



Status

Active

Medical and Behavioral Health Policy

Section: Surgery

Policy Number: IV-128

Effective Date: 08/18/2014

Blue Cross and Blue Shield of Minnesota medical policies do not imply that members should not receive specific services based on the recommendation of their provider. These policies govern coverage and not clinical practice. Providers are responsible for medical advice and treatment of patients. Members with specific health care needs should consult an appropriate health care professional.

ORGAN TRANSPLANTATION

Description: Organ transplantation involves the excision of an organ from a live or cadaveric donor and implantation of the organ into a recipient patient. Transplantation is intended to prolong survival and improve function in patients with severe disease or irreversible organ damage.

Definitions: **Multivisceral:** More than one organ.

Steatohepatitis: A type of liver disease, characterized by inflammation and accumulation of fat in the liver.

Cholangiocarcinoma: Bile duct carcinoma, which may be generally categorized as intrahepatic, extrahepatic (hilar or perihilar), and distal extrahepatic.

- Policy:**
- I. The following organ transplant procedures may be considered **MEDICALLY NECESSARY** when the following criteria are met:
 - A. **Kidney**
 1. Kidney transplantation (with either a living or cadaver donor) for carefully selected patients with end-stage renal disease who meet patient selection criteria established by the Organ Procurement and Transplantation Network (OPTN) and the United Network of Organ Sharing (UNOS)
 2. Kidney retransplantation after a failed primary kidney transplant in patients who meet criteria for a kidney transplantation
 - B. **Heart**
 1. Heart transplantation for carefully selected adult or pediatric patients with end-stage heart failure who meet patient selection criteria established by the Organ Procurement and Transplantation Network (OPTN) and the United Network of Organ Sharing (UNOS)

2. Heart retransplantation after a failed primary heart transplant in patients who meet criteria for heart transplantation

C. Heart/Lung

1. Heart/lung transplantation for carefully selected patients with end-stage cardiac and pulmonary disease who meet patient selection criteria established by the Organ Procurement and Transplantation Network (OPTN) and the United Network of Organ Sharing (UNOS)
2. Heart/lung retransplantation after a failed primary heart/lung transplantation in patients who meet criteria for heart/lung transplantation

D. Lung and Lobar Lung

1. Lung and lobar transplantation for carefully selected patients with irreversible, progressively disabling, end-stage pulmonary disease who meet patient selection criteria established by the Organ Procurement and Transplantation Network (OPTN) and the United Network of Organ Sharing (UNOS)
2. Lung or lobar lung retransplantation after a failed primary lung or lobar transplant in patients who meet criteria for lung transplantation

E. Small Bowel:

1. Small bowel transplantation for patients who meet the following criteria:
 - a. Intestinal failure, characterized by loss of absorption and the inability to maintain protein-energy, fluid, electrolyte, or micronutrient balance; **AND**
 - b. Established long-term dependency on total parenteral nutrition (TPN) and patient is developing or has developed severe complications due to TPN. Severe complications due to TPN include, but are not limited to: multiple and prolonged hospitalizations to treat TPN-related complications (especially repeated episodes of catheter-related sepsis) or the development of progressive liver failure. In the setting of progressive liver failure, small bowel transplant may be considered a technique to avoid end-stage liver failure related to chronic TPN, thus avoiding the necessity of a multivisceral transplant. In those receiving TPN, liver disease with jaundice (total bilirubin above 3 mg/dl) is often associated with development of irreversible progressive liver disease. The inability to maintain venous access and great vein damage are additional reasons to consider small bowel transplant in those who are dependent on TPN.
2. Small bowel retransplantation after a failed primary small bowel transplant in patients who meet criteria for small bowel transplantation

F. Small Bowel/Liver and Multivisceral

1. Small bowel/liver or multivisceral transplantation for patients who meet the following criteria:
 - a. Intestinal failure characterized by loss of absorption and the inability to maintain protein-energy, fluid, electrolyte, or micronutrient balance; **AND**
 - b. Established long-term dependency on total parenteral nutrition (TPN) and evidence of impending end-stage liver failure
2. Small bowel/liver retransplantation or multivisceral retransplantation after a failed primary small bowel/liver transplant or multivisceral transplant in patients who meet criteria for small bowel/liver or multivisceral transplantation

G. **Allogeneic Pancreas**

1. **Combined pancreas-kidney transplantation** in diabetic patients with end-stage renal disease;
2. **Pancreas transplantation after a prior kidney transplantation** in patients with insulin-dependent diabetes;
3. **Pancreas transplantation alone** in patients with severely disabling and potentially life-threatening complications due to hypoglycemia unawareness or labile diabetes that persists despite optimal medical management;
4. **Pancreas retransplantation** after a failed primary pancreas transplantation in patients who meet criteria for pancreas transplantation

H. **Liver**

1. Liver transplantation with either a cadaver or living donor, in carefully selected patients with end-stage liver failure due to irreversible damage to the liver. Conditions causing end-stage liver disease include, but are not limited to, the following:
 - a. Hepatocellular disease
 - Alcoholic cirrhosis;
 - Viral hepatitis (A, B, C);
 - Autoimmune hepatitis;
 - Alpha-1 antitrypsin deficiency;
 - Hemochromatosis;
 - Non-alcoholic steatohepatitis (NASH);
 - Protoporphyrria;
 - Wilson's disease
 - b. Cholestatic liver disease
 - Primary biliary cirrhosis;
 - Primary sclerosing cholangitis with development of secondary biliary cirrhosis;
 - Biliary atresia
 - c. Vascular disease
 - Budd-Chiari syndrome
 - d. Primary hepatocellular carcinoma

- e. Inborn errors of metabolism
- f. Trauma and toxic reactions
- g. Polycystic disease of the liver in patients who have massive hepatomegaly causing obstruction or functional impairment of other organs
- h. Familial amyloid polyneuropathy
- i. Unresectable hilar cholangiocarcinoma
- j. Nonmetastatic hepatoblastoma in pediatric patients
- 2. **Liver retransplantation** in patients with the following indications:
 - a. Primary graft non-function
 - b. Hepatic artery thrombosis
 - c. Chronic rejection
 - d. Ischemic-type biliary lesions
 - e. Recurrent non-neoplastic disease causing late graft failure

- II. All other indications for organ transplantation are considered **INVESTIGATIVE**, due to a lack of evidence demonstrating an impact on improved health outcomes. Those indications include, but are not limited to:
 - A. **Liver** transplantation
 - 1. Intrahepatic cholangiocarcinoma
 - 2. Extrahepatic malignancy, other than unresectable hilar cholangiocarcinoma
 - 3. Hepatocellular carcinoma extending beyond the liver
 - 4. Neuroendocrine tumors metastatic to the liver

Coverage: Blue Cross and Blue Shield of Minnesota medical policies apply generally to all Blue Cross and Blue Plus plans and products. Benefit plans vary in coverage and some plans may not provide coverage for certain services addressed in the medical policies.

Medicaid products and some self-insured plans may have additional policies and prior authorization requirements. Receipt of benefits is subject to all terms and conditions of the member's summary plan description (SPD). As applicable, review the provisions relating to a specific coverage determination, including exclusions and limitations. Blue Cross reserves the right to revise, update and/or add to its medical policies at any time without notice.

For Medicare NCD and/or Medicare LCD, please consult CMS or National Government Services websites.

Refer to the Pre-Certification/Pre-Authorization section of the Medical Behavioral Health Policy Manual for the full list of services, procedures, prescription drugs, and medical devices that require Pre-certification/Pre-Authorization. Note that services with specific coverage criteria may be reviewed retrospectively to determine if

criteria are being met. Retrospective denial of claims may result if criteria are not met.

Coding:

The following codes are included below for informational purposes only, and are subject to change without notice. Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement.

Kidney

CPT:

50300 Donor nephrectomy (including cold preservation); from cadaver donor, unilateral or bilateral

50320 Donor nephrectomy (including cold preservation); open, from living donor

50323 Backbench standard preparation of cadaver donor renal allograft prior to transplantation, including dissection and removal of perinephric fat, diaphragmatic and retroperitoneal attachments, excision of adrenal gland, and preparation of ureter(s), renal vein(s), and renal artery(s), ligating branches, as necessary

50325 Backbench standard preparation of living donor renal allograft (open or laparoscopic) prior to transplantation, including dissection and removal of perinephric fat and preparation of ureter(s), renal vein(s), and renal artery(s), ligating branches, as necessary

50327 Backbench reconstruction of cadaver or living donor renal allograft prior to transplantation; venous anastomosis, each

50328 Backbench reconstruction of cadaver or living donor renal allograft prior to transplantation; arterial anastomosis, each

50329 Backbench reconstruction of cadaver or living donor renal allograft prior to transplantation; ureteral anastomosis, each

50340 Recipient nephrectomy (separate procedure)

50360 Renal allotransplantation, implantation of graft; without recipient nephrectomy

50365 Renal allotransplantation, implantation of graft; with recipient nephrectomy

50380 Renal autotransplantation, reimplantation of kidney

50547 Laparoscopy, surgical; donor nephrectomy (including cold preservation), from living donor

ICD-9 Procedure:

00.91 Transplant from live related donor

00.92 Transplant from live non-related donor

00.93 Transplant from cadaver

55.51 Nephroureterectomy

55.54 Bilateral nephrectomy

55.61 Renal autotransplantation

55.69 Other kidney transplantation

ICD-10 Procedure:

0TY00Z0 Transplantation of Right Kidney, Allogeneic, Open Approach

0TY00Z1 Transplantation of Right Kidney, Syngeneic, Open Approach

0TY10Z0 Transplantation of Left Kidney, Allogeneic, Open Approach

0TY10Z1 Transplantation of Left Kidney, Syngeneic, Open Approach

Heart

CPT:

33940 Donor cardiectomy (including cold preservation)

33944 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

33945 Heart transplant, with or without recipient cardiectomy

ICD-9 Procedure:

00.93 Transplant from cadaver

37.51 Heart transplantation

ICD-10 Procedure:

02YA0Z0 Transplantation of Heart, Allogeneic, Open Approach

02YA0Z1 Transplantation of Heart, Syngeneic, Open Approach

Heart/Lung

CPT:

33930 Donor cardiectomy-pneumonectomy (including cold preservation)

33933 Backbench standard preparation of cadaver donor heart/lung allograft prior to transplantation, including dissection of allograft from surrounding soft tissues to prepare aorta, superior vena cava, inferior vena cava, and trachea for implantation

33935 Heart-lung transplant with recipient cardiectomy-pneumonectomy

ICD-9 Procedure:

00.93 Transplant from cadaver

33.6 Combined heart-lung transplantation

ICD-10 Procedure:

02YA0Z0 Transplantation of Heart, Allogeneic, Open Approach
02YA0Z1 Transplantation of Heart, Syngeneic, Open Approach
0BYM0Z0 Transplantation of Bilateral Lungs, Allogeneic, Open Approach
0BYM0Z1 Transplantation of Bilateral Lungs, Syngeneic, Open Approach
0BYK0Z0 Transplantation of Right Lung, Allogeneic, Open Approach
0BYK0Z1 Transplantation of Right Lung, Syngeneic, Open Approach
0BYL0Z0 Transplantation of Left Lung, Allogeneic, Open Approach
0BYL0Z1 Transplantation of Left Lung, Syngeneic, Open Approach

Lung/Lobar Lung

CPT:

32850 Donor pneumonectomy(s) (including cold preservation), from cadaver donor
32851 Lung transplant, single; without cardiopulmonary bypass
32852 Lung transplant, single; with cardiopulmonary bypass
32853 Lung transplant, double (bilateral sequential or en bloc); without cardiopulmonary bypass
32854 Lung transplant, double (bilateral sequential or en bloc); with cardiopulmonary bypass
32855 Backbench standard preparation of cadaver donor lung allograft prior to transplantation, including dissection of allograft from surrounding soft tissues to prepare pulmonary venous/atrial cuff, pulmonary artery, and bronchus; unilateral
32856 Backbench standard preparation of cadaver donor lung allograft prior to transplantation, including dissection of allograft from surrounding soft tissues to prepare pulmonary venous/atrial cuff, pulmonary artery, and bronchus; bilateral

HCPCS:

S2060 Lobar lung transplantation
S2061 Donor lobectomy (lung) for transplantation, living donor

ICD-9 Procedure:

00.91 Transplant from live related donor
00.92 Transplant from live non-related donor
00.93 Transplant from cadaver
33.50 Lung transplantation, NOS
33.51 Unilateral lung transplantation
33.52 Bilateral lung transplantation

ICD-10 Procedure:

0BYC0Z0 Transplantation of Right Upper Lung Lobe, Allogeneic, Open Approach
0BYC0Z1 Transplantation of Right Upper Lung Lobe, Syngeneic, Open Approach
0BYD0Z0 Transplantation of Right Middle Lung Lobe, Allogeneic, Open Approach
0BYD0Z1 Transplantation of Right Middle Lung Lobe, Syngeneic, Open Approach
0BYF0Z0 Transplantation of Right Lower Lung Lobe, Allogeneic, Open Approach
0BYF0Z1 Transplantation of Right Lower Lung Lobe, Syngeneic, Open Approach
0BYG0Z0 Transplantation of Left Upper Lung Lobe, Allogeneic, Open Approach
0BYG0Z1 Transplantation of Left Upper Lung Lobe, Syngeneic, Open Approach
0BYH0Z0 Transplantation of Lung Lingula, Allogeneic, Open Approach
0BYH0Z1 Transplantation of Lung Lingula, Syngeneic, Open Approach
0BYJ0Z0 Transplantation of Left Lower Lung Lobe, Allogeneic, Open Approach
0BYJ0Z1 Transplantation of Left Lower Lung Lobe, Syngeneic, Open Approach
0BYK0Z0 Transplantation of Right Lung, Allogeneic, Open Approach
0BYK0Z1 Transplantation of Right Lung, Syngeneic, Open Approach
0BYL0Z0 Transplantation of Left Lung, Allogeneic, Open Approach
0BYL0Z1 Transplantation of Left Lung, Syngeneic, Open Approach
0BYM0Z0 Transplantation of Bilateral Lungs, Allogeneic, Open Approach
0BYM0Z1 Transplantation of Bilateral Lungs, Syngeneic, Open Approach

Small Bowel

CPT:

44132 Donor enterectomy (including cold preservation), open; from cadaver donor
44133 Donor enterectomy (including cold preservation), open; partial, from living donor
44135 Intestinal allotransplantation; from cadaver donor
44136 Intestinal allotransplantation; from living donor
44137 Removal of transplanted intestinal allograft, complete

44715 Backbench standard preparation of cadaver or living donor intestine allograft prior to transplantation, including mobilization and fashioning of the superior mesenteric artery and vein

44720 Backbench reconstruction of cadaver or living donor intestine allograft prior to transplantation; venous anastomosis, each

44721 Backbench reconstruction of cadaver or living donor intestine allograft prior to transplantation; arterial anastomosis, each

ICD-9 Procedure:

00.91 Transplant from live related donor

00.92 Transplant from live non-related donor

00.93 Transplant from cadaver

46.97 Transplant of intestine

ICD-10 Procedure:

0DY80Z0 Transplantation of Small Intestine, Allogeneic, Open Approach

0DY80Z1 Transplantation of Small Intestine, Syngeneic, Open Approach

Small Bowel/Liver and Multivisceral

CPT:

44715 Backbench standard preparation of cadaver or living donor intestine allograft prior to transplantation, including mobilization and fashioning of the superior mesenteric artery and vein

44720 Backbench reconstruction of cadaver or living donor intestine allograft prior to transplantation; venous anastomosis, each

44721 Backbench reconstruction of cadaver or living donor intestine allograft prior to transplantation; arterial anastomosis, each

HCPCS:

S2053 Transplantation of small intestine and liver allografts

S2054 Transplantation of multivisceral organs

S2055 Harvesting of donor multivisceral organs, with preparation and maintenance of allografts; from cadaver donor

S2152 Solid organ(s), complete or segmental, single organ or combination of organs; deceased or living donor (s), procurement, transplantation, and related complications; including: drugs; supplies; hospitalization with outpatient follow-up; medical/surgical, diagnostic, emergency, and rehabilitative services, and the number of days of pre and post-transplant care in the global definition

ICD-9 Procedure:

00.91 Transplant from live related donor

00.92 Transplant from live non-related donor

00.93 Transplant from cadaver

ICD-10 Procedure:

0DY60Z0 Transplantation of Stomach, Allogeneic, Open Approach

0DY60Z1 Transplantation of Stomach, Syngeneic, Open Approach

0DY80Z0 Transplantation of Small Intestine, Allogeneic, Open Approach

0DY80Z1 Transplantation of Small Intestine, Syngeneic, Open Approach

0DYE0Z0 Transplantation of Large Intestine, Allogeneic, Open Approach

0DYE0Z1 Transplantation of Large Intestine, Syngeneic, Open Approach

0FY00Z0 Transplantation of Liver, Allogeneic, Open Approach

0FY00Z1 Transplantation of Liver, Syngeneic, Open Approach

0FYG0Z0 Transplantation of Pancreas, Allogeneic, Open Approach

0FYG0Z1 Transplantation of Pancreas, Syngeneic, Open Approach

Allogeneic Pancreas

CPT:

48550 Donor pancreatectomy (including cold preservation), with or without duodenal segment for transplantation

48551 Backbench standard preparation of cadaver donor pancreas allograft prior to transplantation, including dissection of allograft from surrounding soft tissues, splenectomy, duodenotomy, ligation of bile duct, ligation of mesenteric vessels, and Y-graft arterial anastomoses from iliac artery to superior mesenteric artery and to splenic artery

48552 Backbench reconstruction of cadaver donor pancreas allograft prior to transplantation, venous anastomosis, each

48554 Transplantation of pancreatic allograft

HCPCS:

S2065 Simultaneous pancreas kidney transplantation

ICD-9 Procedure:

00.91 Transplant from live related donor

00.92 Transplant from live non-related donor

00.93 Transplant from cadaver

52.6 Total pancreatectomy

52.80 Pancreatic transplant, not otherwise specified

52.81 Reimplantation of pancreatic tissue

52.82 Homotransplant of pancreas

52.83 Heterotransplant of pancreas

ICD-10 Procedure:

0FYG0Z0 Transplantation of Pancreas, Allogeneic, Open Approach

0FYG0Z1 Transplantation of Pancreas, Syngeneic, Open Approach

Liver

CPT:

47133 Donor hepatectomy (including cold preservation), from cadaver donor

47135 Liver allotransplantation; orthotopic, partial or whole, from cadaver or living donor, any age

47136 Liver allotransplantation; heterotopic, partial or whole, from cadaver or living donor, any age

47140 Donor hepatectomy (including cold preservation), from living donor; left lateral segment only (segments II and III)

47141 Donor hepatectomy (including cold preservation), from living donor; total left lobectomy (segments II, III and IV)

47142 Donor hepatectomy (including cold preservation), from living donor; total right lobectomy (segments V, VI, VII and VIII)

47143 Backbench standard preparation of cadaver donor whole liver graft prior to allotransplantation, including cholecystectomy, if necessary, and dissection and removal of surrounding soft tissues to prepare the vena cava, portal vein, hepatic artery, and common bile duct for implantation; without trisegment or lobe split

47144 Backbench standard preparation of cadaver donor whole liver graft prior to allotransplantation, including cholecystectomy, if necessary, and dissection and removal of surrounding soft tissues to prepare the vena cava, portal vein, hepatic artery, and common bile duct for implantation; with trisegment split of whole liver graft into 2 partial liver grafts (ie, left lateral segment [segments II and III] and right trisegment [segments I and IV through VIII])

47145 Backbench standard preparation of cadaver donor whole liver graft prior to allotransplantation, including cholecystectomy, if necessary, and dissection and removal of surrounding soft tissues to prepare the vena cava, portal vein, hepatic artery, and common bile duct for implantation; with lobe split of whole liver graft into 2 partial liver grafts (ie, left lobe [segments II, III, and IV] and right lobe [segments I and V through VIII])

47146 Backbench reconstruction of cadaver or living donor liver graft prior to allotransplantation; venous anastomosis, each

47147 Backbench reconstruction of cadaver or living donor liver graft prior to allotransplantation; arterial anastomosis, each

ICD-9 Procedure:

00.91 Transplant from live related donor
00.92 Transplant from live non-related donor
00.93 Transplant from cadaver
50.51 Auxiliary liver transplant
50.59 Other transplant of liver

ICD-10 Procedure:

0FY00Z0 Transplantation of Liver, Allogeneic, Open Approach
0FY00Z1 Transplantation of Liver, Syngeneic, Open Approach

**Policy
History:**

Developed June 12, 2013

Most recent history:
Revised June 11, 2014

**Cross
Reference:**

Islet Transplantation, IV-09
Ventricular Assist Devices and Total Artificial Hearts, IV-86

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