1. **Describe your assigned client's situation. Why are they presenting to the clinic? What medications are they currently taking?**

Mr. Saagar Agarwal is a 71-year-old male patient presenting to the clinic today with increased chest tightness and a cough over the past week. He has a history of COPD with no allergies. He recently quit smoking 5 years ago and is currently taking salmeterol DPI 50mcg/inhalation every 12 hours. His physical assessment reveals that he has expiratory wheezes with no retraction present. The rest of his exam reveals no other abnormalities, and he has not been hospitalized for his COPD.

2. **Assess the applicable clinical practice guideline (CPG) for your assigned client. What treatment is recommended by the CPG for your client's situation?**

The clinical practice guidelines are broken down into different sections for COPD. They start by describing what COPD is and how it is clinically diagnosed. They then go into detail about different treatments for when patients are stable and when they are having an exacerbation with or without hospital visits. The CPGs go in a step-by-step approach and are encouraged to either step up or step down depending on the patient's discrepancy between spirometry and level of symptoms. With this patient's symptoms and already-established COPD medication, the CPG states that "For patients with persistent breathlessness or exercise limitation on bronchodilator monotherapy, the use of two long-acting bronchodilators is recommended." (Global Initiative, 2023).

3. **Discuss your personal professional assessment of the client's situation provided in the scenario. What pharmacological treatment is necessary and why?**

Following the CPG, starting Mr. Agarwal on a second long-acting bronchodilator (LABA) is a good first choice to help him in his current situation. If this was not a medication change that Mr. Agarwal could handle, another option could be switching him to LABA and a long-acting muscarinic antagonist (LAMA). LABA works by stimulating adrenergic receptors, LAMA works by blocking cholinergic receptors. LABA acts on bronchioles and LAMA acts on the bronchi, these actions on different areas of the airway enhance bronchodilation (Rosenthal & Burchum, 2021). This could be a second recommendation for Mr. Agarwal if he could not tolerate two long-acting bronchodilators and before starting him on a steroid. It has also been shown that there are less adverse effects with LAMAs. In an article by Koarai et al (2020), they state that treatment with LAMA in stable COPD provided a significantly lower incidence of exacerbation and non-serious adverse effects, and higher trough FEV1 compared to LABA. By using combination therapy as a backup, it is less likely that the patient will have adverse effects that he will not be able to tolerate.