MANAGING PEOPLE WITH ASTHMA DURING COVID-19

CONSIDERATIONS FOR HEALTH PROVIDERS

INTRODUCTION

There is ongoing debate on whether or not individuals with moderate to severe asthma are at risk of developing more severe disease from COVID-19. While large case series from China did not list asthma as one of the prevalent underlying conditions, more recent reports in the United States have indicated that approximately 25% of young adults hospitalized with COVID-19 had a history of asthma, and among children 40% had some form of chronic lung disease (including asthma).

Beyond the potential of increased risk of severe COVID-19, people with asthma could have an acute exacerbation if infected with coronavirus. Therefore, it is imperative that providers have a thorough understanding of the implications of COVID-19 in their clients with asthma, as well as best management practices.

Given the burden of asthma in both children and adults, providers will likely be faced with managing asthma in the face of the pandemic. This document serves as guidance to providers who care for people with asthma, providing information on presentation and management.
The greatest challenge in managing asthma in the time of COVID-19 is distinguishing the signs and symptoms of an asthma exacerbation from those of COVID-19, which include dry cough and difficulty breathing. Furthermore, people could concurrently have COVID-19 and an asthma exacerbation triggered by COVID-19.1

- The presence of additional symptoms may help determine if the person has COVID-19. Fever is present in most but not all individuals with COVID-19. A larger proportion of children (27% in a US cohort) than adults may not present with fever. Other symptoms include gastro-intestinal complaints, loss of taste or smell, confusion, and headache.

- A reminder that there are other viruses that can result in an asthma exacerbation and have symptoms overlapping with those mentioned for COVID-19, especially fever. Therefore, with the current pandemic, suspicion for COVID-19 must remain high.

- Screening questions could potentially prove helpful in distinguishing the presence of COVID-19. These would include: 1. Travel to a country with COVID-19 endemicity; 2. Presence of classic COVID-19 symptoms; 3. Contact with someone with known or suspected COVID-19.4 It is important to note, however, that in the setting of broad community spread, a high suspicion for COVID-19 should be maintained despite negative answers to all questions.

- When available, testing should be used to evaluate the presence of COVID-19.

For both children and adults:

- Extensive counseling should be undertaken to help keep people safe during the time of COVID-19.

- Most important is the continuation and full adherence to controller medication. This includes inhaled corticosteroids which are an essential controller medication.

- Some people are on immunomodulators for control of their asthma (e.g. Omalizumab). There is no evidence to suggest that using these medications increases the risk of COVID-19. Recommendations are to continue these medications as the control of asthma is most important.5

- Reiterating the importance of proper inhaler technique with the use of an aerochamber (or “spacer”). Patients should be encouraged to wash their hands before they use their inhaler, they should never share an inhaler with anyone.

- Given ongoing medication supply shortages and supply chain disruptions in some areas, stocking up on medication is critical to ensure there is no discontinuation of treatment.
Due to COVID-19, primary health centers all over the world have limited or eliminated in-person clinic visits. Some centers may have the infrastructure to set up audio/phone consultations and tele-health visits. Primary health centers should have plans in place to provide the continuation of primary care services to patients with chronic disease including asthma.

- If audio visits or tele-health visits are feasible, they should be made easily accessible to ensure that patients can continue to consult with their practitioner. Patients should be aware of how to reach their clinic/provider and how to schedule a phone consultation.

- When audio/tele-health visits are not feasible, in-person access to care should be made available while adhering to strict infection risk reduction procedures described in point ii below. Even when audio/tele-health visits are taking place, some patients will still need to be seen in-person and the same provisions should be instituted.

- Primary health centers should work with local pharmacies to ensure uninterrupted access to essential medication for asthma. People should have the ability to obtain a 90-day supply of medication to reduce likelihood of missed doses.

- Community health workers, who have access to appropriate personal protective equipment (PPE), can be leveraged to help deliver medication to individuals with chronic disease to reduce their exposure risk. They can also be leveraged to conduct home visits for those in need.

Reducing risk of infection to patient and providers

Providing in-person care at primary health centers for individuals with chronic disease requires significant fore-planning and preparation in order to minimize risk of exposure to the patient and the provider.

- This starts before the patient arrives at the clinic. Messaging needs to be conveyed that if they are experiencing COVID-19 like symptoms, they should come into the clinic only if they are feeling distressed and need to be seen in-person.

- For patients with asthma who may be experiencing an asthma exacerbation with or without COVID-19, should also be managed remotely until the need arises for in-person evaluation (worsening status). This management is described below.
For those patients who need to be seen in the clinic, the following should be put in place:

a. Triage of people outside the clinic building to take advantage of air circulation. Triage can occur under a shaded area or tent without the side walls. Patients waiting to be triaged should stand/sit in line with social distancing. Triage should entail a list of symptoms and an infrared temperature screen. If no concern for COVID-19, the patient can be triaged into the clinic for primary health care services. Individuals triaging should have adequate PPE, and be trained on screening and triage based on the most recent WHO case definition for COVID-19.

b. If a person does have COVID-19–related symptoms they should be triaged to a “COVID-19 rule out and management” area. This initial COVID-19 rule out area can also be outside the building. This part of the clinic should be clearly separated in space from the areas where patients without COVID-19 symptoms are being cared for. Since some of these patients will not have COVID-19, continuing to adhere to social distancing is critical.

c. Given the significant overlap of asthma and COVID-19 symptoms, people being seen for asthma exacerbation may need to be treated as a presumptive COVID-19 in areas with community spread. If there is no community spread, the screening questions noted previously can be used to triage these patients.

d. Providers should be wearing appropriate PPE in triage, COVID–19, and non–COVID–19 areas. This entails at a minimum a surgical facemask and gloves. Providers caring for people with COVID–19 (or suspected cases) should wear a facemask with shield, N95 when available, gown, and gloves. All people entering the clinic should be provided with a mask.

e. Ensuring practicing providers and staff are COVID–free is also critical, so that the clinic setting does not become a source for spreading coronavirus.

   » If a provider or clinic staff tests positive for COVID–19, they can only return to work when: at least 3 days (72 hours) have passed since recovery defined as resolution of fever without the use of fever–reducing medications and improvement in respiratory symptoms (e.g., cough, shortness of breath); and, at least 10 days have passed since symptoms first appeared.

   » If a provider or clinic staff has had “contact” with a person infected with COVID–19, then the following recommendations may be considered if feasible: self–quarantine for 14 days; when self–quarantine for all potential contacts is not possible, then providers/staff should check their temperature twice a day and self–isolate if any temperature or symptoms develop.

A significant contact is:

- Face–to–face contact with a probable or confirmed case within 1 meter and for more than 15 minutes;
- Direct physical contact with a probable or confirmed case;
- Direct care for a patient with probable or confirmed COVID–19 disease without using proper personal protective equipment;
- Other situations as indicated by local risk assessments.
Management of asthma exacerbation with or without COVID-19 should continue as before with increased frequency of beta-agonist therapy delivered through metered-dose inhaler using an aero-chamber. Corticosteroids are the mainstay of the treatment of moderate to severe asthma exacerbations. The World Health Organization has recommended against the use of oral corticosteroids as treatment for COVID-19. However, this must be distinguished from the use of oral corticosteroids for asthma exacerbation. There is consensus that management of asthma exacerbations should continue per established guidelines including the use of steroids when needed. The only distinction is the discouragement of using nebulizers in the setting of an asthma exacerbation. Algorithms have been put in place that restrict the use of continuous nebulization to patients with severe asthma (classified as hypoxia, low peak expiratory flow, feeble respiratory effort, confusion, or cardiac arrhythmias). If this is to be considered, an isolation room, preferably with negative pressure, and full PPE (N95, face shield, gown, gloves) should be used by providers. Studies have previously shown the effectiveness of puffs (<4 yr: 2–6 puffs, >4 yr: 4–10 puffs) every 1–4 h in managing asthma exacerbations.

Some people will have concurrent COVID-19. The clinical spectrum of COVID-19 is very heterogeneous and can include fever, cough, shortness of breath, and fatigue. Other symptoms including headache, gastrointestinal symptoms, and upper respiratory tract symptoms (rhinorrhea and sore throat) are less common. Some people will develop smell and taste disorders. Severe COVID-19 results in acute respiratory distress syndrome (ARDS), respiratory failure, arrhythmias, acute cardiac injury, shock, multiple organ failure, and death. Laboratory examinations will often show decreased white blood cell counts, particularly lymphocytopenia. People with severe COVID-19 will have elevated the neutrophil count, inflammatory markers, D-dimer, blood urea, and creatinine levels. Chest computed tomography most commonly shows ground-glass opacifications with or without consolidative abnormalities. They are also more likely to be bilateral, have a peripheral distribution and involve the lower lobes. This is the main reason that prone positioning of awake patients has shown improved ventilatory capacity.

Stress and anxiety imposed by the uncertainty and the social isolation of the COVID-19 may affect people with chronic disease, such as asthma. Social distancing regulations have kept people away from family and loved ones that often form a critical support group. It is important that providers continue to ask about and address mental health problems. Discussing the importance of emotional well-being opens the space for candid conversation.
Management of People with Asthma in the Time of COVID-19

Prevention of Infection in Patients and Providers

- pre-arrival screening
- on-arrival screening outside the clinic
- separated areas for COVID symptoms versus no COVID symptoms

Patient Education

- importance of continuing controller medication
- avoid use of nebulizers
- avoid known asthma triggers
- reasons to seek care
- keeping constant supply of medication
- mental health needs

Individual with Asthma

Management of Asthma Exacerbations

- challenge of distinguishing asthma exacerbation symptoms from those of COVID-19
- use screening questions or presume COVID-19 if community spread
- use MDI unless severe asthma
- okay to use oral corticosteroids
- test for COVID-19 when possible

Strategic Continuation of Primary Health Services

- strategically continue in-person primary care services
- institute process for uninterrupted refill of medications
- address any mental health needs

PAHO
Pan American Health Organization
World Health Organization

BE AWARE. PREPARE. ACT.
www.paho.org/coronavirus


