# MEDICAL POLICY

| POLICY TITLE | OUTPATIENT PULMONARY REHABILITATION |
|---|---|
| POLICY NUMBER | MP 8.008 |

| CLINICAL BENEFIT | ☐ MINIMIZE SAFETY RISK OR CONCERN.<br>☒ MINIMIZE HARMFUL OR INEFFECTIVE INTERVENTIONS.<br>☐ ASSURE APPROPRIATE LEVEL OF CARE.<br>☐ ASSURE APPROPRIATE DURATION OF SERVICE FOR INTERVENTIONS.<br>☒ ASSURE THAT RECOMMENDED MEDICAL PREREQUISITES HAVE BEEN MET.<br>☐ ASSURE APPROPRIATE SITE OF TREATMENT OR SERVICE. |
|---|---|
| **Effective Date:** | **12/1/2024** |



## I. POLICY

A single course of pulmonary rehabilitation in the outpatient setting may be considered **medically necessary** for outpatient treatment of chronic pulmonary disease for individuals with moderate-to-very severe disease.

A single course of pulmonary rehabilitation may be considered **medically necessary** in an outpatient setting as a preoperative conditioning component for those considered appropriate candidates for lung volume reduction surgery and for lung transplantation.

Pulmonary rehabilitation programs are considered **medically necessary** following lung transplantation.

Pulmonary rehabilitation programs are considered **investigational** following other types of lung surgery, included but not limited to lung volume reduction surgery and surgical resection of lung cancer. There is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with other situations.

Multiple courses of pulmonary rehabilitation are considered **investigational**, either as maintenance therapy in patients who initially respond, or in patients who fail to respond, or whose response to an initial rehabilitation program has diminished over time. There is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with multiple courses of pulmonary rehabilitation services.

Home-based pulmonary rehabilitation programs are considered **investigational**. There is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with home-based pulmonary rehabilitation services.

Pulmonary rehabilitation programs are considered **investigational** in all other situations. There is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with other situations.

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Candidates for pulmonary rehabilitation should be medically stable and not limited by another serious or unstable medical condition.

Specific contraindications to pulmonary rehabilitation include:

- severe psychiatric disturbance (e.g., dementia, organic brain syndrome); and
- significant or unstable medical conditions (e.g., congestive heart failure, acute cor pulmonale, substance abuse, significant liver dysfunction, metastatic cancer, disabling stroke).

**Policy Guidelines**

A pulmonary rehabilitation outpatient program is a comprehensive program that generally includes team assessment, patient training, psychosocial intervention, exercise training, and follow-up. The overall length of the program and the total number of visits for each component may vary from program to program.

Team assessment includes input from a physician, respiratory care practitioner, nurse, and psychologist, among others.

Individual training includes breathing retraining, bronchial hygiene, medications, and proper nutrition.

Psychosocial intervention addresses support system and dependency issues.

Exercise training includes strengthening and conditioning and may include stair climbing, inspiratory muscle training, treadmill walking, cycle training (with or without ergometer), and supported and unsupported arm exercise training. Exercise conditioning is an essential component of pulmonary rehabilitation. Education in disease management techniques without exercise conditioning does not improve health outcomes of patients who have chronic obstructive pulmonary disease.

Follow-up to a comprehensive outpatient pulmonary rehabilitation program may include supervised home exercise conditioning.

Candidates for pulmonary rehabilitation should be medically stable and not limited by another serious or unstable medical condition.

While individuals with chronic obstructive pulmonary disease (COPD) comprise the highest proportion of referrals for pulmonary rehabilitation and study participants, individuals with other chronic lung diseases, including interstitial lung disease, bronchiectasis, cystic fibrosis, asthma, pulmonary artery hypertension, lung cancer, and lung transplantation, also derive benefit.

***Cross-references:***

**MP 2.380 Diagnosis and Treatment of Post-Acute Sequelae COVID (PASC)**
**MP 9.014 Heart/Lung Transplant**
**MP 9.015 Lung and Lobar Lung Transplant**

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## II. PRODUCT VARIATIONS TOP

This policy is only applicable to certain programs and products administered by Capital Blue Cross please see additional information below, and subject to benefit variations as discussed in Section VI below.

**FEP PPO**: Refer to FEP Medical Policy Manual. The FEP Medical Policy manual can be found at: https://www.fepblue.org/benefit-plans/medical-policies-and-utilization-management-guidelines/medical-policies

## III. DESCRIPTION/BACKGROUND TOP

Pulmonary rehabilitation (PR) is a multidisciplinary approach to reducing symptoms and improving quality of life in patients with compromised lung function. PR programs generally include a patient assessment followed by therapeutic interventions including exercise training, education, and behavior change.

In 2013, the American Thoracic Society (ATS) and the European Respiratory Society (ERS) define pulmonary rehabilitation as a "comprehensive intervention based on a thorough patient assessment followed by patient-tailored therapies that include, but are not limited to exercise training, education and behavior change." PR programs are intended to improve the patient's functioning and quality of life. Most research has focused on patients with chronic obstructive pulmonary disease (COPD), although there has been some interest in PR in patients with asthma, cystic fibrosis, or bronchiectasis.

PR is also routinely offered to patients awaiting lung transplantation and lung volume reduction surgery (LVRS). PR before lung surgery may stabilize or improve patients' exercise tolerance, teach patients techniques that will help them recover after the procedure, and allow health care providers to identify individuals who might be suboptimal surgical candidates due to non-compliance, poor health, or other reasons. After LVRS, pulmonary rehabilitation is helpful in reversing deconditioning, improving mobility and monitoring oxygenation and the need for medications, and may potentially reduce some of the postoperative complications. Pulmonary rehabilitation plays an essential role in the management of individuals both before and after lung transplantation.

## IV. RATIONALE TOP

### Summary of Evidence

### Chronic Pulmonary Disease Rehabilitation

For individuals with moderate-to-severe COPD who receive a single course of outpatient PR, the evidence includes numerous randomized controlled trials (RCTs) and systematic reviews. Relevant outcomes are symptoms, functional outcomes, and quality of life. The published studies found improved outcomes (i.e., functional ability, quality of life) in patients with moderate-to-severe COPD who underwent a comprehensive PR program in the outpatient setting. Among the many randomized trials, the structure of the PR programs varied, so it is not

possible to provide guidance on the optimal components or duration of a PR program. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

For individuals with idiopathic pulmonary fibrosis who receive a single course of outpatient PR, the evidence includes 2 systematic reviews of RCTs. Relevant outcomes are symptoms, functional outcomes, and quality of life. The number of controlled studies is limited. One small RCT evaluated a comprehensive PR program in patients with idiopathic pulmonary fibrosis; at 3 months postintervention, outcomes did not differ between groups that did and did not receive PR. The evidence is insufficient to determine the effects of the technology on health outcomes.

For individuals with bronchiectasis who receive a single course of outpatient PR, the evidence includes a systematic review of RCTs. Relevant outcomes are symptoms, functional outcomes, and quality of life. A systematic review of 4 RCTs on PR for patients with bronchiectasis found that some, but not all, outcomes, improved more with PR than with non-exercise control conditions immediately after the intervention. The evidence is insufficient to determine the effects of the technology on health outcomes.

Although most published evidence on outpatient pulmonary rehabilitation for chronic pulmonary diseases assesses COPD, observational studies have reported on outcomes from pulmonary rehabilitation for other chronic pulmonary diseases. Clinical guidelines from pulmonary organizations have supported the use of outpatient pulmonary rehabilitation for individuals who are experiencing disabling symptoms and have significantly diminished quality of life despite optimal medical management. Therefore, outpatient pulmonary rehabilitation may be considered medically necessary for this population.

**Preparation for Lung Surgery**

For individuals with scheduled lung surgery for volume reduction, transplantation, or resection who receive a single course of outpatient PR, the evidence includes RCTs and observational studies. Relevant outcomes are symptoms, functional outcomes, and quality of life. There is a lack of large RCTs comparing PR with no PR for preoperative candidates undergoing lung volume reduction surgery (LVRS), lung transplantation, or lung cancer resection. Moreover, the available studies have evaluated exercise programs, but not necessarily comprehensive PR programs. Also, the few small RCTs, and observational studies have only reported short-term outcomes and inconsistent evidence of benefit even on these outcomes. The evidence is insufficient to determine the effects of the technology on health outcomes. Findings from the National Emphysema Treatment Trial have suggested that pulmonary rehabilitation is an appropriate component of care for patients with COPD before undergoing lung volume reduction surgery. Also, pulmonary rehabilitation is considered the standard of care in individuals undergoing lung transplantation to maximize preoperative pulmonary status. Thus, pulmonary rehabilitation may be considered medically necessary for individuals considered appropriate candidates for lung volume reduction surgery or lung transplantation.

**Pulmonary Rehabilitation After Lung Surgery**

For individuals who have had LVRS who receive a single course of outpatient PR, the evidence includes a case series. Relevant outcomes are symptoms, functional outcomes, and quality of life. No published RCTs were identified. The case series evaluated a comprehensive PR

program after LVRS in 49 patients who had not received preoperative PR. Health-related quality of life was higher at 3 to 6 months and 12 to 18 months post surgery. The series did not provide data on patients who underwent LVRS and did not have postoperative PR, or patients who had preoperative PR. The American Thoracic Society/European Respiratory Society have noted in their 2013 statement that after LVRS, pulmonary rehabilitation is helpful in reversing deconditioning, improving mobility and monitoring oxygenation and the need for medications, and may potentially reduce some of the postoperative complications. However, lung volume reduction surgery remains controversial in its benefit. Therefore, the evidence is insufficient to determine the effects of the technology on health outcomes.

For individuals who have had lung transplantation who receive a single course of outpatient PR, the evidence includes RCTs, systematic reviews, and a case series. Relevant outcomes are symptoms, functional outcomes, and quality of life. Neither of the 2 RCTs identified in a 2010 systematic review reported on functional outcomes, but uncontrolled studies have reported improvements in functional outcomes. An RCT, published after the systematic review, found that patients who had a postsurgical exercise intervention walked more 1 year post discharge than before and had a significantly greater 6-minute walk distance. Findings on other outcomes were mixed. The most recent RCT (2017) did not identify a difference in outcomes with longer duration of PR. Case series data also support improvements in 6-minute walk distance after postoperative PR. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

For individuals who have had lung cancer resection who receive a single course of outpatient PR, the evidence includes 2 RCTs. Relevant outcomes are symptoms, functional outcomes, and quality of life. One small RCT has evaluated a comprehensive PR program in patients who underwent thoracotomy for lung cancer. The trial was terminated early, had a high dropout rate, and reported mixed findings. An exercise-only intervention in patients who had lung cancer surgery had mixed findings and did not evaluate functional outcomes. The evidence is insufficient to determine the effects of the technology on health outcome

**Repeat or Maintenance Rehabilitation**

For individuals who have had an initial course of PR who receive repeat or maintenance outpatient PR, the evidence includes an RCT. Relevant outcomes are symptoms, functional outcomes, and quality of life. This small RCT had methodologic limitations and did not report inpatient and outpatient outcomes separately; it also lasted only 3 weeks. The evidence is insufficient to determine the effects of the technology on health outcome.

**Home-Based Rehabilitation**

For individuals who have an indication for outpatient PR who receive a single course of home-based PR, the evidence includes RCTs and systematic reviews. Relevant outcomes are symptoms, functional outcomes, and quality of life. Most studies of home-based PR have compared outcomes with standard care. Very few have compared home-based PR with the hospital- or clinic-based PR, and the available studies are mostly of low quality. The evidence is insufficient to determine the effects of the technology on health outcome.

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## V. DEFINITIONS

TOP

N/A

## VI. BENEFIT VARIATIONS

TOP

The existence of this medical policy does not mean that this service is a covered benefit under the member's health benefit plan. Benefit determinations should be based in all cases on the applicable health benefit plan language. Medical policies do not constitute a description of benefits. A member's health benefit plan governs which services are covered, which are excluded, which are subject to benefit limits, and which require preauthorization. There are different benefit plan designs in each product administered by Capital Blue Cross. Members and providers should consult the member's health benefit plan for information or contact Capital Blue Cross for benefit information.

## VII. DISCLAIMER

TOP

*Capital Blue Cross' medical policies are developed to assist in administering a member's benefits, do not constitute medical advice and are subject to change. Treating providers are solely responsible for medical advice and treatment of members. Members should discuss any medical policy related to their coverage or condition with their provider and consult their benefit information to determine if the service is covered. If there is a discrepancy between this medical policy and a member's benefit information, the benefit information will govern. If a provider or a member has a question concerning the application of this medical policy to a specific member's plan of benefits, please contact Capital Blue Cross' Provider Services or Member Services. Capital Blue Cross considers the information contained in this medical policy to be proprietary and it may only be disseminated as permitted by law.*

## VIII. CODING INFORMATION

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***Note:*** This list of codes may not be all-inclusive, and codes are subject to change at any time. The identification of a code in this section does not denote coverage as coverage is determined by the terms of member benefit information. In addition, not all covered services are eligible for separate reimbursement.

**Investigational; therefore, not covered:**

| Procedure Codes | | | | | | | |
|---|---|---|---|---|---|---|---|
| G0305 | | | | | | | |

**Covered when medically necessary:**

| Procedure Codes | | | | | | | |
|---|---|---|---|---|---|---|---|
| 94625 | 94626 | G0237 | G0238 | G0239 | G0302 | G0303 | G0304 |
| S9473 | | | | | | | |

| ICD-10-CM Diagnosis Codes | Description |
|---|---|
| D38.1 | Neoplasm of uncertain behavior of trachea, bronchus, and lung |
| D86.0 | Sarcoidosis of lung |
| D86.1 | Sarcoidosis of lymph nodes |
| D86.2 | Sarcoidosis of lung with sarcoidosis of lymph nodes |
| D86.9 | Sarcoidosis, unspecified |
| E84.0 | Cystic fibrosis with pulmonary manifestations |
| E84.9 | Cystic fibrosis, unspecified |
| I27.0 | Primary pulmonary hypertension |
| I27.20 | Pulmonary hypertension, unspecified |
| I27.23 | Pulmonary hypertension due to lung diseases and hypoxia |
| J41.0 | Simple chronic bronchitis |
| J41.1 | Mucopurulent chronic bronchitis |
| J41.8 | Mixed simple and mucopurulent chronic bronchitis |
| J43.0 | Unilateral pulmonary emphysema [MacLeod's syndrome] |
| J43.1 | Panlobular emphysema |
| J43.2 | Centrilobular emphysema |
| J43.8 | Other emphysema |
| J43.9 | Emphysema, unspecified |
| J44.0 | Chronic obstructive pulmonary disease with acute lower respiratory infection |
| J44.1 | Chronic obstructive pulmonary disease with (acute) exacerbation |
| J44.89 | Other specified chronic obstructive pulmonary disease |
| J44.9 | Chronic obstructive pulmonary disease, unspecified |
| J47.0 | Bronchiectasis with acute lower respiratory infection |
| J47.1 | Bronchiectasis with (acute) exacerbation |
| J47.9 | Bronchiectasis, uncomplicated |
| J60 | Coalworker's pneumoconiosis |
| J61 | Pneumoconiosis due to asbestos and other mineral fibers |
| J62.0 | Pneumoconiosis due to talc dust |
| J62.8 | Pneumoconiosis due to other dust containing silica |
| J63.0 | Aluminosis (of lung) |
| J63.1 | Bauxite fibrosis (of lung) |
| J63.2 | Berylliosis |
| J63.3 | Graphite fibrosis (of lung) |
| J63.4 | Siderosis |

| ICD-10-CM Diagnosis Codes | Description |
|---|---|
| J63.5 | Stannosis |
| J63.6 | Pneumoconiosis due to other specified inorganic dusts |
| J65 | Pneumoconiosis associated with tuberculosis |
| J66.0 | Byssinosis |
| J66.1 | Flax-dressers' disease |
| J66.2 | Cannabinosis |
| J66.8 | Airway disease due to other specific organic dusts |
| J67.0 | Farmer's lung |
| J82 | Pulmonary eosinophilia, not elsewhere classified |
| J82.8 | Pulmonary eosinophilia, not elsewhere classified |
| J82.89 | Other Pulmonary Eosinophilia, not elsewhere classified |
| J84.10 | Pulmonary fibrosis, unspecified |
| J84.111 | Idiopathic interstitial pneumonia, not otherwise specified |
| J84.112 | Idiopathic pulmonary fibrosis |
| J84.113 | Idiopathic non-specific interstitial pneumonitis |
| J84.115 | Respiratory bronchiolitis interstitial lung disease |
| J84.116 | Cryptogenic organizing pneumonia |
| J84.117 | Desquamative interstitial pneumonia |
| J84.17 | Other interstitial pulmonary diseases with fibrosis in diseases classified elsewhere |
| J84.178 | Other interstitial pulmonary diseases with fibrosis in diseases classified elsewhere |
| J84.2 | Lymphoid interstitial pneumonia |
| J84.89 | Other specified interstitial pulmonary diseases |
| J84.9 | Interstitial pulmonary disease, unspecified |
| J98.4 | Other disorders of lung |
| J99 | Respiratory disorders in diseases classified elsewhere |
| Z76.82 | Awaiting organ transplant status |
| Z94.2 | Lung transplant status |
| Z94.3 | Heart and lungs transplant status |

## IX. REFERENCES

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## X. POLICY HISTORY

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| **MP 8.008** | **03/27/2020 Consensus Review**. Added FEP variation**.** No changes made to policy statement. |
| | **09/01/2020 Administrative Update.** Added ICD-10 code J84.178, J82.89, J82.8 |
| | **05/19/2021 Consensus Review.** No change to policy statements. References, description/background and rationale sections updated. FEP policy number corrected. |
| | **12/02/2021 Administrative Update.** Added new codes 94625 and 94626 and removed G0424; effective 1/1/22. |

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| | **04/18/2022 Consensus Review.** No change to policy statement. Cross-reference added. References reviewed and added. |
| | **04/05/2023 Consensus Review.** No change to policy statement. References reviewed and updated. Rationale and FEP statement updated. No coding changes. |
| | **08/30/2023 Administrative Update.** Added J44.89 to ICD-10-CM codes as part of new code update. Effective 10/1/2023. |
| | **07/12/2024 Consensus Review.** No change to policy stance. Updated policy guidelines, background, rationale. Updated references. |

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