



MASSACHUSETTS

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## Medical Policy

### Heart Transplant

#### Table of Contents

- [Policy: Commercial](#)
- [Policy: Medicare](#)
- [Authorization Information](#)
- [Coding Information](#)
- [Description](#)
- [Policy History](#)
- [Information Pertaining to All Policies](#)
- [References](#)

#### Policy Number: 197

BCBSA Reference Number: 7.03.09

#### Related Policies

- Heart-Lung Transplant, [#269](#)
- Total Artificial Hearts and Ventricular Assist Devices, [#280](#)
- Laboratory Tests for Heart Transplant Rejection, [#530](#)
- Immune Cell Function Assay in Solid Organ Transplantation, [#182](#)

#### Policy

#### Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity Medicare HMO Blue<sup>SM</sup> and Medicare PPO Blue<sup>SM</sup> Members

Human heart transplantation may be considered [MEDICALLY NECESSARY](#) for selected adults and children with end-stage heart failure when any one of the following criteria are met:

##### Adult Patients

1. Accepted Indications for Transplantation
  - a. Hemodynamic compromise due to heart failure demonstrated by any of the following 3 bulleted items:
    - Maximal  $\text{Vo}_2$  (oxygen consumption)  $<10$  mL/kg/min with achievement of anaerobic metabolism
    - Refractory cardiogenic shock
    - Documented dependence on intravenous inotropic support to maintain adequate organ perfusionor
  - b. Severe ischemia consistently limiting routine activity not amenable to bypass surgery or angioplasty, or
  - c. Recurrent symptomatic ventricular arrhythmias refractory to ALL accepted therapeutic modalities.
2. Probable Indications for Cardiac Transplantation
  - a. Maximal  $\text{Vo}_2 <14$  mL/kg/min and major limitation of the patient's activities, or

- b. Recurrent unstable ischemia not amenable to bypass surgery or angioplasty, or
  - c. Instability of fluid balance/renal function not due to patient noncompliance with regimen of weight monitoring, flexible use of diuretic drugs, and salt restriction.
3. The following conditions are inadequate indications for transplantation unless other factors as listed above are present:
- a. Ejection fraction <20%
  - b. History of functional class III or IV symptoms of heart failure
  - c. Previous ventricular arrhythmias
  - d. Maximal  $\text{Vo}_2 > 15 \text{ mL/kg/min}$ .

### **Pediatric Patients**

Patients with heart failure with persistent symptoms at rest who require one or more of the following:

- Continuous infusion of intravenous inotropic agents, or
- Mechanical ventilatory support, or
- Mechanical circulatory support, or

Patients with pediatric heart disease with symptoms of heart failure who do not meet the above criteria but who have:

- Severe limitation of exercise and activity (if measurable, such patients would have a peak maximum oxygen consumption <50% predicted for age and sex); or
- Cardiomyopathies or previously repaired or palliated congenital heart disease and growth failure attributable to the heart disease; or
- Near sudden death and/or life-threatening arrhythmias untreatable with medications or an implantable defibrillator; or
- Restrictive cardiomyopathy with reactive pulmonary hypertension; or
- Reactive pulmonary hypertension and risk of developing fixed, irreversible elevation of pulmonary vascular resistance that could preclude orthotopic heart transplantation in the future; or
- Anatomical and physiological conditions likely to worsen the natural history of congenital heart disease in infants with a functional single ventricle; or
- Anatomical and physiological conditions that lead to heart transplantation without systemic ventricular dysfunction.

Heart retransplantation after a failed primary heart transplant may be considered **MEDICALLY NECESSARY** in patients who meet criteria for heart transplantation.

Heart transplantation is **INVESTIGATIONAL** in all other situations.

In addition to the above information, we do not cover heart transplantation when any of the following conditions are present:

- Known current malignancy, including metastatic cancer
- Recent malignancy with high risk of recurrence
  - Note: the assessment of risk of recurrence for a previously treated malignancy is made by the transplant team; providers must submit a statement with an explanation of why the patient with a recently treated malignancy is an appropriate candidate for a transplant.
- Untreated systemic infection making immunosuppression unsafe, including chronic infection
- Other irreversible end-stage disease not attributed to heart or lung disease
- History of cancer with a moderate risk of recurrence
- Systemic disease that could be exacerbated by immunosuppression
- Psychosocial conditions or chemical dependency affecting ability to adhere to therapy
- Pulmonary hypertension that is fixed as evidenced by pulmonary vascular resistance (PVR) greater than 5 Wood units, or transpulmonary gradient (TPG) greater than or equal to 16 mm/Hg despite treatment\*

- Severe pulmonary disease despite optimal medical therapy, not expected to improve with heart transplantation\*

\*Some patients may be candidates for combined heart-lung transplantation (See policy #269).

## Prior Authorization Information

Pre-service approval is required for all inpatient services for all products.

See below for situations where prior authorization may be required or may not be required for outpatient services.

Yes indicates that prior authorization is required.

No indicates that prior authorization is not required.

	Outpatient
<b>Commercial Managed Care (HMO and POS)</b>	NA
<b>Commercial PPO and Indemnity</b>	NA
<b>Medicare HMO Blue<sup>SM</sup></b>	NA
<b>Medicare PPO Blue<sup>SM</sup></b>	NA

## CPT Codes / HCPCS Codes / ICD-9 Codes

The following codes are included below for informational purposes. Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member. A draft of future ICD-10 Coding related to this document, as it might look today, is included below for your reference.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

### CPT Codes

CPT codes:	Code Description
33945	Heart transplant, with or without recipient cardiectomy

### ICD-9 Procedure Codes

ICD-9-CM procedure codes:	Code Description
37.51	Heart transplantation

### ICD-10 Procedure Codes

ICD-10-PCS procedure codes:	Code Description
02YA0Z0	Transplantation of Heart, Allogeneic, Open Approach
02YA0Z1	Transplantation of Heart, Syngeneic, Open Approach

## Description

A heart transplant consists of replacing a diseased heart with a healthy donor heart. Transplantation is used for patients with refractory end-stage cardiac disease.

Heart failure may be the consequence of a number of differing etiologies, including ischemic heart disease, cardiomyopathy, or congenital heart defects. The reduction of cardiac output is considered to be severe when systemic circulation cannot meet the body's needs under minimal exertion.

## Summary

The literature, consisting of case series and registry data, continues to demonstrate that heart transplantation provides a survival benefit in appropriately selected patients, compared to the exceedingly poor expected survival without transplantation. Despite an improvement in prognosis for many patients with advanced heart disease, heart transplant remains a viable treatment for those who have exhausted other medical or surgical remedies, yet remain in end-stage disease. Heart transplantation is contraindicated in patients in whom the procedure is expected to be futile due to comorbid disease or in whom post-transplantation care is expected to significantly worsen comorbid conditions.

## Policy History

Date	Action
10/2014	Medical policy remediation: New indications for non-coverage. Coding information clarified. Effective 10/1/2014.
6/2014	Updated Coding section with ICD10 procedure and diagnosis codes, effective 10/2015.
4/2014	BCBSA National medical policy review. New medically necessary and investigational indications described. Effective 4/1/2014.
12/2013	Removed ICD-9 diagnosis codes as this policy requires prior authorization
11/2011-4/2012	Medical policy ICD 10 remediation: Formatting, editing and coding updates. No changes to policy statements.
10/2011	Medical Policy Group - GI, Nutrition and Organ Transplantation. No changes to policy statements.
3/22/2011	Clarified medical necessity criteria based on revision of the BCBSA policy.
11/2010	Medical Policy Group - Gastroenterology, Nutrition and Organ Transplantation. No changes to policy statements.
5/20/2010	Updated to clarify and reword when services are not covered section. No changes to policy statement.
3/2010	National Policy Review # 7.03.09. Revision to policy statement.

## Information Pertaining to All Blue Cross Blue Shield Medical Policies

Click on any of the following terms to access the relevant information:

[Medical Policy Terms of Use](#)

[Managed Care Guidelines](#)

[Indemnity/PPO Guidelines](#)

[Clinical Exception Process](#)

[Medical Technology Assessment Guidelines](#)

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