WEANING CHRONIC LUNG PATIENTS FROM HOME OXYGEN

by Kenneth A. Wyka, MS, RRT, FAARC

Within the past several years, there has been a concerted move to wean patients with chronic cardiopulmonary conditions off of home oxygen. This has been particularly true of patients discharged from hospitals to skilled nursing and rehabilitation facilities. This move may have been motivated by economical concerns regarding healthcare cost containment or one stemming from patients and/or family members whose desire is not to have oxygen equipment in the home. Personally, I think it is a combination of these reasons. Hopefully, clinicians will address this matter within their institutions and formulate a more effective strategy; one that considers patient need, patient care and economics.

You don't have to remind any hospital-based respiratory therapist about "frequent flyer" chronic lung patients. They were around in the early 1970s and they are still around today. For close to 40 years, these patients go in and out of hospitals stressing healthcare dollars and personnel resources. While respiratory-related technology and pharmaceuticals have experienced enormous advances during this period of time, some patients with chronic pulmonary diseases are still hospitalized 4 or 5 times a year (or more) and for causes that seemingly should be under control.

Part of the problem lies with patient compliance and self-care. The other part I believe is weaning patients off of oxygen therapy prematurely or unnecessarily. Sure, there are probably other reasons, issues and concerns that must be considered, but I believe taking therapy away from chronic lung patients whose disease is generally progressive in nature is not the answer. Add in the aging process and we really have to be asking ourselves, "What are we doing here?" Let's take a look at two patient care examples. You would never discontinue or wean Type II diabetics off of their insulin. Sure, you might adjust the amount of insulin they use but, imagine, if on a very good day, an insulin-dependent diabetic was told that their sugar level is near normal and to stop taking the insulin. Yet, this is practiced with COPD patients and others who are on supplemental oxygen therapy.

Another example is patients with hypertension. Again, you would never suggest they stop taking their high blood pressure medications because their blood pressures were near normal. Instead, good patient care would dictate a possible adjustment in medication along with dietary regulation and sensible exercise. Yet, we do this with our chronic lung patients with regard to home oxygen. Practitioners need to look at several pulse oximetry measurements and trend patients over a longer period of time. A number of healthcare facilities have protocols that require oximetry readings over a 24 hour period of time before any decision regarding oxygen is made. This is far better than one spot check followed by an order to discontinue the oxygen.

Perhaps the GOLD (global initiative for chronic obstructive lung disease) staging of COPD should be followed with regard to monitoring the severity of COPD. According to GOLD, there are 4 stages of COPD, based on airflow (FEV1) spirometric determinations, which denote the severity of the disease: stage I (mild), stage II (moderate), stage III (severe) and stage IV (very severe). Therapeutic interventions based on these stages suggest that oxygen therapy should be considered for stage III and definitely for stage IV. This should be taken into account before any oxygen is discontinued.

Of course some chronic lung patients with mild to moderate severity of their condition recovering from pneumonia, congestive

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heart failure (CHF) or other exacerbations may no longer require oxygen therapy. This has to be considered with regard to patient age, the type and severity of the primary pulmonary disease, presence of any co-morbidity and other patient-related variables.

Since most pulse oximetries are taken during the day with the patient awake and sitting upright, consideration should also be given for an overnight pulse oximetry study. This test may provide some valuable data. With the patient sleeping in a supine, prone or lateral position, ventilation/perfusion (V/Q) imbalance or mismatch may occur affecting overall oxygenation. In addition, during sleep there may be a slowing of the respiratory rate, decrease in a patient's tidal volume and possible periods of apnea that may be suggestive of sleep apnea. All of these will impact a patient's blood oxygen level. Before discontinuing a patient's oxygen therapy, it might be advisable to perform an overnight oximetry. The test is easy to perform and the data provided will give you a better picture of the patient's cardiopulmonary status.

Equipment capable of performing overnight pulse oximetry is readily available. Many home care companies are now able to provide this service through CMS (Centers for Medicare and Medicaid Services) and HIPPA approved programs and independent testing facilities (IDTFs) using tamper-proof oximeters and soft-ware. However, home care companies offering overnight oximetry must comply with very strict guidelines pertaining to patient set-up and data retrieval. Downloads of overnight testing are sent directly to the independent laboratory which in turn sends test results in the form of an extensive report to the prescribing physician or healthcare provider. This data is useful in determining if the patient qualifies for nocturnal oxygen. It also provides valuable baseline data on the patient that can be referred to at a later date.

On the economic side of the coin, we really do not save healthcare dollars if patients with any type of chronic cardiopulmonary condition constantly go to the emergency department (ED) and are admitted to the hospital for care. In 2006, Medicare estimates indicated that the average length of stay (LOS) in a hospital for a COPD patient was 5.2 days. The average cost of treating these patients was over $4600 per day resulting in an average cost of close to $24,000 for each hospitalization. Home care with prescribed oxygen and aerosol therapy coupled with RT follow-up and education is far less expensive and can result in fewer ED visits, hospitalizations and reduced healthcare expenditures overall.

Thomas Petty, MD and associates, in several landmark studies (1980 and 2000) on nocturnal and continuous oxygen therapy in COPD patients, demonstrated greater survival rates in patients who kept active (high walk) and used oxygen continuously. Consequently, we have to ask ourselves the following questions. Why are we in such a hurry to wean these patients off of oxygen? Are we doing our patients any disservice when we discontinue a therapy that has been proven to help their cardiopulmonary condition? The economic argument does not appear to be valid and neither is the aesthetics issue of being on oxygen or having the equipment in the home. Home oxygen systems are safe, and for patients who qualify, the newer oxygen conserving devices are light-weight, easy to operate and provide hours of oxygen if properly used. RTs need to look at the greater picture of improved patient care which can result in reduced hospitalizations and an improved health-related quality of life for patients afflicted with chronic lung disease.

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