

## PA.003.MPC Transplant: Heart-Lung

Maryland Physicians Care considers **Heart-Lung Transplant** medically necessary for the following indications:

### Recipient Criteria

- The member has no medical, cognitive, or other psychiatric condition that is likely to interfere with their ability to manage the sequelae of the transplant, including complex medication regimens

### General Criteria for Heart-Lung Transplant

- The member meets the institution's selection criteria for heart-lung transplantation.

### Specific Criteria for Heart-Lung Transplant

Heart-lung transplantation may be medically necessary for members with irreversible, progressively disabling, end-stage cardiopulmonary disease including any one of the conditions listed below:

- Refractory NYHA Class III or IV heart failure associated with:
  - End-stage chronic obstructive pulmonary disease
  - Severe pulmonary fibrosis
  - Cystic Fibrosis
  - Severe primary pulmonary hypertension
- Irreversible, uncontrollable pulmonary hypertension associated with:
  - Refractory NYHA Class III or IV heart failure
  - Pulmonary fibrosis
  - Cardiomyopathy and/or severe coronary heart disease
  - Congenital heart disease with complications that cannot be repaired with conventional surgical approaches to the heart and lungs
- Eisenmenger's complex with irreversible pulmonary hypertension and refractory NYHA Class III or IV heart failure
- End-stage lung disease with malignant ventricular arrhythmias that are uncontrollable despite optimal pharmacologic or electrophysiologic treatments (including implantable cardioverter-defibrillator)
- Subsequent operation for failure of original graft

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### Specific Criteria for Heart-Lung Transplant in HIV+ Members

Heart-lung transplantation in HIV+ members is considered medically necessary when all of the following conditions are met:

1. The member has a life expectancy of at least five years
2. CD4 count  $\geq 200$  cells/mL for at least six months
3. Undetectable HIV viremia ( $< 50$  copies/mL) for six months
4. Demonstrated adherence to highly active antiretroviral therapy (HAART) regimen for  $\geq$  six months
5. Available antiretroviral treatment options post-transplant

### Limitations

1. All other medical and surgical therapies that might be expected to yield both short-and long-term survival comparable to that of transplantation must have been tried or considered.
2. Members must first undergo stringent physical and psychological evaluation to determine eligibility for transplant. Members should have no other serious medical problems, and they should be psychologically willing to undergo the stressful surgery and postoperative care necessary.
3. Heart Xeno-transplantation for any cardiac condition is considered experimental-investigational and is not covered.

### Background

Heart-lung transplantation, also known as cardiopulmonary transplantation, is the simultaneous surgical replacement of the heart and lungs in patients with end-stage cardiac and pulmonary disease. Eisenmenger syndrome, pulmonary artery hypertension and cystic fibrosis account for the top three conditions for heart-lung transplant recipients. In 2014, there were 24 heart-lung transplantations according to OPTN data from UNOS.

It is a complex, expensive, and resource-intensive procedure. It is performed more often where there is coexistence of end-stage pulmonary disease with advanced cardiac disease that is not secondary to pulmonary hypertension (e. g., some forms of congenital heart disease, some situations with Eisenmenger's syndrome, and possibly the coexistence of end-stage heart and end-stage lung disease).

### New York Heart Association (NYHA) Functional Classification:

- I. No limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitation, dyspnea (shortness of breath).
- II. Slight limitation of physical activity. Comfortable at rest. Ordinary physical activity results in fatigue, palpitation, dyspnea (shortness of breath).

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- III. Marked limitation of physical activity. Comfortable at rest. Less than ordinary activity causes fatigue, palpitation, or dyspnea.
- IV. Unable to carry on any physical activity without discomfort. Symptoms of heart failure at rest. If any physical activity is undertaken, discomfort increases.

### Codes

#### CPT/HCPCS Codes

Code	Description
33933	Backbench preparation for cadaver donor heart/lung
33935	Heart-lung transplant with recipient cardiectomy-pneumonectomy

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