

## Cardiovascular disease risk score assessment among COPD and non-COPD patients

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**Introduction/Aim:** Cardiovascular disease (CVD) is a major contributor to morbidity and premature mortality in Australia and is 2–5-times more prevalent among people with chronic obstructive pulmonary disease (COPD)<sup>1</sup>. Risk assessment is key to identification of modifiable risk factors and optimisation of therapies. We investigated the use of CVD screening risk scores among patients with and without COPD in the Australian (Aus) primary care setting.

**Methods:** Patients with a recorded CVD risk score were described by COPD status using primary care data from the Optimum Patient Care Research Database Australia from Nov 2009 to Mar 2025. The *AusCVDRisk* risk score (July 2023 onwards<sup>2</sup>) was further described using medians (25<sup>th</sup>, 75<sup>th</sup> quartiles [Q1, Q3]) and risk categories (low: <5%; intermediate: ≥5 to <10%; high: ≥10%). CVD risk was compared by COPD status and age, sex and smoking status (non-parametric statistics and unadjusted logistic regression).

**Results:** Of 5,157 people with COPD, 11.7% had a CVD risk score recorded compared with 2.4% of 386,803 people without COPD. Risk scores comprised *AusCVDRisk*, 2012 CVD Risk calculator<sup>3</sup> and Coronary Artery Calcium Score (<1%). Of 2,631 patients with an *AusCVDRisk* score, 125 (4.8%) had COPD with a median *AusCVDRisk* risk score of 7% (Q1,Q3: 4,11) compared with 4% (Q1,Q3: 2,7) for non-COPD patients (p<0.001). COPD patients with a recorded CVD risk score were more likely to be over 60 years of age (56.7% vs 18.4%; p<0.001) and current smokers (35.1% vs 10.7%; p<0.001). COPD was associated with a 2.8-fold elevated risk of a high CVD risk score (≥10%) (p<0.001).

**Conclusion:** CVD risk was higher among people with COPD compared to those without COPD. Although screening (using CVD risk assessments) was more prevalent among this population, eight in ten COPD patients had no CVD risk score recorded. Greater awareness and screening of CVD risk is a priority issue for COPD patients.

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**Key Words:** Cardiovascular disease, COPD, risk assessment

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