Identifying opportunities for earlier diagnosis of high-risk COPD patients in Australia: an observational study

#PA3635

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Introduction

- Delayed COPD diagnosis and unrecognised exacerbations before diagnosis are associated with future exacerbations.
- UK and US studies[1,2] conducted within the COllaboratioN on QUality improvement initiative for achieving Excellence in STandards of COPD care (CONQUEST) program[3] identified substantial opportunities for earlier recognition of COPD in those with potential high-risk COPD (≥2 exacerbation-like events in the previous 12 months).
- It is unknown if similar opportunities exist within other healthcare systems, such as in Australia.

Aims and Objectives

To compare identification and assessment of patients with potential high-risk COPD in Australia, to the national and international guidelines, and to the CONQUEST quality standards[4] as follows:

1. **Identification** of patients with **high-risk** COPD
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 with potential COPD (ever smokers aged ≥40) at high risk of future exacerbations (≥2 antibiotic and/or steroid prescriptions in the prior 12 months).
- EHR codes 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 and 2019 to exclude confounding by COVID-19 in later years.

Results

- 6.2% (1045/16816) to 8.3% (834/9998) of patients with no COPD diagnosis were deemed high-risk in 2015-2019 (Figure 1).
- In the annual period when patients first became high-risk, <5% of patients with potential high-risk COPD had recorded lung function, <1% had a respiratory referral, and <50% had an updated smoking status recorded.
- 11-13% of this population were prescribed maintenance inhaled COPD therapy in each study year without a recorded respiratory diagnosis (Figure 2).
- Around 1% of undiagnosed high-risk patients received a COPD diagnosis in each study year (Figure 3).

Figure 1: Number and proportion of undiagnosed patients classified as high-risk in each study year

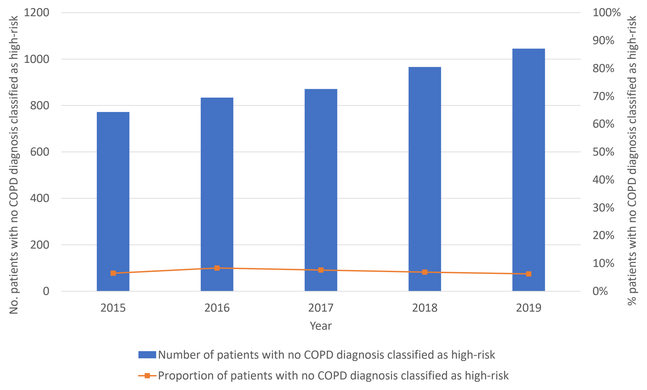


Figure 2: Proportion of undiagnosed high-risk patients prescribed inhaled therapy in the 12 months before 1st January in each study year

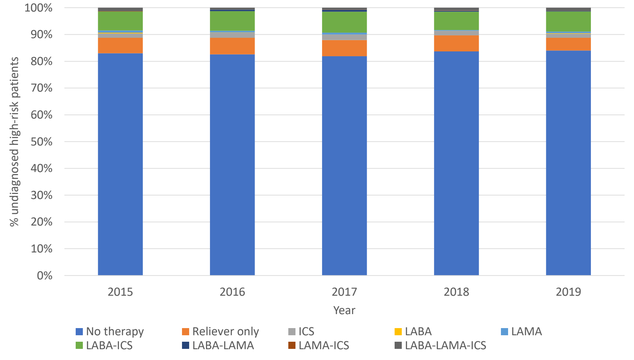
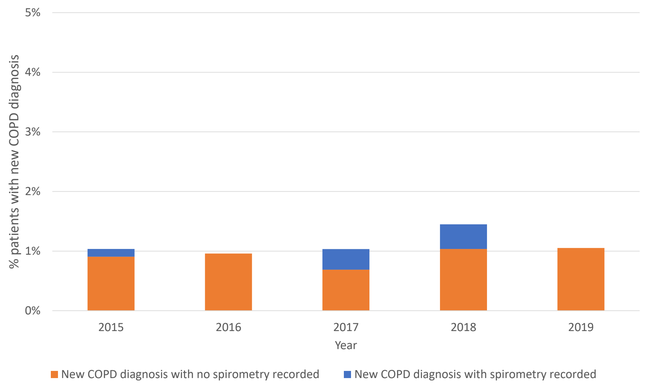


Figure 3: Proportion of undiagnosed high-risk patients receiving a new COPD diagnosis in 12-month follow-up period



Conclusions

- There are opportunities for earlier diagnosis of COPD among patients at high risk of exacerbation in line with Australian and global guidelines and CONQUEST quality standards.
- Pharmacological management of undiagnosed high-risk patients should trigger further diagnostic tests in this population.

Research Approval

ENCePP registration number: ENCEPP/DSPP/49365

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Disclosures

Andrew Dickens is an employee of the Observational and Pragmatic Research Institute. This study was conducted by Optimum Patient Care Australia (OPCA) and was partially funded by AstraZeneca and Optimum Patient Care Australia (OPCA).

References

1. Halpin DMG, et al. Lancet Reg Health Eur. 2023;29:100619. https://doi.org/10.1016/j.lanepe.2023.100619
2. Kerr M, et al. Lancet Reg Health Am. 2023;24:100546. https://doi.org/10.1016/j.lana.2023.100546
3. www.conquest.care (Viewed Mar 2023)
4. Pullen et al. Int J Chron Obstruct Pulmon Dis. 2021;16:2301-2322. https://doi.org/10.2147/COPD.S313498

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