Maintenance and reliever therapy (MART) prescribing in a large UK primary care asthma cohort: implications for BTS, NICE, SIGN Asthma Guideline implementation.

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Introduction

The 2024 BTS, NICE, SIGN asthma guideline recommends anti-inflammatory reliever (AIR)-based management for all newly diagnosed and uncontrolled asthma patients aged 12 years and older. Use of AIR inhalers (a combination of an inhaled corticosteroid (ICS) and formoterol) has been approved in the UK for use only as required in mild asthma since 2023 and as maintenance and reliever therapy (MART) since 2014. We report the findings of an analysis of the quality of MART prescribing in a UK primary care setting.

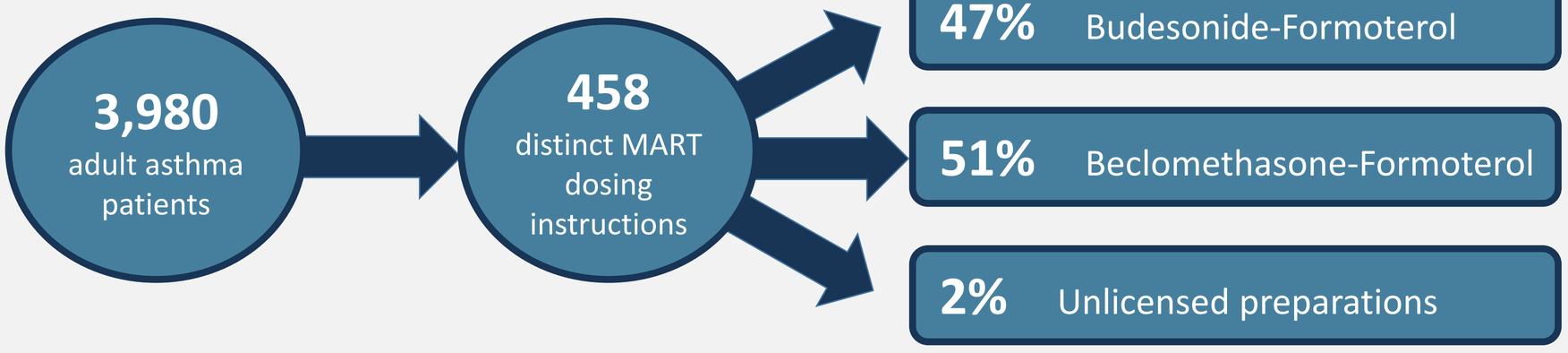
Aim

To investigate the quality of MART prescribing in a UK primary care setting.

Methods

Electronic health records (EHR) from 3 primary care networks within two sub-ICB locations were searched and data extracted for all adult asthma patients that had received at least 1 inhaled asthma treatment prescription within the past year. ICS-LABA combination inhaler prescription dosing instructions were reviewed to identify MART prescriptions. Prescription quality was assessed based on adequacy of information to enable correct use. To be considered 'complete', prescription dosing instructions were required to include: i) regular daily dosing instructions, ii) accurate reliever dosing instructions, and iii) accurate maximum daily dosing instructions.

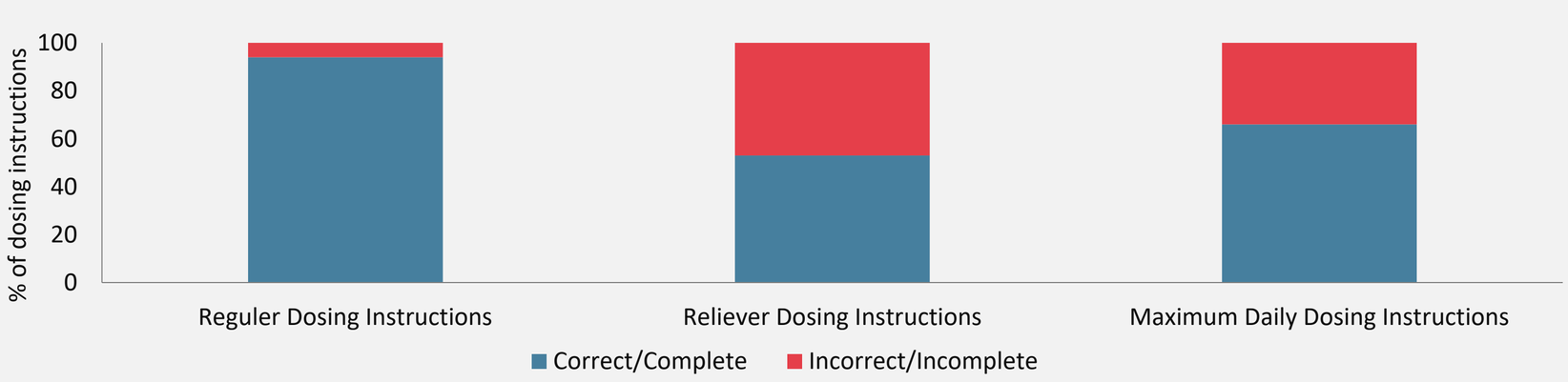
Results



Data were extracted for 3,980 adult asthma patients across 4 general practices within 3 PCNs. 458 distinct dosing instructions were consistent with MART.

232 (51%) dosing instructions were for beclomethasone-formoterol and 216 (47%) were for budesonide-formoterol at licensed MART doses. 10 (2%) dosing instructions were for inhaler combinations/strengths that do not have a MART license.

194 (42%) MART prescription dosing instructions met all 3 criteria and were considered 'complete' prescriptions. Regular dosing instructions were absent or incorrect in 26 (6%), reliever dosing instructions were absent or incorrect in 214 (47%), and maximum daily dosing instructions were absent or incorrect in 155 (34%).



Conclusions

MART prescribing quality in UK primary care is variable and frequently does not include adequate dosing information to enable correct use. Healthcare professional education, electronic prescribing systems, and AIR/MART specific asthma action plans represent potential solutions to support correct prescribing aligned with BTS, NICE, SIGN asthma guideline recommendations. Use of MART codes and development of specific AIR codes would facilitate future identification of AIR/MART prescriptions, facilitating evaluation of guideline implementation and audit of prescribing quality.

Presented at the Primary Care Respiratory Society 2025, Telford, 18th – 20th September 2025

References

1. Global Initiative for Asthma (GINA) 2024 Main Report. Available at: https://ginasthma.org/2024-report/. Accessed 24.09.2024
2. O'Byrne PM, FitzGerald JM, Bateman ED, Barnes PJ, Zhong N, Keen C, Jorup C, Lamarca R, Ivanov S, Reddel HK. Inhaled Combined Budesonide-Formoterol as Needed in Mild Asthma. N Engl J Med. 2018 May 17;378(20):1865-1876.
3. Beasley R, Holliday M, Reddel HK, Braithwaite I, Ebmeier S, Hancox RJ, Harrison T, Houghton C, Oldfield K, Papi A, Pavord ID, Williams M, Weatherall M; Novel START Study Team. Controlled Trial of Budesonide-Formoterol as Needed for Mild Asthma. N Engl J Med. 2019 May 23;380(21):2020-2030.
4. Beasley R, et al. Evaluation of Budesonide-Formoterol for Maintenance and Reliever Therapy Among Patients With Poorly Controlled Asthma: A Systematic Review and Meta-analysis. JAMA Netw Open. 2022 Mar 1;5(3):e220615.

Funded by AstraZeneca