Subject: Foot Surgery Guidelines for Deformities of the Toes [Bunion, Hammertoe, Hallux Rigidus]		Original Effective Date: 4/5/21
Policy Number: MCP-401	**Revision Date(s):**	
MCPC Approval Date: 4/5/21	**Review Date: 6/29/21**	

Contents

DISCLAIMER

This Molina clinical policy is intended to facilitate the Utilization Management process. It expresses Molina's determination as to whether certain services or supplies are medically necessary, experimental, investigational, or cosmetic for purposes of determining appropriateness of payment. The conclusion that a particular service or supply is medically necessary does not constitute a representation or warranty that this service or supply is covered (i.e., will be paid for by Molina) for a particular member. The member's benefit plan determines coverage. Each benefit plan defines which services are covered, which are excluded, and which are subject to dollar caps or other limits. Members and their providers will need to consult the member's benefit plan to determine if there are any exclusion(s) or other benefit limitations applicable to this service or supply. If there is a discrepancy between this policy and a member's plan of benefits, the benefits plan will govern. In addition, coverage may be mandated by applicable legal requirements of a State, the Federal government or CMS for Medicare and Medicaid members. CMS's Coverage Database can be found on the CMS website. The coverage directive(s) and criteria from an existing National Coverage Determination (NCD) or Local Coverage Determination (LCD) will supersede the contents of this Molina clinical policy document and provide the directive for all Medicare members.[1]

DESCRIPTION OF PROCEDURE/SERVICE/PHARMACEUTICAL

This policy addresses miscellaneous foot surgery done to correct certain foot deformities such as hammertoe, hallux rigidus, and poor alignment of the big toe caused by a Tailors bunion or bunionette.

Hallux rigidus is a painful arthritis of the first metatarsophalangeal joint (big toe), which can cause stiffness and progressive loss of motion. It is the most common arthritic condition of the foot. The first metatarsophalangeal joint develops progressive degenerative changes resulting in pain, inflammation, and limited motion. The condition is more prevalent in females than males and has an average age of onset of about 50 years. Over 95% of patients have it bilaterally and two thirds have a positive family history. Arthrodesis is the most common treatment for patients with advanced hallux rigidus but carries additional risks including the potential for loss of foot function and joint motion, diminished gait efficiency, failure of fixation, nonunion, and transfer metatarsalgia. Hallux limitus is the earlier stage of hallux rigidus and movement of the big toe is only somewhat affected. Generally conservative measures can often relieve pain and improve function.

Hallux valgus is a common deformity of the big toe characterized by a lateral deviation of the proximal phalanx at the level of the metatarsal joint. It is frequently associated with a concomitant medial (varus) deviation of the first metatarsal. The result is a bony prominence or "bump" on the medial side of the first metarsophalangeal joint. This is often referred to as a "bunion" and may be associated with soft tissue swelling and pain. In addition, the articular surface of the first metatarsal may have a valgus (lateral) inclination also contributing to the deformity. As the deformity progresses the sesamoid complex will shift laterally aided by the deforming force of the adductor tendon and the lateral capsule tightens while the medial side attenuates. When conservative management fails, the surgical correction of bony and/or soft tissue hallux valgus is often performed, and over 100 different surgical techniques have been described in the literature. Surgical procedures for hallux valgus include simple bunionectomy, various soft tissue procedures, metatarsal and phalangeal osteotomies, resection arthroplasty and metatarsophalangeal arthrodesis.

Bunionette deformity, also known as Tailor's bunion, involves the fifth metatarsal head with a painful lateral bony prominence. It is often associated with constrictive footwear causing pain, inflammation, keratosis, and ulceration. When conservative management fails, surgical methods include condylar excision, proximal or distal osteotomies.

Hammer toe is characterized by flexion deformity of the proximal interphalangeal joint of one or more of the lesser four toes. In severe or chronic conditions, it may be associated with either flexion or extension of the distal interphalangeal or hyperextension of the metatarsophalangeal joint. The most commonly affected toe is the second, although multiple toes can be involved. Hammer toes are considered flexible if passively correctable or rigid if not correctable to the neutral position.

Several procedures are typically done to correct these deformities in an ambulatory or out-patient setting by an orthopedist foot/ankle surgeon or podiatrist.

POSITION STATEMENT

This policy addresses foot surgery done to correct certain foot deformities such as hammertoe, hallux rigidus, hallux limitus, and poor alignment of the big toe caused by a Tailors bunion or bunionette.

CLINICAL CRITERIA [2-31 32-37]

1. **Hammertoe:** Hammertoe deformity surgery may be considered medically necessary in skeletally mature individuals when ALL of the following criteria are met:
   - ❑ Age 18 or older; and
   - ❑ Diagnosis of hammertoe with clinical evidence of one of the following conditions: [ONE]
     - o Adventitious bursitis on the dorsal surface of the hammertoe; or

- Ankylosis of the distal interphalangeal (DIP) joint or proximal interphalangeal (PIP) joint; or
- Inter-digital neuroma caused by the deformity; or
- Lateral metatarsophalangeal (MTP) capsular tear caused by the deformity; or
- Painful nail conditions secondary to persistent trauma; or
- Presence of co-existing or causative conditions (e.g., tendon contracture) that need repair; or
- Subluxation or dislocation of the MTP joint; or
- Synovitis/capsulitis of the MTP joint; or
- Ulceration of the apices

❑ Documentation of adequate lower extremity vascular perfusion (e.g., strong, palpable pedal pulses); and
❑ Radiographic confirmation of a hammer toe, claw toe, or mallet toe; and
❑ Significant pain and functional impairment that persists after at least 3 months of conservative therapy or non-healing ulcer attributed to the lesser toe deformity that includes: [TWO]
- Corticosteroid injections
- Debridement of associated hyperkeratotic lesions (e.g., corns, calluses)
- Foot orthotics (e.g., adaptive footwear such as shoe inserts, footgear
- modifications, corrective splinting)/orthopedic shoes (i.e., wide/deep toe box)
- Oral analgesics and/or nonsteroidal anti-inflammatory drugs (NSAIDs)
- Protective padding
- Taping or adhesive devices

❑ Fixation implants are considered experimental, investigational or unproven due to insufficient evidence in the peer reviewed literature of efficacy and safety

2. **Hallux Rigidus-Limitus:** Hallux Rigidus-Limitus deformity surgery may be considered medically necessary in skeletally mature patients when ALL of the following requirements are met: [ALL]
❑ Age 18 years or older; and
❑ Diagnosis of Hallux rigidus-limitus; and
❑ Presence of ONE of the following: [ONE]
- Severe hallux rigidus confirmed by radiography includes the following findings: [BOTH]
  - Marked osteophyte formation and loss of the joint space, cystic changes with or without subchondral sclerosis; and
  - Nearly constant pain, pain throughout the range of motion including midrange; or
- Moderate hallux rigidus confirmed by radiography with excessive (hyper) mobility of the first metatarsophalangeal joint includes the following findings: [BOTH]
  - Moderate osteophyte formation and joint space narrowing; subchondral sclerosis
  - Moderate-to-severe pain constant at the extremes of motion, moderate-to-severe stiffness; or
- Failed prior hallux valgus/rigidus surgery: (applicable to first metatarsophalangeal joint arthrodesis procedure only, not applicable to cheilectomy or osteotomy)

❑ Limited and/or painful range of motion first metarsophalangeal joint with findings that include: [ONE]
- Extension or dorsiflexion < 25 degrees, or
- Palpable dorsal osteophytes; and

❑ Significant pain and functional impairment of the first metatarsophalangeal joint that persists after failed prior first metatarsophalangeal surgery or after at least 3 months of conservative management that includes: [TWO]
- Alternative or modified footwear
- Corticosteroid injections
- Debridement of associated hyperkeratotic lesions (e.g., corns, calluses)
- Foot orthotics (e.g., adaptive footwear such as shoe inserts, footgear

- modifications, corrective splinting)
- Oral analgesics or nonsteroidal anti-inflammatory drugs (NSAIDS)
- Protective cushions/pads
- Taping or adhesive devices

❑ Documentation of adequate lower extremity vascular perfusion (e.g., strong, palpable pedal pulses)

3. **Tailors Bunion or Bunionette:** Hallux valgus or bunionette deformity surgery may be considered medically necessary skeletally mature patients when ALL of the following requirements are met:

❑ Age 18 years or older; and

❑ Diagnosis of any of the following: [ONE]

- Ulceration at metatarsophalangeal joint; or
- Nonhealing ulcer at the sole of the foot or the second toe; or
- Inability to accommodate or modify footwear to control pain; or
- Avulsion fracture of proximal phalanx; or
- Malunion or nonunion of prior surgery; and

❑ Significant pain and functional limitation of the first or fifth metatarsophalangeal joint that persists after at least 3 months of conservative management; that includes two of the following: [TWO]

- Alternative or modified footwear
- Corticosteroid injections
- Debridement of associated hyperkeratotic lesions (e.g., corns, calluses)
- Foot orthotics (e.g., adaptive footwear such as shoe inserts, footgear
- modifications, corrective splinting)
- Oral analgesics or nonsteroidal anti-inflammatory drugs (NSAIDS)
- Protective cushions/pads
- Taping or adhesive devices

❑ Radiographic confirmation of a hallux valgus angle (HVA) or metatarsophalangeal angle greater than 15 degrees or an intermetatarsal angle greater than 9 degrees; and

❑ Documentation of adequate lower extremity vascular perfusion (e.g., strong, palpable pedal pulses)

CONTINUATION OF THERAPY

N/A

LIMITATIONS [32-37]

The following clinical conditions and treatments are considered not medically necessary that include but are not limited to the following: [ALL]

❑ Asymptomatic hallux valgus, hallux rigidus-limitus or bunionette deformity
❑ Surgical intervention solely for cosmetic purposes
❑ Implant arthroplasty

Contraindications to any of the above surgery include but are not limited to all of the following: [ALL]

❑ Active infection of the joint
❑ Active systemic bacteremia
❑ Active skin infection
❑ Inadequate bone stock for osteotomy or arthrodesis

- ❑ Poor wound healing
- ❑ Peripheral vascular disease with non-healing ulcerative wounds

SUMMARY OF MEDICAL EVIDENCE [2-31]

The peer reviewed literature describes many different procedures for the correction of hammertoe, hallux rigidus, and Tailor's bunionette deformities and there is an abundance of clinical review studies, guidelines and various position statements and other publications available. Randomized controlled trials comparing the various techniques to correct the deformities are lacking. The relevant meta-analysis, systematic reviews and case series are outlined below:

Hallux Rigidus:

Harshadkumer P et al.; (2019) performed a systematic review was to investigate clinical outcomes and complications following interposition arthroplasty for moderate to severe hallux rigidus, for patients who would prefer to maintain range of motion in the MTP joint. A systematic search on MEDLINE, EMBASE and Cochrane library database was performed during February 2018. Demographics, surgical techniques, clinical outcomes, radiological outcomes and complications were recorded from each included study. Pooled statistics performed for variables with homogenous data across the studies. A linear regression model used to compare the clinical outcomes between autogenous vs allogenous material interposition arthroplasty. Fifteen articles were included in the systematic review. Mean AOFAS scores improved from preoperative 41.35 to postoperative 83.17. Mean pain, function, and alignment score improved from preoperative values of 14.9, 24.9, and 10 to postoperative values of 33.3, 35.8, and 14.5. Mean dorsiflexion increased from 21.27° (5-30) to 42.03° (25-71). Mean ROM improved from 21.06° to 46.43°. Joint space increased from 0.8mm to 2.5mm. The most common postoperative complications included metatarsalgia (13.9%), loss of ground contact (9.7%), osteonecrosis (5.4%), great toe weakness (4.8%), hypoesthesia (4.2%), decreased push off power (4.2%), and callous formation (4.2%). The authors concluded that interposition arthroplasty is an effective treatment option with acceptable clinical outcomes in patients with moderate-severe hallux rigidus who prefer to maintain range of motion and accept the risk of future complications, although arthrodesis of MTP joint is the gold standard treatment. [14]

Maffulli N et al.; (2011) performed a systematic review to assess whether benefits from surgery, validated and standardized measures should be used to compare the outcomes of patients undergoing standard surgical procedures. Surgical techniques for the management of hallux rigidus include cheilectomy, Keller resection arthroplasty, arthrodesis, Silastic implantation, phalangeal or metatarsal osteotomy, capsular arthroplasty, partial or total joint replacement, interposition arthroplasty. However, the optimal management is controversial. A comprehensive systematic review was perfromed of CINAHL, Embase, Medline and the Cochrane Central Registry of Controlled Trials, from inception of the database to 2 November 2010. Sixty-nine articles published in peer reviewed journals were included in this comprehensive review. Cheilectomy and first metatarsal or phalangeal corrective osteotomy may provide better outcome for patients with early and intermediate hallux rigidus (Stages I-II), while arthrodesis or arthroplasty are indicated to manage more severe conditions. The Coleman Methodology Score showed great heterogeneity in terms of study design, patient characteristics, management methods and outcome assessment and generally low methodological quality. The authors concluded that definitive conclusions on the use of these techniques for routine management of patients with hallux rigidus are not possible. Given the limitations of the published literature, especially the extensive clinical heterogeneity, it is not possible to compare outcomes of patients undergoing different surgical procedures and determine clear guidelines. There is a need to perform appropriately powered randomized clinical trials of using standard diagnostic assessment, common and validated scoring system comparing reported outcomes and duration of follow-up >2 years. [16]

Hallux Valgus (Cochrane Review)

Ferrari et al. (2004) performed a Cochrane review to identify and evaluate the evidence from randomised trials of interventions used to correct hallux valgus. Randomised or quasi-randomised trials of both conservative and surgical treatments of hallux valgus. Excluded were studies comparing areas of surgery not specific to the control of the deformity such as use of anesthetics or tourniquet placement. The methodological quality of the 21 included trials was generally poor and trial sizes were small. Three trials involving 332 participants evaluated conservative treatments versus no treatment. There was no evidence of a difference in outcomes between treatment and no treatment. One good quality trial involving 140 participants compared surgery to conservative treatment. Evidence was shown of an improvement in all outcomes in patients receiving chevron osteotomy compared with those receiving orthoses. The same trial also compared surgery to no treatment in 140 participants. Evidence was shown of an improvement in all outcomes in patients receiving chevron osteotomy compared with those receiving no treatment. Two trials involving 133 people with hallux valgus compared Keller's arthroplasty with other surgical techniques. In general, there was no advantage or disadvantage using Keller's over the other techniques. When the distal osteotomy was compared to Keller's arthroplasty, the osteotomy showed evidence of improving the intermetatarsal angle and preserving joint range of motion. The arthroplasty was found to have less of an impact on walking ability compared to the arthrodesis. Six trials involving 309 participants compared chevron (and chevron-type) osteotomy with other techniques. The chevron osteotomy offered no advantages in these trials. For some outcomes, other techniques gave better results. Two of these trials (94 participants) compared a type of proximal osteotomy to a proximal chevron osteotomy and found no evidence of a difference in outcomes between techniques. Three trials involving 157 participants compared outcomes between original operations and surgeon's adaptations. There was no advantage found for any of the adaptations. Three trials involving 71 people with hallux valgus compared new methods of fixation to traditional methods. There was no evidence that the new methods of fixation were detrimental to the outcome of the patients. Four trials involving 162 participants evaluated methods of post-operative rehabilitation. The use of continuous passive motion appeared to give an improved range of motion and earlier recovery following surgery. Early weightbearing or the use of a crepe bandage were not found to be detrimental to final outcome. The reviewers concluded that only a few studies had considered conservative treatments. The evidence from these suggested that orthoses and night splints did not appear to be any more beneficial in improving outcomes than no treatment. Surgery (chevron osteotomy) was shown to be beneficial compared to orthoses or no treatment, but when compared to other osteotomies, no technique was shown to be superior to any other. Only one trial had compared an osteotomy to an arthroplasty. There was limited evidence to suggest that the osteotomy gat the osteotomy gave the better outcomes. It was notable that the numbers of participants in some trials remaining dissatisfied at follow-up were consistently high (25 to 33%), even when the hallux valgus angle and pain had improved. A few of the more recent trials used assessment scores that combine several aspects of the patients outcomes. These scoring systems are useful to the clinician when comparing techniques but are of dubious relevance to the patient if they do not address their main concern and such scoring systems are frequently unvalidated. Only one study simply asked the patient if they were better than before the treatment. Final outcomes were most frequently measured at one year, with a few trials maintaining follow-up for 3 years. Such time-scales are minimal given that the patients will be on their feet for at least another 20-30 years after treatment. Future research should include patient-focused outcomes, standardized assessment criteria and longer surveillance periods, more usefully in the region of 5-10 years. [11]

Hammertoe

Wei et al (2020) performed a systematic review is to compare the surgical outcomes of K-wires versus novel internal fixation devices in PIPJ arthrodesis in claw/hammer toe surgery. The databases searched were PubMed, Scopus, Cochrane, and Embase with keywords "claw toe OR hammer toe" AND "proximal interphalangeal OR PIP" AND "fusion OR arthrodesis." Clinical trials published in English with evidence levels I, II, and III were included. Five studies, including one randomized controlled trial and four case-controlled studies, were identified to meet the inclusion criteria. The authors concluded that overall, the studies showed promising results in union rates using the novel internal devices

compared to K-wires. However, the novel internal devices seem not to present advantages in clinical parameters such as pain levels, patient satisfaction, foot-related function, or surgical complication rates. [31]

Lehman D et al (1995) examined a single case series of 76 consecutive patients (100 feet) treated by a single surgeon for both flexible and rigid hammertoes with a PIP arthrodesis using custom-machined drills, a peg cutter, and hole cutter, combined with an extensor tenotomy and dorsal capsulotomy. Forty-eight percent of patients were defined as satisfied without reservation, 37% were defined as satisfied with reservations, and 15% were defined as dissatisfied. The incidence of radiographic fusion was 95% (130/137 toes). The most common reasons for either reservation or dissatisfaction included incomplete pain relief, residual toe angulation, and prolonged shoe wear restriction in the postoperative period. Based upon the results of this study, the authors concluded that when using a peg and socket arthrodesis for hammertoe correction (1) there is a 95% rate of radiographic fusion, (2) patients over 65 years old be alerted to a diminished rate of satisfaction, and (3) a distal flexor tenotomy be considered in patients with a preoperative DIP flexion contracture. [15]

Tailors Bunion

Martijin H et al (2018) performed a meta-analysis to assess which type of osteotomy would be most suited for correcting an increased fourth to fifth intermetatarsal angle (IMA) and metatarsophalangeal angle (MPA) and would have the best results regarding the clinical condition and satisfaction. The study design was a systematic review and meta-analysis. The main outcome measures were the IMA, MPA, and American Orthopaedic Foot and Ankle Society Lesser Metatarsophalangeal-Interphalangeal scale and satisfaction scores. A systematic search was performed in Medline, Embase, Cochrane, SPORTdiscus, and CINAHL up to September 2016. Prospective and retrospective studies that had evaluated the outcomes of fifth metatarsal osteotomies to correct a bunionette deformity at all patient ages were included. The outcomes were determined from clinical or radiographic evaluations. The search yielded 28 studies suitable for inclusion in our meta-analysis. All groups of osteotomies achieved significant IMA changes, with proximal osteotomies resulting in significantly greater changes than diaphyseal or distal osteotomies. The overall effect of osteotomies on the MPA was of a significant reduction. Proximal and diaphyseal osteotomies both resulted in significant differences in MPA correction compared with distal osteotomies. The incidence of major complications was the least in the distal osteotomy group. The overall mean success rate of bunionette surgery was 93%. The patients were most satisfied with proximal osteotomies, followed by distal and diaphyseal osteotomies (100% and 92%, respectively). In conclusion, every type of osteotomy has the capability of significantly reducing the fourth to fifth IMA and MPA. The fewest complications occurred with distal osteotomies, and the greatest satisfaction score was achieved with proximal osteotomies. However, only 1 study evaluated these results for proximal osteotomies. The authors concluded that distal osteotomies resulted in a high satisfaction rate and were the most represented osteotomy in our meta-analysis. Thus, when major IMA and MPA reduction is not required, the distal osteotomy could be the treatment of choice owing to its low complication rate. [18]

PROFESSIONAL SOCIETY GUIDELINES [33]

American College of Foot and Ankle Surgeons (ACFAS). Clinical Practice Guideline. (2009):

Hammertoe and Hallux Rigidus:

Symptomatic digital deformities may be treated nonsurgically or surgically, depending on multiple factors. These include degree of deformity, duration and severity of symptoms previous treatment, associated medical conditions, and ability to perform work duties comfortably. Nonsurgical treatment is often the initial treatment choice for the symptomatic digital deformity. Various padding techniques exist, serving to cushion or offload pressure points that may involve both the affected toe(s) as well as its respective metatarsal head plantarly. Orthotic devices or shoe insole modifications using a metatarsal pad may offer relief of excessive metatarsal head pressures. Debridement of associated hyperkeratotic lesions usually is effective in helping to reduce symptoms. If local inflammation or bursitis exists, a corticosteroid injection into

the affected area may be beneficial. Taping to reduce and splint flexible deformities may be performed, especially in the setting of an early crossover second toe deformity. Lastly, footwear changes such as a wider and/or deeper toe box may be used to accommodate the deformity and decrease shoe pressure over osseous prominences. When the deformity is manually reducible, tenotomy or tendon lengthening at the level of the MPJ, PIPJ, or DIPJ may be sufficient for deformity correction; however, this may require combining with capsular and/or ligamentous release (or reefing), especially at the level of the MPJ. In some cases, phalangeal head resection (partial or complete) and/or flexor tendon transfer also may be necessary. Surgical treatment of a hammertoe deformity depends on the flexibility and severity of the flexion deformity along with associated pathology and can require single or multiple procedures for correction. Hammertoe procedures include arthrodesis, joint arthroplasty, tendon transfer, lengthening or tenotomy, joint capsulotomy, and soft tissue releases (Thomas et al., J. American College of Foot and Ankle Surgeons (ACFAS). Clinical Practice Guideline. Foot Ankle Surg 2009, 48: 230-8).

Tailor's Bunion

Nonsurgical treatment of tailor's bunion deformity is centered on alleviating pressure and irritation over the fifth metatarsal head. This may be accomplished by footwear modifications and/or padding as well as debridement of associated hyperkeratotic lesions. If an inflamed bursa is present, injection therapy may be indicated. Orthoses and padded insoles also may be beneficial in offloading the symptomatic area or in treating associated hindfoot varus or flatfoot deformity. Anti-inflammatory medication also may be used. Surgical treatment of a tailor's bunion deformity is indicated for patients who have failed nonsurgical care and patients who are not candidates for nonsurgical care. The goal of surgical treatment is to decrease the prominence of the fifth metatarsal laterally. Selection of the surgical procedure is based on the physical evaluation and radiographic assessment. Surgical correction to alleviate the pain at the bone prominence varies from exostectomy to differing types of osteotomies. Resection of the fifth metatarsal head for treatment of tailor's bunion generally is indicated for salvage conditions or in the presence of unreconstructable deformities. (Thomas et al., J American College of Foot and Ankle Surgeons (ACFAS). Clinical Practice Guideline. Foot Ankle Surg 2009, 48: 230-8).

CODING INFORMATION: THE CODES LISTED IN THIS POLICY ARE FOR REFERENCE PURPOSES ONLY. LISTING OF A SERVICE OR DEVICE CODE IN THIS POLICY DOES NOT IMPLY THAT THE SERVICE DESCRIBED BY THIS CODE IS COVERED OR NON-COVERED. COVERAGE IS DETERMINED BY THE BENEFIT DOCUMENT. THIS LIST OF CODES MAY NOT BE ALL INCLUSIVE.

CPT	Description
28110	Ostectomy, partial excision, fifth metatarsal head (bunionette) (separate procedure)
28112	Ostectomy, complete excision; other metatarsal head (second, third or fourth)
28232	Tenotomy, open, tendon flexor; toe, single tendon (separate procedure)
28285	Correction Hammertoe
28286	Correction, cock-up fifth toe, with plastic skin closure (eg, Ruiz-Mora type procedure)
28288	Ostectomy, partial, exostectomy or condylectomy, metatarsal head, each metatarsal head
28289	Hallux rigidus correction with cheilectomy, debridement and capsular release of the first metatarsophalangeal joint; without implant
28291	Hallux rigidus correction with cheilectomy, debridement and capsular release of the first metatarsophalangeal joint; with implant
28292	Correction, hallux valgus (bunionectomy), with sesamoidectomy, when performed; with resection of proximal phalanx base, when performed, any method
28295	Correction, hallux valgus (bunionectomy), with sesamoidectomy, when performed; with proximal metatarsal osteotomy, any method

28297	Correction, hallux valgus (bunionectomy), with sesamoidectomy, when performed; with first metatarsal and medial cuneiform joint arthrodesis, any method
28298	Correction, hallux valgus (bunionectomy), with sesamoidectomy, when performed; with proximal phalanx osteotomy, any method
28299	Correction, hallux valgus (bunionectomy), with sesamoidectomy, when performed; with double osteotomy, any method
28306	Osteotomy, with or without lengthening, shortening or angular correction, metatarsal; first metatarsal
28307	Osteotomy, with or without lengthening, shortening or angular correction, metatarsal; first metatarsal with autograft (other than first toe)
28308	Osteotomy, with or without lengthening, shortening or angular correction, metatarsal; other than first metatarsal, each
28310	Osteotomy, shortening, angular or rotational correction; proximal phalanx, first toe (separate procedure)
28312	Osteotomy, shortening, angular or rotational correction; other phalanges, any toe
28750	Arthrodesis, great toe; metatarsophalangeal joint

HCPCS	Description
	N/A

ICD-10	Description: [For dates of service on or after 10/01/2015]
M20.10	Hallux valgus (acquired), unspecified foot
M20.11	Hallux valgus (acquired), right foot
M20.12	Hallux valgus (acquired), left foot
M20.2	Hallux rigidus
M20.20	Hallux rigidus, unspecified foot
M20.4	Other hammer toe(s) (acquired)
M20.40	Other hammer toe(s) (acquired), unspecified foot
M20.41	Other hammer toe(s) (acquired), right foot
M20.42	Other hammer toe(s) (acquired), left foot
M21.62	Bunionette
M21.621	Bunionette of right foot
M21.622	Bunionette of left foot
M21.629	Bunionette of unspecified foot

REFERENCES

Government Agency

1. Centers for Medicare & Medicaid Services (CMS). Medicare Coverage Database. National coverage determination (NCD) Search. Accessed at: https://www.cms.gov/medicare-coverage-database/new-search/search.aspx

Peer Reviewed Publications

2. Ajis A, Koti M, Maffulli N. Tailor's bunion: a review. J Foot Ankle Surg 2005; 44:236.
3. Baumhauer JF, Singh D, Glazebrook M, et al. Prospective, Randomized, Multi-centered Clinical Trial Assessing Safety and Efficacy of a Synthetic Cartilage Implant Versus First Metatarsophalangeal Arthrodesis in Advanced Hallux Rigidus. Foot Ankle Int 2016; 37:457.

4. Blitz NM, Lee T, Williams K, et al. Early weight bearing after modified lapidus arthodesis: a multicenter review of 80 cases. J Foot Ankle Surg 2010; 49:357.
5. Buciuto R. Prospective randomized study of chevron osteotomy versus Mitchell's osteotomy in hallux valgus. Foot Ankle Int. 2014 Dec;35(12):1268-76.
6. Bus SA, Maas M, Michels RP, Levi M. Role of intrinsic muscle atrophy in the etiology of claw toe deformity in diabetic neuropathy may not be as straightforward as widely believed. Diabetes Care 2009; 32:1063.
7. Caravelli S, et al. Percutaneous treatment of hallux valgus: What's the evidence? A systematic review. Musculoskeletal Surgery 2018;102(2):111-117.
8. Coughlin MJ, Shurnas PS. Hallux rigidus. Grading and long-term results of operative treatment. J Bone Joint Surg Am 2003; 85-A:2072.
9. Dux K, Smith N, Rottier FJ. Outcome after metatarsal osteotomy for hallux valgus: a study of postoperative foot function using revised foot function index short form. J Foot Ankle Surg 2013; 52:422.
10. Faber FW, Mulder PG, Verhaar JA. Role of first ray hypermobility in the outcome of the Hohmann and the Lapidus procedure. A prospective, randomized trial involving one hundred and one feet. J Bone Joint Surg Am 2004; 86-A:486.
11. Ferrari J, Higgins JP, Prior TD. Interventions for treating hallux valgus (abductovalgus) and bunions. Cochrane Database Syst Rev 2004; :CD000964.
12. Giannini S, Faldini C, Nanni M, et al. A minimally invasive technique for surgical treatment of hallux valgus: simple, effective, rapid, inexpensive (SERI). Int Orthop 2013; 37:1805.
13. Grady JF, Axe TM, Zager EJ, Sheldon LA. A retrospective analysis of 772 patients with hallux limitus. J Am Podiatr Med Assoc 2002; 92:102.
14. Hardshadkumar P et al. Is interposition arthroplasty a viable option for treatment of moderate to severe hallux rigidus? - A systematic review and meta-analysis. Foot Ankle Surg. 2019 Oct;25(5):571-579.
15. Lehman D et al. Treatment of symptomatic hammertoe with a proximal interphalangeal joint arthrodesis. Foot Ankle Int. 1995 Sep;16(9):535-41.
16. Maffulli N et al. Quantitative review of operative management of hallux rigidus. Br Med Bull. 2011;98:75-98.
17. Mao D et al. Salvage arthrodesis for failed first metatarsophalangeal joint arthroplasty: A network meta-analysis. Foot Ankle Surg. 2020 Aug;26(6):614-623
18. Martijin H et al. Fifth Metatarsal Osteotomies for Treatment of Bunionette Deformity: A Meta-Analysis of Angle Correction and Clinical Condition. J Foot Ankle Surg. Jan-Feb 2018;57(1):140-148.
19. Mueller CM, Boden SA, Boden AL, et al. Complication Rates and Short-Term Outcomes After Operative Hammertoe Correction in Older Patients. Foot Ankle Int 2018; 39:681.
20. Morawe GA, Schmieschek MHT. Minimally invasive bunionette correction. Operative Orthopadie und Traumatologie 2018;30(3):184-194.
21. O'Doherty DP, Lowrie IG, Magnussen PA, Gregg PJ. The management of the painful first metatarsophalangeal joint in the older patient. Arthrodesis or Keller's arthroplasty? J Bone Joint Surg Br 1990; 72:839.
22. Park M et al. Implant Arthroplasty versus Arthrodesis for the Treatment of Advanced Hallux Rigidus: A Meta-analysis of Comparative Studies. J Foot Ankle Surg. 2019 Jan;58(1):137-143.
23. Saxena A, Valerio DL, Behan SA, Hofer D. Modified Valenti Arthroplasty in Running and Jumping Athletes With Hallux Limitus/Rigidus: Analysis of One Hundred Procedures. J Foot Ankle Surg 2019; 58:609.
24. Scott J et al. Effectiveness of percutaneous flexor tenotomies for the management and prevention of recurrence of diabetic toe ulcers: a systematic review. J Foot Ankle Res. 2016 Jul 29;9:25.
25. Shi GG, Humayun A, Whalen JL, Kitaoka HB. Management of Bunionette Deformity. J Am Acad Orthop Surg 2018; 26:e396.
26. Shirzad K, Kiesau CD, DeOrio JK, Parekh SG. Lesser toe deformities. J Am Acad Orthop Surg 2011; 19:505.

27. Siddiqui NA, LaPorta GA. Minimally invasive bunion correction. Clinics in Podiatric Medicine and Surgery 2018;35(4):387-402.
28. Stibolt R et al. Hemiarthroplasty Versus Total Joint Arthroplasty for Hallux Rigidus: A Systematic Review and Meta-analysis. Foot Ankle Spec. 2019 Apr;12(2):181-193
29. Torkki M, Malmivaara A, Seitsalo S, et al. Surgery vs orthosis vs watchful waiting for hallux valgus: a randomized controlled trial. JAMA 2001; 285:2474.
30. Trnka HJ, Krenn S, Schuh R. Minimally invasive hallux valgus surgery: a critical review of the evidence. Int Orthop 2013; 37:1731.
31. Wei R et al. Ideal implant choice for proximal interphalangeal joint arthrodesis in hammer toe/claw toe deformity correction: A systematic review. J Orthop Surg (Hong Kong). Jan-Apr 2020;28(1):2309499020911168.

Professional Society Guidelines

32. Academy of Minimally Invasive Foot and Ankle Surgery. Hammertoe syndrome; 2021. Accessed at: https://www.aafas.org/hammer-toe.html
33. American College of Foot and Ankle Surgeons (ACFAS) Website. Accessed at: https://www.acfas.org/
    - ACFAS position statement on cosmetic surgery. February 2020.
    - Thomas et al., J. American College of Foot and Ankle Surgeons (ACFAS). Clinical Practice Guideline. Foot Ankle Surg 2009, 48: 230-8.
    - Hammertoe. 2019.

Other Resources

34. UpToDate: [website]: Waltham, MA: Walters Kluwer Health; 2021.
    - Ferrari J. Hallux valgus deformity (bunion).
    - Fields K. Evaluation and diagnosis of common causes of forefoot pain in adults.
35. IRO Peer Review [AMR]: Policy reviewed by practicing physician board certified in Orthopaedic Surgery. March 7, 2021.
36. McKesson InterQual 2019 Procedures Criteria:
    - Arthroplasty, PIP Joint, Second-Fifth Toes
    - Arthrodesis, First MTP Joint
    - Exostectomy, Fifth MT Head
    - Osteotomy, Transpositional, Distal/Proximal, Fifth MT
37. AIM Specialty Health Guidelines. Appropriate Use Criteria: Small Joint Surgery. 2020.

REVISION/REVIEW HISTORY:

4/5/2021: New Policy