

**Subject: Outpatient Pulmonary Rehabilitation****Authorization:**

Prior authorization is required for outpatient pulmonary rehab (physical and occupational therapy services only) provided to members enrolled in commercial (HMO, POS, PPO) products.

- Authorization is typically limited to one multi-disciplinary course of treatment per member (generally 2-3 visits/week for up to 12 weeks).
- An additional course of treatment may be authorized for members with COPD when specific criteria are met.

**Background:** Pulmonary rehabilitation, also called pulmonary rehab or PR, is a program that works to improve the overall well-being of people who have chronic breathing difficulties. This includes but is not limited to people who have COPD (chronic obstructive pulmonary disease), sarcoidosis, idiopathic pulmonary fibrosis, or cystic fibrosis. PR may also benefit people who need lung surgery, both before and after the surgery.

Pulmonary rehabilitation is a multidisciplinary approach which includes: Exercise Training; nutritional counseling; techniques to conserve energy, individual and group psychological counseling and support and breathing strategies.

**Policy and Coverage Criteria:**

Harvard Pilgrim Health Care (HPHC) covers outpatient Pulmonary Rehabilitation (PR) that is reasonable and medically necessary to increase endurance and exercise tolerance in members with symptomatic chronic obstructive pulmonary disease (COPD) sarcoidosis, idiopathic pulmonary fibrosis, or cystic fibrosis.

- Clinical documentation from the PCP or attending physician must demonstrate that the member can reasonably be expected to comply with, and benefit from, the multi-disciplinary outpatient PR program.

HPHC also covers outpatient PR that is reasonable and medically necessary for preoperative lung surgery.

**Initial Course:**

The member meets ALL the following:

1. Willing and able to actively participate in, and benefit from, a multi-disciplinary outpatient PR program; AND
2. Meets ANY of the following:
  - Current candidate for lung transplantation or LVRS (authorization limited to one course of pulmonary rehabilitation per member for preoperative preparation and assessment);
  - Has moderate to moderately severe COPD (FEV1 of  $\leq 70\%$  predicted and ALL the following:
    - Has abstained from smoking tobacco products for at least 3 months\*
    - BMI  $\leq 39$ .
  - For members with a BMI of 35 or higher, there must be documentation from the PCP or attending physician confirming ALL the following:
    - The member is able to actively participate in, and benefit from, the multi-disciplinary rehabilitation program; AND
    - The member's functional limitation is primarily related to their COPD and expected to significantly improve with the pulmonary rehabilitation program.

**HPHC Medical Review Criteria****Outpatient Pulmonary Rehabilitation****Page 1 of 4**

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- Member has pulmonary impairment and dyspnea characterized by Modified Medical Research Council (mMRC) dyspnea scale 2-3, reduced exercise tolerance (e.g., reduced 6-minute walk test), and/or restriction of physical activities, despite optimal medical management.

**\*An exception to smoking cessation criteria may be considered in situations when a significantly ill member is referred by the PCP or attending physician from an acute hospital setting directly to an outpatient pulmonary rehabilitation program, and the member has demonstrated compliance with the initiation of smoking cessation. The referring MD must document that the member is a good candidate to maintain long term compliance with smoking cessation.**

### **Subsequent Course:**

One additional course of multi-disciplinary outpatient PR for a member with COPD with 3 or more of the following:

1. There is documentation confirming the member has successfully completed a previous multi-disciplinary PR program, and complied with prior discharge plans (e.g., home exercise program, medications, O2 administration, smoking abstinence);
2. The member has not required or received PR for at least 6 months;
3. There is evidence of a significant and persistent decrease in respiratory and/or functional status (e.g., decrease in 6 Minute Walk Distance since previous training) despite close physician follow up and optimal medical management);
4. The focus of the treatment plan is significantly different from the previous course of treatment

### **Exclusions:**

- Outpatient Pulmonary Rehabilitation in situations where HPHC determines services are contraindicated or might put the member at greater risk;
- Outpatient Pulmonary Rehabilitation in situations where the member has significant learning impairments, medical co-morbidities, or behavioral health conditions (e.g. severe psychiatric disease) that would interfere with program completion, or substantially limit the member's ability to participate in, or benefit from, a multi-disciplinary pulmonary rehabilitation program. Such conditions include, but are not limited to:
  - Dementia/organic brain syndrome/disabling stroke
  - Unstable angina
  - Myocardial infarction within the past 3 months
  - Uncontrolled arrhythmia
  - Ejection fraction < 20% or uncompensated ventricular failure.
  - Uncompensated cor pulmonale
  - Metastatic cancer
  - Severe arthritis limiting exercise capacity
  - Insufficiently treated psychiatric disease
  - Active substance abuse

### **Supporting Information:**

The American College of Physicians (ACP), American College of Chest Physicians (ACCP), American Thoracic Society (ATS), and European Respiratory Society (ERS) 2011 guidelines on the diagnosis and management of individuals with stable COPD including pulmonary rehabilitation programs for those with an FEV<sub>1</sub><50% predicted or lower. Evidence reviewed in the guideline suggests that patients with moderate COPD also experience a benefit with pulmonary rehabilitation. The study included 252 patients with moderate to severe COPD who were monitored over 8 weeks and compared outpatient hospital-based pulmonary rehabilitation with home-based

### **HPHC Medical Review Criteria**

#### **Outpatient Pulmonary Rehabilitation**

**Page 2 of 4**

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pulmonary rehabilitation. Study inclusion required a diagnosis of COPD and an FEV<sub>1</sub> less than 70% predicted. The mean FEV<sub>1</sub> was 43% predicted, and approximately one third of individuals had moderate COPD (Global Initiative for Chronic Obstructive Lung Disease stage II). More than 99% of patients had self-reported shortness of breath. Results showed that both interventions produced similar improvements in the dyspnea domain of the Chronic Respiratory Questionnaire and total score on St. George's Respiratory Questionnaire. The improvement in dyspnea from baseline in both groups was statistically significant and greater for both scale scores than the previously determined minimally important difference at 3 months. The main components of the pulmonary rehabilitation programs included a multidisciplinary approach which included endurance and exercise training, education, behavioral modification, and outcome assessment.

In a Cochrane review, Puhan et al (2009) evaluated the effects of pulmonary rehabilitation following COPD exacerbations on future hospital admissions and other patient-important outcomes such as health-related quality of life, mortality, and capacity for exercise. Randomized controlled trials comparing pulmonary rehab of any duration after exacerbation of COPD with conventional medical care were selected for inclusion. Pulmonary rehabilitation programs at minimum needed to include at least physical exercise. The control groups received conventional community care without rehabilitation. A total of 6 trials (n = 219) were identified. Pulmonary rehabilitation significantly reduced hospital admissions and mortality. Effects of pulmonary rehabilitation on health-related quality of life were well above the minimal important difference for dyspnea, fatigue, emotional function, and mastery domains of the Chronic Respiratory Questionnaire for total, impact and activity limitation domains of the St. Georges Respiratory Questionnaire. In all trials, pulmonary rehabilitation improved exercise capacity (60 to 215 meters in 6-min or shuttle walk tests). No adverse events were reported (2 studies). The authors concluded that the evidence from small studies of moderate methodological quality suggested that pulmonary rehab is a highly effective and safe program to reduce hospital admissions and mortality and to improve health-related quality of life in COPD patients after suffering an exacerbation.

### Coding:

**Codes are listed below for informational purposes only, and do not guarantee member coverage or provider reimbursement. The list may not be all-inclusive. Deleted codes and codes which are not effective at the time the service is rendered may not be eligible.**

HCPCS Codes	Description
<b>G0424</b>	Pulmonary rehabilitation, including exercise (includes monitoring), one hour, per session, up to 2 sessions per day

### References:

1. Bartolome, CR. Pulmonary rehabilitation in COPD. UpToDate.com/login [via subscription only]. Accessed July 27, 2017.
2. Ferguson, GT., Make, B. Management of stable chronic obstructive pulmonary disease. UpToDate.com/login [via subscription only]. Accessed July 27, 2017.
3. Higashimoto, Yuji, et al. "Influence of comorbidities on the efficacy of pulmonary rehabilitation in patients with chronic obstructive pulmonary disease." *Geriatrics & gerontology international* (2015).
4. Kozu, R., Senjyu, H., Jenkins, S. C., Mukae, H., Sakamoto, N., & Kohno, S. (2011). Differences in response to pulmonary rehabilitation in idiopathic pulmonary fibrosis and chronic obstructive pulmonary disease. *Respiration*, 81(3), 196-205. Physical training for interstitial lung disease (Review). The Cochrane Collaboration. The Cochrane Library. 2010, issue 3.
5. Lacasse, Yves, et al. "Pulmonary rehabilitation for chronic obstructive pulmonary disease." *Cochrane Database Syst Rev* 4.4 (2006).
6. Nici, Linda, et al. "American thoracic society/European respiratory society statement on pulmonary rehabilitation." *American journal of respiratory and critical care medicine* 173.12 (2006): 1390-1413.

### HPHC Medical Review Criteria

#### Outpatient Pulmonary Rehabilitation

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7. Puhan, Milo A., et al. "Pulmonary rehabilitation following exacerbations of chronic obstructive pulmonary disease." *The Cochrane Library* (2016).
8. Qaseem, Amir, et al. "Diagnosis and management of stable chronic obstructive pulmonary disease: a clinical practice guideline update from the American College of Physicians, American College of Chest Physicians, American Thoracic Society, and European Respiratory Society." *Annals of internal medicine* 155.3 (2011): 179-191.
9. Rabe, Klaus F., et al. "Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease: GOLD executive summary." *American journal of respiratory and critical care medicine* 176.6 (2007): 532-555.
10. Weiss, ST. Chronic obstructive pulmonary disease: Risk factors and risk reduction. UpToDate.com/login [via subscription only]. Accessed July 27, 2017.
11. Wickerson, Lisa, Sunita Mathur, and Dina Brooks. "Exercise training after lung transplantation: a systematic review." *The Journal of Heart and Lung Transplantation* 29.5 (2010): 497-503.

**Summary of Changes:**

<b>Date</b>	<b>Revisions</b>
<b>7/17</b>	Updated background, supporting information and references.
<b>5/17</b>	Supporting information and references updated.
<b>4/16</b>	Formatting changes and reference updates
<b>3/15</b>	Minor language and formatting changes.

**Approved by UMPCP: 7/26/17**

**Reviewed/Revised: 11/02, 1/04, 2/05, 3/06, 3/07, 3/08, 5/09, 4/10, 6/11, 6/12, 9/13, 2/14, 3/15, 4/16, 5/17, 7/17**

**Initiated: 11/1/01**

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