The virtual COPD visit in the COVID-19 pandemic

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The COVID-19 Pandemic has changed how we practice, moving to virtual visits to protect ourselves, our staff and our patients. This gives us great opportunity, but requires organization to be effective. This article is to breakdown the facts about COVID-19 and COPD and to help guide you through the virtual visit.

Key Facts

- COPD does not affect the immune system so does not increase the risk of contracting COVID-19

- The risk of death with COVID-19 is related to comorbidities of CV disease, hypertension, diabetes, chronic renal disease and chronic lung disease (including COPD, restrictive lung disease and lung cancer). One study from Washington US reviewed that 33% of the patients admitted to their ICU had COPD[1]. As such, patients with COPD are likely to be at risk of more severe COVID-19 disease

- Best method to prevent COVID-19 respiratory morbidity in COPD is proper adherence to treatment and social distancing

- COPD management is unchanged by the COVID-19 pandemic.

The visit should have a number of objectives.

1. **Assess for COVID-19 symptoms and respond to patient questions about COVID.**

The SARS-Cov-2 virus is shed early in the illness and some people are asymptomatic, so encourage staying at home, social distancing and enquire about supports, food security, medications etc. Reassure patients that wearing their oxygen is necessary and has not been shown to spread the virus, but wearing a mask over their tubing when they go out is a good idea, if they have one.

2. **Assess Disease Severity and Optimize Symptom Relief.**

Questions could include[2] a description of their breathing problem in their own words, some idea of baseline evaluation and whether or not there has been any change in their symptoms. If needed, stepping up their bronchodilators as per the CTS Guidelines[3] which suggests moving up from short acting to long acting bronchodilators with persistent symptoms and combining them into one of the LABA/LAMA combinations for continued symptoms. Even though they may not be as active, it is important to continue take their medications. One way that symptoms can be measured from visit to visit is with the COPD Assessment Test (CAT). The first four questions are about cough, phlegm, chest tightness and dyspnea quantified each from 0-5 on a Likert scale. This is NOT the time for elective spirometry which is an aerosol generating procedure.

Assess inhaler technique! There are multiple potential devices including MDI (metered dose inhaler), DPI (dry powder inhaler) and SMI (soft mist inhaler). The Lung Association has a website with all the different inhalers with descriptions and videos to help your patients use them correctly (https://www.lung.ca/lung-health/get-help/how-use-your-inhaler). If you are conducting a video visit, watch the patient use their inhaler to assess technique. The use of nebulizers will generate aerosols and as such should not be used unless a patient is living alone. Fortunately, it is clear that other devices deliver medication at least equally efficiently to nebulizers[4].

Smoking cessation is a goal for all of our patients. The current pandemic may be an opportunity for patients to consider it. While some patients will cite boredom or loneliness as a barrier, others may recognize that being at home removes them from the work stresses and the need for work-breaks that drive some smokers to do so.

Reduce the 5A's to 2A's. Ask and Act. Support with pharmacotherapy that could include nicotine replacement, buproprion or varenicline.

We cannot measure oxygenation without an oximeter. There are some phone apps that claim to be able to do so which have not been validated. The Roth test[5] wherein the patient counts as rapidly as they can from one to thirty in their native language after a single breath can be used. The time it takes to finish or until having to stop for a breath as well as the number reached at finish or stopping has been correlated in a study in an ICU setting. It showed that if you only counted to 9 and had to stop at 7 seconds, the Oxygen saturation was frequently <95% and if you only got to 6 and had to stop at 5 seconds, an oxygen saturation of 90% was associated. Not perfect, but at least something we can measure!

3. **Prevent Exacerbations**.

Again assessment of adherence, smoking cessation and inhaler technique are the pillars of therapy. In the long-term immunization for influenza and pneumococcus will be important, but this is likely best left to an in-person visit. Hopefully we will get COVID vaccinations at some time.

Much has been written about the risk of bacterial pneumonia with the treatment of COPD with ICS (inhaled steroids) and considering tapering down ICS to reduce this risk in those patients with COPD currently treated with ICS[6]. This is an important long-term consideration for your patients, but now is not the time to de-escalate therapy as the possibility of acute symptoms would trigger concerns for COVID and necessitate patients leaving their homes to get care. When the COVID-19 pandemic ends assess your patients for possible ICS reduction using the tool called Applying The Wisdom of Stepping Down Inhaled Corticosteroids on the FPAGC website in the tools section.

A non-pharmacologic therapy to prevent exacerbations, as well as reduce symptoms, is the use of airway clearance devices. Devices such as Aerobika and Flutter work by the principal of oscillating positive pressure to get in behind mucus and help the patient expel it. This procedure is likely an aerosol generating one, so it should be done at a distance from others, preferably in a well-ventilated room such as with an open window[7].

4. **Treatment of exacerbations should be continued as per pre-COVID recommendations.**

The Canadian Thoracic Society has written a position paper on COPD and COVID that is accessible on their website (https://cts-sct.ca/covid-19/) and reiterates appropriate use of antibiotics for non-COVID exacerbations.

As far as the use of oral steroids goes (for which there are some concerns re use as to decrease the immune response) evidence from MERS and steroid therapy did not show increased mortality. As such they say "In the absence of evidence of harm and an expectation of a low risk of harm, we prioritized the high value of current evidence-based care recommendations to treat COPD exacerbations with prednisone to reduce the need for urgent health service utilization."

Feel free to download the COPD Action Plan from our tools section to assist you in providing this tool to your patients for early action on their exacerbations.

A current concerns is medication shortages, and this is of particular concern with Salbutamol by MDI as it has replaced nebulized therapy for acute illness. Recognize that there are other short acting medications if Salbutamol MDI is not available locally which include Terbutaline by DPI, Formoterol by DPI and Salbutamol/Ipratropium by SMI (though side effect concerns limit its use in patients on LAMA).

5. **Exercise.**

Pulmonary rehabilitation is of great importance in improving quality of life and reducing exacerbations. Clearly group classes are now closed, but patients need to be encouraged to do home exercises. They can access some advice through websites including a Canadian one called "Living Well with COPD" as well as the "resource pack for pulmonary rehabilitation available through the British Thoracic Society. In addition, they ARE allowed to go for a walk, as long as they continue appropriate social distancing.

6. **Remember that the patient with COPD often has multiple comorbidities.**

The common ones include cardiovascular disease, osteoporosis and mood and anxiety. Screen for depression with the PHQ -2 tool and anxiety with the GAD-7 tool. In addition, the CAT tools last four questions can often give a hint about how a patient is doing beyond their lungs.

Clinical - patient reported symptoms and smoking cessation

Objective - CAT and MRC scores

Plan - COPD action plan

Drugs - technique and adherence

There is a lot to consider, but a lot you CAN do to help your patients with COPD during this difficult time.

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References

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