



Celebrating World Asthma Day in Brazil: lessons learned from the pandemic. Can we do better?

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To celebrate World Asthma Day this year (May 3rd), the Global Initiative for Asthma (GINA)⁽¹⁾ has chosen "closing gaps in asthma care" as the theme for the Day. Of the 10 gaps listed, we have chosen to highlight "equal access to diagnosis and treatment of asthma."⁽¹⁾ In Brazil, a country with continental dimensions, the main challenge is to develop initiatives that allow easy and equitable access to asthma treatment, given the immense socioeconomic differences and disparities in local health care systems.

Three years have passed since the last JBP publication on the World Asthma Day (2019). In that editorial,⁽²⁾ the authors described the asthma scenario in Brazil, questioning whether the advances in asthma management, achieved at that time, would allow us to state that the asthma "glass" was half full or half empty. The conclusion was that there were reasons to believe in both points of view, but effort and work were necessary to fill the glass.

On May 11, 2020, the WHO declared that COVID-19, a global, highly communicable, and potentially lethal disease, was pandemic, and that triggered extraordinary changes in lifestyle, economy, and beliefs about health and health care worldwide. In the present editorial we discuss the influence of COVID-19 on asthma care, the improvement in the asthma scenario in Brazil, even in times of COVID-19, and the prospects for refining asthma management.

Initial studies described that respiratory comorbidities, including asthma, were predictors of more severe outcomes and mortality for COVID-19 patients. The broadcasting of this information increased the awareness of the population and the medical community about the relevance of asthma and its appropriate treatment. In this regard, national societies, such as the *Sociedade Brasileira de Pneumologia e Tisiologia* (SBPT) and the *Associação Brasileira de Alergia e Imunologia*, international societies, and the GINA quickly changed their priorities and issued educational notes emphasizing three major points: (1) adherence to control treatment in combination with a self-management action plan in cases of worsening of symptoms; (2) avoidance of nebulizer use because of the potential to spread COVID-19; and (3) adoption of preventive measures against the disease, such as the use of masks, hand hygiene, and social distancing.

Subsequent studies were unable to prove that asthma was a risk factor for COVID-19,^(3,4) a paradox when compared with other respiratory viruses to which

asthma patients are known to be susceptible. Asthma exacerbations caused by viral infections are common events and result in a seasonal increase in ER visits and hospitalizations.⁽⁵⁾ However, the relationship between COVID-19 and asthma is still debatable.

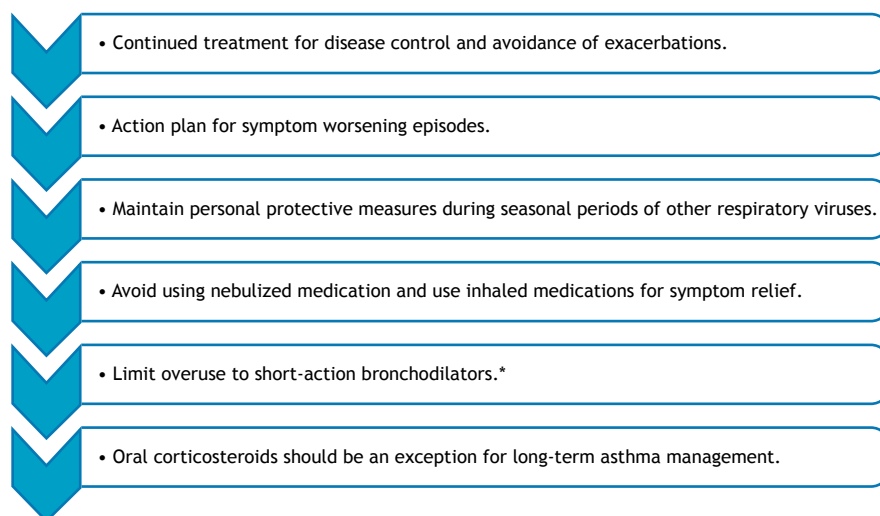
What have the latest publications on COVID-19 and asthma shown? Adults and children with controlled asthma are not at an increased risk of hospitalization or death from COVID-19.⁽⁶⁾ It remains unclear whether asthma is a protective factor for COVID-19 or it is an independent protective factor against mortality for patients with COVID-19.^(4,6) Possible explanations for these findings include lockdowns and/or better asthma management.

In this regard, we highlight two recent population-based studies carried out in the United Kingdom. In a cohort of 100,165 asthma patients with at least one exacerbation within the last five years, Shah et al.⁽⁷⁾ showed a substantial reduction in the rates of severe exacerbations reported in primary health care. Nevertheless, there was no significant reduction in the number of exacerbations requiring hospital care and/or hospitalization or in the number of asthma-related deaths. Additionally, Davies et al.⁽⁸⁾ reported a 36% decrease in asthma-related ER admissions after lockdown. More importantly, in the week before the lockdown, there was a 127% increase in the number of inhaled and oral corticosteroid prescriptions for asthma patients when that was compared with the mean number of those prescriptions in the previous five years. After the lockdown, there was the biggest reduction in the number of severe asthma exacerbations ever recorded in the United Kingdom, which might partially have been the result of improved asthma management. Similar reductions in the rate of asthma-related hospitalizations were observed in Brazil during the first peak of COVID-19.⁽⁹⁾

Even in times of a pandemic, it is undeniable that there have been great advances in the asthma scenario in Brazil, thanks to the work of pulmonologists and pediatric pulmonologists from the SBPT and its Asthma Committee. In this sense, the 2020 SBPT Asthma Management Recommendations⁽¹⁰⁾ were published, with updates on asthma treatment, adapting international guidelines to the Brazilian reality. The document emphasizes the need for a personalized approach, including pharmacological treatment, patient education, a written action plan, training in inhalation device use, and inhalation technique review at each visit. In the following year, the 2021 Brazilian Thoracic Association Recommendations for the Management of Severe Asthma⁽¹¹⁾ were published,

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*Be aware of any asthma patient who request a third short-action bronchodilator prescription within a year. This patient must be referred for medical evaluation to identify the causes of lack of asthma control and to optimize maintenance treatment.

Figure 1. Lessons from the COVID-19 pandemic that can guide the way forward.

highlighting that severe asthma is uncommon and requires correct diagnosis, phenotyping based on easily accessible biomarkers, personalized pharmacological and nonpharmacological treatment, and the criteria for evaluation response to monoclonal biologics.

Another important advance in the field of asthma was the update of the Brazilian Ministry of Health *Protocolo Clínico e Diretrizes Terapêuticas* (Clinical Protocol and Therapeutic Guidelines), published in 2021, which updates the strategies of asthma treatment and incorporates two monoclonal biologics (omalizumab and mepolizumab) for the treatment of severe asthma in the *Sistema Único de Saúde* (SUS, Brazilian Unified Health System). In the wake of these advances, omalizumab, mepolizumab, benralizumab, and dupilumab were also approved for use by the *Agência Nacional da Saúde Suplementar* (ANS, Brazilian National Health Insurance Agency). The incorporation of monoclonal biologics by the SUS and ANS enabled the access of these drugs to severe asthma patients, but this did not guarantee equity of treatment.

We recognize that some gaps were not filled in during the public consultations of the *Comissão Nacional de Incorporação de Tecnologias do SUS* (Brazilian National Commission for the Incorporation of Technologies in SUS), since the provision of other control medications.

For example, an inhaled corticoid associated with a long-acting β_2 agonist bronchodilator via a metered-dose inhaler is a treatment option for some pediatric and adult patients with mild-to-moderate asthma. This association together with a long-acting antimuscarinic bronchodilator (tiotropium bromide) is a treatment option for preceding the use of monoclonal biologics, at least for some severe asthma patients, increasing access to treatment and/or reducing costs.

In summary, we acknowledge that asthma remains a public health problem in our country, but we have undoubtedly made significant progress. Although any death from asthma is unacceptable, its frequency has gradually been decreasing in Brazil.⁽¹²⁾ In contrast, asthma morbidity is still troublesome and points to the need for directing our efforts toward other outcomes, such as asthma control, patients' quality of life, and accessibility to pharmacological and nonpharmacological treatments. In our viewpoint, it is necessary to improve patient-tailored therapeutic options in order to fill in the gaps, so that the patient's quality of life is similar to that of a patient without asthma. In this regard, lessons from the pandemic can guide the way forward (Figure 1). If we go on this path, we can assume that the medium-term results may result in satisfaction for patients and health care providers.

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