Clinical Practice Guideline: Calcaneal Osteotomy

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Date of Implementation: July 16, 2015

45 **Product:**

Specialty

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GUIDELINES

American Specialty Health – Specialty (ASH) considers services consisting of CPT Code 28300 to be medically necessary for calcaneal deformity correction **upon meeting ALL of the following criteria:**

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1. When supported by 1 or more of the following diagnoses:

ICD-10 Code	ICD-10 Code Description
M21.071 - M21.079	Valgus deformity, not elsewhere classified, ankle
M21.171 - M21.179	Varus deformity, not elsewhere classified, ankle
M21.371 - M21.379	Foot drop
M21.531 - M21.539	Acquired clawfoot
M21.541 - M21.549	Acquired clubfoot
M21.6X1 - M21.6X9	Other acquired deformities of foot
M21.961 - M21.969	Unspecified acquired deformity of lower leg
M67.971 - M67.979, M67.98 - M67.99,	Unspecified disorder of synovium and tendon of lower leg, ankle and foot, other sites, and multiple sites
M71.871 – M71.879, M71.88, M71.89	Other specified bursopathies, ankle and foot, other sites, and multiple sites
Q66.00 - Q66.02	Congenital talipes equinovarus
Q66.10 - Q66.12, Q66.30 - Q66.32	Congenital talipes calcaneovarus and other congenital varus deformities of feet
Q66.211 - Q66.219, Q66.221 - Q66.229	Congenital metatarsus primus varus - adductus
Q66.40 - Q66.42	Congenital talipes calcaneovalgus, foot
Q66.50 - Q66.52	Congenital pes planus, foot
Q66.6	Other congenital valgus deformities of feet
Q66.70 - Q66.72	Congenital pes cavus, foot
Q66.80 - Q66.82	Congenital vertical talus deformity, foot

Q66.89	Other specified congenital deformities of feet
Q66.90 - Q66.92	Congenital deformity of feet, unspecified

- 2. Failure of at least 1 of the following non-operative treatments with persistent pain and dysfunction
 - Orthotics/bracing
 - Activity modification

CPT CODES AND DESCRIPTIONS

CPT® Code	CPT® Code Description
28300	Osteotomy; calcaneus (e.g., Dwyer or Chambers type
	procedure), with or without internal fixation

BACKGROUND

The calcaneus can be realigned to achieve a different orientation, which can correct many different deformities and functional limitations. For example, pes cavus and pes planus are deformities that can be addressed with calcaneal realignment to relieve pain, improve alignment, and gait.

A course of conservative treatment is the first line of care for foot and ankle deformity. If conservative measures fail to adequately reduce pain and improve function, then surgical procedures may be considered as treatment options. Appropriate surgical management is determined based upon degree of deformity and individualized patient needs (Heaver et al., 2020).

Calcaneal osteotomy is an extra-articular, joint-sparing procedure that is used in the correction of significant foot and ankle deformities. For example, both varus and valgus deformities often require calcaneal deformities for correct alignment. Multiple options for osteotomies include translational, closing wedge (Dwyer), and rotational type osteotomies (Evans, Z-osteotomy). Although a large number of calcaneal osteotomies have been described in the literature, there are a few principal ones that tend to be more commonly used than others. The Dwyer osteotomy is commonly used for frontal plane deformity of varus in the cavus foot. Whereas the Evans osteotomy is often performed for realignment of the adolescent valgus foot, but it is also used during adult flatfoot repairs (Mahan, 2003).

Cavus foot deformity, most commonly the result of first-ray plantar flexion, is frequently encountered by the foot and ankle specialist. The Dwyer calcaneal osteotomy is a useful adjunctive procedure to address the heel varus component of the cavus foot deformity, especially in the presence of concomitant peroneal tendon pathology. The lateralizing heel osteotomy using a wedge resection can effectively reduce future stress on the repaired peroneal tendons (Boffeli et al., 2012).

Infection and the presence of open wounds are absolute contraindications for the calcaneal osteotomy. The potential complications associated with calcaneal osteotomies are nerve and tendon injury, failure of the bone fragments to heal together, loss of correction of the deformity, painful hardware and infection. Careful review of indications and contraindications for the procedure, with meticulous surgical technique, should be followed to avoid complications and to achieve optimal outcomes.

PRACTITIONER SCOPE AND TRAINING

Practitioners should practice only in the areas in which they are competent based on their education, training and experience. Levels of education, experience, and proficiency may vary among individual practitioners. It is ethically and legally incumbent on a practitioner to determine where they have the knowledge and skills necessary to perform such services and whether the services are within their scope of practice.

It is best practice for the practitioner to appropriately render services to a member only if they are trained, equally skilled, and adequately competent to deliver a service compared to others trained to perform the same procedure. If the service would be most competently delivered by another health care practitioner who has more skill and training, it would be best practice to refer the member to the more expert practitioner.

Best practice can be defined as a clinical, scientific, or professional technique, method, or process that is typically evidence-based and consensus driven and is recognized by a majority of professionals in a particular field as more effective at delivering a particular outcome than any other practice (Joint Commission International Accreditation Standards for Hospitals, 2020).

Depending on the practitioner's scope of practice, training, and experience, a member's condition and/or symptoms during examination or the course of treatment may indicate the need for referral to another practitioner or even emergency care. In such cases it is prudent for the practitioner to refer the member for appropriate co-management (e.g., to their primary care physician) or if immediate emergency care is warranted, to contact 911 as appropriate. See the *Managing Medical Emergencies (CPG 159 - S)* clinical practice guideline for information.

References

American College of Ankle and Foot Surgeons (ACFAS) Cosmetic surgery position statement (2020). Retrieved on May 9, 2023 from: https://www.acfas.org/policy-advocacy/policy-position-statements/acfas-position-statement-on-cosmetic-surgery

American Medical Association. (current year). Current Procedural Terminology (CPT) Current year (rev. ed.). Chicago: AMA.

1 American Medical Association. (current year). ICD-10-CM. American Medical Association.

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Barg, A., Hörterer, H., Jacxsens, M., Wiewiorski, M., Paul, J., & Valderrabano, V. (2015). Dwyer-Osteotomie: Laterale Verschiebeosteotomie des Kalkaneus [Dwyer osteotomy: Lateral sliding osteotomy of calcaneus]. *Oper Orthop Traumatol*. 27(4), 283–297.

6 7

Bariteau, J. T., Blankenhorn, B. D., Tofte, J. N., & DiGiovanni, C. W. (2013). What is the Role and Limit of Calcaneal Osteotomy in the Cavovarus Foot?. *Foot and Ankle Clinics*, *18*(4), 697-714. doi: http://dx.doi.org/10.1016/j.fcl.2013.08.001

11

Boffeli, T. J., & Collier, R. C. (2012). Surgical technique for combined Dwyer calcaneal osteotomy and peroneal tendon repair for correction of peroneal tendon pathology associated with cavus foot deformity. *The Journal of Foot and Ankle Surgery*, *51*(1), 135-140. doi: 10.1053/j.jfas.2011.10.021

16

Butterworth, M. (2010). A Systematic Approach to Pediatric Flatfoot: What to Do and When to Do It. Retrieved on May 9, 2023 from http://www.podiatryinstitute.com/pdfs/Update_2010/2010_12.pdf

20

Guha, A. R., & Perera, A. M. (2012). Calcaneal osteotomy in the treatment of adult acquired flatfoot deformity. *Foot and Ankle Clinics*, 17(2), 247-258. doi: 10.1016/j.fcl.2012.02.003

2425

Halabchi, F., Mazaheri, R., Mirshahi, M., & Abbasian, L. (2013). Pediatric flexible flatfoot; clinical aspects and algorithmic approach. *Iranian Journal of Pediatrics*, 23(3), 247-260.

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32

Harris, E. J., Vanore, J. V., Thomas, J. L., Kravitz, S. R., Mendelson, S. A., Mendicino, R. W., Silvani, S. H., Gassen, S. C., & Clinical Practice Guideline Pediatric Flatfoot Panel of the American College of Foot and Ankle Suregons (2004). Diagnosis and treatment of pediatric flatfoot. *The Journal of Foot and Ankle Surgery*, 43(6), 341-373. doi: 10.1053/j.jfas.2004.09.013

333435

Heaver, C., Chatterton, B., & Hill, S. (2020). Correction of neurological deformity in the foot and ankle. *Orthopaedics and Trauma*, *34*(1), 44-51

363738

Joint Commission International. (2020). Joint Commission International Accreditation Standards for Hospitals (7th ed.): Joint Commission Resources.

39 40

Lamm, B. M., Gesheff, M. G., Salton, H. L., Dupuis, T. W., & Zeni, F. (2012). Preoperative planning and intraoperative technique for accurate realignment of the Dwyer calcaneal

1 2 3	osteotomy. The Journal of Foot and Ankle Surgery, $51(6)$, $743-748$. doi: $10.1053/j.jfas.2012.08.004$
4	Mahan, K. (2003). Key Pearls Of Calcaneal Osteotomies. <i>Podiatry Today</i> , 16(5). Retrieved
5	on May 9, 2023 from
6	https://www.hmpgloballearningnetwork.com/site/podiatry/article/1561
7	
8	Mahan, K., & Tuer, R. (2009). Essential Insights On The Evans Calcaneal Osteotomy.
9	Retrieved on May 9, 2023 from
10	https://www.hmpgloballearningnetwork.com/site/podiatry/essential-insights-on-the-
11	evans-calcaneal-osteotomy
12	•
13	Maskill, M. P., Maskill, J. D., & Pomeroy, G. C. (2010). Surgical management and
14	treatment algorithm for the subtle cavovarus foot. Foot & ankle international, 31(12),
15	1057-1063
16	
17	Mosca, V. S. (2010). Flexible flatfoot in children and adolescents. Journal of Children's
18	Orthopaedics, 4(2), 107-121. doi: 10.1007/s11832-010-0239-9
19	
20	Parsa, A., Moghadam, M. H., & Jamshidi, M. H. (2014). Relapsing and residual clubfoot
21	deformities after the application of the ponseti method: a contemporary review.
22	Archives of Bone and Joint Surgery, 2(1), 7-10
23	
24	Tennant, J. N., Carmont, M., & Phisitkul, P. (2014). Calcaneus osteotomy. Current
25	Reviews in Musculoskelet Medicine, 7(4), 271-276. doi: 10.1007/s12178-014-9237-8
26	
27	Thomas, J. L., Christensen, J. C., Kravitz, S. R., Mendicino, R. W., Schuberth, J. M.,
28	Vanore, J. V., American College of Foot and Ankle Surgeons heel pain committee
29	(2010). The diagnosis and treatment of heel pain: a clinical practice guideline-revision
30	2010. Journal of Foot and Ankle Surgery, 49(3 Suppl), S1-19. doi:
31	10.1053/j.jfas.2010.01.001
32	
33	Waizy, H., Windhagen, H., Stukenborg-Colsman, C., & Floerkemeier, T. (2011). Taylor
34	spatial frame in severe foot deformities using double osteotomy: technical approach

and primary results. International Orthopaedics, 35(10), 1489-1495.

35