

“Improving Outcomes for Respiratory Patients”

**Tees Valley Carbon Reduction Pilot,
Holgate & Greater Middlesbrough PCNs**

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The Challenge to Patient Care and our Environment



- **The Action
we're taking
with our
Partners**



- **How we are going to Measure Success**

HOW

A wooden surface with several colorful light bulbs (green, yellow, blue, pink) and the word 'HOW' written in large wooden letters. The bulbs are scattered around the text, with some appearing to glow or be out of focus. The word 'HOW' is made of light-colored wooden blocks.

High burden of asthma in UK; Stagnation in outcomes

5.4 million people being treated in the UK with asthma¹, clinical outcomes are poor

~1 million

severe asthma attacks in adults occur every year in the UK ^{^2}

Country	Hospital admission rate for asthma in adults (2012)	Mortality rate of asthma in adults (2011)
(Age-standardised rate per 100,000, >15 years of age)		
France	32.51	1.14
Germany	45.67	1.13
Italy	35.8	0.52
Spain	89.72	1.53
United Kingdom	77.74	1.47

Hospital admission (2012) and mortality rates (2011) of asthma in adults across the 'Big Five' European countries³

“Deaths from asthma attacks are the highest they have been in the last decade, increasing by more than 33%.”

For England and Wales. Asthma UK⁴



77,124 Hospital admissions (2016/17) for asthma¹



>130,000 patients take 3 or more courses of OCS per year⁵



£1 billion spent by the NHS/year treating and caring for people with asthma¹

[^]calculated from the mean number of exacerbations in a retrospective observational study (SABA use IN Asthma; SABINA) in the UK using data from the Clinical Practice Research Datalink (CRPD) database between 2007-2017 (n=574,913 of which 284,816 were adults who were accessed for outcomes).² The rate was extrapolated to an adult asthma population of 4.3 million patients.¹ An exacerbation was defined as either a short course of OCS (GP managed exacerbation), an Accident and Emergency visit for asthma, a hospital admission or death secondary to asthma.²

1. Asthma UK. Asthma facts and statistics. <https://www.asthma.org.uk/about/media/facts-and-statistics/> (Accessed July 2021); 2. AstraZeneca Data on File. REF-77186. August, 2020; 3. European Lung White Book. Adult asthma. European Respiratory Society Sheffield; 2019. <https://www.erswhitebook.org/chapters/adult-asthma/> (Accessed July 2021); 4. Asthma UK. Press Release. August 2019. <https://www.asthma.org.uk/about/media/news/press-release-asthma-death-toll-in-england-and-wales-is-the-highest-this-decade/> (Accessed July 2021); 5. Asthma UK. Living in limbo, 2019. <https://www.asthma.org.uk/support-us/campaigns/publications/living-in-limbo/> (Accessed July 2021)

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SABA inhaler use is a key contributor to the total inhaler carbon footprint in the UK

In addition to improving asthma outcomes, eliminating SABA over-reliance could support the NHS to address their sustainability goals¹⁻³

70%

of the **total carbon footprint** of inhaler devices in the UK is represented by SABAs⁴



~3X (or more)

SABA GHG emissions observed than in other large European countries⁴

83%

In asthma:
of SABAs prescribed go to patients using ≥ 3 inhalers/year^{4*}



~28kg[‡] eCO₂
per pMDI canister⁵



>250,000 tonnes
eCO₂ per year⁴



>100 million[†]
average car trips in an average diesel car^{6,7}

“Improving Outcomes for Respiratory Patients”

A Proof-of-Concept study in two PCNs – Holgate & Greater Middlesbrough

Project objectives:

- To significantly reduce the disease burden of patients with asthma and COPD
- To reduce the carbon footprint of inhalers used by patients
- To improve system integration and multi-disciplinary team working

Project structure:

- **A modular education programme:**
 - Pre and post-course confidence questionnaires
 - 4 training modules, targeting various relevant HCP groups
- **General Practice & Community Pharmacy intervention, targeting:**
 - Asthma patients receiving 6 or more SABA supplies in a year
 - Asthma patients receiving 2 or more courses of oral corticosteroids in a year
- **General Practice intervention:**
 - COPD patients on ‘open’ triple therapy
 - COPD patients on Respimat inhalers

The Community Pharmacist Consultation:

A face-to-face consultation using Pharm Outcomes to ensure a safe and replicable process

- Asthma Control Test
- Assessment of patient's understanding of why, when, and how to take medication including inhaler technique training and asthma action plans.
- Alternative treatment options discussed as appropriate, prior to pharmacist informing GP surgery of consultation outcome.
- Recommendations back to GP surgery, where appropriate

Project Partnerships

- ICS sustainability group
- NHS BSA:
 - Patient identification, 5 cohorts:
 1. Inhaled steroid prevention (including ICS LABA) - < 5 prescriptions / year
 2. Prescribing frequency of prednisolone 5mg tablets – 2 or more / year
 3. Excess SABA prescribing – 6 or more / year
 4. Patients on open triple therapy
 5. Patients on Respimat inhalers
- Teva – project evaluation
- NESCHA – patient participation group
- Astra Zeneca – Sentinel plus + Interface support
- GSK, Chiesi and Orion- Donations

Multi-dimensional, collaborative, system-wide working tool

SENTINEL Plus

- ✓ Developed by SENTINEL team and adapted from SENTINEL joint working project
- ✓ Resources to support implementation of a reduced SABA strategy for appropriate patients
 - ✓ HCP & patient educational materials
 - ✓ Communication materials



Patient ID & Risk Stratification

- ✓ Regional reports e.g. Heatmaps
- ✓ Digital Dashboard



Targeted Clinical Reviews

- ✓ Pharmacist led asthma review service



Evidence

- ✓ Track progress
- ✓ Demonstrate impact on SABA outcomes and CO₂



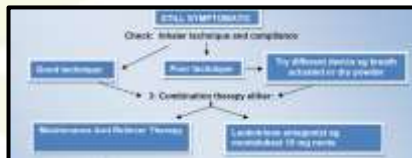
Other Educational Resources

- ✓ Medical Educators
- ✓ Other HCP and Patient Educational Materials



The 'SENTINEL' programme in Hull CCG:

SABA reduction through implementing Hull SABA-free asthma guidelines¹⁻³



Joint Working with AstraZeneca to implement Hull asthma guidelines (SABA-free strategy with DPI MART)

Objectives:

- Reduce SABA use
- Improve asthma outcomes
- Reduce carbon footprint

PCN 1
(Dec 20-Jan 21)
2473 pts with asthma

761 pt reviews

633 pts therapy change deemed appropriate

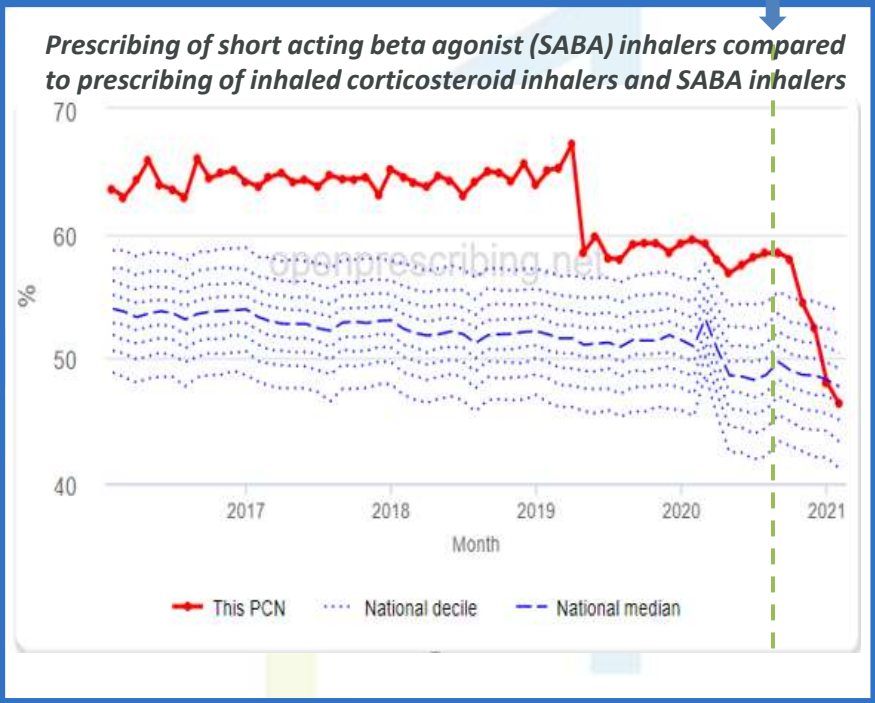
407 pts change to MART

375 pts had SABA discontinued

↓1047 SABAs prescribed vs previous 12 months (all respiratory patients)

↓ 29[†] tonnes eCO₂ vs previous 12 months

Intervention start



Figures are shown for SABA inhaler use across ALL respiratory patients and are not adjusted for changes in patient numbers during the assessment period.

[†] Janson et al, 2020³ quotes 94% of SABAs prescribed are pMDIs. Calculation assumes that 100% of SABAs prescribed are pMDIs

1. Crowther, L et al. Poster presentation. 10th IPCRG World Conference, Dublin, 2021, 6-8th May;
2. Open Prescribing. Available from <https://openprescribing.net/pcn/U64827/measures/?tags=respiratory> (Accessed July 2021); 3. Janson, C et al. Thorax 2020; 75: 82-84.

Outcomes/benefit measurement:

Patient Measures:

- Asthma Control Test (ACT) & COPD Assessment Test (CAT) scores pre and post consultation
- Number of patients that had treatment change / change of Asthma or COPD action plan.
- The number of patients subsequently referred to a severe asthma centre
- Patient experience

Clinician Measures:

- Confidence questionnaires pre and post modular education sessions

Prescribing Measures:

- Volume of SABAs used in Asthma
- Increased uptake in DP MART in asthma
- Volume of prednisolone courses (number of patients on 2 or more courses per year)
- Reduction in SABA repeat prescribing and wastage
- Volume of Closed Triple Therapy used in COPD
- Increase in volume of used inhalers returned to community pharmacy for disposal (individual pharmacies)
- Reduction in Carbon Footprint of inhalers used (a GP contract measure from April 2022)

Project timeframes:

- Project planning Sept 2021 – Jan 2022
- Education delivery phase Feb/March 2022
- Implementation & ongoing support phase April – Nov 2022
- Interim Reporting July 2022
- Final Reporting Dec/Jan 2022-23
- Local / Regional / National dissemination → Adoption & Spread Feb 2023 onwards

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Questions ?