

Addressing cardiopulmonary risk in COPD patients: North Belfast General Practice Federation Joint Working Project with AstraZeneca

Maura Corry,^a Christine Haughey,^a Catherine McKay,^b Marie Therese Connolly,^b Sara Gardner,^b Rebecca Campbell,^b Jane McCusker,^b Aisling O'Reilly Smyth,^c Natasha Stevenson^c

^aNorth Belfast GP Federation, Northern Ireland, ^bScreen Clinical Ltd, Northern Ireland, ^cAstraZeneca, United Kingdom

BACKGROUND

“A brief update for practicing cardiologists” that highlights The Global Initiative for Chronic Obstructive Lung Disease (GOLD) guidelines states:

“COPD is the elephant in the room for many patients with CVD...optimal management of COPD is associated with improved cardiovascular outcomes.”¹

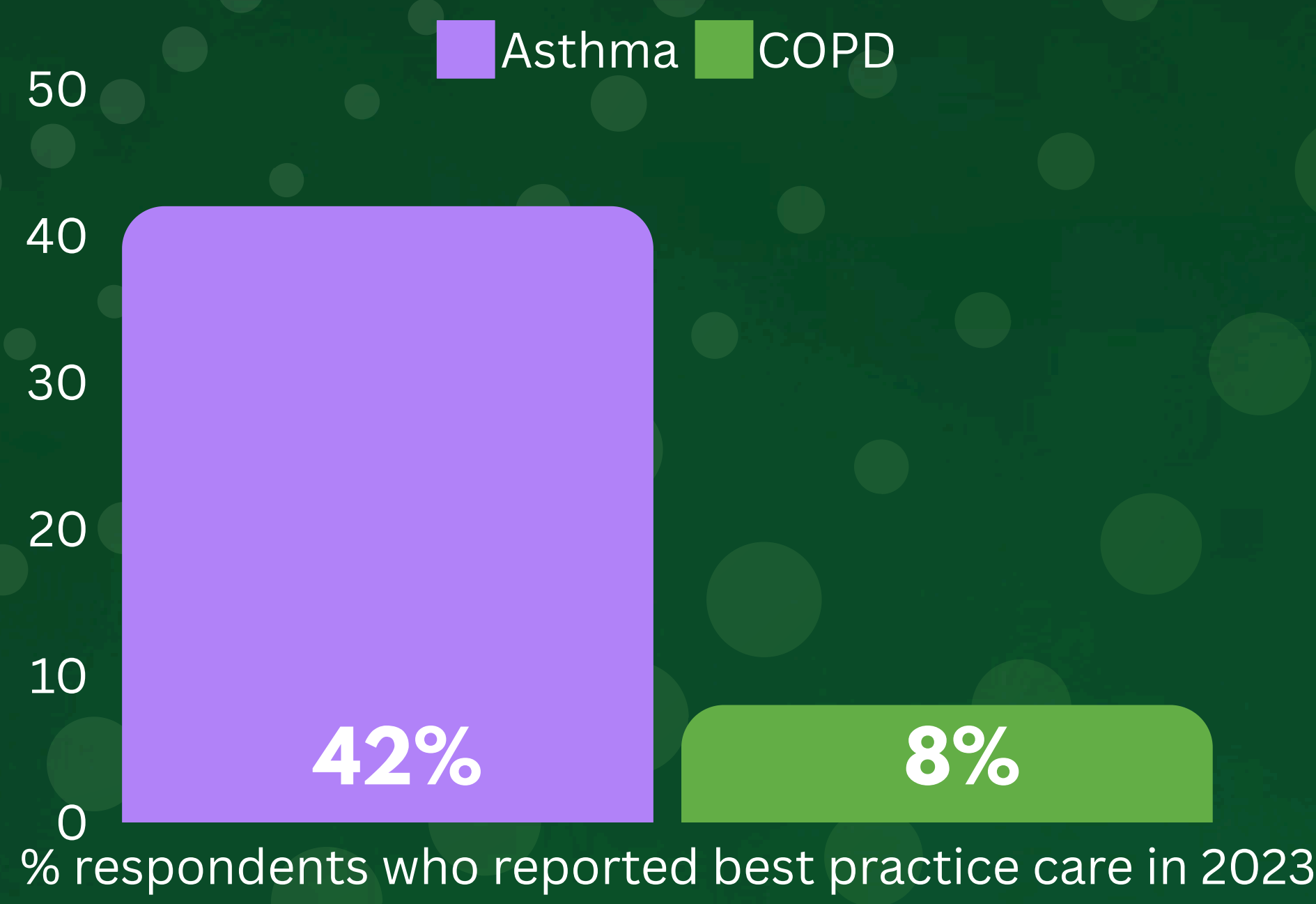
The GOLD report also highlights that airway obstruction indicates an increased risk for all-cause mortality according to the severity of the GOLD stage. All stages carry a risk for cardiovascular death independently of smoking history and other known risk factors.²

In Northern Ireland, the Belfast Health and Social Care Trust (BHSCT) had the highest rate of respiratory admissions (1,582 per 100,000) and respiratory deaths (145 per 100,000) across all the local trusts.³

Following the Asthma and Lung UK patient survey,³ we know that the majority of those with a diagnosed lung condition do not receive best practice ongoing care (Figure 1).

This means there is a huge opportunity to reduce hospital demand by better supporting patients post diagnosis.

Figure 1: Asthma and Lung UK Patient Survey



AIMS & OBJECTIVES

In August 2023, a Joint working project was agreed between the North Belfast GP Federation (NBF) and AstraZeneca UK. To meet project demands, the NBF contracted and collaborated with Screen Clinical Ltd to provide additional resources to fulfil the project.

The project aimed to identify COPD patients with increased cardiopulmonary risk and to subsequently minimise risk in primary care by focussing on implementing the 5 fundamentals of COPD care (Figure 2).

Figure 2

FUNDAMENTALS OF COPD CARE

1. Offer treatment and support to stop smoking
2. Offer pneumococcal and influenza vaccinations
3. Offer pulmonary rehabilitation if indicated
4. Co-develop a personalised self-management plan
5. Optimise treatment for comorbidities

These treatments and plans should be revisited at every review

START INHALED THERAPIES ONLY IF

- all of the above interventions have been offered (if appropriate) and:
- inhaled therapies are needed to relieve breathlessness and exercise limitation and
- people have been trained to use inhalers and can demonstrate satisfactory technique

FOR ALL INHALED THERAPIES

- Train people in correct inhaler technique
- Review medication and assess inhaler technique and adherence regularly throughout treatment

ACKNOWLEDGEMENTS

Patients and staff of North Belfast Federation of Family Practices CIC

REFERENCES

- 1) GOLD COPD DOCUMENT 2023: a brief update for practicing cardiologists. Agusti A et al, Clinical Research in Cardiology (2024) 113: 195-204
- 2) Global strategy for the diagnosis, management, and prevention of chronic obstructive lung disease. Available at: <https://goldcopd.org/2024-gold-report/>. Accessed June 2024
- 3) Saving your breath. How better lung health benefits everyone in Northern Ireland. Asthma + Lung UK, accessed June 2024 at www.asthmaandlung.org.uk/saving-your-breath-how-better-lung-health-benefits-all-us-northern-ireland
- 4) Chronic obstructive pulmonary disease in over 16s: diagnosis and management, National Institute for Clinical Effectiveness Guidelines (NG115) www.nice.org.uk/guidance/ng115/documents/supporting-documentation * PR, Pulmonary Rehab, #DNA, Did not attend

Date of preparation June 2024 Veeva ID: GB-56528

METHODS

1. In September 2023, the project commenced with the interrogation of clinical systems across 17 GP Practices in the NBF

2. Eligibility criteria outlined in Table 1 was applied to the registered list of patients with COPD within each of the practices. All eligible patients then entered the service and were assigned to relevant cohorts.

3. For each patient, all relevant indices were collated.

4. Cohort 6 identified patients based only on having COPD and concomitant CVD

5. Appropriate patients called for face-to-face pharmacist-led clinics between October 2023 and March 2024.

6. Screen Clinical Pharmacists undertook individualised assessments for each patient implemented the 5 fundamentals of COPD care.

Table 1: Cohorts for risk stratification and screening by Screen Clinical Pharmacists

Cohort	Criteria	No. of Patients
1a	Exacerbating and symptomatic	599
1b	Exacerbating and NOT symptomatic	131
2	Symptomatic and not exacerbating	515
3	Current Triple Therapy	64
4	Raised blood Eosinophil (EOS) count	98
5	COPD & established CVD/MACE (not in previous cohorts)	48
6	Total patient with COPD & established CVD	572

RESULTS

Additional stratification and patient screening took place to further identify patients with COPD and CVD (cohort 6) at increased cardio-pulmonary risk as shown in below figure 3.

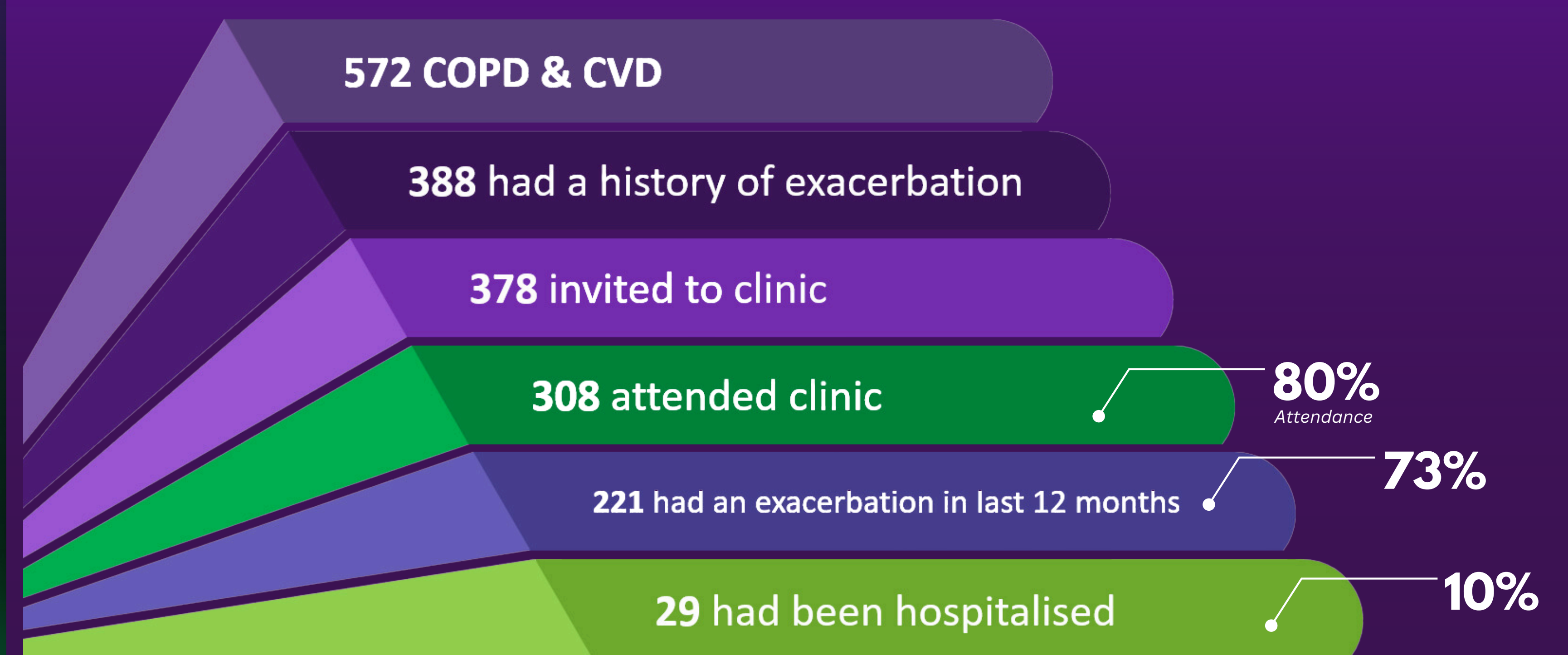


Figure 3: Patients at increased cardio-pulmonary risk

Baseline Therapy

303 patients attended clinic, with established CVD and a history of an exacerbation. Of these patients 140 patients (46%) were treated on triple therapy (Figure 4).

Baseline Therapy by Eosinophil (EOS) count

On further investigation, the team looked to identify patients who may require a steroid containing inhaler based on Eosinophil. Of the 303 patients, 28 had no record of EOS count on their medical record, 80 patients (26%) had an EOS count of greater than 0.3 and of that 21 patients (26%) were NOT on ICS containing therapy. 19 patients (8%) with an EOS count of greater than 0.1 were receiving no therapy (Figure 5).

Exacerbation data

Of the 221 patients who had an exacerbation in the previous 12 months, 139 patients (63%) were not on triple therapy. 24 patients (11%) were not receiving any therapy (Figure 6).

Fundamentals of COPD care implementation

Patients attended a face-to-face pharmacist-led COPD clinic. The aim of these clinics were to implement the 5 fundamentals of COPD and optimise medicines. This resulted in 205 changes in therapy (Figure 7) and significant improvements in the implementation of COPD care with 100% implementation on self-management plans (Figure 8).

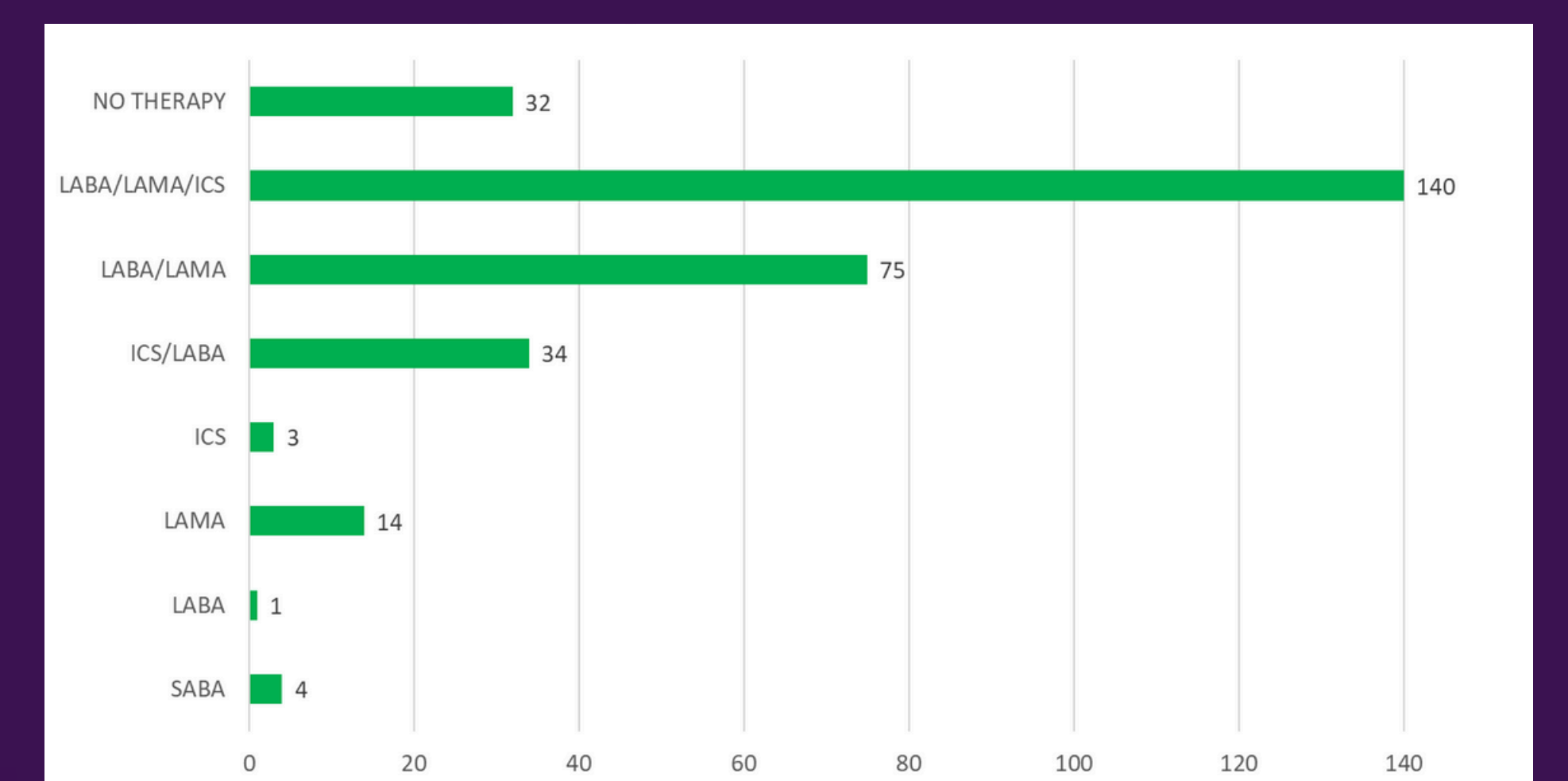


Figure 4: Patients at increased cardio-pulmonary risk

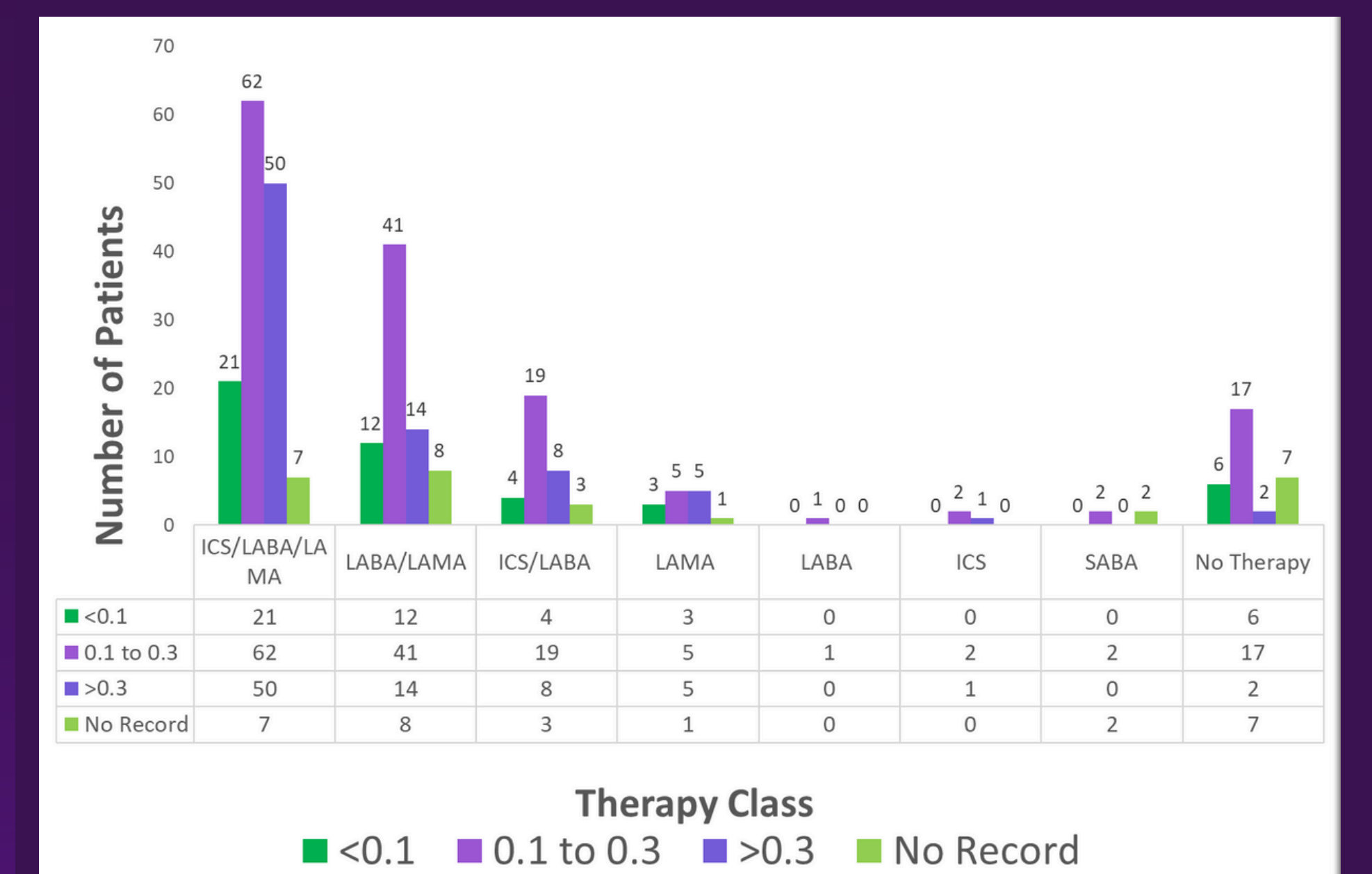


Figure 5: Eosinophil count and therapy

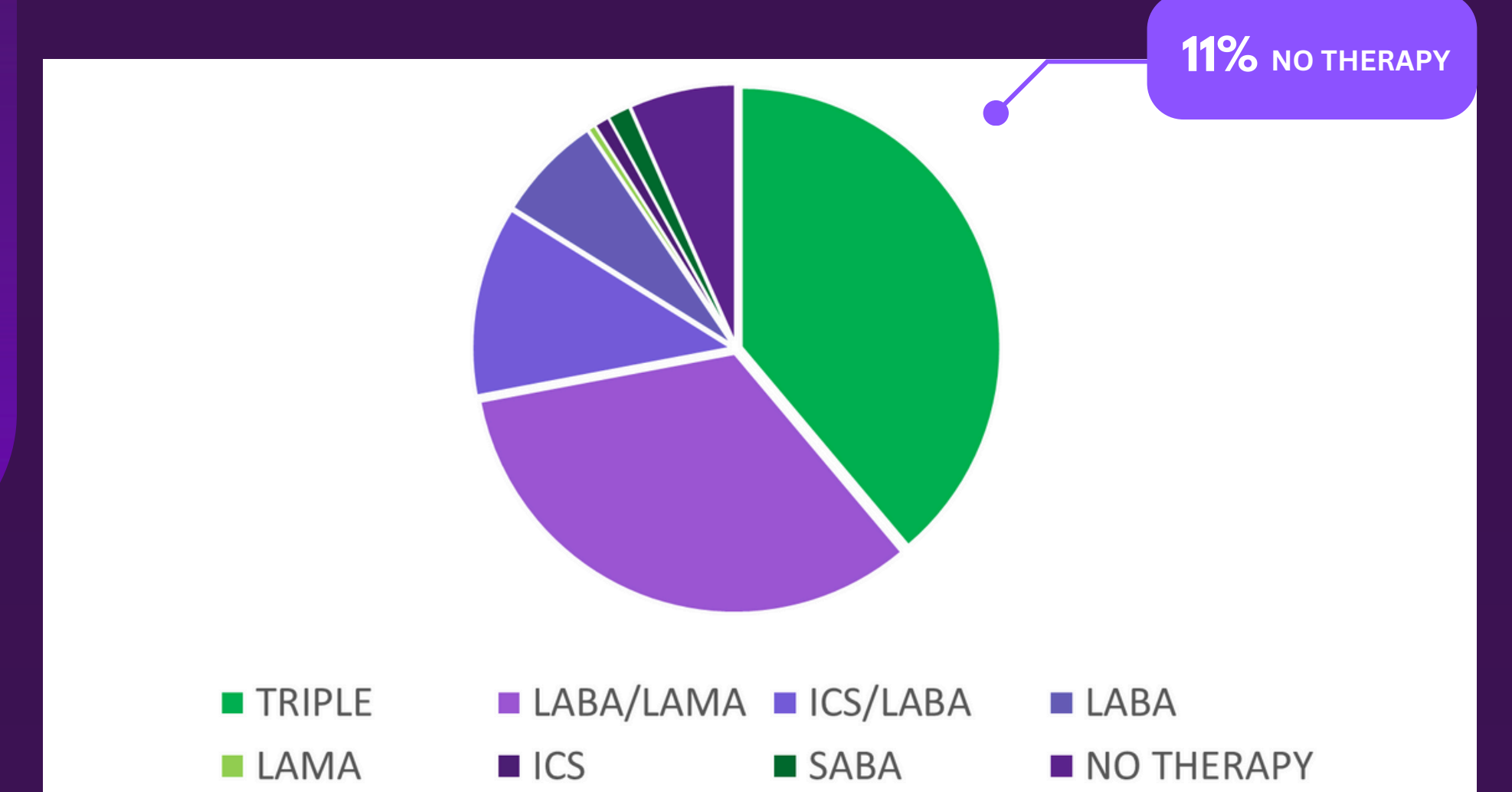


Figure 6: Baseline therapy and exacerbation data

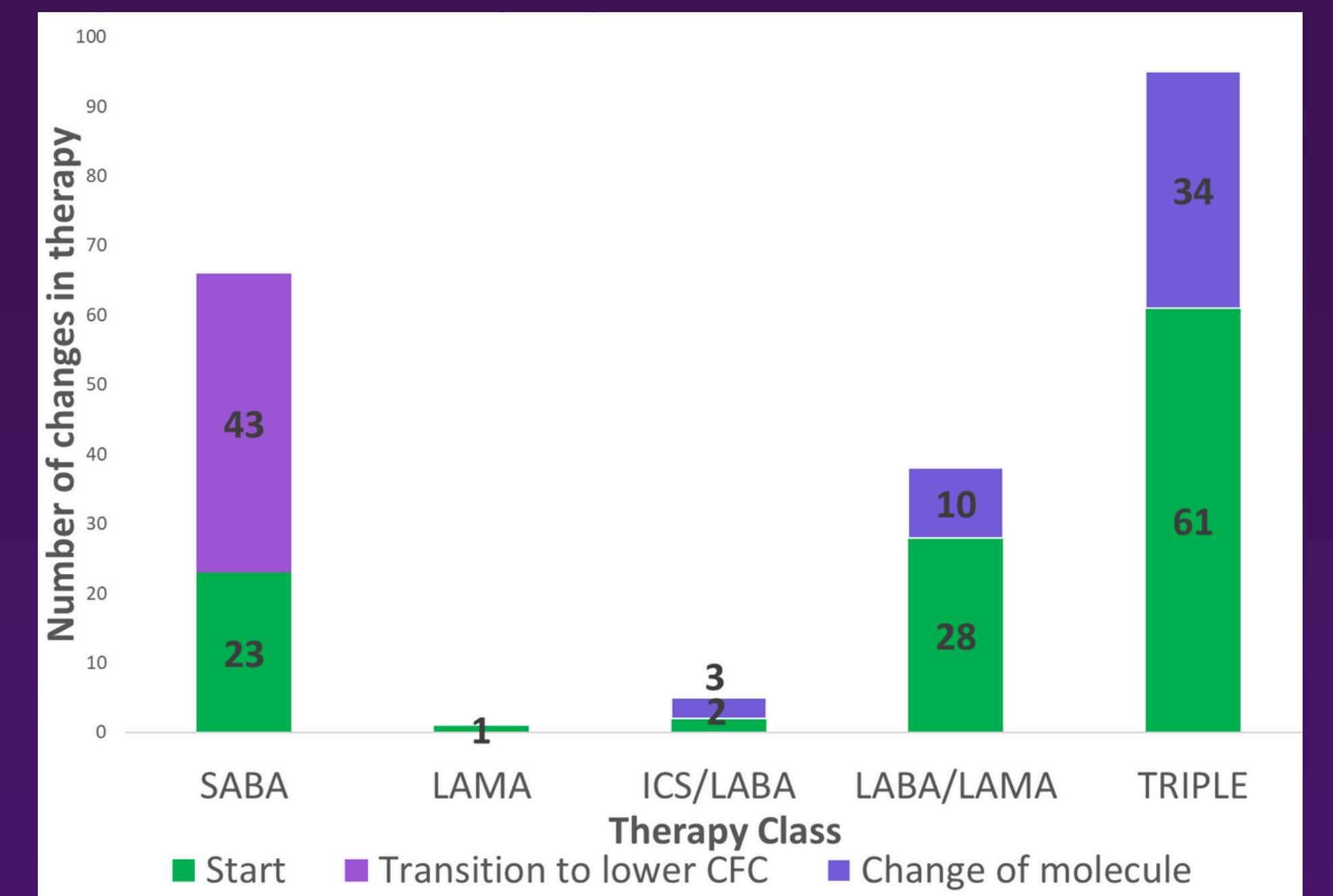


Figure 7: Intervention by drug class

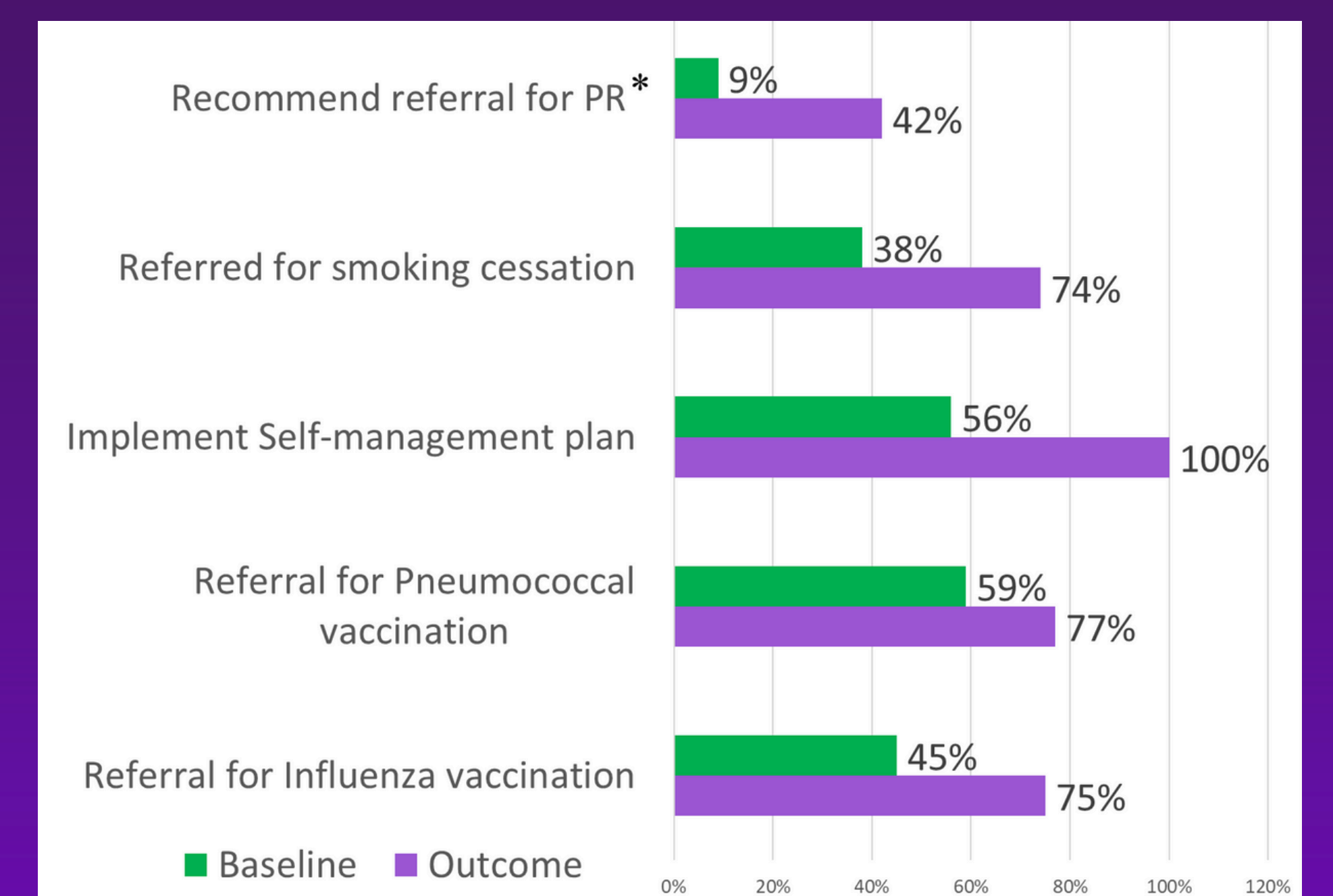


Figure 8: Fundamentals of COPD care implementation

CONCLUSIONS

Our findings underscore the critical importance of stratifying COPD patients based on their symptoms, exacerbation history, and cardiopulmonary profile. By tailoring interventions according to these stratifications and implementing the fundamentals of COPD care, we can more effectively manage COPD and put primary prevention strategies within primary care.

This approach not only optimises patient outcomes but also enhances overall healthcare efficiency by minimising the burden of COPD across the healthcare system. Moreover, proactive and personalised care, promises to significantly improve the quality of life for COPD patients.

“The mortality rate for CVD has improved by 71% over the last 20 years. However, for lung conditions, it has only improved by 9%. If lung health had improved at the same rate as CVD, there would now be around 707 fewer deaths each year from lung conditions.”³