



Precice

2020 coding and reimbursement considerations for limb reconstruction

This information is shared for educational purposes only and is based upon information published by American Medical Association (AMA) and Centers for Medicare and Medicaid Services (CMS) as of January 2020. Upon review of this information, healthcare providers are encouraged to contact their payers directly if they have questions about coding, coverage and/or reimbursement. NuVasive does not assume any responsibility for healthcare provider coding decisions nor do we recommend codes for specific cases. While codes may exist, this does not guarantee payment. For additional information, please speak with your NuVasive sales professional.

FDA regulatory clearance

The Precice system is indicated for limb lengthening, open and closed fracture fixation, pseudoarthrosis, mal-union, non-unions or bone transport of long bones. The most recent clearance is for the Precice Stryde stainless steel variant (K180503, April 3, 2018).

Table 1: Physician coding and reimbursement

Professional coders are encouraged to review the “Surgery/Musculoskeletal System” section of AMA “CPT® 2020.” The range of “Repair, Revision and Reconstruction” and/or “Fracture and/or Dislocation” procedures performed on long bones, such as the humerus, femur and leg (tibia and fibula) are too numerous to list, for example, but not limited to the following considerations:

CPT Code*	Description	Total RVUs**	2020 average Medicare payment***
Humerus “Repair, Revision and/or Reconstruction” and “Fracture and/or Dislocation”			
24420	Osteoplasty, humerus (e.g., shortening or lengthening)	29.59	\$1,067.89
24430	Repair of nonunion or malunion, humerus; without graft	30.50	\$1,100.73
24516	Treatment of humeral shaft fracture, with insertion of intramedullary implant, with or without cerclage and/or locking screws	24.80	\$895.02
Femur “Repair, Revision and/or Reconstruction” and “Fracture and/or Dislocation”			
27466	Osteoplasty, femur, lengthening	34.23	\$1,235.35
27468	Osteoplasty, combined, lengthening and shortening with femoral segment transfer	38.80	\$1,400.28
27470	Repair, nonunion or malunion, femur, distal to head and neck; without graft	34.04	\$1,228.49
27506	Open treatment of femoral shaft fracture, with or without external fixation, with insertion of intramedullary implant, with or without cerclage and/or locking screws	38.64	\$1,394.50
Leg Tibia and fibula			
27715	Osteoplasty, tibia and fibula, lengthening or shortening	30.97	\$1,117.69
27720	Repair of nonunion or malunion, tibia, without graft	25.28	\$912.35
27726	Repair of fibula nonunion and/or malunion with internal fixation	27.66	\$998.24
27727	Repair of congenital pseudoarthrosis, tibia	29.97	\$1,081.61
27745	Prophylactic treatment (nailing, pinning, plating or wiring) with or without methylmethacrylate, tibia	21.96	\$792.53

*Source: AMA. CPT 2020 Professional Edition.

**The facility payment is the physician’s professional fee in a facility setting. Average national rates are unadjusted by Geography Practice Cost Index.

Payment rates reflect a conversion factor of \$36.0896 (effective first quarter 2020).

***2020 Medicare national average physician payment

Table 2: Inpatient facility coding and reimbursement

The site of service depends on the patient’s chief complaint and clinical presentation, and is solely determined by the admitting physician. The ICD-10-CM (Internal Classification of Disease, Tenth Revision, Clinical Modification) diagnosis code(s) and primary ICD-10-PCS procedure code(s) determine the MS-DRG (Medicare Severity Diagnosis Related Group).

MS-DRG*	Description	Weight	Arithmetic mean LOS	2020 average Medicare payment**
Femur				
480	Hip and femur procedure, except major joint, with MCC	3.0185	7.3	\$18,892.67
481	Hip and femur procedure, except major joint, with CC	2.0878	4.8	\$13,067.46
482	Hip and femur procedure, except major joint, without MCC	1.6453	3.6	\$10,297.87
Tibia “Repair, Revision and/or Reconstruction” and “Fracture and/or Dislocation”				
492	Lower extremity and humerus procedures, except hip, foot and femur with MCC	3.4453	7.7	\$21,563.99
493	Lower extremity and humerus procedures, except hip, foot and femur with CC	2.3020	4.8	\$14,408.13
494	Lower extremity and humerus procedures, except hip, foot and femur without MCC	1.8114	3.2	\$11,337.48
Humerus Tibia and fibula				
510	Shoulder, elbow or forearm proc, except major joint procedure with MCC	2.7880	6.3	\$17,449.98
511	Shoulder, elbow or forearm proc, except major joint procedure with CC	1.8842	3.9	\$11,793.13
512	Shoulder, elbow or forearm proc, except major joint procedure without MCC	1.5138	2.5	\$9,474.81

CC = comorbidity or complication MCC = major complication or comorbidity

*Source: FY20 Medicare inpatient rates based upon final rule released in the Federal Register on October 2, 2019.

**2020 Medicare national average physician payment

Table 3: Outpatient hospital

Procedural CPTs that appear in Medicare’s 2020 outpatient fee schedule:

CPT	Description	APC*	APC title	2020 average Medicare payment**
24420	Osteoplasty, humerus (e.g., shortening or lengthening)	5114	Level 4 musculoskeletal procedures	\$5,981.95
24430	Repair of nonunion or malunion, humerus, without graft	5115	Level 5 musculoskeletal procedures	\$11,900.71
24516	Treatment of humeral shaft fracture, with plate/screw, with or without cerclage	5115	Level 5 musculoskeletal procedures	\$11,900.71
27705	Osteotomy, tibia	5114	Level 4 musculoskeletal procedures	\$5,981.95
27720	Repair of nonunion or malunion, tibia	5114	Level 4 musculoskeletal procedures	\$5,981.95
27726	Repair of fibula nonunion and/or malunion with internal fixation	5114	Level 4 musculoskeletal procedures	\$5,981.95
27745	Prophylactic treatment (nailing, pinning, plating or wiring) with or without methylmethacrylate, tibia	5114	Level musculoskeletal procedures	\$5,981.95

*Source: CY20 Medicare outpatient rates based upon the final rule released in the Federal Register on January 3, 2020.

**2020 Medicare national average physician payment

Table 4: ICD-10 coding considerations for limb length discrepancy, deformity and nonunion may include...

Procedural CPTs that appear in Medicare’s 2020 outpatient fee schedule:

ICD-10 CM	Diagnosis description	ICD-10 CM	Diagnosis description
M21.70	Unequal limb length (acquired), unspecified site	M84	Disorders of continuity of bone
M21.721	Unequal limb length (acquired), right humerus	M84.02	Malunion of fracture, upper arm
M21.722	Unequal limb length (acquired), left humerus	M84.06	Malunion of fracture, lower leg
M21.70	Unequal limb length (acquired), unspecified site	M84.1	Nonunion of fracture (pseudarthrosis)
M21.721	Unequal limb length (acquired), right humerus	M84.12	Nonunion of fracture (pseudarthrosis), upper arm
M21.751	Unequal limb length (acquired), right femur	M84.16	Nonunion of fracture (pseudarthrosis), lower leg
M21.752	Unequal limb length (acquired), left femur	Q74.0–Q74.9	Other congenital malformations of limbs (congenital pseudarthrosis)
M21.759	Unequal limb length (acquired), unspecified femur	S42.209K	Unspecified fracture of upper end of unspecified humerus, subsequent encounter for fracture with nonunion
M21.761	Unequal limb length (acquired), right tibia	S72.90XK	Unspecified fracture of unspecified femur, subsequent encounter for closed fracture with nonunion
M21.762	Unequal limb length (acquired), left tibia	S82.101+	Fracture upper end of tibia
M21.763	Unequal limb length (acquired), right fibula	S82.1	Fracture of upper end of tibia
M21.764	Unequal limb length (acquired), left fibula	S82.2	Fracture of shaft of tibia
M21.769	Unequal limb length (acquired), unspecified tibia and fibula	S82.201	Closed fracture of shaft of right tibia
M21.751	Unequal limb length (acquired), right femur	S82.3	Fracture of lower end of tibia
M21.752	Unequal limb length (acquired), left femur	S82.4	Fracture of shaft of fibula
M21.759	Unequal limb length (acquired), unspecified femur	S82.401	Closed fracture of shaft of right fibula
M21.761	Unequal limb length (acquired), right tibia	S82.831+	Other fracture of upper and lower end of fibula

Note: Diagnostic descriptions include but are not limited to the specified characteristics.

Table 5: ICD-10-PCS coding considerations

Per CMS, code limb lengthening procedures that utilize the intramedullary limb lengthening system to the appropriate body part value in tables **0PH** and **0QH**, insertion of upper bones and insertion of lower bones, using the device value **7** internal fixation device, intramedullary limb lengthening and the applicable approach:

Section	O Medical and surgical		
Body system	P Upper bones		
Operation	H Insertion: Putting in a nonbiological application that monitors, assists, performs, or prevents a physiological function but does not physically take the place of a body part.		
Body part	Approach	Device	Qualifier
C Humeral head, right D Humeral head, left F Humeral shaft, right G Humeral shaft, left H Radius, right J Radius, left K Ulna, right L Ulna, left	0 Open 3 Percutaneous 4 Percutaneous endoscopic	4 Internal fixation device 5 External fixation device 7 Internal fixation device, intramedullary limb lengthening 8 External fixation device, limb lengthening B External fixation device, monopolar C External fixation device, ring D External fixation device, hybrid	Z No qualifier

Section	O Medical and surgical		
Body System	Q Lower bones		
Operation	H Insertion: Putting in a nonbiological application that monitors, assists, performs, or prevents a physiological function but does not physically take the place of a body part.		
Body Part	Approach	Device	Qualifier
8 Femoral shaft, right 9 Femoral shaft, left G Tibia, left H Tibia, right	0 Open 3 Percutaneous 4 Percutaneous endoscopic	4 Internal fixation device 5 External fixation device 7 Internal fixation device, intramedullary limb lengthening 8 External fixation device, limb lengthening B External fixation device, monopolar C External fixation device, ring D External fixation device, hybrid	Z No qualifier

Source: ICD-10 Coordination and Maintenance Committee, September 11, 2018

Additional Information

Peer-Reviewed Evidence

Clinical evidence in support of intramedullary treatment of limb length discrepancy, limb deformity and/or chronic nonunion includes, but not limited to, the following publications. Reprints are available upon request.

1. Birch JG., A brief history of limb lengthening. *J Pediatr Orthop* 2017;37(Suppl 2):S1-S8.
2. Calder PR, Laubscher M, Goodier WD. The role of the intramedullary implant in limb lengthening. *Injury* 2017;48(Suppl 1):S52-S58.
3. Downs SH, Black N. The feasibility of creating a checklist for the assessment of the methodological quality both of randomized and non-randomized studies of health care interventions. *J Epidemiol Community Health* 1998;52(6):377-84.
4. Green SA. The evolution of remote-controlled intramedullary lengthening and compression nails. *J Orthop Trauma* [Internet] 2017;31(Suppl 2):S2-S6.
5. Hammouda AI, Jauregui JJ, Gesheff MG, et al. Trochanteric entry for femoral lengthening nails in children: is it safe? *J Pediatr Orthop* 2017;37(4):258-64.
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7. Hasler CC, Krieg AH. Current concepts of leg lengthening. *J Child Orthop* 2012;6(2):89-104.
8. Laubscher M, Mitchell C, Timms A, et al. Outcomes following femoral lengthening: An initial comparison of the Precice intramedullary lengthening nail and the LRS external fixator monorail system. *Bone Joint J* 2016;98-B(10):1382-8.
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10. Tiefenboeck TM, Zak L, Bukaty A, et al. Pitfalls in automatic limb lengthening - first results with an intramedullary lengthening device. *Orthop Traumatol Surg Res* 2016;102(7):851-5.
11. Schiedel FM, Vogt B, Tretow HL, et al. How precise is the Precice compared to the ISKD in intramedullary limb lengthening? Reliability and safety in 26 procedures. *Acta Orthop* 2014;85(3):293-8.
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13. Young C, Farrah K, Frey N. Intramedullary distraction devices for lower-limb lengthening: clinical effectiveness and guidelines. *Ottawa (ON): CADTH*; 2017;18. CADTH Rapid Response Report: Reference List Accessed Feb 4th 2019: <https://www.cadth.ca/sites/default/files/pdf/htis/2017/RA0904%20Lower-Limb%20Lengthening%20Final.pdf>
14. Wiebking U, Liodakis E, Kenaway M, et al. Limb lengthening using the Precice nail system: complications and results. *Arch Trauma Res* 2016;5(4):e36273.

For personal assistance with payer communications, please speak with your Precice sales professional.

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References

1. 2020 Current Procedural Terminology (CPT®) Professional Edition. CPT is a registered trademark of the American Medical Association. All rights reserved.
2. CMS-1715-F; Physician Fee Schedule final rule CY2020. Effective through December 31, 2020. Conversion Factor: \$36.0896
3. CMS-1717-FC; Hospital Outpatient Prospective Payment and Ambulatory Surgical Center Payment Systems and Quality Reporting Programs, final rule CY2020. Effective through December 31, 2020.
4. Centers for Medicare & Medicaid Services [CMS website]. September 11, 2018. Available at: <https://www.cms.gov/Medicare/Coding/ICD9ProviderDiagnosticCodes/meetings.html>. Accessed January 7, 2019.

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