4 Ps to Improve Quality of Life in Residents with COPD

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Chronic obstructive pulmonary disease (COPD) places devastating limitations on the functional abilities and social interactions of many assisted living (AL) residents who suffer from the disease. But staff can provide training in simple energy conservation techniques that can remarkably improve quality of life for those with COPD.

What is COPD?

The term *COPD* refers to two progressive and irreversible lung diseases—chronic bronchitis and emphysema—that frequently coexist. These conditions are characterized by obstruction and limitation of airflow that interferes with normal breathing.

Chronic bronchitis causes excessive mucus production within the bronchial tree in amounts sufficient to cause a productive cough for at least 3 months per year for 2 or more consecutive years. Airway lumen may be partially blocked by excessive mucus secretions and enlargement of the mucus-secreting glands. Cilia also become damaged and less effective as the mucus glands enlarge. Narrowed airways and increased mucus cause congestion and coughing, resulting in dyspnea.

Emphysema is characterized by gradual destruction of alveoli, the organs that allow oxygen and carbon dioxide exchange. Damage to the alveoli is irreversible, leaving fewer to do the work of oxygen exchange. The lung's alveoli also lose their elasticity, making it difficult to maintain open airways and contributing to poor oxygen exchange. Patients with emphysema experience great difficulty exhaling. The level of impairment and functional limitation is dependent on the degree of damage to the alveoli and lung tissue.

Approximately 80% to 90% of COPD deaths are caused by smoking.[1] Other risk factors of COPD include secondhand smoke, air pollution, occupational exposure to certain industrial pollutants, history of childhood respiratory infections, and heredity.[2]

Quality of life for a person suffering from COPD diminishes as the disease progresses. A survey by the American Lung Association revealed that half of all COPD patients (51%) say their condition limits their ability to work. It also limits them in normal physical exertion (70%), household chores (56%), social activities (53%), sleeping (50%), and family activities (46%).[3] In 2004 the cost to the nation for COPD was

Table 1.
Breathing Exercises

Breathing exercises can help improve the efficiency of the breathing pattern and strengthen the respiratory muscles. These breathing exercises can be easily incorporated into an individual's existing exercise program or a group exercise class. As with any new exercise, increased effort may be needed initially, but with continued practice, will decrease.

Step 1: Pursed Lip Breathing
Inhale slowly through the nose, keeping the mouth closed. Pucker or "purse" the lips and then exhale slowly and gently through pursed lips. The exhalation should be longer than the inhalation. An easy way to remember the proper breathing pattern is: "Smell the roses (inhale); then blow out lots of birthday candles slowly (exhale)."

Step 2: Diaphragmatic Breathing
Place one hand on the upper chest and the other just below the rib cage. While inhaling through the nose, keeping the mouth closed (smell the roses), feel the abdomen expand with the lower hand. While exhaling through pursed lips (blow out lots of birthday candles slowly), tighten the stomach muscles, letting the abdomen fall inward. The hand on the upper chest must remain as still as possible throughout the entire exercise.

approximately $37.2 billion.[4] COPD is the fourth leading cause of death in America, affecting more women than men.[5]

Managing COPD

The goal of pharmacotherapy in the treatment of COPD is to provide symptom relief, prevent complications, and slow progression of the disease while producing minimal side effects. Bronchodilator medications are used to open airways and relieve dyspnea symptoms. Corticosteroids decrease airway inflammation; however, side effects of long-term corticosteroid therapy include osteoporosis. Antibiotics are used for the treatment of infections, and residents should be encouraged to get flu vaccine shots each year.

Oxygen therapy may help correct hypoxemia, thereby improving sleep, increasing the level of alertness during the day, and reducing the perceived level of dyspnea. In severe cases of COPD, when other treatment options are not effective, there are three surgical options: a lung transplant, lung volume reduction surgery, or a bullectomy.

Although there is no cure for COPD, the AL multidisciplinary team of physician, nursing staff, dieticians, occupational therapists, physical therapists, pharmacists, and direct caregivers, can be effective in assisting residents with COPD manage their disease by encouraging a healthy lifestyle through smoking cessation, avoidance of air pollutants, exercise, weight management, eating well, and breathing exercises (Table 1). Another role for the staff is to provide training in task simplification and energy conservation.

Table 2.
Identifying Residents in Need

Residents who can benefit from energy conservation training are those who:

- Display heavy breathing after walking or wheeling themselves to the dining room or any other common areas within the facility
- Are unable to complete daily dressing tasks without taking frequent rests and breathing heavily
- May be unable to complete tasks that require bending, such as putting on socks or tying shoes
- Formerly participated in social activities and outings but now use varying excuses not to attend

Teaching Energy Conservation Techniques

The dyspnea caused by COPD produces functional limitations, such as inability to or difficulty in ambulating or self-propelling a wheelchair. This impairment and functional limitation can restrict a resident's involvement in social activities within the AL facility and with family members, thereby reducing quality of life. Residents may have difficulty performing activities of daily living (ADLs), including dressing, bathing, and performing household tasks.

Energy conservation techniques allow the resident to complete functional tasks efficiently so they have more energy to participate in more meaningful activities. These techniques may require streamlining current methods of performing tasks.

Members of the AL multidisciplinary team, including direct care staff and activities coordinators, can identify residents who may benefit from energy conservation training (Table 2). Nursing staff, occupational therapists, or physical therapists can lead the training programs.

For ease of learning and retention, energy conservation techniques are often organized into the 4 Ps: planning, pacing, prioritizing, and positioning (Table 3).

Planning

Planning includes organizing daily routines to allow completion of activities that are essential at times

Table 3.
The 4 Ps of Energy Conservation

Planning
- Consider showering in the evening to conserve daytime energy.
- Consider using a bag, basket, or rolling utility cart to carry multiple items in one trip.
- Space difficult and strenuous chores evenly throughout the week.

Pacing
- Perform tasks at a moderate rate and avoid rushing.
- Allow plenty of time for rest and relaxation. Take a morning or afternoon nap prior to activities or outings to build up energy.

Prioritizing
- Look critically at your roles with work, family, and friends. Keep only those that are necessary and pleasurable.
- Eliminate unnecessary tasks, chores, or steps of an activity. Look for shortcuts.
- Ask staff to empty trash and clean your room if the service is available.

Positioning
- Store items at a convenient height to avoid excessive and prolonged stooping and stretching.
- Use lightweight wheelchairs with proper seat and arm rest height.

when residents feel most vibrant. Many find it helpful to perform strenuous tasks such as dressing early in the day when strength and stamina are often at their peak. One simple way to plan is to use mental energy before expending physical energy. Teach residents to:
- Think about the steps that need to be completed and items required for the task.
- Prepare the required items ahead of time.
- Keep frequently used items in easily accessible places.
- Have duplicate items available to limit unnecessary trips between the bathroom, bedroom, or kitchen.
- Consider using a bag, basket, or rolling utility cart to carry tools or supplies in one trip.

Planning also includes organizing weekly routines. Teach residents to:
- Consider scheduling strenuous activities, such as going to the hairdresser, attending religious services, and shopping, evenly throughout the week instead of all in one day.

Pacing

The second strategy of energy conservation is pacing. Once activities are planned, pacing allows individuals with COPD to sustain an energy level until the task is completed. Instruct residents to:
- Allow plenty of time to complete activities and incorporate frequent rests.
- Perform tasks at a moderate rate and avoid rushing. Although a task may be completed in less time, rushing utilizes more energy and leaves less "in the bank" for later activities.
- Breathe easily and properly during activities. Using these techniques helps decrease shortness of breath.
- Rethink activities with rest in mind. For example, sit instead of stand while folding clothes or preparing food. Instead of writing 25 holiday cards in 1 day, consider writing 5 cards per day over 5 days. Simple changes add up to more energy.

Prioritizing

The third strategy is often the most challenging. When faced with limited energy reserves, residents with COPD must look critically at work, family, and social roles and keep only those roles that are necessary and pleasurable. If the services are available within the facility, provide help to residents with emptying trash or cleaning their rooms. As much as possible, eliminate unnecessary chores or steps of an activity for residents with COPD. Look for shortcuts and loosen the rules. Embracing flexibility in daily routines enables those suffering from COPD to enjoy activities they would otherwise miss because of fatigue.

Positioning

Positioning is extremely effective, but not often considered when addressing energy conservation. Current methods of performing tasks may be using more energy than required. Instruct residents with COPD to:
- Consider storing items at a convenient height to avoid excessive and prolonged stooping and stretching.
- Make sure all work surfaces are at the correct height. If a counter is too short, slouching and bending can occur.
- Use a shower seat and a handheld shower head to facilitate bathing.
- Use long-handled devices such as reachers or telescoping cleaning tools to avoid unnecessary bending and reaching.
- Set wheelchair seat height properly so that feet touch the floor for self-propelling and arm rest height so that arms are bent and resting comfortably. This facilitates good posture that improves breathing.

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Improving COPD Through Energy Conservation

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Improving Quality of Life for All Residents

Although this article offers tips to help residents with COPD lead more fulfilling lives, many of these tips are appropriate for all residents. Although dyspnea and exhaustion may limit residents with COPD from tackling all the tasks they'd like to do, these simple steps can help them conserve the energy needed to enjoy the simple pleasures of life that most people take for granted. The AL multidisciplinary team can effectively help these residents manage COPD or just the wear and tear of older age by providing education in these basic energy conservation techniques and helping residents incorporate them into their daily routines. ALC

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