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CHEST

Concerns About Coronavirus Disease–Related Collateral Damage for Patients With COPD

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The unprecedented coronavirus disease (COVID) pandemic is rapidly taking its toll on the world population, health-care systems and workers, and global resources. Treatment accommodations and choices within the health-care system to address COVID are likely to have unintended consequences for patients with existing chronic diseases. Patients with COPD, for instance, are a high-risk population at risk for "collateral damage" during the coronavirus disease 2019 (COVID-19) pandemic. We summarize the current evidence base for potential harm or risk of harm to patients with COPD during the COVID-19 pandemic and propose some strategies to mitigate those risks.

Presentation with worsening respiratory symptoms during the COVID-19 pandemic creates diagnostic and therapeutic challenges among patients with COPD. Evaluation for COVID-19 as a possible trigger of acute exacerbations of COPD (AECOPD) is essential; however, implementing proven AECOPD therapies remains challenging. For instance, routine therapy with corticosteroids for AECOPD may be delayed because of diagnostic uncertainty and hesitation to treat COVID-19 with steroids while COVID-19 testing is pending. The preliminary evidence is currently mixed as to whether oral steroids are harmful, neutral, or even beneficial for patients with COVID-19 infection.[1,2] However, for patients with COPD, with respect to inhaled and/or oral corticosteroids the clinical guidelines have been updated to support continuation of these as maintenance medications or treatments for AECOPD given their importance in preventing and shortening hospitalizations.[3]

During this pandemic, patients with COPD are also at risk for decreased access to medications and other therapies. Shortages of many classes of inhaler medications, the backbone of COPD treatment, are ongoing globally and expected to continue.[4,5] Albuterol and other inhaler therapy use for hypoxic respiratory failure or other symptomatic treatment in patients with COVID-19 is a likely driver of these shortages. There are also disruptions in the global supply chain because of quarantine restrictions.[6] The move away from nebulizer therapy (due to aerosolization concerns with COVID-19) to inhaler therapy has further exacerbated this critical shortage.[7] The impact of the historic rapid job loss and unemployment in the United States, coupled with a health system of employment-integrated health insurance coverage, makes it more likely that people with COPD will not be able to afford their medications.[8] COPD is already known to impact those of lower socioeconomic status more than others.[9] In addition to medication limitations, access to noninvasive ventilation (NIV) therapy for COPD has been severely curtailed because of concerns about the risk of aerosolization with NIV, coupled with the risk of ventilator shortages.[7]

ABBREVIATIONS: AECOPD = acute exacerbations of COPD; COVID = coronavirus disease; COVID-19 = coronavirus disease 2019; NIV = noninvasive ventilation; OLD = obstructive lung disease

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The COVID pandemic has made it more difficult for patients to obtain many types of care. Whereas telehealth visits have increased, in-person visits have decreased dramatically in many areas. This limitation in health-care access may result in patients failing to gain access to and/or seek care (due to fears about contracting COVID) from their usual medical support as their condition deteriorates. EDs and hospital volumes have decreased substantially for a variety of critical conditions.[10,11] COPD is an ambulatory care-sensitive condition,[12] meaning that good-quality care keeps people out of the hospital. Hence decreased access to controller medications, increased barriers to usual support systems, and a higher threshold for presenting to the hospital may lead to more severe presentation (ie, AECOPD) later in its course, with increased limitations on standard AECOPD therapy.

What Strategies Can Physicians and Health Systems Implement to Mitigate These Risks?

First, in addition to tracking drug shortages, many health systems have implemented guidelines and restrictions to prescription of inhaler therapy to ensure its use is preserved for patients who are most likely to benefit. The Food and Drug Administration recently approved a generic albuterol inhaler in response to COVID-related shortages, and health systems and physicians should alert patients to this option.[13] Understanding that the pandemic will be ongoing, many health systems have already increased telehealth visits (phone/video). Although programs for patients with COPD following hospitalization have been implemented across many hospital systems, it may be useful to rethink how those programs may pivot to use telehealth proactively to identify patients at risk for exacerbation. Programs involving remote patient monitoring and acute care at home models, linked to telehealth initiatives, are being built and implemented.[14] Development, awareness, and integration of diverse care models for patients with COPD will be key in coordinating care and preventing and treating AECOPD.

Finally, although self-management programs have been a core component of COPD therapy for decades, these formal or informal "action plans," which help patients identify and treat exacerbations, may need to be modified to accommodate COVID-19. Although patients with COPD should avoid in-person clinical encounters and isolate at home when appropriate, they should seek care with worsening symptoms and have clear treatment guidelines regarding seeking phone/video visits; implementing therapy with corticosteroids, antibiotics, or inhalers and nebulizers; COVID-19 testing recommendations; and thresholds for seeking emergency, urgent, or outpatient care in person. Home self-monitoring tools such as pulse oximeters may help patients monitor their need for more urgent evaluation.

Although the current pandemic presents many challenges for the treatment and management of patients with COPD, it presents opportunities to rethink our models of care, improve remote patient monitoring, and implement earlier treatment at home through novel models of virtual care. The challenges of medication supply shortages and cost, exacerbated by the current pandemic, remain important factors to address for the health of our patients. There are still many unknowns about the overlap of COPD and COVID-19 and actual harm or risk of harm. As we learn more about COVID-19 and its interaction with COPD and its treatments, we will be better suited to provide improved recommendations for management. At present, we need to ensure that "what if" care (without evidence) does not displace proven and necessary treatments for patients with COPD, hence placing them at increased risk for poor outcomes.

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