

## HEART-LUNG AND LUNG TRANSPLANTATION

Issue Date: October 27, 1995

Authority: [32 CFR 199.4\(e\)\(5\)](#)

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### I. PROCEDURE CODES

33930 - Donor cardiectomy-pneumonectomy, with preparation and maintenance of allograft

33935 - Heart-lung transplant

32850 - Donor pneumonectomy with preparation-and maintenance of allograft

32851 - Single lung transplant without cardiopulmonary bypass

32852 - Single lung transplant with cardiopulmonary bypass

32853 - Double lung transplant without cardiopulmonary bypass

32854 - Double lung transplant without cardiopulmonary bypass

(ICD-9-CM - 33.50 for lung transplant, not otherwise specified)

(ICD-9-CM - 33.51 for unilateral lung transplantation)

(ICD-9-CM - 33.52 for bilateral lung transplantation)

(ICD-9-CM - 33.6 for combined heart-lung transplantation)

DRG - 495 for lung transplant

### II. POLICY

A. Heart-lung and single and double lung transplantation **requires preauthorization.**

B. **Living donor lobar lung transplantation requires preauthorization.**

1. A TRICARE Prime enrollee must have a referral from his/her Primary Care Manager (PCM) and an authorization from the Health Care Finder (HCF) before obtaining transplant-related services. If network providers furnish transplant-related services without prior PCM referral and HCF authorization, penalties will be administered according to TRICARE network provider agreements. If Prime enrollees receive transplant-related services from non-network civilian providers without the required PCM referral and HCF authorization, Managed Care Support (MCS) contractors shall reimburse charges for the services on a Point of Service basis. Special cost-sharing requirements apply to Point of Service claims. For specific information on Point of Service cost-shares and catastrophic cap calculations, see [Chapter 12, Section 2.2](#), and [Section 10.1](#), and [Chapter 13, Section 14.1](#).

2. For Standard and Extra patients residing in a Managed Care Support (MCS) region, preauthorization authority is the responsibility of the MCS Medical Director, Health Care Finder, or other designated utilization staff.

C. The designated preauthorizing authority shall only use the criteria contained in this policy when preauthorizing lung and heart-lung transplantations.

D. The designated preauthorizing authority may also preauthorize advanced life support for air ambulance and a certified advanced life support attendant for a heart-lung or lung transplantation patient who has received preauthorization.

E. Affirmative Patient Selection Criteria. Benefits may be allowed for medically necessary services and supplies related to heart-lung and single and double lung **and living donor lobar lung** transplantation when the transplant is performed at a TRICARE or Medicare approved lung transplant center. **TRICARE may cost-share medically necessary services and supplies related to heart-lung transplantation when the transplant is performed at a TRICARE or Medicare approved heart, lung, or heart-lung transplant center. The beneficiaries must meet the following criteria:**

1. Have irreversible, progressively disabling, end-stage pulmonary or cardiopulmonary disease (for example, less than a 50 percent likelihood of survival for 8 months). Prognosis otherwise must be good for both survival and rehabilitation.

2. Have tried or considered all other medical and surgical therapies that might have been expected to yield both short and long-term survival comparable to that of transplantation.

3. Have a realistic understanding of the range of clinical outcomes that may be encountered.

4. Demonstrate plans for a long-term adherence to a disciplined medical regimen are feasible and realistic.

F. In addition to meeting the above patient selection criteria, the following adverse factors must be absent or minimized:

1. Acutely ill patients (i.e., with serious exacerbation of chronic end-stage disease or with nonchronic end-stage disease) or those who currently require mechanical ventilation for more than a very brief period (because there is difficulty in adequate assessment, a propensity for infection and likelihood for poor results).

2. Significant systemic or multi-system disease (because the presence of multi-organ involvement limits the possibility of full recovery and may compromise the function of the newly transplanted organ(s)).

3. Extrapulmonary site of infection (because of the probability of recrudescence once immunosuppression is instituted).

4. Hepatic dysfunction, even secondary to right ventricular failure, such as bilirubin exceeding 2.5 mg/ml (because of hepatotoxicity of many post-transplant medications and complications due to coagulopathies, hepatic encephalopathy, infection, poor wound healing, and increased postoperative mortality).

5. Renal dysfunction, such as preoperative serum creatinine greater than 1.5 mg/dl or a 24-hour creatinine clearance less than 50 ml/min, except that with severe pulmonary hypertension creatinine clearance as low as 35 ml/min may be acceptable if intrinsic renal disease is excluded. (Cyclosporine is nephrotoxic).
6. Systemic hypertension that requires multidrug therapy for even moderate control (for example, multidrugs to bring diastolic pressure below 105 mm Hg), either at transplantation or at the development of end-stage heart-lung disease (because of substantial exacerbation of hypertension with post-transplantation drug regimen).
7. Cachexia, even in the absence of major end organ failure (because of the significantly less favorable survival of these patients).
8. Obesity, with weight being an increasingly severe adverse factor as the patient exceeds by 20 percent of ideal weight for height and sex (because of more difficult post-operative mobilization and impaired diaphragmatic function, as well as the difficulty of weight control once corticosteroid immunosuppressant is instituted).
9. A history of a behavior pattern or psychiatric illness considered likely to interfere significantly with compliance with a disciplined medical regimen (because a lifelong medical regimen is necessary requiring multiple drugs several times a day, with serious consequences in the event of their interruption of excessible consumption).
10. Continued cigarette smoking or failure to have abstained for a sufficient time (e.g., at least 1 or 2 years to indicate low likelihood of recidivism because of the expected detrimental effects of smoking on the transplanted organs).
11. Previous thoracic or cardiac surgery or other bases for pleural adhesions may be a serious adverse factor depending upon site of thoracotomy/sternotomy, the degree of adhesions and the type of transplant anticipated (because of scar tissue and the propensity for inadequately controlled bleeding).
12. Age beyond 50 or 55 becomes increasingly severe adverse factor, that is, a patient has to be extremely "young for his/her age" if a heart-lung or double lung transplantation is envisioned in one who is over 50 or if a single lung transplantation is envisioned in one who is over 55 (because of greater complications beyond these ages unless this standard is used).
13. Recent or current history of gastrointestinal problems (because of common post-operative gastrointestinal problems and hemorrhage).
14. Chronic corticosteroid therapy that cannot be tapered and discontinued prior to transplantation has been considered a serious adverse factor by many (because of the increased risk of tracheal or bronchial dehiscence in the early post-operative period).
15. With chronic pulmonary infection (as with bronchiectasis, chronic or cystic fibrosis), single lung transplantation is contraindicated (because of the great likelihood of the infection extending from the contaminated native lung into the transplanted lung) and the patient must meet the criteria and benefit/risk considerations of double lung or heart-lung transplantation.

16. With significant heart disease (for example, substantial irreversible right ventricular disease or significant coronary artery disease) the patient must meet the criteria and benefit/risk considerations for heart-lung transplantation; lung transplantation and concurrent repair of the cardiac abnormality may be appropriate in unusual circumstances, as in some situations with Eisenmenger's syndrome.

17. Primary or metastatic malignancies of the lung.

G. For a properly preauthorized patient, benefits may be allowed for medically necessary services and supplies related to heart-lung or lung transplantation for:

1. Evaluation of potential candidate's suitability for heart-lung or lung transplantation, whether or not the patient is ultimately accepted as a candidate for transplantation.
2. Pre- and post-transplant inpatient hospital and outpatient services.
3. Pre- and post-operative services of the transplant team.
4. The donor acquisition team, including the costs of transportation to the location of the donor organ and transportation of the team and the donated organ to the location of the transplantation center.
5. The maintenance of the viability of the donor organ after all existing legal requirements for excision of the donor organ have been met.
6. Blood and blood products.
7. FDA approved immunosuppression drugs to include off-label uses when determined to be proven. Refer to [Chapter 7, Section 7.1](#) for requirements for off-label drug use.
8. Complications of the transplant procedure, including inpatient care, management of infection and rejection episodes.
9. Periodic evaluation and assessment of the successfully transplanted patient.
10. Cardiac rehabilitation as outlined in the [Chapter 1, Section 18.4](#).
11. Pulmonary rehabilitation for pre- and post-lung and heart-lung transplants when preauthorized by the appropriate preauthorizing authority as outlined in [paragraph II.A.](#) under Policy.
12. Advanced life support air ambulance, see [paragraph II.D.](#) above regarding preauthorization of this service. Reference to [Chapter 7, Section 2.1](#).

H. Benefits may be allowed for DNA-HLA tissue typing in determining histocompatibility.

I. Benefits may be allowed for epoprostenol (FLOLAN®) for the management of severe secondary pulmonary hypertension for patients who have been preauthorized for lung transplant and are awaiting transplant.

### III. POLICY CONSIDERATIONS

A. Preauthorization and retrospective authorization of lung and heart-lung transplantations must meet the following two requirements:

1. Patient meets (or would have met) patient selection criteria; and
2. Transplant facility is (or would have been) TRICARE or Medicare-certified at the time of transplant.

B. In those cases where the beneficiary fails to obtain preauthorization, benefits may be extended if the services of supplies otherwise would qualify for benefits but for the failure to obtain preauthorization. If preauthorization is not received, the appropriate preauthorizing authority as outline in [paragraph II.A.](#) under Policy is responsible for reviewing the claims to determine whether the beneficiary's condition meets the clinical criteria for the heart-lung or lung transplantation benefit. Charges for transplant and transplant-related services provided to TRICARE Prime enrollees who failed to obtain PCM referral and HCF authorization will be reimbursed only under Point of Service rules.

C. Benefits will only be allowed for transplants performed at a TRICARE or Medicare-authorized **heart**, heart-lung or lung transplantation center. The contractor is the certifying authority for transplant centers within its region. Refer to [Chapter 11, Section 11.5](#) for organ transplant certification center requirements.

D. Claims for services and supplies related to heart-lung transplantation through September 30, 1998, will be reimbursed based on billed charges. Effective October 1, 1998, heart-lung transplantation will be paid under the DRG. Acquisition costs related to the heart-lung transplant will continue to be paid on a reasonable cost basis and not included in the DRG.

E. Claims for services related to lung transplantation through September 30, 1994, will be reimbursed based on billed charges. Effective October 1, 1994, lung transplants will be paid under the DRG. Acquisition costs related to the lung transplant will continue to be paid on a reasonable cost basis and not included in the DRG.

F. Claims for transportation of the donor organ and transplant team shall be adjudicated on the basis of billed charges, but not to exceed the transport service's published schedule of charges, and cost-shared on an inpatient basis. Scheduled or chartered transportation may be cost-shared.

G. Benefits will be allowed for donor costs. Refer to [Chapter 3, Section 1.6L](#) for guidelines regarding donor costs associated with organ transplants.

H. Charges made by the donor hospital will be cost-shared on an inpatient basis and must be fully itemized and billed by the transplant center in the name of the TRICARE patient.

I. Acquisition and donor costs are not considered to be components of the services covered under the DRG. These costs must be billed separately on a standard UB-92 claim form in the name of the TRICARE patient.

J. For beneficiaries who reside in TRICARE regions, the issuance of a Nonavailability Statement (NAS) shall be in accordance with direction of the Lead Agent.

K. When a properly preauthorized transplant candidate is discharged less than 24-hours after admission because of extenuating circumstances, such as the available organ is found not suitable or other circumstances which prohibit the transplant from being timely performed, all otherwise authorized services associated with the admission shall be cost-shared on an inpatient basis, since the expectation at admission was that the patient would remain more than 24 hours.

#### IV. EXCLUSIONS

A. Benefits will not be paid for:

1. Expenses waived by the transplant center, (e.g., beneficiary/sponsor not financially liable).
2. Services and supplies not provided in accordance with applicable program criteria (i.e., part of a grant or research program; unproven procedure).
3. Administration of an unproven immunosuppressant drug that is not FDA approved or has not received TRICARE approval as an appropriate "off label" drug indication. Refer to [Chapter 7, Section 7.3](#) for TRICARE/CHAMPUS Policy requirements for immunosuppression therapy.
4. Pre- or post-transplant nonmedical expenses, (e.g., out-of-hospital living expenses, to include hotel, meal, privately owned vehicle for the beneficiary or family members).
5. Transportation of an organ donor.
6. Living related lung transplantation as this procedure is considered unproven.

#### V. EXCEPTIONS

A. Benefits may be allowed for heart-lung and lung transplantations performed prior to February 28, 1991, (but not before January 1, 1987) only if the patient criteria discussed in [paragraph II.E.](#) under "Policy", and the institutional criteria, outlined in [Chapter 11, Section 11.5](#), were met or would have been met at the time of transplantation.

B. Service and supplies for inpatient or outpatient services that are provided prior to and/or after discharge from hospitalization for a heart-lung or lung transplantation performed in an unauthorized transplant center may be cost-shared subject to applicable Program policy. Pre-admission services rendered by an unauthorized transplant center may also be cost-shared subject to applicable program policies. These exceptions are also

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applicable to heart-lung and lung transplantations performed prior to the effective date of February 28, 1991.

VI. EFFECTIVE DATE

- A. February 28, 1991, for heart-lung and lung transplantation.
- B. May 1, 1996, for epoprostenol.
- C. June 1, 1997, for living donor lobar lung transplantation.

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