Are people with asthma at increased risk of COVID-19, or severe COVID-19?
- People with asthma do not appear to be at increased risk of acquiring COVID-19, and systematic reviews have not shown an increased risk of severe COVID-19 in people with well-controlled, mild-to-moderate asthma.

Are people with asthma at increased risk of COVID-19-related death?
- Overall, people with well-controlled asthma are not at increased risk of COVID-19-related death (Williamson, Nature 2020; Liu et al JACI IP 2021).
- However, the risk of COVID-19 death was increased in people who had recently needed OCS for their asthma (Williamson, Nature 2020) and in hospitalized patients with severe asthma (Bloom, Lancet RM 2021).

Are inhaled corticosteroids (ICS) protective in COVID-19?
- In one study of hospitalized patients aged ≥50 years with COVID-19, ICS use in those with asthma was associated with lower mortality than in patients without an underlying respiratory condition (Bloom, Lancet RM 2021).

What are the implications for asthma management?
- It is important to continue good asthma management (as described in the GINA report), with strategies to maintain good symptom control, reduce the risk of severe exacerbations and minimise the need for OCS.

Have there been more asthma exacerbations during the pandemic?
- No. In 2020, many countries saw a reduction in asthma exacerbations and influenza-related illness. The reasons are not precisely known, but may be due to handwashing, masks and social/physical distancing that reduced the incidence of other respiratory infections, including influenza.
COVID-19 and asthma - medications

- Advise patients to continue taking their prescribed asthma medications, particularly inhaled corticosteroids
  - For patients with severe asthma, continue biologic therapy or oral corticosteroids if prescribed
- Make sure that all patients have a written asthma action plan, advising them to:
  - Increase controller and reliever medication when asthma worsens (see GINA report Box 4-2)
  - Take a short course of OCS when appropriate for severe asthma exacerbations
- Avoid nebulizers where possible, to reduce the risk of spreading virus
  - Pressurized metered dose inhaler via a spacer is preferred except for life-threatening exacerbations
  - Add a mouthpiece or mask to the spacer if required
COVID-19 and asthma – infection control

- Avoid spirometry in patients with confirmed or suspected COVID-19, or if community transmission of COVID-19 is occurring in your region
  - Follow aerosol, droplet and contact precautions if spirometry is needed
  - Consider asking patients to monitor PEF at home, if information about lung function is needed

- Follow strict infection control procedures if aerosol-generating procedures are needed
  - Nebulization, oxygen therapy (including nasal prongs), sputum induction, manual ventilation, non-invasive ventilation and intubation

- Follow local health advice about hygiene strategies and use of personal protective equipment, as new information becomes available in your country or region
COVID-19 vaccines and asthma

- Have COVID-19 vaccines been studied in people with asthma?
  - Yes. Many types of COVID-19 vaccines have been studied and are being used worldwide
  - New evidence, including in people with asthma, will emerge over time

- Are COVID-19 vaccines safe? What is the current advice?
  - In general, allergic reactions to vaccines are rare
  - The Pfizer/BioNTek and Moderna COVID-19 vaccines should be administered in a healthcare setting where anaphylaxis can be treated if it occurs
  - These vaccines should not be administered to patients with a history of severe allergic reaction to polyethylene glycol, or any other vaccine ingredient. More details from ACIP are here
  - As always, patients should speak to their healthcare provider if they have concerns

- Usual vaccine precautions apply, for example:
  - Ask if the patient has a history of allergy to any components of the vaccine
  - If the patient has a fever or another infection, delay vaccination until they are well

- At present, based on the risks and benefits, and with the above caution, GINA recommends COVID-19 vaccination for people with asthma

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After COVID-19 vaccination
- Current advice from the US Centers for Disease Control and Prevention (CDC) is that people who have received a COVID-19 vaccine should continue to wear a mask and avoid close contact with others

Influenza vaccination
- Remind people with asthma to have an annual influenza vaccination
- A gap of 14 days between COVID-19 vaccination and influenza vaccination is recommended by CDC

COVID-19 vaccination and biologic therapy
- We suggest that biologic therapy and COVID-19 vaccine should not be given on the same day, to allow adverse effects of either to be more easily distinguished

GINA will update these statements as new data become available

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