Effective date: 9/2017
Reviewed: 9/2017, 12/2018, 2/2019, 12/2019, 9/2020, 12/2021, 5/2022, 2/2023, 2/2024, 01/2025 Scope: Medicaid

SPECIALTY GUIDELINE MANAGEMENT

Tyvaso (treprostinil inhalation solution)
Tyvaso DPI (treprostinil inhalation powder)

POLICY

I. INDICATIONS

The indications below including FDA-approved indications and compendial uses are considered a covered benefit provided that all the approval criteria are met, and the member has no exclusions to the prescribed therapy.

FDA-Approved Indications:

A. Pulmonary arterial hypertension (PAH; WHO Group 1) to improve exercise ability. Studies establishing effectiveness predominately included patients with New York Heart Association (NYHA) Functional Class III symptoms and etiologies of idiopathic or heritable PAH or PAH associated with connective tissue diseases.
B. Pulmonary hypertension associated with interstitial lung disease (PH-ILD; WHO Group 3) to improve exercise ability. The study establishing effectiveness predominately included patients with etiologies of idiopathic interstitial pneumonia (IIP) inclusive of idiopathic pulmonary fibrosis (IPF), combined pulmonary fibrosis and emphysema (CPFE), and WHO Group 3 connective tissue disease.

All other indications are considered experimental/investigational and are not a covered benefit.

II. CRITERIA FOR INITIAL APPROVAL

Pulmonary Hypertension (PH)

Authorization of 6 months may be granted for treatment of PH when both of the following criteria are met:

A. Prescriber is either one of the following:
    1. Prescriber is associated with an accredited Center of Comprehensive Care by the Pulmonary Hypertension Association for adult members
    2. Prescriber is a cardiologist, pulmonologist or physician specializing in PAH for pediatric members
B. Documentation that the member has either of the following:
    1. WHO Group 1 class of pulmonary hypertension (refer to Appendix)
    2. Pulmonary hypertension associated with interstitial lung disease (WHO Group 3)
B. PH was confirmed by either criterion (1) or criterion (2) below:
    1. Pretreatment right heart catheterization with documentation of all of the following results:
        i. Mean pulmonary arterial pressure mPAP > 20 mmHg
        ii. Pulmonary capillary wedge pressure PCWP ≤ 15 mmHg

iii. Pulmonary vascular resistance PVR > 2 Wood units in adult members or pulmonary vascular resistance index (PVRI) ≥ 3 Wood units x m^2 in pediatric members

2. For infants less than one year of age, documentation that the PH was confirmed by Doppler echocardiogram if right heart catheterization cannot be performed.

III. CONTINUATION OF THERAPY

Authorization of 6 months may be granted for members with documentation of an indication listed in Section II who are currently receiving the requested medication through a paid pharmacy benefit, and who have documentation that they are experiencing benefit from therapy as evidenced by disease stability or disease improvement.

IV. QUANTITY LIMITS

a. Tyvaso 0.6mg/ml – 2.9 ml (1 amp) per day or 81.2ml every 28 days
b. Tyvaso DPI 16mcg, 32mcg, 48mcg and 64mcg – 4 cartridges per day
c. Tyvaso DPI Titration Kit 16-32mcg – 7 cartridges per day
d. Tyvaso DPI Titration Kit 32-48mcg – 8 cartridges per day
e. Tyvaso DPI Titration Kit 16-32-48mcg – 9 cartridges per day
f. Tyvaso Refill & Starter Kit – 2.9 ml (1 amp) per day or 81.2ml every 28 days

V. APPENDIX

WHO Classification of Pulmonary Hypertension

1 PAH
1.1 Idiopathic (PAH)
1.2 Heritable PAH
1.3 Drug- and toxin-induced PAH
1.4. PAH associated with:
1.4.1 Connective tissue diseases
1.4.2 HIV infection
1.4.3 Portal hypertension
1.4.4 Congenital heart diseases
1.4.5 Schistosomiasis
1.5 PAH long-term responders to calcium channel blockers
1.6 PAH with overt features of venous/capillaries (PVOD/PCH) involvement
1.7 Persistent PH of the newborn syndrome

2 PH due to left heart disease
2.1 PH due to heart failure with preserved LVEF
2.2 PH due to heart failure with reduced LVEF
2.3 Valvular heart disease
2.4 Congenital/acquired cardiovascular conditions leading to post-capillary PH

3 PH due to lung diseases and/or hypoxia
3.1 Obstructive lung disease
3.2 Restrictive lung disease
3.3 Other lung disease with mixed restrictive/obstructive pattern
3.4 Hypoxia without lung disease
3.5 Developmental lung disorders

4 PH due to pulmonary artery obstruction
4.1 Chronic thromboembolic PH
4.2 Other pulmonary artery obstructions
- 4.2.1 Sarcoma (high or intermediate grade) or angiosarcoma
- 4.2.2 Other malignant tumors
  - Renal carcinoma
  - Uterine carcinoma
  - Germ cell tumours of the testis
  - Other tumours
- 4.2.3 Non-malignant tumours
  - Uterine leiomyoma
- 4.2.4 Arteritis without connective tissue disease
- 4.2.5 Congenital pulmonary artery stenosis
- 4.2.6 Parasites
- 4.2.7 Hydatidosis

5 PH with unclear and/or multifactorial mechanisms
5.1 Hematologic disorders: Chronic hemolytic anemia, myeloproliferative disorders
5.2 Systemic and metabolic disorders: Pulmonary Langerhans cell histiocytosis, Gaucher disease, glycogen storage disease, neurofibromatosis, sarcoidosis
5.3 Others: chronic renal failure with or without hemodialysis, fibrosing mediastinitis
5.4 Complex congenital heart disease

VI. REFERENCES

1. Tyvaso [package insert]. Research Triangle Park, NC: United Therapeutics Corp.; January 2025.
2. Chin KM, Rubin LJ. Pulmonary arterial hypertension. *J Am Coll Cardiol.* 2008;51(16):1527-1538.
3. McLaughlin VV, Archer SL, Badesch DB, et al. ACCF/AHA 2009 expert consensus document on pulmonary hypertension a report of the American College of Cardiology Foundation Task Force on Expert Consensus Documents and the American Heart Association developed in collaboration with the American College of Chest Physicians; American Thoracic Society, Inc.; and the Pulmonary Hypertension Association. *J Am Coll Cardiol.* 2009;53(17):1573-1619.
4. Badesch DB, Champion HC, Gomez-Sanchez MA, et al. Diagnosis and assessment of pulmonary arterial hypertension. *J Am Coll Cardiol.* 2009;54:S55-S66.
5. Simonneau G, Robbins IM, Beghetti M, et al. Updated clinical classification of pulmonary hypertension. *J Am Coll Cardiol.* 2013;62:D34-S41.

6. Rubin LJ; American College of Chest Physicians. Diagnosis and management of pulmonary arterial hypertension: ACCP evidence-based clinical practice guidelines. *Chest*. 2004;126(1 Suppl):7S-10S.
7. Barst RJ, Gibbs SR, Ghofrani HA, et al. Updated evidence-based treatment algorithm in pulmonary arterial hypertension. *J Am Coll Cardiol*. 2009;54:S78-S84.
8. Taichman DB, Ornelas J, Chung L, et al. Pharmacologic therapy for pulmonary arterial hypertension in adults. CHEST guideline and expert panel report. *Chest*. 2014;46(2):449-475.
9. Abman, SH, Hansmann G, Archer SL, et al. Pediatric pulmonary hypertension: guidelines from the American Heart Association and American Thoracic Society. *Circulation*. 2015;132(21):2037-99.
10. Klinger, JR., Elliott, CG, Levine, DJ, et al. Therapy for Pulmonary Arterial Hypertension in Adults: Update of the CHEST Guidelines and Expert Panel Report. *Chest*. 2019:155(3): 565-586.
11. Galie, N., McLaughlin, VV, Rubin, LJ, Simonneau, G. An overview of the 6th World Symposium on Pulmonary Hypertension. Eur Respir J 2019; 53: 1802148; DOI: 10.1183/13993003.02148-2018. Published 24 January 2019.
12. Simonneau G, Montani D, Celermajer DS, et al. Haemodynamic definitions and updated clinical classification of pulmonary hypertension. *Eur Respir J* 2019;53:1801913; doi:10.1183/13993003.01913-2018.