

The association of short acting β_2 -agonist overuse with asthma control and severe exacerbations: an Australian perspective

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Background: Globally, short-acting β_2 -agonist (SABA) use is higher than recommended,¹ a pattern which is associated with increased risk of adverse outcomes.² In Australia, the potential for overuse is enabled by the fact SABAs are available over-the-counter (OTC) and by GP prescription (routinely 2 canisters/dispensing and up to 5 repeats/prescription).

Aim: To describe SABA usage patterns in the Australian asthma population and investigate the impact of overuse on asthma outcomes.

Methods: In this historical, observational study, electronic medical record (EMR) data and questionnaire responses from patients ≥ 12 years-old with an asthma diagnosis of ≥ 1 years were extracted from the Optimum Patient Care Research Database Australia. The annual number of SABA canisters prescribed/purchased per patient was quantified, and the relationship between self-reported SABA overuse (≥ 3 canisters/year) and asthma control and exacerbation rate was assessed.

Results: A total of 720 patients were included. As per EMRs, 52.8% of patients were prescribed ≥ 3 SABA canisters/year. 28.9% of patients self-reported the purchase of SABA canisters OTC; of these 37.5% acquired ≥ 3 canisters/year. Self-reported, inappropriate use of SABA (≥ 3 canisters/year) was associated with an increased risk of uncontrolled asthma symptoms (OR 1.41; 95% CI 1.04-1.92) and an increase in the mean number of self-reported exacerbations for all GINA steps (Figure 1).

Conclusions: Australian patients living with asthma who use ≥ 3 SABA canisters/year have a 41% greater risk of having uncontrolled asthma and experience more exacerbations than those who use < 3 canisters/year. This suggests that review of practitioner and patient driven asthma management practices is warranted.

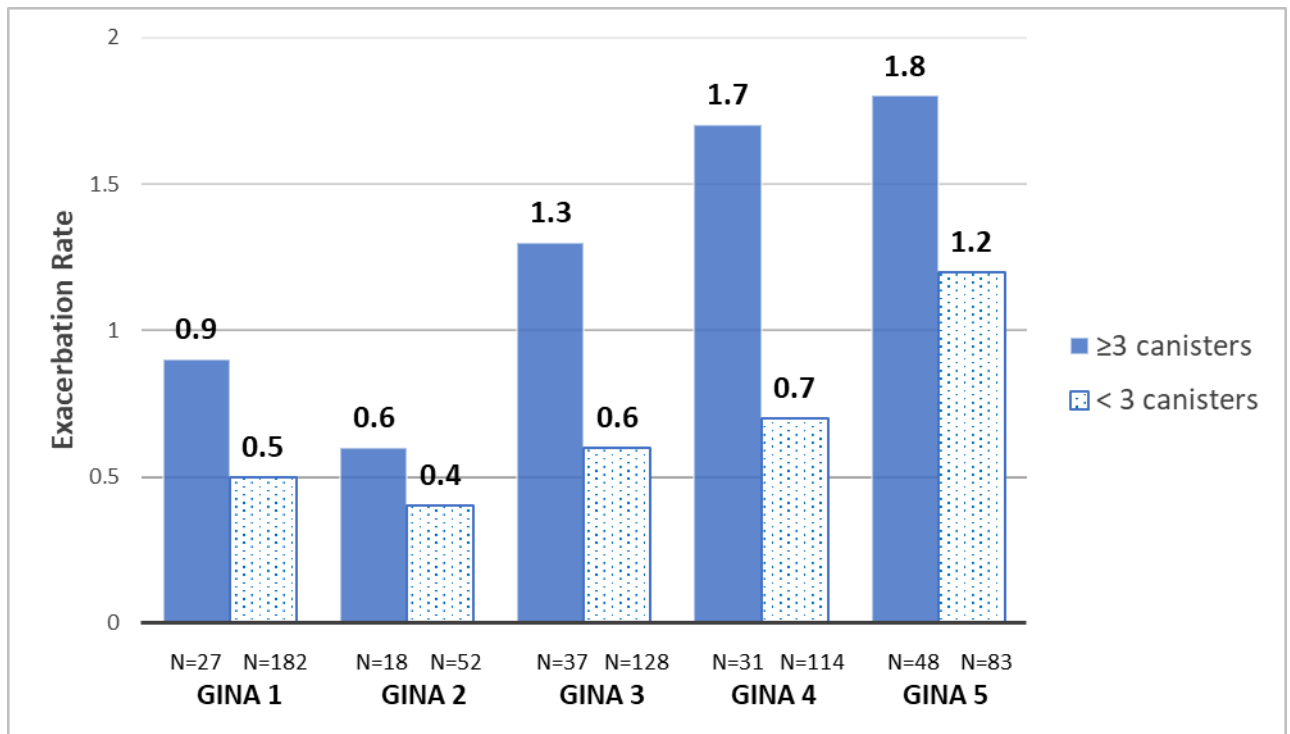


Figure 1: Mean frequency of self-reported asthma exacerbations as per Global Initiative for Asthma (GINA) treatment intensity steps for patients prescribed canisters of short acting β_2 -agonists (SABA).

References

1. Bateman ED, et al. *Eur Respir J* 2021; 2101402.
2. FitzGerald JM, et al. *Resp Med* 2017; **131**:135-140.

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