Cohere Medicare Advantage Policy - Tarsometatarsal Arthrodesis

Clinical Policy for Medical Necessity Review

Version: 3
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Important Notices

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Policy Information:

Specialty Area: Disorders of the Musculoskeletal System
Policy Name: Cohere Medicare Advantage Policy - Tarsometatarsal Arthrodesis
Type: [**X**] Adult (18+ yo) | [**X**] Pediatric (0-17 yo)

Table of Contents

Medical Necessity Criteria

Service: Tarsometatarsal Arthrodesis

Related CMS Documents

Please refer to the CMS Medicare Coverage Database for the most current applicable CMS National Coverage.

- There are no applicable NCDs or LCDs for tarsometatarsal arthrodesis.

Description

Tarsometatarsal (TMT) arthrodesis is a minimally invasive procedure that involves the surgical fusion of the tarsal bones (calcaneus, talus, cuboid, navicular, and cuneiform bones) with the metatarsal bones (the long bones that connect the toes to the rest of the foot). The goal of the procedure is to eliminate movement and pain in the affected joints by fusing the bones together. This is typically achieved through the use of internal fixation devices such as screws, plates, or rods.[1-2]

Medical Necessity Criteria

Indications

Tarsometatarsal arthrodesis is considered appropriate if **ALL** of the following are **TRUE**[1-7]:

- The patient has **ANY** of the following positive findings:
  - Bunion deformity and **ALL** of the following:
    - Persistent pain; **AND**
    - Difficulty walking; **OR**
  - Documented hypermobility of the first TMT joint suggested by greater than 10mm of total sagittal motion; **OR**
  - Painful TMT joint with tenderness on exam; **OR**
  - Hindfoot deformity or arthrosis and triple arthrodesis indicated; **AND**

- Failure of conservative management for greater than 3 months, including **ALL** of the following:
  - Anti-inflammatory medications, non-opioid analgesics, or prescription medications (e.g., oral steroids, neuropathic pain medications) if not contraindicated; **AND**
  - Physical therapy, including a physician-directed home exercise program; **AND**
  - **ANY** of the following:
    - Corticosteroid injection if medically appropriate; **OR**
    - Documentation that corticosteroid injection is contraindicated; **OR**
    - Shoe modification; **OR**
    - Splinting or padding; **OR**
    - Orthotics; **AND**
- Radiographic confirmation with report (must be weight-bearing radiographs of the foot) of **ANY** of the following[8]:
  - Intermetatarsal (IM) angle greater than 15 degrees[3]; **OR**
  - Advanced osteoarthritis of the tarsometatarsal (TMT) joint (e.g., joint space narrowing, osteophyte formation, subchondral cysts)[9]; **OR**
  - Traumatic disruption of the TMT articulation.

Non-Indications

Tarsometatarsal arthrodesis is not considered appropriate if **ANY** of the following is **TRUE**[2,10]:

- The patient has not reached skeletal maturity; **OR**
- Inadequate blood supply that could prevent healing; **OR**
- The presence of active, untreated infection at the surgical site; **OR**
- Significant bone loss with shortening of the foot rays that requires bone block fusion.

Definitions

None applicable

Level of Care Criteria

Inpatient or Outpatient

Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description
28297	Correction, hallux valgus (bunionectomy), with sesamoidectomy, when performed; with first metatarsal and medial cuneiform joint arthrodesis, any method
28730	Arthrodesis, midtarsal or tarsometatarsal, multiple or transverse
28735	Arthrodesis, midtarsal or tarsometatarsal, multiple or transverse; with osteotomy (e.g., flatfoot correction)
28740	Arthrodesis, midtarsal or tarsometatarsal, single joint

Disclaimer: S Codes are non-covered per CMS guidelines due to their experimental or investigational nature.

Evaluation of Clinical Harms and Benefits

Clinical determinations for Medicare Advantage beneficiaries are made in accordance with 42 CFR 422.101 guidance outlining CMS' required approach to decision hierarchy in the setting of NCDs/LCDs identified as being "not fully established". When clinical coverage criteria are "not fully established" Medicare Advantage organizations are instructed to create publicly accessible clinical coverage criteria based on widely-accepted clinical guidelines and/or scientific studies backed by a robust clinical evidence base. Clinical coverage criteria provided by Cohere Health in this manner include coverage rationale and risk/benefit analysis.

The potential clinical harms of using these criteria for tarsometatarsal arthrodesis may include:

- Adverse effects from delayed or denied treatment, which include nerve damage, osteoarthritis, worsening of chronic pain, worsening deformity, and increased fall risk.[11]
- Inherent surgical complications include but are not limited to standard risks of anesthesia, infection, and iatrogenic injury.
- Surgical complications specific to this procedure include but are not limited to nonunion, malunion, hardware issues, compensatory joint arthrosis, peripheral nerve damage, and recurrent or malaligned deformities.[12]

The clinical benefits of using these criteria include:

- Improved patient selection for tarsometatarsal arthrodesis resulting in better long-term outcomes including pain relief, improved stability, and increased quality of life for individuals with painful or unstable tarsometatarsal joints. The procedure effectively stabilizes the joint, reducing pain and allowing for greater weight-bearing and activity.[13]
- Maintenance of rigorous patient safety standards aligned to best available evidence.
- Appropriate allocation of healthcare resources at the individual beneficiary and population levels.

Medical Evidence

Schwartz et al. (2024) conducted a two-part, randomized, double-blind, active-controlled trial. The study examined the efficacy, safety, and how liposomal bupivacaine (LB) works in the body when given through ultrasound-guided sciatic nerve block in the popliteal fossa during bunionectomy surgery. In part A, patients were randomized 1:1:1 into 3 groups: LB 266 mg, LB 133 mg, or bupivacaine hydrochloride 50 mg (BUPI). Part B participants were randomized 1:1 to LB (at the dose established by part A) or to the BUPI group. When administered via sciatic nerve block in the popliteal fossa following a bunionectomy, LB 133 mg demonstrated superior pain management compared to BUPI. Patients experienced a decrease in pain levels and opioid usage for up to 4 days post-surgery, with a notably higher proportion of participants abstaining from opioids.[4]

Ilfeld et al. (2021) performed a randomized controlled trial (RCT) to determine the impact of percutaneous peripheral nerve stimulation on postoperative pain levels and opioid usage. Study participants included patients undergoing foot, ankle, knee, or shoulder surgeries. Each patient received percutaneous peripheral nerve stimulation preoperatively, followed by a single injection of long-acting local anesthetic along the same nerve. Postoperatively, patients were randomized into groups receiving active or sham stimulation for 14 days. The primary outcome measures were opioid consumption and pain scores within the first 7 postoperative days. Results showed that participants receiving active stimulation had significantly lower opioid consumption and pain scores compared to those receiving sham treatment. The authors concluded that percutaneous peripheral nerve stimulation effectively reduced pain and opioid usage after ambulatory orthopedic surgery without systemic side effects.[5]

Stødle et al. (2020) conducted an RCT to evaluate primary arthrodesis of the first tarsometatarsal (TMT) joint compared to temporary bridge plating for managing unstable Lisfranc injuries. This study compared primary arthrodesis (PA) and temporary bridge plate (BP) treatments for Lisfranc injuries. A total

of 48 patients were followed for 2 years. 24 patients were randomized to primary arthrodesis (PA) of the medial 3 TMT joints, whereas 24 patients were randomized to temporary bridge plate (BP) over the first TMT joint and primary arthrodesis of the second and third TMT joints. PA involved fusing the medial 3 TMT joints, while BP involved placing a plate over the first TMT joint and fusing the second and third TMT joints. The main outcome measured was the American Orthopaedic Foot & Ankle Society (AOFAS) midfoot scale, with secondary measures including SF-36, VAS pain scores, and radiographic assessments. Results showed no significant difference in AOFAS scores between groups, but authors noted better alignment of the first metatarsal in the BP group. Overall, favorable outcomes were observed for both treatments.[6]

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Clinical Guideline Revision History/Information

Original Date: May 27, 2024		
Review History		
Version 2	06/10/2024	422.101 Disclaimer added
Version 3	05/22/2025	Annual Review. References added Harms and Benefits section revised Clarified conservative care language Removed nonindication regarding deformity related to Lisfranc arthritis