

Introduction

Cardiovascular (CV) disease is common and often under-recognised in people with COPD. COPD exacerbations are associated with increased CV risk, and people living with COPD have a two- to three-fold higher risk of CV disease¹. The GOLD recommendations for 2026 and the European Society of Cardiology guidelines recommend routine assessment of CV comorbidities and risk factors in all patients with COPD². Earlier identification of CV risk in this population may enable timely intervention and help improve outcomes.

In Northern Ireland, the Northern Trust was ranked third highest of all five Trusts in terms of respiratory admission rates (1223 per 100,000) and deaths (125 per 100,000) within the most recent Asthma and Lung UK report³. Indicating that there is a huge opportunity to reduce hospital demand by better supporting patients post diagnosis.

Aims

To evaluate the impact of implementing a structured COPD review template incorporating cardiopulmonary risk assessment on clinical management in primary care.

Methods

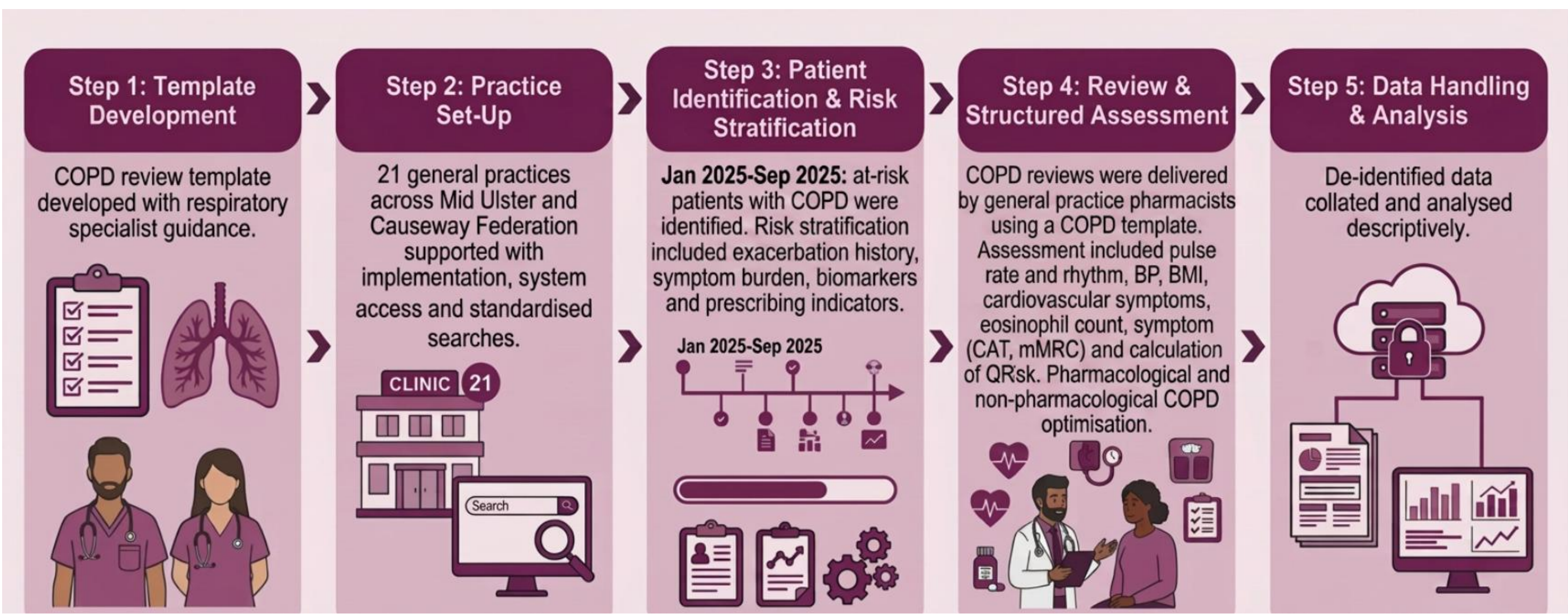


Table 1: Patient identification and cohorts for risk stratification

Domain	Cohort Criteria
Exacerbation Risk	COPD exacerbation in the last 12 months
Symptom Burden	MRC ≥3 or CAT ≥10 with CHD/AF/HF, MRC ≥3 or CAT ≥10
Biomarker Profile	History of Eosinophils >0.3 × 10^9 cells/L and not currently prescribed ICS
Treatment Pattern	Underuse of maintenance therapy <4 issues in the last 12 months, Overuse of maintenance therapy >12 issues in the last 12 months SABA therapy >12 issues in last 12 months

Results

Respiratory Outcomes

- Within the reviewed cohort, respiratory associated antibiotic prescribing reduced by an average of 53% per practice (n=21) in the six months following the cardiopulmonary risk-focused COPD review compared to the six months prior to the review (Mid Ulster showed a 56% reduction and Causeway a 50% reduction) (Figure 1). Within the reviewed population, respiratory associated acute OCS prescriptions reduced by an average of 52% per practice (n=21) in the six months post-review compared to the six months prior review, with consistent reductions across both GP Federations (Mid Ulster showed a 51% reduction and Causeway demonstrated a 52% reduction) (Figure 2).
- Practice-level analysis demonstrated consistent reductions across participating practices (Wilcoxon signed-rank test p<0.001 for both outcomes).

Cardiovascular Outcomes

- Following the cardiopulmonary risk-focused COPD review, 100% of patients (n=232) had a QRISK score recorded, 30.2% of patients (n=70) had a CV risk intervention for atrial fibrillation (AF), ischaemic heart disease (IHD) or heart failure (HF), and 23.3% of patients (n=54) were referred to a healthcare professional following CV risk identification (Table 2).

Key Findings

- Implementation of the cardiopulmonary risk-focused template identified a substantial proportion of patients requiring optimisation of COPD therapy and/or further cardiovascular assessment (Table 2).

Figure 1: Mean Reduction in Respiratory Associated Antibiotic Prescriptions Per Practice Following Cardiopulmonary Risk-Focused COPD Review
Data represents mean values per GP practice within each Federation (Mid Ulster n=11 practices; Causeway n=10 practices)

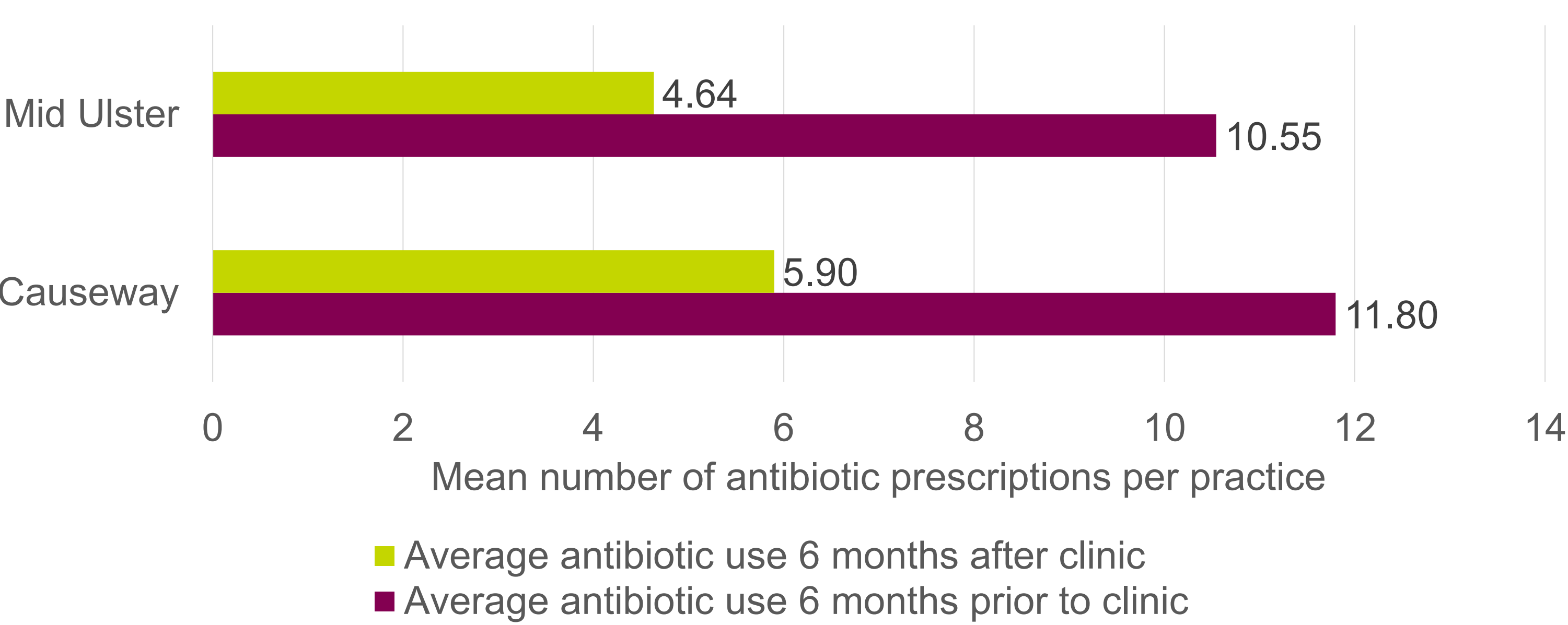


Figure 2: Mean Reduction in Respiratory Associated Acute OCS Prescriptions Per Practice Following Cardiopulmonary Risk-Focused COPD Review
Data represents mean values per GP practice within each Federation (Mid Ulster n=11 practices; Causeway n=10 practices)

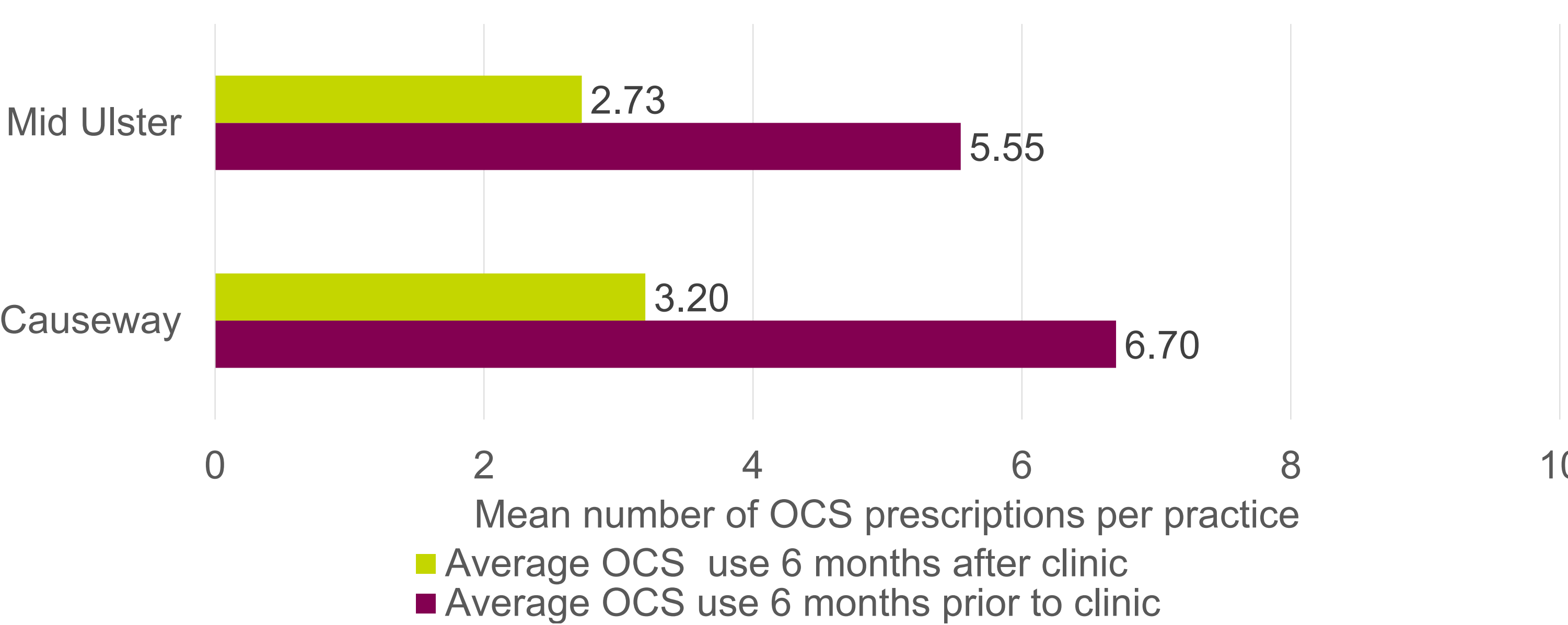


Table 2: Key clinical actions and outcomes following cardiopulmonary risk-focused COPD review (N=232).

Action/outcome identified during review	n (%)
Initiated on single-inhaler triple therapy	115 (49.6)
Lipid-lowering therapy optimised	42 (18.1)
CV risk score (QRISK) recorded	232 (100)
CV risk intervention for AF, IHD or HF	70 (30.2)
Identified as current smoker	113 (48.7)
Current smoker referred to smoking cessation*	63 (55.8)
Suitable for pulmonary rehabilitation	63 (27.2)
Accepted pulmonary rehabilitation referral†	25 (39.7)
Referred to healthcare professional following CV risk identification	54 (23.3)

* Percentage calculated from patients identified as current smokers.
† Percentage calculated from patients identified as suitable for pulmonary rehabilitation.

Conclusions

- Embedding cardiopulmonary risk assessment within routine COPD reviews in primary care supports identification of unmet cardiovascular and respiratory needs and facilitates optimisation of management in patients with COPD.
- Clinical pharmacist-led reviews were associated with substantial reductions in exacerbation related prescribing, suggesting improved disease control and reduced exacerbation burden in a high-risk respiratory population.

References

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2. Global Initiative for Chronic Obstructive Lung Disease. Global Strategy for diagnosis, management, and prevention of COPD.2026.
3.Saving your breath . How better lung health benefits everyone in Northern Ireland accessed July 2026 at www.asthmasaving-your-breath-how-better-lung-health-benefits-all-us-northern-irelandlung.org.uk/

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