Heart Transplant

I. Policy

University Health Alliance (UHA) will reimburse for heart transplant when it is determined to be medically necessary and when it meets the medical criteria guidelines (subject to limitations and exclusions) indicated below.

II. Criteria/Guidelines

Human heart transplantation is covered (subject to Administrative Guidelines) for selected adult and pediatric patients with end-stage heart failure when patient selection criteria are met.

Adult patients:

A. Accepted Indications for Transplantation:
   1. Hemodynamic compromise due to heart failure demonstrated by any of the following three items:
      a. Maximal VO2 (oxygen consumption) <10 ml/kg/min with achievement of anaerobic metabolism
      b. Refractory cardiogenic shock
      c. Documented dependence on intravenous inotropic support to maintain adequate organ perfusion; or
   2. Severe ischemia consistently limiting routine activity not amenable to bypass surgery or angioplasty; or
   3. Recurrent symptomatic ventricular arrhythmias refractory to ALL accepted therapeutic modalities.

B. Probable Indications for Cardiac Transplantation:
   1. Maximal VO2 <14 ml/kg/min and major limitation of the patient’s activities; or
   2. Recurrent unstable ischemia not amenable to bypass surgery or angioplasty; or
   3. Instability of fluid balance/renal function not due to patient noncompliance with regimen of weight monitoring, flexible use of diuretic drugs, and salt restriction.

C. The following conditions are inadequate indications for transplantation unless other factors as listed above are present.
   1. Ejection fraction <20%
   2. History of functional class III or IV symptoms of heart failure
   3. Previous ventricular arrhythmias
   4. Maximal VO2 >15 ml/kg/min

Pediatric Patients:

The following are indications for pediatric heart transplantation:

A. Patients with heart failure with persistent symptoms at rest who require one or more of the following:
   1. Continuous infusion of intravenous inotropic agents; or
2. Mechanical ventilatory support; or
3. Mechanical circulatory support.

B. Patients with pediatric heart disease with symptoms of heart failure who do not meet the above criteria but who have:
   1. Severe limitation of exercise and activity (if measurable, such patients would have a peak maximum oxygen consumption <50% predicted for age and sex); or
   2. Cardiomyopathies or previously repaired or palliated congenital heart disease and significant growth failure attributable to the heart disease; or
   3. Near sudden death and/or life-threatening arrhythmias untreatable with medications or an implantable defibrillator; or
   4. Restrictive cardiomyopathy with reactive pulmonary hypertension; or
   5. Reactive pulmonary hypertension and potential risk of developing fixed, irreversible elevation of pulmonary vascular resistance that could preclude orthotopic heart transplantation in the future; or
   6. Anatomical and physiological conditions likely to worsen the natural history of congenital heart disease in infants with a functional single ventricle; or
   7. Anatomical and physiological conditions that may lead to consideration for heart transplantation without systemic ventricular dysfunction.

NOTE:

This UHA payment policy is a guide to coverage, the need for prior authorization and other administrative directives. It is not meant to provide instruction in the practice of medicine and it should not deter a provider from expressing his/her judgment.

Even though this payment policy may indicate that a particular service or supply is considered covered, specific provider contract terms and/or members’ individual benefit plans may apply, and this policy is not a guarantee of payment. UHA reserves the right to apply this payment policy to all UHA companies and subsidiaries.

UHA understands that opinions about and approaches to clinical problems may vary. Questions concerning medical necessity (see Hawaii Revised Statutes §432E-1.4) are welcome. A provider may request that UHA reconsider the application of the medical necessity criteria in light of any supporting documentation.

III. Limitations/Exclusions

A. Heart re-transplantation after a failed primary heart transplant may be covered for patients who meet criteria for heart transplantation. Heart re-transplantation in all other situations is not covered as it is not known to be effective in improving health outcomes.

B. Specific criteria for prioritizing donor thoracic organs for transplant are provided by the Organ Procurement and Transplantation Network (OPTN) and implemented through a contract with the United Network for Organ Sharing (UNOS). Donor thoracic organs are prioritized by UNOS on the basis of recipient medical urgency, distance from donor hospital, and pediatric status. Patients who are most severely ill (status 1A) are given highest priority. Criteria from OPTN for listing status are as can be found by contacting the Organ Procurement and Transplantation Network. For coverage consideration, patients must meet the United Network for Organ Sharing (UNOS) guidelines for 1A, 1B, or 2 Status and not currently be Status 7.

C. Potential contraindications subject to the judgement of the transplant center include:
1. Known current malignancy, including metastatic cancer, or history of cancer with moderate risk of recurrence
2. Recent malignancy with high risk of recurrence
3. Untreated systemic infection making immunosuppression unsafe, including chronic infection
4. Other irreversible end-stage disease not attributed to heart or lung disease
5. System disease that could be exacerbated by immunosuppression
6. Psychosocial conditions or chemical dependency affecting ability to adhere to therapy

D. Policy-specific potential contraindications

1. 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 mmHg despite treatment*
2. Severe pulmonary disease despite optimal medical therapy, not expected to improve with heart transplantation*

*Some patients may be candidates for combined heart-lung transplantation

IV. Administrative Guidelines

A. Prior Authorization is required for a transplant evaluation and for the transplant itself and should be submitted by the proposed treating facility.

B. To request prior authorization, please submit via UHA’s online portal.

<table>
<thead>
<tr>
<th>CPT Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>33940</td>
<td>Donor cardiectomy (including cold preservation)</td>
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<tr>
<td>33944</td>
<td>Backbench standard preparation of cadaver donor heart allograft prior to transplantation, including dissection of allograft from surrounding soft tissues to prepare aorta, superior vena cava, inferior vena cava, pulmonary artery, and left atrium for implantation</td>
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<tr>
<td>33945</td>
<td>Heart transplant, with or without recipient cardiectomy</td>
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</tbody>
</table>

V. Policy History

Policy Number: MPP-0045-120301
Current Effective Date: 08/08/2018
Original Document Effective Date: 03/01/2012
Previous Revision Dates: 09/01/2016
PAP Approved Date: 03/01/2012