

**Benefit Coverage:**

Pulmonary rehabilitation is a conditional benefit, available through contracted providers within the Neighborhood network. Prior authorization is required and approval is based on review of medical necessity documentation. This policy includes information and criteria for pulmonary rehabilitation both in the outpatient setting and at home.

Pulmonary Rehabilitation authorizations for an outpatient program include 24 sessions (2 sessions per week for 12 weeks).

Authorizations for a home program include an evaluation and assessment and 12-18 total visits by multiple disciplines over an 8 week period.

**Description:**

Pulmonary Rehabilitation is an integrated educational and exercise program designed to improve the functional and symptom status of patients with severe COPD.

The goal of pulmonary rehabilitation services is not to achieve maximum exercise tolerance, but rather a level of function that allows for the transfer of treatment from the clinic, hospital, or doctor to self-care in the home by the patient, the patient's family, or the patient's caregiver.

Unless the patient is willing and able to conduct ongoing self-care at home, there will be only temporary benefit from the pulmonary rehabilitation services. The endpoint of treatment, therefore, is not when the patient achieves maximal exercise tolerance or stabilizes, but when the patient or his or her attendant is able to continue with self management of pulmonary rehabilitation at home.

The three primary objectives of pulmonary rehabilitation services are:

- 1) Control, reduce, and alleviate the symptoms and pathophysiologic complications of chronic pulmonary disease;
- 2) Teach the patient how to reach the highest possible level of independent functioning for his or her activities of daily living within the limitations of the pulmonary disease; and
- 3) Teach the patient self-management techniques for his or her daily living consistent with the pulmonary disease process in order to obtain the highest possible level of independent function.

Pulmonary rehabilitation is not a primary mode of therapy for obstructive airway disease; therefore, patients should be stabilized on standard medical therapy before beginning the program.

Outpatient Pulmonary Rehabilitation Program

The educational component of Pulmonary Rehabilitation includes didactic sessions on topics such as, the pathophysiology of COPD, current medications and their proper use, identification of disease exacerbations, nutritional support, and energy conserving techniques for daily living. In addition, each patient is given an exercise prescription that is based on their medical history, cardiopulmonary status, orthopedic limitations, and results of a standardized 6 minute walk test

(the total distance covered in 6 minutes). The walk test takes place at the initial assessment and monthly thereafter to determine progress.

In general, the intensity of the exercise is determined by a standardized perceived exertion dyspnea scale (ex. Borg Scale) as well as the patient's oxygen saturation. Oxygen saturation is assessed on all exercise modalities. Supplemental oxygen is considered if the oxygen saturation is found to consistently fall below established guidelines of  $< 89\%$ . If the patient is already using supplemental oxygen, liter flow is adjusted to maintain saturations  $\geq 89\%$ .

When the patient begins the program, exercise intensity is gradually increased by observing oxygen saturation, heart rate, blood pressure, EKG responses, and the perceived exertional dyspnea scale. The goal is to first increase the duration of exercise (5-8 minutes per week) and then the speed and resistance/workload in order to maintain an appropriate training level. After an initial warm up, exercise prescriptions usually consist of 15-60 minutes of aerobic exercise, supplemented with 10-15 minutes of light resistance training exercises, and followed by a cool down period. The exercise prescription is reviewed and updated daily. Initially, the frequency of exercise is two days per week. A home exercise prescription may be implemented to increase exercise frequency to 3 to 6 days per week.

Modalities used for cardiovascular exercise training include upper extremity exercise (ex. arm ergometer), lower extremity exercise (ex. recumbent bike), and combined upper and lower body exercises (ex. seated Nu-step & Schwinn air dyne). In addition some modalities may be weight bearing (ex. treadmill) and others may be non-weight bearing modalities (ex. upright bike). Each patient's exercise prescription should incorporate both upper and lower extremity exercises as well as weight bearing and non-weight bearing modalities.

Proper breathing and posture are emphasized to ensure maximum benefit.

#### Home Pulmonary Rehabilitation Program

The objectives of pulmonary rehabilitation in the home are similar to those in the outpatient setting:

- 1) Control, reduce, and alleviate the symptoms and pathophysiologic complications of chronic pulmonary disease;
- 2) Teach the patient how to reach the highest possible level of independent functioning for his or her activities of daily living within the limitations of the pulmonary disease; and
- 3) Teach the patient and their caregiver, self-management techniques for his or her daily living consistent with the pulmonary disease process in order to obtain the highest possible level of independent function.

While the outpatient program is the preferred setting for rehabilitation, Neighborhood considers authorization for the home program if there are barriers that prevent a member from successfully achieving goals in an outpatient program. If these barriers are removed, the member may be considered for continued rehabilitation in an outpatient program after successful progress with a home program.

**Coverage Determination:**

Neighborhood covers Pulmonary Rehabilitation as a clinical option when determined to be medically necessary. Prior authorization is required.

**Criteria – Outpatient Pulmonary Rehabilitation Program:**

All of the following criteria must be met for authorization of member participation in an outpatient program:

1. diagnosis is chronic bronchitis, emphysema, restrictive lung disease, or chronic obstructive pulmonary disease, or status post lung transplant,
2. medically stable and receiving optimal medical management,
3. under the care of a physician, with a specific referral for the participation in the pulmonary rehabilitation program,
4. PFT within the past 6 months shows moderate to severe COPD with FEV < 60% predicted or meets the medical criteria for home supplemental oxygen coverage,
5. significant respiratory symptoms while performing ADL's,
6. not limited by another serious or unstable medical condition,
7. have a sufficient level of cognition to comprehend and retain educational and instructional materials,
8. demonstrate a high level of motivation relative to success in rehabilitation, and
9. member is a non-smoker or agrees to stop smoking during the duration of the program and/or will enroll in a smoking cessation program while on the program.

**Criteria – Home Pulmonary Rehabilitation Program:**

All of the following criteria must be met for authorization of member participation in a home program:

1. diagnosis is chronic bronchitis, emphysema, restrictive lung disease, or chronic obstructive pulmonary disease, or status post lung transplant
2. medically stable and receiving optimal medical management,
3. under the care of a physician, with a specific referral for the participation in the pulmonary rehabilitation program,
4. PFT within the past 6 months shows moderate to severe COPD with FEV < 60% predicted or meets the medical criteria for home supplemental oxygen coverage,
5. significant respiratory symptoms while performing ADL's,
6. not limited by another serious or unstable medical condition,
7. have a sufficient level of cognition to comprehend and retain educational and instructional materials,
8. demonstrate a high level of motivation relative to success in rehabilitation,
9. barriers exist that preclude member achieving goals in an outpatient setting, and

10. member is a non-smoker or agrees to stop smoking during the duration of the program and/or will enroll in a smoking cessation program while on the program.

**Exclusions:**

Members with unstable ischemic heart disease are not eligible for pulmonary rehabilitation unless there is documentation of medical clearance by a cardiologist.

Exercise equipment, physiotherapy, or personal comfort and convenience items are excluded from coverage. Also refer to Clinical Medical Policy for Durable Medical Equipment.

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*CMP Number:* CMP – 033.00

*CMP Cross Reference:* CMP-018 DME

**References:**

1. Nici L, Donner C, Wouters E, Zuwallack R, Ambrosino N, Bourbeau J et al. American Thoracic Society/European Respiratory Society statement on pulmonary rehabilitation. *Am J Respir Crit Care Med* 2006; 173(12):1390-1413.
2. Pulmonary rehabilitation. *Thorax* 2001; 56(11):827-834.
3. Hill NS. Pulmonary rehabilitation. *Proc Am Thorac Soc* 2006; 3(1): 66-74.
4. Sin DD, McAlister FA, Man SF, Anthonisen NR. Contemporary management of chronic obstructive pulmonary disease: scientific review. *JAMA* 2003; 290(17):2301-2312.
5. Aetna Policy Bulletin, Pulmonary Rehabilitation, 3/9/2010 last update.

*Created:* 6/19/08

*Annual Review Month:*

*Review Dates:* 9/09

*Revised Dates:* 11/3/10, 1/30/11

*CMC Review Date:* 11/9/10, 3/8/11

*CMO Approval Dates:* 7/8/08, 9/22/09, 11/9/10, 3/15/11