Medical Management

Medical Management Policy:

Policy Title: Intestinal Transplant
Policy Number: F.16

Primary Department: Medical Management

Affiliated Department(s): N/A

NCQA Standard: N/A

URAC Standard: N/A

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Effective Date: 06/24/2011

Next Review Date: 06/2015


Special Instructions Alert:

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<th>State/Program</th>
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Policy:

Meridian Health Plan covers intestinal transplantation for the purpose of restoring intestinal function in patients with irreversible intestinal failure. Intestinal failure is defined as the loss of absorptive capacity of the small bowel secondary to severe primary gastrointestinal disease or surgically induced short bowel syndrome. Short bowel syndrome occurs after surgery or congenitally when the patient is left with < 200 cm of functional small intestine. Patients at greatest nutritional risk generally have a duodenostomy or a jejunoileal anastomosis with < 35 cm of residual small intestine, jejunoileal or ileocolic anastomosis with < 60 cm of residual small intestine, or an end jejunostomy with < 115 cm of residual small intestine. It may be associated with both mortality and profound morbidity. Restoration of intestinal continuity, such as reanastomosis of small intestine with colon, should be performed whenever possible, because it can be performed with relatively low morbidity and mortality (often with discontinuation of TPN). Other forms of bowel lengthening surgery have significant associated morbidity and mortality, and therefore should be considered only in select patients. The evidence supports the fact that aged patients generally do not survive as well as younger patients receiving intestinal transplantation. Nonetheless, some older patients who are free from other contraindications have received the procedure and are progressing well, as evidenced by the United Network for Organ Sharing (UNOS) data.

It is essential to determine if associated liver pathology exists in patients being evaluated for potential intestinal transplantation; etiologies other than TPN or malabsorption should be considered. Hepatic aminotransferases, total bilirubin, albumin, international normalized ratio, and platelet count should be determined, and liver biopsy should be performed. Portal venous pressure should be measured to exclude portal hypertension, although normal results may be deceiving in patients who have had major intestinal resections, since most
portal inflow will be missing. Patients and their families should meet with a social worker and psychiatrist who understand the complex medical, psychological, and social issues involved with organ transplantation. Living donation should be considered to eliminate waiting time, optimize HLA matching, and simplify coordination of donor-recipient procedures.

**Procedure:**

This procedure is covered only when performed for patients who have irreversible intestinal failure, have failed total parenteral nutrition (TPN) and only when performed in centers that meet approval criteria.

1. **Failed TPN:** TPN failure includes the following:
   a. Impending or overt liver failure due to TPN induced liver injury. The clinical manifestations include elevated serum bilirubin and/or liver enzymes, splenomegaly, thrombocytopenia, gastroesophageal varices, coagulopathy, stomal bleeding or hepatic fibrosis/cirrhosis.
   b. Thrombosis of the major central venous channels; jugular, subclavian, and femoral veins. Thrombosis of two or more of these vessels is considered a life threatening complication and failure of TPN therapy. The sequelae of central venous thrombosis are lack of access for TPN infusion, fatal sepsis due to infected thrombi, pulmonary embolism, Superior Vena Cava syndrome, or chronic venous insufficiency.
   c. Frequent line infection and sepsis. The development of two or more episodes of systemic sepsis secondary to line infection per year that requires hospitalization indicates failure of TPN therapy. A single episode of line related fungemia, septic shock and/or Acute Respiratory Distress Syndrome are considered indicators of TPN failure.
   d. Frequent episodes of severe dehydration despite intravenous fluid supplement in addition to TPN. Under certain medical conditions such as secretory diarrhea and non-constructable gastrointestinal tract, the loss of the gastrointestinal and pancreatobiliary secretions exceeds the maximum intravenous infusion rates that can be tolerated by the cardiopulmonary system. Frequent episodes of dehydration are deleterious to all body organs particularly kidneys and the central nervous system with the development of multiple kidney stones, renal failure, and permanent brain damage.

**Contraindications**

1. Systemic and untreated local infections (bacterial, fungal, viral).
2. Malignancy within 5 years of consideration for transplant
3. Systemic diseases affecting multiple organ systems, including but not limited to:
   A. Scleroderma
   B. Amyloidosis
   C. Diffuse atheromatous disease
4. History of noncompliance with medical management
5. Multisystem organ failure
6. Cerebral edema
7. Severe cardiac and/or pulmonary disease
8. **Absence of HIV infection, as defined by all of the following:**
   A. CD4 count greater than 200 cells/mm3 for more than 6 months; and
   B. HIV-1 RNA (viral load) undetectable; and
   C. On stable anti-viral therapy for more than 3 months; and
   D. No other complications from AIDS, such as opportunistic infection (e.g., aspergillus, coccidiomycosis, resistant fungal infections, tuberculosis), Kaposi’s sarcoma or other neoplasm
9. Active tobacco, drug or alcohol abuse within past 6 months
10. Unresolved psychosocial issues

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1 (Ward, Slutsker, Buehler, Jaffe, Berkelman, & Curran, 1992)

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11. Abdominal wall defects that would complicate closure
12. Advanced neurological disorders
13. Concurrent GI disorders (diverticulitis, bleeding peptic ulcer)

Preoperative evaluation
1. Blood group and HLA typing
2. CBC, LFT’s, Renal profile, coagulation profile
3. Serologic testing: CMV, EBV, Hepatitis (A,B and C), HIV
4. Radiographic evaluation of the bowel to determine bowel length and function
5. Duplex Doppler sonography of intraabdominal vascular system (abdominal aorta, superior mesenteric artery, portal vein, superior mesenteric vein).
6. Psychological evaluation to assess behavioral or psychiatric disorders likely to compromise adherence to strict medical regimens and post-transplant follow-up.
7. Social work evaluation to confirm adequate family/social support post-transplant
8. Nutritional consult to confirm TPN failure
9. Evidence of non-tobacco use for continuous period by regular (at least monthly) cotinine levels.
10. If there is a prior history of illicit drug use, at least 6 months of regularly negative drug screens done monthly must be provided.

Administrative
1. Member must demonstrate compliance with all medical care and medications to be eligible for transplant.
2. If member qualifies for another governmental agency program such as Medicare or CSHCS, the member must apply and demonstrate a written copy of non-eligibility from the governmental agency prior to MHP’s ability to cover the service.

Special Instructions:
Medicaid/All: Member must be in Compliance with MHP’s Member Compliance Medical Policy (I.7)

Medicaid/Iowa: Intestinal transplantation is not a covered service provided by Meridian Health Plan of Iowa.

Medicare/All: Intestinal transplantation is covered by Medicare if performed in an approved facility. The criteria for approval of centers will be based on a volume of 10 intestinal transplants per year with a 1-year survival of 65 percent using the Kaplan-Meier technique.

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Approved by: _____________________________
Corporate Chief Operating Officer

Date: 06/27/2014

Reviewed and approved by Medical Policy and Procedures Committee: Date: 05/16/2014

Reviewed and approved by Medical Policy Operations Committee: Date: 06/13/2014

Reviewed and approved by Physician Advisory Committee: Date: 06/27/2014

Reviewed and approved by Corporate Compliance Committee: Date: 08/28/2014
References:

3. Troppmann C and Guessner RWG. Surgical Treatment: Evidence Based and Problem Oriented (Chapter on Intestinal Transplantation). 2001
13. Michigan Department of Community Health, Medicaid Provider Manual- Hospital, Sec. 3.22, p. 24-26 (Version Date April 1, 2013)