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How to Match POCs to Patients' Needs

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As providers look for ways to transition to a non-delivery oxygen business model, and patients demand systems that give them more mobility, the demand for portable concentrators is on the rise. However, matching POCs to patient needs is an in-depth process.

Determining needs starts with the provider assessing the activity level and lifestyle of the patient. That will determine how much oxygen the patient is going to need during his or her long-term oxygen therapy. Moreover, the oxygen patient is going to be using their oxygen equipment at a variety of settings each day.

There are basically four realms of oxygen use: at home, exercising, while sleeping and at altitude. The majority of the day might be spent at home either sedentary or doing light house keeping, which would require one setting. Or there patients will be engaged in exercise, and will thusly have higher oxygen needs. The third type of need is during sleep, when each patient's respiratory patterns change. Lastly, whether or not the patient travels to altitude, as that will affect their oxygen needs, too.

Keeping these different types of use in mind, what are the various factors providers should consider when trying to match POCs to their patients' needs?

What are the patient's respiratory mechanics? From the clinical side, providers must be more mindful of patients' respiratory mechanics. Specifically, how long it takes a patient to inhale. With a pulse dose setting, the device will be introducing the oxygen bolus, or volume, during the initial part of their inhalation, which might last a fraction of a section. How quickly that bolus is delivered is important. For example, for some patients, a bolus of 20 ml delivered at 400 milliseconds might not be quick enough; the bolus might have to be delivered in 300 milliseconds.

This is determined via oximetry, but the RT also has to know what the bolus delivery times are for each unit in order to dose it to the patient's respiratory mechanics. This means providers and RTs must coordinate even more closely as oxygen dosing grows all the more sophisticated.

What is the patient's liter flow? There are some POC systems on the market now that can deliver up to three liters of continuous flow. Will the patient need something that robust, or does he or she require a smaller liter flow. Find out factors such as the patient's flow when they at when resting, exercising and sleeping when in continuous flow. If they are in pulse setting, what is their setting for resting and exercise?

How severe is the patient's disease state? For instance the patient might be on two liters right now but his or her disease state is quickly progressing, and the patient might have to move to four or five liters in the next six months. Obviously, the provider wouldn't want to put that patient on a POC instead of a device that will be able to scale to their future needs.

Does the patient travel? Patients that travel, especial "snowbirds" who regularly engage in seasonal travel to sunnier climates in order to escape winter cold, must be supported by the HME provider, according to Medicare guidelines, regardless of whether that patient travels far from the provider's usual service area. Needless to say, a POC would be ideal for such a patient, and the provider, too. They can simply get on a plane and go (assuming the device is approved by the airline, of course).

Can the patient sustain on a POC? Some POCs on the market are pulse only, which might not be enough for some patients. So determine whether or not the patient needs a continuous flow device. Oximetries need to be performed on the patient both while they are resting and while exercising. Can they walk or exercise on a pulse setting?

A lot of patients are enamored with the pulse only POCs, because they come in such a small form factor. The device might perform well while they are sitting at home, but the minute they get up and start exercising and their respiratory rate gets above 15 to 25 breaths per minute, those devices have to start cutting their bolus size and thusly the device is not delivering the same amount of oxygen as during a resting respiratory rate. Therefore, the patient's saturation decreases when he or she needs the oxygen the most.

Are they in a pulmonary rehab program? This is an important question to ask because the provider will want patients exercising with the device that has been put on them. Often patients will go to a pulmonary rehab program and are instructed to stow their POC and are given a separate device provided by the program. So, patients exercise on a different device that provides a different amount of oxygen. The patient must exercise on their device instead.

Can they lift the POC? With higher, continuous flow POCs, the devices are a little heavier, weighing in the 16- to 22-pound range, roughly. In order to use th device, the patient needs to be able to lift that kind of weight at least two feet of the ground so that he or she can get the POC into and out of the car.

Points to take away:

- The demand for POCs will increase as patients want them for more mobility and providers need them to transition to non-delivery.
- Providers must assess patients' activities levels and lifestyles in order to determine their needs.
- How quickly patients inhale the oxygen dose and how big that does is are important in determining the right POC.
- Other factors to consider include the patient's liter flow, disease state, travel habits, ability to lift a heavier POC into a car, their ability to sustain on a POC, and whether or not they are in pulmonary rehab.

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