

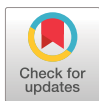


# Short-acting $\beta_2$ -agonist prescriptions are associated with poor clinical outcomes of asthma: the multi-country, cross-sectional SABINA III study

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Findings from SABINA III, which included 8351 patients from 24 countries, indicate that across treatment steps and clinical care settings, high SABA prescriptions were associated with higher rates of severe exacerbations and poorer asthma control <https://bit.ly/2VHBISg>

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## Abstract

**Background** To gain a global perspective on short-acting  $\beta_2$ -agonist (SABA) prescriptions and associated asthma-related clinical outcomes in patients with asthma, we assessed primary health data across 24 countries in five continents.

**Methods** SABINA III was a cross-sectional study that employed electronic case report forms at a study visit (in primary or specialist care) to record prescribed medication(s), over-the-counter (OTC) SABA purchases and clinical outcomes in asthma patients ( $\geq 12$  years old) during the past 12 months. In patients with  $\geq 1$  SABA prescriptions, associations of SABA with asthma symptom control and severe exacerbations were analysed using multivariable regression models.

**Results** Of 8351 patients recruited (n=6872, specialists; n=1440, primary care), 76.5% had moderate-to-severe asthma and 45.4% experienced  $\geq 1$  severe exacerbations in the past 12 months. 38% of patients were prescribed  $\geq 3$  SABA canisters; 18.0% purchased OTC SABA, of whom 76.8% also received SABA prescriptions. Prescriptions of 3–5, 6–9, 10–12 and  $\geq 13$  SABA canisters (*versus* 1–2) were associated with increasingly lower odds of controlled or partly controlled asthma (adjusted OR 0.64 (95% CI 0.53–0.78), 0.49 (95% CI 0.39–0.61), 0.42 (95% CI 0.34–0.51) and 0.33 (95% CI 0.25–0.45), respectively; n=4597) and higher severe exacerbation rates (adjusted incidence rate ratio 1.40 (95% CI 1.24–1.58), 1.52 (95% CI 1.33–1.74), 1.78 (95% CI 1.57–2.02) and 1.92 (95% CI 1.61–2.29), respectively; n=4612).

**Conclusions** This study indicates an association between high SABA prescriptions and poor clinical outcomes across a broad range of countries, healthcare settings and asthma severities, providing support for initiatives to improve asthma morbidity by reducing SABA overreliance.

