

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

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Introduction

Prior exacerbation history and current management opportunities are associated with future exacerbation risk. UK and US studies undertaken as part of the CONQUEST program have identified opportunities to optimise COPD management. It is unknown the extent of similar opportunities in other healthcare systems, such as Australia.

Aims and objectives

To review management opportunities for high-risk COPD patients in Australia, with reference to national and international guidelines, and CONQUEST quality standards¹ (identification, assessment, treatment and follow-up for high-risk COPD).

Methods

We utilised the Optimum Patient Care Research Database Australia (OPCRDA), a primary care database of electronic health record (EHR) data containing 900,000 ever-active patients, to identify patients with a COPD diagnosis at high-risk of future exacerbations (≥ 2 exacerbations in the previous 12 months, based on clinical data and prescribed antibiotics or oral corticosteroids). EHR coded and free text data were analysed to examine COPD maintenance therapy, smoking cessation support and formal COPD reviews (defined as a recorded COPD review/advice/education or lung function assessment). Cross-sectional analyses were conducted on annual patient cohorts between 2015-2019 to exclude confounding by COVID-19.

Results

The proportion of diagnosed COPD patients defined as high-risk ranged from 30.3% (1620/5340) in 2016 to 24.9% (1476/5992) in 2019 (Table 1). Across the 5-year period, approximately 40% of high-risk patients were not prescribed any COPD maintenance therapy, while the most common therapies were LABA/ICS (~18%) and LAMA/LABA/ICS (~25%). In this population, the proportion of smokers with recorded smoking cessation support reduced from 36% in 2015 to 30% in 2019. Less than 20% of high-risk patients received a COPD review in each study year (Table 1).

Conclusions

There is substantial opportunity to improve the assessment and treatment of patients with diagnosed COPD by reviewing and managing high-risk patients systematically in line with guidelines and CONQUEST quality standards.

Table 1: High-risk COPD patient populations and COPD management outcomes

	2015	2016	2017	2018	2019
Eligible COPD patients[†]	N=5,594	N=5,340	N=5,729	N=5,955	N=5,922
High-risk patients[‡]	1,534 (27.4%)	1,620 (30.3%)	1,665 (29.1%)	1,586 (26.6%)	1,476 (24.9%)
COPD therapy; n (%*)					
No therapy	567 (37.0)	681 (42.0)	720 (43.2)	661 (41.7)	632 (42.8)
Reliever only	81 (5.3)	19 (1.2)	19 (1.1)	30 (1.9)	23 (1.6)
ICS	27 (1.8)	32 (2.0)	37 (2.2)	25 (1.6)	20 (1.4)
LABA	20 (1.3)	6 (0.4)	11 (0.7)	12 (0.8)	6 (0.4)
LAMA	76 (5.0)	73 (4.5)	107 (6.4)	112 (7.1)	105 (7.1)
LABA/ICS	316 (20.6)	305 (18.8)	291 (17.5)	266 (16.8)	221 (15.0)
LABA/LAMA	32 (2.1)	57 (3.5)	74 (4.4)	95 (6.0)	86 (5.8)
LAMA/ICS	16 (1.0)	15 (0.9)	6 (0.4)	7 (0.4)	12 (0.8)
LAMA/LAMA/ICS	399 (26.0)	432 (26.7)	400 (24.0)	378 (23.8)	371 (25.1)
Smoking cessation; n (%**)	72 (35.6)	69 (32.1)	84 (31.7)	91 (35.1)	70 (30.2)
Annual COPD review; n (%*)	226 (14.7)	242 (14.9)	238 (14.3)	254 (16.0)	242 (16.4)

[†]COPD diagnosis, aged ≥40yrs, evidence of primary care consultation or prescription in last 24 months, no other significant lung disease, no active cancer (except non-invasive skin cancer)

[‡]≥2 exacerbations in last 12 months

*reported as a proportion of the high-risk COPD patients in each year cohort

**reported as a proportion of the high-risk COPD patients who were current smokers in each year cohort

References

¹ Pullen et al. CONQUEST Quality Standards: For the Collaboration on Quality Improvement Initiative for Achieving Excellence in Standards of COPD Care. *Int J Chron Obstruct Pulmon Dis*. 2021 Aug 12;16:2301-2322. doi: 10.2147/COPD.S313498