

Reducing Short Acting Beta Agonist (SABA) prescribing in Antrim/Ballymena GP Federation through SENTINEL Plus

A joint working between Antrim/Ballymena GP Federation and AstraZeneca.
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Intended for UK Healthcare Professionals.

Introduction

Local prescribing data revealed Antrim/Ballymena Federation to be among the top prescribers of SABA inhalers in Northern Ireland, negatively impacting patients and the environment. To address this, Antrim/Ballymena Federation utilised SENTINEL Plus, a co-designed quality improvement package, in conjunction with Interface Pharmacy Services.

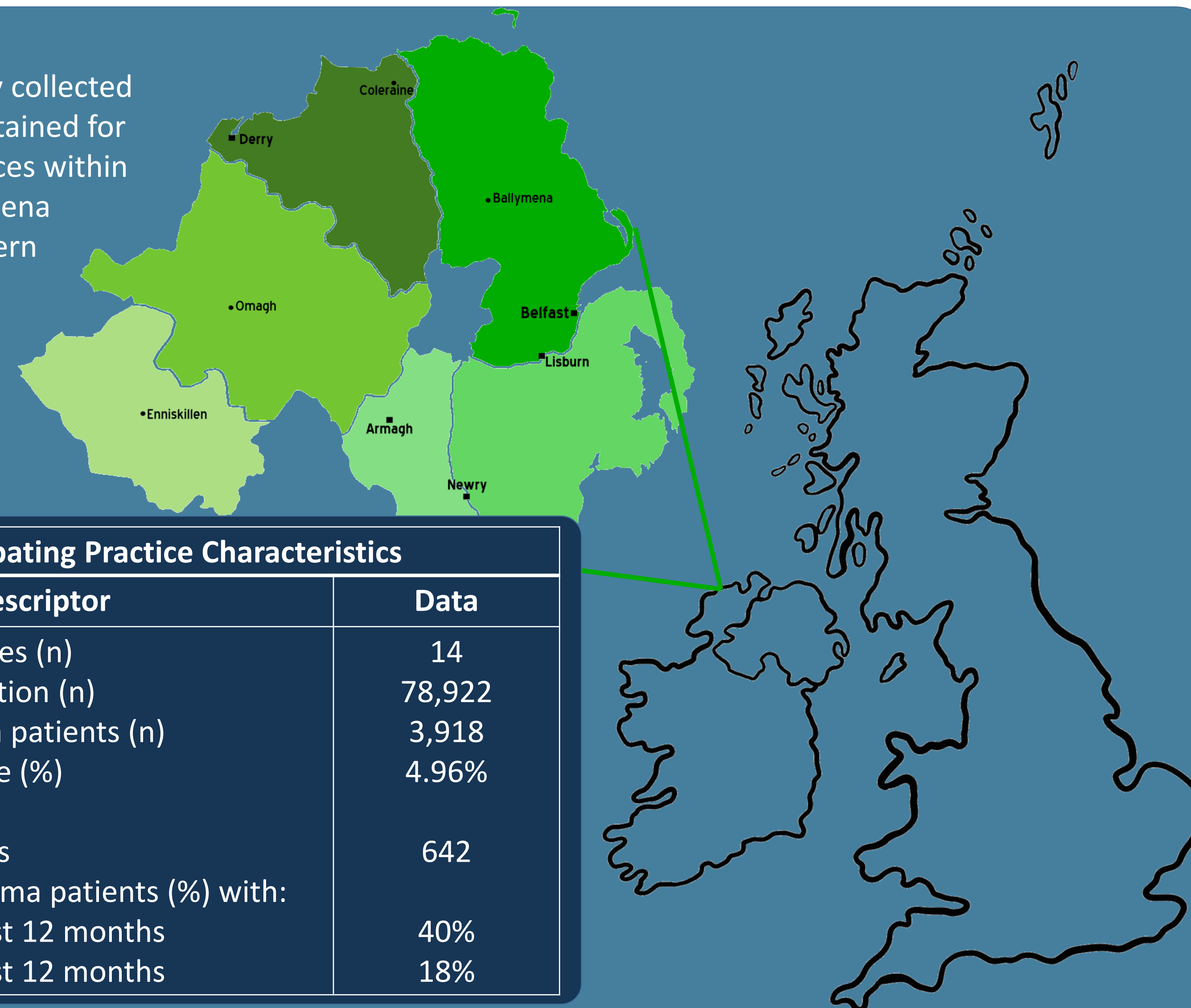
Aim

To improve patient outcomes and reduce the environmental impact of asthma care by reducing SABA over-use and implementing maintenance and reliever therapy (MART) use for appropriate patients.

Methods

From September 2022 to March 2023, Interface Pharmacy Services analysed routinely collected NHS data to form a baseline and conducted asthma reviews aligned with SENTINEL Plus in 14 of 26 Federation practices. Changes in prescribing practice are reported.

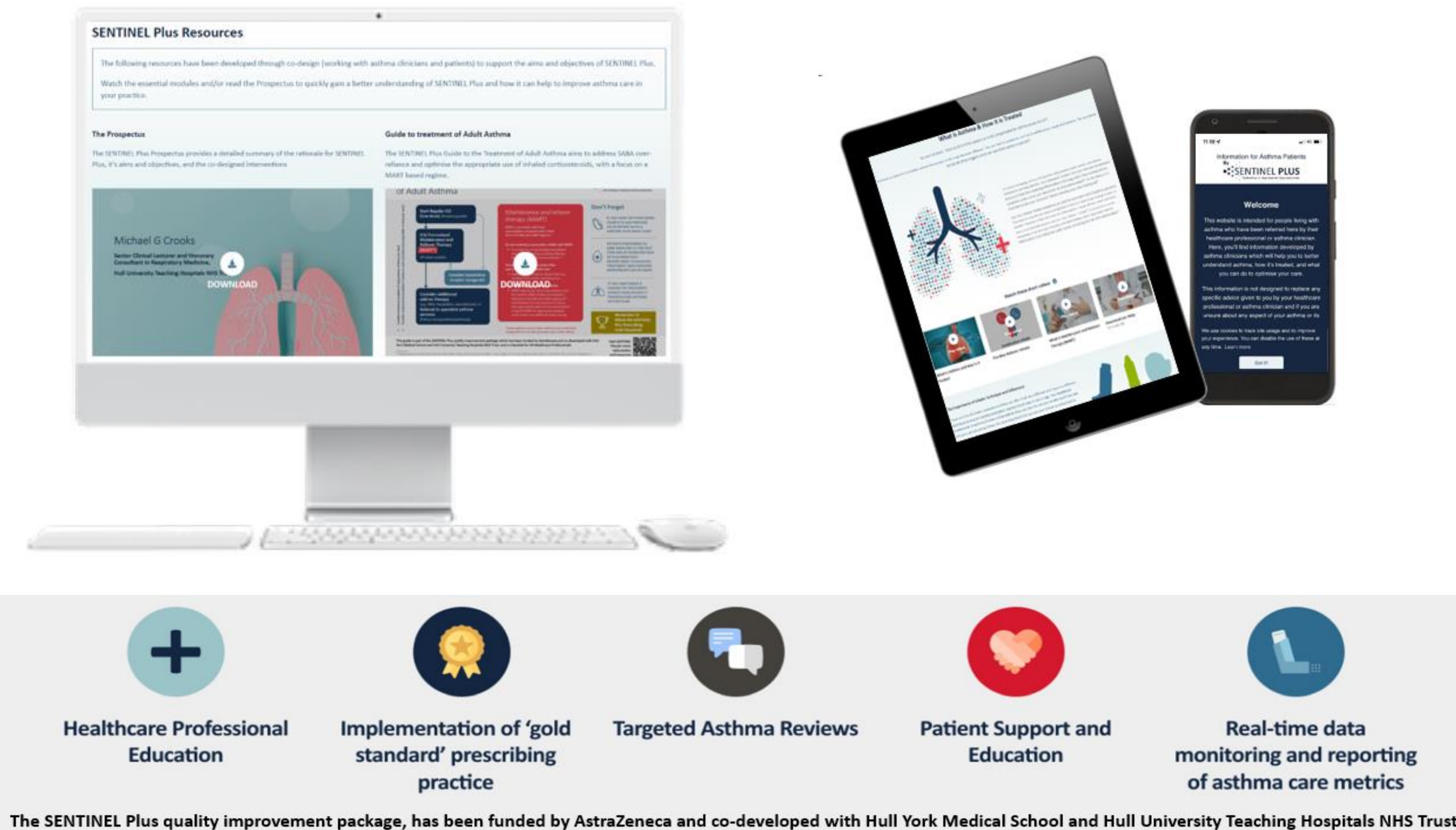
Figure 1. Routinely collected NHS data were obtained for 14 of 26 GP Practices within the Antrim/Ballymena Federation, Northern Ireland



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What is SENTINEL Plus?



SENTINEL Plus is a quality improvement framework that aims to improve outcomes for asthma patients and reduce the environmental impact of asthma treatment by identifying and addressing SABA over-use. SENTINEL Plus utilises a co-designed intervention, developed during the SENTINEL Project (1).

SABA over-use in Asthma in N. Ireland is associated with exacerbation risk

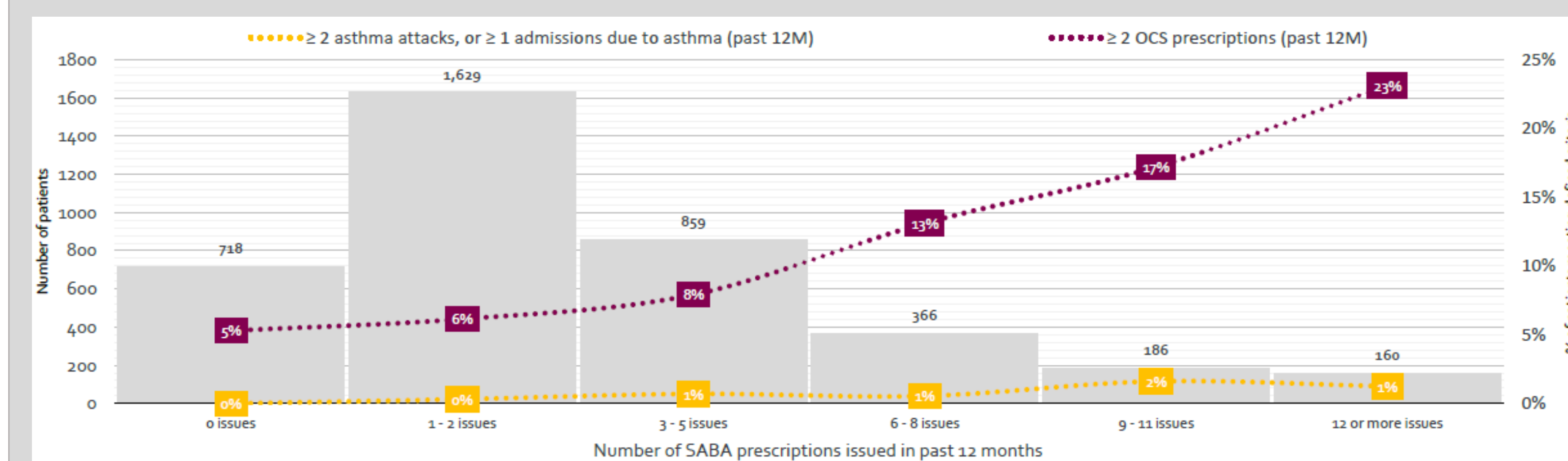


Figure 2. Number of patients with 0, 1-2, 3-5, 6-8, 9-11 or ≥ 12 SABA prescription within the past 12 months (grey bars) among asthma patients registered with participating practices (n= 3,918). Asthma exacerbation data defined by proportion (%) of patients with i) ≥ 2 oral corticosteroid (OCS) courses in the past 12 months (purple line) or ii) ≥ 2 coded asthma attacks or ≥ 1 asthma related admission (yellow line).

Results

642 patient reviews were undertaken. Of these, 424 patients had their short acting bronchodilator (SABA or SAMA) removed from repeat prescription and 374 patients were commenced on MART. 99% of reviewed patients received pharmacological and non-pharmacological interventions to improve asthma control. Prescribing changes are displayed in the table.

Descriptor	Before SENTINEL Plus	After SENTINEL Plus
Overall asthma prescribing – number of patients		
No Regular Preventer Therapy	94	2
ICS Monotherapy	130	34
ICS/LABA	309	491
MART Regime	95	469
Inhaler device prescribing		
number of patients (%) prescribed MDI versus DPI preventer inhalers		
MDI	294 (49%)	154 (24%)
DPI	300 (51%)	479 (76%)
Overall SABA prescribing (asthma and COPD)*		
mean number of inhalers per registered patient		
SABA	2.03*	1.98*

Table 1. Summary of asthma prescribing among patients reviewed through SENTINEL Plus in Antrim/Ballymena Federation, Northern Ireland. * Overall SABA prescribing data is for all registered asthma and COPD patients. ICS: inhaled corticosteroids; LABA: long-acting beta agonist; MART: maintenance and reliever therapy; MDI: metered dose inhaler; DPI: dry powder inhaler; SABA: short-acting beta-agonist; SAMA: short acting muscarinic antagonist.

Conclusion

Through Sentinel Plus adoption, SABA prescribing was reduced and MART regimens were adopted for appropriate asthma patients. Dry powder inhaler (DPI) use increased, reducing the environmental impact of asthma prescribing.

References

1. Crowther L, Pearson M, Cummings H, Crooks MG. Towards codesign in respiratory care: development of an implementation-ready intervention to improve guideline-adherent adult asthma care across primary and secondary care settings (The SENTINEL Project). *BMJ open respiratory research*. 2022;9(1)