Identifying opportunities for optimising the management of high-risk COPD patients in Australia: an observational study

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Introduction

- Australia has a COPD prevalence of 7.5% in adults ≥40yrs[1]
- COPD is the main cause of preventable hospitalizations[2]
- Prior exacerbation history and current management opportunities are associated with future exacerbation risk[3].
- UK & US studies undertaken as part of CONQUEST identified significant opportunities to optimise COPD management of high-risk patients (≥2 exacerbations in the previous 12 months).
- It is currently unknown the extent of similar opportunities in other healthcare systems, such as Australia.

CONQUEST: Collaboration On QUality improvement initiative for achieving Excellence in STandards for COPD Care programme [4] (www.conquest.care)

Aims and Objectives

To comprehensively review management opportunities for high-risk COPD patients in Australia, with reference to national and international guidelines, and also to the CONQUEST quality standards[5] as follows:

1. **Identification** of **high-risk** COPD patients
2. **Assessment** of disease and **quantification** of future risk
3. Pharmacological and non-pharmacological **intervention**
4. **Appropriate** follow-up

Methods

- Optimum Patient Care Research Database Australia (OPCRDA) is a primary care database of electronic health record (EHR) data containing 900,000 ever-active patients
- We identified patients aged ≥40 years with a COPD diagnosis who were at high-risk of future exacerbations.
- EHR coded and free text data were analysed to examine COPD inhaled therapy, smoking cessation support, and formal COPD reviews.
- Cross-sectional analyses were conducted on annual patient cohorts between 2015-2019, to exclude confounding by COVID-19 in later years.

Results

- In each study year (2015-2019), 2.3% of total patients had a recorded COPD diagnosis.
- The proportion of diagnosed active COPD patients defined as high-risk ranged from 30.3% in 2016 to 24.9% in 2019 (Figure 1).
- Approximately 40% of high-risk patients were not prescribed any COPD maintenance therapy, while the most common therapies were ICS/LABA (~18%) and ICS/LABA/LAMA(~25%). (Figure 2)
- In this population, the proportion of smokers with recorded smoking cessation support reduced from 36% in 2015 to 30% in 2019 (Figure 3).
- Less than 20% of high-risk patients received a COPD review in each study year (Figure 3).

Figure 1: Number and proportion of active diagnosed COPD classified as high-risk

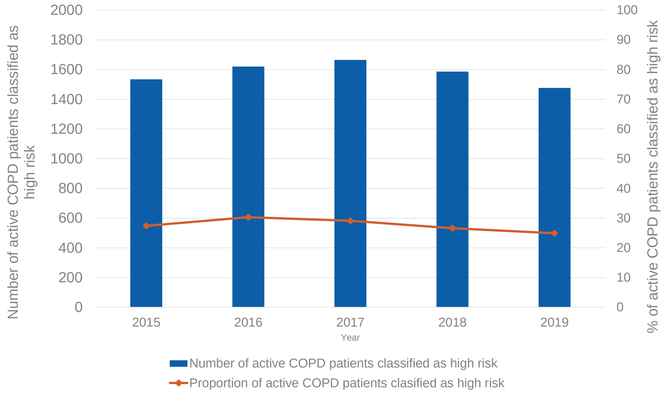


Figure 2: Proportion of patients prescribed inhaled "COPD" therapy in the 12 months before 1st January in each study year

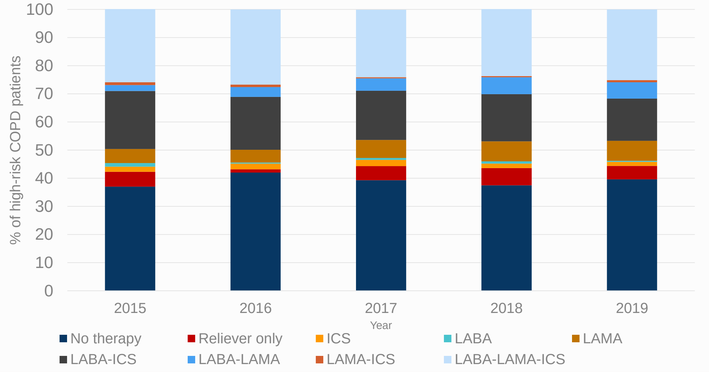
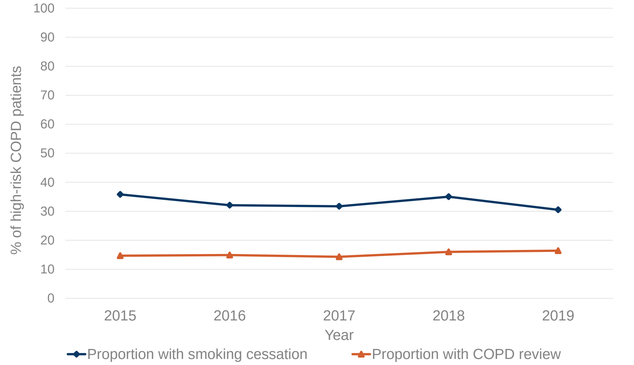


Figure 3: Proportion of high-risk COPD patients with evidence of smoking cessation support* or COPD review**



* Within 12 months before or after index, proportion of the high-risk COPD patients who were current smokers

** Within 12 months after index, proportion of all high-risk COPD patients. Defined as recorded COPD review, advice, education or lung function assessment.

Conclusions

- A large percentage of active diagnosed COPD patients can be considered to be high-risk.
- There is substantial opportunity to improve the assessment, treatment, and follow-up of patients with diagnosed COPD in Australia.

Research Approval

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Disclosures

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