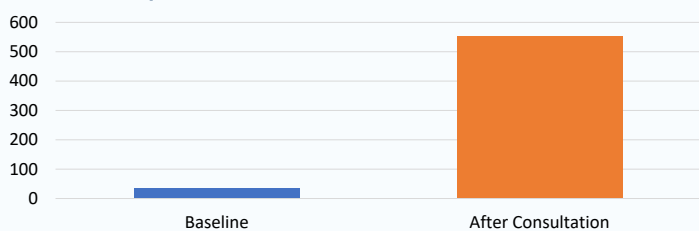


Figure 2. Summary of preventer device type at baseline vs. on review completion

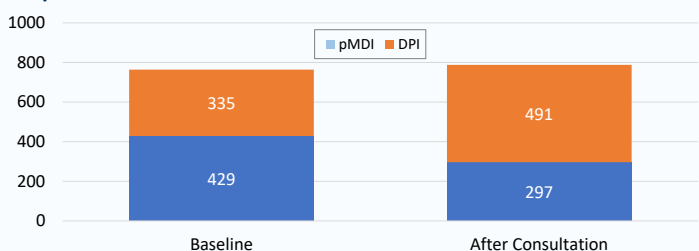
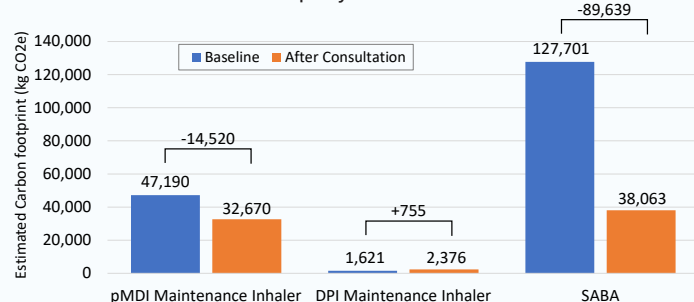


Table 1. Baseline Demographics

ACT: Asthma Control Test; SABA: short-acting beta2-agonist; ICS: Inhaled Corticosteroids; LABA: Long-acting beta2-agonist; LTRA: Leukotriene Receptor Antagonist; LAMA: Long-acting muscarinic antagonist)

	Overall Population
Asthma Register	13,126
Asthma Control (n=11,816)	
ACT 0-15	1,885 (16.0%)
ACT 16-19	1,987 (16.8%)
ACT 20-25	7,882 (66.7%)
Number of patients invited for review	5,256
Number of patients receiving a review	811
Number of patients with an asthma review in the previous 12 months	649 (80.0%)
Number of patients with a written personalised asthma action plan	519 (64.0%)
Number of patients with inhaler technique recorded in the past 12 months	280 (34.5%)
Number of patients with SABA usage recorded	48 (5.9%)
Baseline Asthma Management	
No treatment	3
SABA only treatment	62
ICS Monotherapy	178
ICS/LABA	402
ICS/LABA + LTRA	127
ICS + LTRA	2
ICS + Specialist therapies (LAMA, Xanthine, Biologics)	37

Figure 3. Projected 12-month reduction in carbon footprint of inhalers prescribed. Data assumes 8 SABA inhalers used per patient per year, 10 maintenance inhalers used per year



References

1. Global Initiative for Asthma. Global strategy for asthma management and prevention. 2024. Updated May 2024. Available at: www.ginasthma.org
2. Crooks MG, Crowther L, Cummings H et al. Improving asthma care through implementation of the SENTINEL programme: findings from the pilot site. ERJ Open Res 2023;9:00685-2022

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Disclosures

PL and YX are employees of AstraZeneca and may hold stock or stock options

Conclusions

- Implementing a MART strategy was feasible via pharmacist-led asthma clinics.
- Most patients accepted a change to a MART regimen.
- Reductions in SABA prescribing are projected to produce a significant reduction in the carbon impact of inhaler prescribing.
- A prescribing incentive scheme will be offered to extend this strategy across Leeds.