Sacroiliac Joint Fusion
Clinical Coverage Criteria

Description

Sacroiliac joint fusion (arthrodesis) is a surgical technique that is intended to achieve bony fusion of the sacroiliac joint and stabilize it, thus reducing pain and disability. Sacroiliac joint fusion may be performed as an open surgical procedure or as a minimally invasive (percutaneous) procedure.

Policy

This Policy applies to the following Fallon Health products:

☒ Medicare Advantage (Fallon Medicare Plus, Fallon Medicare Plus Central)
☒ MassHealth ACO
☒ NaviCare (NaviCare HMO SNP, NaviCare SCO)
☒ PACE (Summit Eldercare PACE, Fallon Health Weinberg PACE)
☒ Community Care

Sacroiliac joint fusion requires prior authorization.

Medicare Advantage (Fallon Medicare Plus, Fallon Medicare Plus Central)
Fallon Health complies with CMS's national coverage determinations (NCDs), local coverage determinations (LCDs) of Medicare Contractors with jurisdiction for claims in the Plan's service area, and applicable Medicare statutes and regulations when making medical necessity determinations for Medicare Advantage members. When coverage criteria are not fully established in applicable Medicare statutes, regulations, NCDs or LCDs, Fallon Health may create internal coverage criteria under specific circumstances described at § 422.101(b)(6)(i) and (ii).

Medicare does not have a National Coverage Determination (NCD) for open or minimally invasive sacroiliac joint fusion. National Government Services, Inc., the Part A and B Medicare Administrative Contractor (MAC) with jurisdiction in our service area has an LCD for Minimally-invasive Surgical (MIS) Fusion of the Sacroiliac (SI) Joint L36406 (Revision Effective Date 10/10/2019) and an LCA for Billing and Coding: Minimally-invasive Surgical (MIS) Fusion of the Sacroiliac (SI) Joint A57431 (Revision Effective Date 10/10/2019) (MCD search 03/24/2024).

Links:
LCD: Minimally-invasive Surgical (MIS) Fusion of the Sacroiliac (SI) Joint (L36406)
LCA: Billing and Coding: Minimally-invasive Surgical (MIS) Fusion of the Sacroiliac (SI) Joint (A57431)

Coverage criteria for ***open*** sacroiliac joint fusion are not fully established by Medicare, therefore the Plan's clinical coverage criteria for ***open*** sacroiliac joint fusion are applicable.

Coverage criteria for ***minimally invasive*** surgical fusion of the sacroiliac joint are fully established by Medicare, therefore, the Plan's clinical coverage criteria for ***minimally invasive*** sacroiliac joint fusion are not applicable.

MassHealth ACO
Fallon Health follows Medical Necessity Guidelines published by MassHealth when making medical necessity determinations for MassHealth members. In the absence of Medical Necessity Guidelines published by MassHealth, Fallon Health may create clinical coverage criteria in accordance with the definition of Medical Necessity in 130 CMR 450.204.

MassHealth does not have Medical Necessity Guidelines for open or minimally invasive sacroiliac joint fusion currently (MassHealth website search 03/24/2024), therefore, the Plan's clinical coverage criteria are applicable.

NaviCare (NaviCare HMO SNP, NaviCare SCO)
For plan members enrolled in NaviCare, Fallon Health first follow's CMS's national coverage determinations (NCDs), local coverage determinations (LCDs) of Medicare Contractors with jurisdiction for claims in the Plan's service area, and applicable Medicare statutes and regulations when making medical necessity determinations.

When coverage criteria are not fully established in applicable Medicare statutes, regulations, NCDs or LCDs, or if the NaviCare member does not meet coverage criteria in applicable Medicare statutes, regulations, NCDs or LCDs, Fallon Health then follows Medical Necessity Guidelines published by MassHealth when making necessity determinations for NaviCare members.

PACE (Summit Eldercare PACE, Fallon Health Weinberg PACE)
Each PACE plan member is assigned to an Interdisciplinary Team. PACE provides participants with all the care and services covered by Medicare and Medicaid, as approved by the interdisciplinary team, as well as additional medically necessary care and services not covered by Medicare and Medicaid. With the exception of emergency care and out-of-area urgently needed care, all care and services provided to PACE plan members must be approved by the interdisciplinary team.

Fallon Health Clinical Coverage Criteria

Open sacroiliac joint fusion is considered medically necessary when all of the following criteria are met:

- Recent (within 6 months) plain radiographs and/or cross-sectional imaging (CT or MRI) demonstrate localized sacroiliac joint pathology
- Documentation of nicotine-free status with EITHER of the following:
  - Patient is a nonsmoker
  - Patient has refrained from smoking for at least 6 weeks prior to planned surgery as evidenced by cotinine lab results of ≤ 10 ng/mL
- ANY of the following:
  - Post-traumatic injury of the sacroiliac joint (e.g., following pelvic ring fracture)
  - As an adjunctive treatment for sacroiliac joint infection
  - Management of sacral tumor (e.g., partial sacrectomy)
  - When performed as part of a multisegmental long fusion constructs for the correction of spinal deformity (e.g., idiopathic scoliosis, neuromuscular scoliosis)

Minimally-invasive surgical fusion of the sacroiliac (SI) joint (CPT 27279)* is considered medically necessary when ALL of the following criteria are met:

- Have moderate to severe pain with functional impairment and pain persists despite a minimum six months of intensive nonoperative treatment that must include medication optimization, activity modification, bracing, and active therapeutic exercise targeted at the lumbar spine, pelvis, SIJ and hip including a home exercise program
- Patient's report of typically unilateral pain that is caudal to the lumbar spine (L5 vertebrae), localized over the posterior SIJ, and consistent with SIJ pain

- A thorough physical examination demonstrating localized tenderness with palpation over the sacral sulcus (Fortin's point, i.e., at the insertion of the long dorsal ligament inferior to the posterior superior iliac spine or PSIS) in the absence of tenderness of similar severity elsewhere (e.g. greater trochanter, lumbar spine, coccyx) and that other obvious sources for their pain do not exist
- Positive response to a cluster of 3 provocative tests (e.g., thigh thrust test, compression test, Gaenslen's test, distraction test, Patrick's sign, posterior provocation test)
- Absence of generalized pain behavior (e.g., somatoform disorder) or generalized pain disorders (e.g., fibromyalgia)
- Diagnostic imaging studies that include all of the following:
    - Imaging (plain radiographs and a CT or MRI) of the SI joint that excludes the presence of destructive lesions (e.g., tumor, infection), fracture, traumatic SIJ instability, or inflammatory arthropathy that would not be properly addressed by percutaneous SIJ fusion
    - Imaging of the pelvis (AP plain radiograph) to rule out concomitant hip pathology
    - Imaging of the lumbar spine (CT or MRI) to rule out neural compression or other degenerative condition that can be causing low back or buttock pain
- At least 75 percent reduction of pain for the expected duration of two anesthetics (on separate visits each with a different duration of action), and the ability to perform previously painful maneuvers, following an image-guided, contrast-enhanced intra-articular SIJ injection.
- A trial of at least one therapeutic intra-articular SIJ injection (i.e., corticosteroid injection)

* The lateral MIS SI joint fusion procedure should be coded with CPT code 27279. The posterior (dorsal) MIS SI joint fusion procedure is significantly distinct from the lateral procedure and is, as of yet, unproven (Lorio et al., 2020).

There are numerous devices available that have received FDA 510(k) clearance for use in MIS or percutaneous lateral SI joint fusion stabilization.

Exclusions

- Posterior (dorsal) minimally invasive sacroiliac joint fusion.

Summary of Evidence

The sacroiliac joint may be a primary source of pain in patients complaining of low back and/or buttock pain. Sacroiliac joint pathology may include degenerative and inflammatory arthritis, post-traumatic arthritis, post-partum instability, post-infectious arthritis, joint degeneration related to previous lumbar spinal fusion, joint damage from previous posterior iliac crest bone graft harvesting, and neoplastic processes. Nonsurgical treatment of sacroiliac joint pain typically includes structured core and pelvic muscle flexibility and strengthening; pharmaceutical management through oral and injectable medication; and ablation procedures. For patients who do not improve with comprehensive, nonoperative treatment, surgical fusion of the sacroiliac joint is an option with overall good, reported outcomes.

Zaidi et al., 2015, systematically reviewed studies on sacroiliac joint fusion in the neurosurgical and orthopedic literature to investigate whether sufficient evidence exists to support its use. A total of 16 peer-reviewed journal articles met the inclusion criteria: 5 consecutive case series, 8 retrospective studies, and 3 prospective cohort studies. A total of 430 patients were included, of whom 131 underwent open surgery and 299 underwent minimally invasive surgery for sacroiliac joint fusion. The mean duration of follow-up was 60 months for open surgery and 21 months for minimally invasive surgery. Sacroiliac joint degeneration/arthrosis was the most common pathology among patients undergoing surgical intervention (present in 257 patients [59.8%]), followed by SIJ dysfunction (79 [18.4%]), postpartum instability (31 [7.2%]), posttraumatic (28 [6.5%]), idiopathic (25 [5.8%]), pathological fractures (6 [1.4%]), and HLA-B27+/rheumatoid arthritis (4 [0.9%]). Radiographically confirmed fusion rates were 20%–90% for open surgery and 13%–100% for minimally invasive surgery. Rates of excellent satisfaction, determined by pain

reduction, function, and quality of life, ranged from 18% to 100% with a mean of 54% in open surgical cases. For minimally invasive surgery patients, excellent outcome, judged by patients' stated satisfaction with the surgery, ranged from 56% to 100% (mean 84%). The reoperation rate after open surgery ranged from 0% to 65% (mean 15%). Reoperation rate after minimally invasive surgery ranged from 0% to 17% (mean 6%). Major complication rates ranged from 5% to 20%, with 1 study that addressed safety reporting a 56% adverse event rate.

Zaidi et al., 2015, conclude that surgical intervention for sacroiliac joint pain is beneficial in a subset of patients. However, with the difficulty in accurate diagnosis and lack of evidence for the efficacy of the procedure itself, serious consideration of the cause of pain and treatment alternatives should be made before performing sacroiliac joint fusion. Prospective, randomized studies with a focus on long-term pain control and fusion rates after sacroiliac joint fusion are lacking in the neurosurgical and orthopedic literature. Further, well-designed studies are necessary to better understand the surgical and clinical efficacy of sacroiliac joint fusion.

Federico et al. 2023 reviewed the Medicare database to determine the trends in volume of open and minimally invasive sacroiliac joint fusion. CPT codes specific to open and MIS SI joint fusion (27279 and 27280) were identified and tracked for 2010 to 2020. A total of 33,963 sacroiliac joint fusions were conducted in the Medicare population between 2010 and 2020, with an overall increase in procedure volume of 2,350.9% from 318 cases in 2010 to 7,794 in 2020. Since the introduction of the 27279 CPT code in 2015, 8,806 cases (31.5%) have been open and 19,120 (68.5%) have been minimally invasive. Sacroiliac joint fusion volume in the Medicare population has increased substantially in the past 10 years, with minimally invasive sacroiliac joint fusion accounting for most of the procedures since the introduction of the 27279 CPT code in 2015.

Analysis of Evidence (Rationale for Determination)

Studies of lateral transiliac minimally invasive sacroiliac joint fusion consistently show improved pain scores with fewer complications than open fusion in patients with non-infectious, non-traumatic related sacroiliac pain. This improvement appears to be sustained in the long term. These results along with the 2016 ISASS guideline recommendation and 2020 Update are the basis for coverage of minimally invasive sacroiliac joint fusion in carefully selected patients.

Posterior (dorsal) minimally invasive sacroiliac joint fusion is not recommended in the ISASS 2020 Update because the procedure is, as of yet, unproven. There is limited published clinical evidence supporting the safety and effectiveness of posterior (dorsal) minimally invasive surgical sacroiliac joint fusion.

Coding

The following codes are included below for informational purposes only; inclusion of a code does not constitute or imply coverage or reimbursement.

CPT	Description
27279	Arthrodesis, sacroiliac joint, percutaneous or minimally invasive (indirect visualization), with image guidance, includes obtaining bone graft when performed, and placement of transfixing device
27280	Arthrodesis, open, sacroiliac joint, including obtaining bone graft, including instrumentation, when performed

References

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2. National Government Services, Inc. Local Coverage Article (LCA) Billing and Coding: Minimally-invasive Surgical (MIS) Fusion of the Sacroiliac (SI) Joint (A57431). Original

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12. Federico VP, Zavras AG, Butler A, Nolte MT, Munim MA, Lopez GD, DeWald C, An HS, Colman MW, Phillips FM. Medicare Reimbursement Rates and Utilization Trends in Sacroiliac Joint Fusion. *J Am Acad Orthop Surg*. 2023 Sep 1;31(17):923-930.
13. International Society for the Advancement of Spine Surgery (ISASS). ISASS Policy Statement – Minimally Invasive Sacroiliac Joint Fusion (July 2016). Updated July 5, 2016. This supplements the ISASS Policy Statement – Minimally Invasive Sacroiliac Joint Fusion (2014). Available at: https://isass.org/isass-policy-statement-minimally-invasive-sacroiliac-joint-fusion-july-2016/. Accessed 09/21/2023.

Policy history

Origination date:	12/01/2023
Review/Approval Dates:	Technology Assessment Committee: 09/26/2023, 10/24/2023 (policy origination), 03/26/2024 (annual review; updated exclusion from lateral minimally invasive sacroiliac joint fusion to posterior (dorsal) minimally invasive sacroiliac joint fusion).

Not all services mentioned in this policy are covered for all products or employer groups. Coverage is based upon the terms of a member's particular benefit plan which may contain its own specific provisions for coverage and exclusions regardless of medical necessity. Please consult the product's Evidence of Coverage for exclusions or other benefit limitations applicable to this service or supply. If there is any discrepancy between this policy and a member's benefit plan, the provisions of the benefit plan will govern. However, applicable state mandates take precedence with respect to fully-insured plans and self-funded non-ERISA (e.g., government, school boards, church) plans. Unless otherwise specifically excluded, federal mandates will apply to all plans