



Medical Coverage Policy

Effective Date3/15/2026

Next Review Date9/15/2026

Coverage Policy Number..... 0276

Manipulation Under Anesthesia

Table of Contents

- Overview 2
- Coverage Policy 2
- Coding Information 3
- General Background..... 6
- Health Equity Considerations..... 8
- References..... 9
- Revision Details 13

Related Coverage Resources

- [Chiropractic Care](#)
- [Musculoskeletal Management Guidelines](#)

INSTRUCTIONS FOR USE

The following Coverage Policy applies to health benefit plans administered by Cigna Companies. Certain Cigna Companies and/or lines of business only provide utilization review services to clients and do not make coverage determinations. References to standard benefit plan language and coverage determinations do not apply to those clients. Coverage Policies are intended to provide guidance in interpreting certain standard benefit plans administered by Cigna Companies. Please note, the terms of a customer’s particular benefit plan document [Group Service Agreement, Evidence of Coverage, Certificate of Coverage, Summary Plan Description (SPD) or similar plan document] may differ significantly from the standard benefit plans upon which these Coverage Policies are based. For example, a customer’s benefit plan document may contain a specific exclusion related to a topic addressed in a Coverage Policy. In the event of a conflict, a customer’s benefit plan document always supersedes the information in the Coverage Policies. In the absence of a controlling federal or state coverage mandate, benefits are ultimately determined by the terms of the applicable benefit plan document. Coverage determinations in each specific instance require consideration of 1) the terms of the applicable benefit plan document in effect on the date of service; 2) any applicable laws/regulations; 3) any relevant collateral source materials including Coverage Policies and; 4) the specific facts of the particular situation. Each coverage request should be reviewed on its own merits. Medical directors are expected to exercise clinical judgment where appropriate and have discretion in making individual coverage determinations. Where coverage for care or services does not depend on specific circumstances, reimbursement will only be provided if a requested service(s) is submitted in accordance with the relevant criteria outlined in the applicable Coverage Policy, including covered diagnosis and/or procedure code(s). Reimbursement is not allowed for services when billed for conditions or diagnoses that are not covered under this Coverage Policy (see "Coding Information" below). When billing, providers must use the most appropriate codes as of the effective date of the submission. Claims submitted for services that are not accompanied by covered code(s) under the applicable Coverage Policy will be denied as not covered. Coverage Policies relate exclusively to the administration of health

benefit plans. Coverage Policies are not recommendations for treatment and should never be used as treatment guidelines. In certain markets, delegated vendor guidelines may be used to support medical necessity and other coverage determinations.

Overview

This Coverage Policy addresses manipulation under anesthesia (MUA).

Coverage Policy

A single treatment of manipulation under anesthesia* (MUA) is considered as medically necessary for ANY of the following indications:

- adhesive capsulitis (i.e., frozen shoulder) when there is failure of conservative medical management, including medications with or without articular injections, home exercise programs and physical therapy/standard chiropractic treatment (Common Procedural Terminology [CPT] code 23700)
- post-traumatic or postoperative arthrofibrosis of the knee (e.g., total knee replacement, anterior cruciate ligament repair) (CPT code 27570) when there is failure of conservative medical management, including exercise and physical therapy/standard chiropractic treatment
- reduction of a displaced fracture (e.g., long bones)
- reduction of acute/traumatic dislocation
- chronic contracture of upper or lower extremity joint (e.g., fixed contracture from a neuromuscular condition) when there is failure of conservative medical management including range of motion exercise programs and physical therapy/standard chiropractic treatment

***MUA provided for these indications consists of a SINGLE treatment session. Repeat treatment sessions involving a previously treated bone or joint are subject to medical necessity review. Furthermore, serial treatment sessions (i.e., treatments of the same bone/joint provided subsequently over a period of time) are not in accordance with generally accepted standards of medical practice and are therefore not medically necessary.**

MUA for any other indication, including the treatment of acute or chronic pain conditions-involving one or more of the following joints, is considered not medically necessary:

- ankle (CPT code 27860)
- elbow (CPT code 24300)
- finger (CPT code 26340, 26989)
- hip (CPT code 27275)
- knee (CPT code 27570) (other than post-traumatic or postoperative arthrofibrosis, as defined above)
- pelvis, sacroiliac (CPT code 27198)
- shoulder (CPT code 23700) (other than adhesive capsulitis (i.e., frozen shoulder), as defined above)
- temporomandibular (CPT code 21073)
- thumb (CPT code 26340, 26989)

- toe (CPT code 28899)
- wrist (CPT code 25259)

Coding Information

Notes:

1. This list of codes may not be all-inclusive since the American Medical Association (AMA) and Centers for Medicare & Medicaid Services (CMS) code updates may occur more frequently than policy updates.
2. Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement.

Coverage is limited to a **SINGLE** treatment session of an isolated joint condition.

SHOULDER

Considered Medically Necessary when criteria in the applicable policy statements listed above are met:

| CPT®* Codes | Description |
|-------------|---|
| 23655 | Closed treatment of shoulder dislocation, with manipulation; requiring anesthesia |
| 23700 | Manipulation under anesthesia, shoulder joint, including application of fixation apparatus (dislocation excluded) |

PELVIS

Considered Medically Necessary when criteria in the applicable policy statements listed above are met:

| CPT®* Codes | Description |
|-------------|---|
| 27198 | Closed treatment of posterior pelvic ring fracture(s), dislocation(s), diastasis or subluxation of the ilium, sacroiliac joint, and/or sacrum, with or without anterior pelvic ring fracture(s) and/or dislocation(s) of the pubic symphysis and/or superior/inferior rami, unilateral or bilateral; with manipulation, requiring more than local anesthesia (i.e., general anesthesia, moderate sedation, spinal/epidural) |

ARM

Considered Medically Necessary when criteria in the applicable policy statements listed above are met:

| CPT®* Codes | Description |
|-------------|---|
| 24300 | Manipulation, elbow, under anesthesia |
| 24605 | Treatment of closed elbow dislocation; requiring anesthesia |

WRIST

Considered Medically Necessary when criteria in the applicable policy statements listed above are met:

| CPT®* Codes | Description |
|--------------------|--|
| 25259 | Manipulation, wrist, under anesthesia |
| 25690 | Closed treatment of lunate dislocation, with manipulation |
| 26641 | Closed treatment of carpometacarpal dislocation, thumb, with manipulation |
| 26675 | Closed treatment of carpometacarpal dislocation, other than thumb, with manipulation, each joint; requiring anesthesia |

HAND / FINGERS

Considered Medically Necessary when criteria in the applicable policy statements listed above are met:

| CPT®* Codes | Description |
|--------------------|--|
| 26340 | Manipulation, finger joint, under anesthesia, each joint |
| 26705 | Closed treatment of metacarpophalangeal dislocation, single, with manipulation; requiring anesthesia |
| 26775 | Closed treatment of interphalangeal joint dislocation, single, with manipulation; requiring anesthesia |
| 28665 | Closed treatment of interphalangeal joint dislocation; requiring anesthesia |

HIP

Considered Medically Necessary when criteria in the applicable policy statements listed above are met:

| CPT®* Codes | Description |
|--------------------|--|
| 27252 | Closed treatment of hip dislocation, traumatic; requiring anesthesia |
| 27275 | Manipulation, hip joint, requiring general anesthesia |

LEG

Considered Medically Necessary when criteria in the applicable policy statements listed above are met:

| CPT®* Codes | Description |
|--------------------|---|
| 27831 | Closed treatment of proximal tibiofibular joint dislocation; requiring anesthesia |

KNEE

Considered Medically Necessary when criteria in the applicable policy statements listed above are met:

| CPT®* Codes | Description |
|--------------------|--|
| 27552 | Closed treatment of knee dislocation; requiring anesthesia |
| 27562 | Closed treatment of patellar dislocation; requiring anesthesia |
| 27570 | Manipulation of knee joint under general anesthesia (includes application of traction or other fixation devices) |

ANKLE

Considered Medically Necessary when criteria in the applicable policy statements listed above are met:

| CPT®* Codes | Description |
|--------------------|---|
| 27860 | Manipulation of ankle under general anesthesia (includes application of traction or other fixation apparatus) |
| 28545 | Closed treatment of tarsal bone dislocation, other than talotarsal; requiring anesthesia |

FOOT/TOES

Considered Medically Necessary when criteria in the applicable policy statements listed above are met:

| CPT®* Codes | Description |
|--------------------|---|
| 28635 | Closed treatment of metatarsophalangeal joint dislocation; requiring anesthesia |

Considered Not Medically Necessary when used to report manipulation under anesthesia of a single joint or multiple body joints for any other condition, including the management of acute or chronic pain conditions:

| CPT®* Codes | Description |
|--------------------|---|
| 21073 | Manipulation of temporomandibular joint(s) (TMJ), therapeutic, requiring an anesthesia service (i.e., general or monitored anesthesia care) |
| 23700 | Manipulation under anesthesia, shoulder joint, including application of fixation apparatus (dislocation excluded) |
| 24300 | Manipulation, elbow, under anesthesia |
| 25259 | Manipulation, wrist, under anesthesia |
| 26340 | Manipulation, finger joint, under anesthesia, each joint |
| 26989 | Unlisted procedure, hands or fingers |
| 27198 | Closed treatment of posterior pelvic ring fracture(s), dislocation(s), diastasis or subluxation of the ilium, sacroiliac joint, and/or sacrum, with or without anterior pelvic ring fracture(s) and/or dislocation(s) of the pubic symphysis and/or superior/inferior rami, unilateral or bilateral; with manipulation, requiring more than local anesthesia (i.e., general anesthesia, moderate sedation, spinal/epidural) |
| 27275 | Manipulation, hip joint, requiring general anesthesia |
| 27570 | Manipulation of knee joint under general anesthesia (includes application of traction or other fixation devices) |

| CPT®* Codes | Description |
|--------------------|---|
| 27860 | Manipulation of ankle under general anesthesia (includes application of traction or other fixation apparatus) |
| 28899 | Unlisted procedure, foot or toes |

***Current Procedural Terminology (CPT®) © 2025 American Medical Association: Chicago, IL.**

General Background

Manipulation under anesthesia (MUA), a treatment modality aimed at reducing pain and improving range of motion, consists of manipulation and stretching procedures performed while an individual receives anesthesia (e.g., conscious sedation, general anesthesia). A chiropractor, osteopathic physician or medical physician may perform this type of manipulation with an anesthesiologist in attendance.

MUA is considered a safe and effective form of treatment for some joint conditions, such as arthrofibrosis of the knee and adhesive capsulitis. It is also used for treatment of fractures (e.g., vertebral, long bones) and dislocations. Although there is limited evidence in the peer-reviewed medical literature supporting safety and efficacy for the treatment of pain conditions, MUA has been recommended as a treatment modality for acute and chronic pain conditions, when standard chiropractic care and other conservative measures have proved unsuccessful.

An individual's protective reflex mechanism is absent under anesthesia and proponents contend it is less difficult to separate and move the joint when the reflex is absent. During MUA, the chiropractor or physician performs a combination of short manipulations, passive stretches and maneuvers to break up fibrous and scar tissue around the spine and surrounding joint areas. This manipulation typically includes a high velocity thrust (i.e., a technique that adjusts the joints rapidly), which may be followed by a popping or snapping sound.

In a less frequently used technique, manipulation under anesthesia (MUA) may be accompanied by fluoroscopically guided intra-articular injections with corticosteroid agents to reduce inflammation. This procedure is referred to as manipulation under joint anesthesia/analgesia (MUJA).

MUA is considered safe and effective and is a well-established method of treatment for conditions such as adhesive capsulitis of the shoulder, arthrofibrosis of the knee, and some fractures, dislocations and contractures. When performed for these specific conditions, MUA generally requires a single session of treatment, most often performed unilaterally, involving a single joint. Data supporting the need for, and clinical efficacy of, multiple repeat MUA treatment sessions for these specific conditions is lacking in the peer-reviewed published medical literature.

Adhesive Capsulitis/Frozen Shoulder

Adhesive capsulitis (also known as frozen shoulder or pericapsulitis), is a painful restriction (both passive and active) of shoulder motion in an individual whose radiographs are typically normal. It occurs in approximately 2-5% of the general population. Some authors contend the condition results from synovial inflammation with subsequent reactive capsular fibrosis. Early stages are treated with steroid injections and home therapy. For refractory cases, more aggressive treatment involves manipulation of the shoulder joint under anesthesia or an arthroscopic capsular release (Griffen, 2003). Manipulating the joint under anesthesia breaks up the adhesions surrounding the joint and stretches the fibrotic tissue thereby increasing joint motion and reducing pain. Evidence

in the peer-reviewed published scientific literature, including textbook sources, supports the consideration of MUA for refractory cases of adhesive capsulitis of the shoulder (Miller, et al., 2021; Srikesavan, et al., 2021; Kim, et al., 2020; Brealey, et al., 2020; Rangan, et al., 2020; Alsubheen, et al., 2019; Rolle, 2017; Vastamaki, 2013; Maund, et al., 2012; Kivimaki, et al., 2007; Wang, et al., 2007; Sheridan and Hannafin, 2006; Dias, et al., 2005; Farrell, et al., 2005; Hamdan and Essa, 2003; Nirschl and Willet, 2002). MUA is generally recommended for individuals who do not respond to or who demonstrate little improvement after conservative treatment. An UpToDate review titled, "Frozen shoulder (adhesive capsulitis)" (Hudnall, 2024) states, "Manipulation of the shoulder has proven to be effective; however, it does not allow for a controlled release of the pathologic tissue restricting motion and carries an increased risk of humerus fracture and intraarticular shoulder injury. Arthroscopic release is now more commonly performed."

Postoperative/Post-traumatic Arthrofibrosis of the Knee

Arthrofibrosis of the knee is a condition caused by inflammation and proliferation of scar tissue following trauma, surgery or joint replacement. Traumatic injury to the knee can cause the formation of internal scar tissue with shrinking and tightening of the joint capsule. Tendons outside the joint may also shrink and tighten, leading to further decrease of joint mobility. Treatment of arthrofibrosis of the knee begins with physical therapy to improve motion; for refractory cases manipulation of the joint under anesthesia may be performed. In some cases, depending on the severity of adhesion formation and joint weakness, manipulation of the joint may inadvertently result in femoral or tibial fracture. As a precaution, some surgeons perform an arthroscopic internal resection of scar tissue prior to manipulation in order to reduce force and prevent fractures. MUA is indicated, with or without arthroscopy for arthrofibrosis of the knee, when there is < 90° range of motion following surgery or trauma despite physical therapy (Magit, et al. 2007). Published evidence in the medical literature supports MUA as a well-established safe and effective treatment for arthrofibrosis of the knee (Haffar, et al., 2022; Lim, et al., 2021; Randsborg, et al., 2020; Gu, et al., 2018 ; Issa, et al., 2014a; Issa, et al., 2014b; Pivec, et al., 2013; Ghani, et al., 2012; Ipach, et al., 2011; Fitzsimmons, et al., 2010; Mohammed, et al., 2009; Keating, et al., 2007; Magit, et al., 2007; Namba and Inacio, 2007; D'Amato and Bach, 2003; Esler, et al. 1999).

Postoperative/Post-traumatic Arthrofibrosis of the Elbow

Arthrofibrosis of the elbow often occurs following injury (e.g., operative, fracture). The elbow becomes stiff as a result of soft-tissue contracture of the ligaments, muscles and/or tendons. Early management generally involves bracing and splinting (Araghi, et al, 2010). MUA may be recommended when there is failure to improve and progress following the use of bracing. Operative release may be considered a treatment option depending on the cause of the contracture, the presence of pain or other symptoms, and decrease in functional level.

Fracture and/or Dislocation

MUA is considered a well-established and successful treatment for some types of fractures (e.g., vertebral, long bones) and acute/traumatic dislocations (~~e.g., perched cervical facet~~). It is typically performed with surgical repair and other medically necessary procedures such as arthroscopy. When performed in this context, MUA is considered incidental to the base procedure.

Chronic Contracture of Upper or Lower Extremity Joint

A joint contracture is a limitation in the passive range of motion of a joint. Joint contractures prevent normal movement of the associated body part and can result from a variety of causes such as spasticity or prolonged immobilization. Intra-articular adhesions and peri-articular adhesions, as well as capsular, ligament and muscle shortening and tightness may develop. As a result, activities of daily living and other skills may be adversely affected due to decreased mobility. In many cases, contractures can be successfully treated nonoperatively with aggressive

physical therapy or splinting with restoration of functional range of motion. When conservative treatment fails, more aggressive treatment may be necessary. More aggressive treatment includes anesthetic block, maximal stretching, and in some cases, serial casting (Garden, 2002). For joint contracture deformities, extra-articular and intra-articular soft tissue releases are considered standard treatment (Paley, 2003). Surgical treatments include tenotomy, tendon lengthening and joint capsule release. Manipulation under anesthesia, involving maximal passive stretching may be considered standard treatment and is often performed in combination with serial casting and/or surgical release when less aggressive treatments have failed.

There is a lack of peer-reviewed medical literature evaluating the use of manipulation under anesthesia (MUA) for managing pain conditions, or for any other indication involving major joints such as the hip, ankle, toe, elbow, wrist, or temporomandibular joint—whether performed on a single joint, multiple joints, or as whole-body MUA. Because the evidence is insufficient, no conclusions can be drawn regarding the clinical utility, safety, or effectiveness of MUA for these joints in pain management.

The International Chiropractors Association issued a policy statement on Manipulation Under Anesthesia in 2017. The group stated, “within the armamentarium of chiropractic techniques efficient methods exist that address the pain profiles of even the most sensitive patient. Furthermore, the chiropractic adjustment relies on the body’s own inherent constructive survival mechanisms to innately accomplish adjustive correction.” They concluded that anesthesia is inappropriate and unnecessary to the delivery of chiropractic adjustment.

The American Association of Oral and Maxillofacial Surgeons (Bouloux et al., 2024) published a position paper on the contemporary management of Temporomandibular joint (TMJ) pain and dysfunction. The AAOMS Special Committee on TMJ Care recommended initiation of the least invasive evidence-based nonsurgical or surgical treatment. Recommendations for the initial care of intra-articular pain and dysfunction (IPD) with or without symptomatic disc displacement (SDD) include: rest, heat, ice, nonsteroidal anti-inflammatory drugs, muscle relaxants, physical therapy and orthotics. They stated the documented success of nonsurgical treatment as well as minimally invasive surgical options, arthroplasty and total joint replacement (TJR), provide the patient and surgeon with sound treatment choices. Treatment with manipulation under anesthesia was not included in their recommendations.

Health Equity Considerations

Health equity is the highest level of health for all people; health inequity is the avoidable difference in health status or distribution of health resources due to the social conditions in which people are born, grow, live, work, and age.

Social determinants of health are the conditions in the environment that affect a wide range of health, functioning, and quality of life outcomes and risks. Examples include safe housing, transportation and neighborhoods; racism, discrimination and violence; education, job opportunities and income; access to nutritious foods and physical activity opportunities; access to clean air and water; and language and literacy skills.

Postoperative stiffness is a common complication following total knee arthroplasty (TKA), affecting 1.3% to 5.8% of patients—approximately 85,000 cases annually in the U.S. (Walsh et al., 2024). It is a significant source of dissatisfaction following TKA. One frequently used treatment for this condition is manipulation under anesthesia (MUA).

Barbera et al. (2022) conducted a retrospective cohort study using Medicare Limited Data Set claims data from 2013 to 2018, which included 836,054 patients who underwent primary TKA. The study aimed to examine racial disparities in MUA rates. The primary outcome was the incidence of MUA within one year after TKA, along with the time from TKA to MUA (measured in days).

The analysis revealed that MUA occurred in 1.7% of White patients, 3.2% of Black patients, and 2.1% of patients categorized as other races. Compared to White patients, Black patients had higher odds of requiring MUA and experienced a longer average time to MUA (64 days vs. 60 days).

References

1. Alsubheen SA, Nazari G, Bobos P, MacDermid JC, Overend TJ, Faber K. Effectiveness of Nonsurgical Interventions for Managing Adhesive Capsulitis in Patients With Diabetes: A Systematic Review. *Arch Phys Med Rehabil.* 2019 Feb;100(2):350-365.
2. American Association of Manipulation Under Anesthesia Providers. Guidelines for the practice and performance of manipulation under anesthesia. Feb 3, 2014. *Chiropr Man Therap.* 2014; 22: 7.
3. American College of Occupational and Environmental Medicine (ACOEM). Cervical and thoracic spine disorders guideline. Accessed September 10, 2024. Reed Group, Medical Disability Advisor, MDGuidelines. 2016. Available at: Guidelines | ACOEM
4. Araghi A, Celli A, Adams R, Morrey B. The outcome of examination (manipulation) under anesthesia on the stiff elbow after surgical contracture release. *Shoulder Elbow Surg.* 2010 Mar;19(2):202-8.
5. Barbera, J. P., Raymond, H. E., Zubizarreta, N., Poeran, J., Chen, D. D., Hayden, B. L., & Moucha, C. S. (2022). Racial Differences in Manipulation Under Anesthesia Rates Following Total Knee Arthroplasty. *The Journal of arthroplasty*, 37(9), 1865–1869.
6. Bouloux GF, Chou J, DiFabio V, Ness G, Perez D, Mercuri L, Chung W, Crago CA. The Contemporary Management of Temporomandibular Joint Intra-Articular Pain and Dysfunction. *J Oral Maxillofac Surg.* 2024 Jun;82(6):623-631. doi: 10.1016/j.joms.2024.01.003. Epub 2024 Jan 6. PMID: 38280727.
7. Brealey S, Northgraves M, Kottam L, Keding A, Corbacho B, Goodchild L, et al. Surgical treatments compared with early structured physiotherapy in secondary care for adults with primary frozen shoulder: the UK FROST three-arm RCT. *Health Technol Assess.* 2020 Dec;24(71):1-162.
8. Chao EK, Chen AC, Lee MS, Ueng SW. Surgical approaches for nonneurogenic elbow heterotopic ossification with ulnar neuropathy. *J Trauma.* 2002 Nov;53(5):928-33.
9. Centers for Medicare and Medicaid Services (CMS). National Coverage Determinations (NCDs). Accessed July 8, 2025. URL address: <https://www.cms.gov/medicare-coverage-database/reports/national-coverage-ncd-report.aspx?chapter=all&labOnly=allnacd&sortBy=title>
10. Cremata E, Collins S, Clauson W, Solinger AB, Roberts ES. Manipulation under anesthesia: a report of four cases. *J Manipulative Physiol Ther.* 2005 Sep;28(7):526-33.

11. D'Amato MJ, Bach BR. Loss of motion. In: DeLee: DeLee and Drez's Orthopaedic Sports Medicine, 2nd edition. Copyright © 2003, Saunders. Section J. Anterior cruciate ligament injuries.
12. Esler CN, Lock K, Harper WM, Gregg PJ. Manipulation of total knee replacements. Is the flexion gained retained? *J Bone Joint Surg Br.* 1999 Jan;81(1):27-9.
13. Farrell CM, Sperling JW, Cofield RH. Manipulation for frozen shoulder: long-term results. *J Shoulder Elbow Surg.* 2005 Sep-Oct;14(5):480-4.
14. Fitzsimmons SE, Vazquez EA, Bronson MJ. How to treat the stiff total knee arthroplasty?: a systematic review. *Clin Orthop Relat Res.* 2010 Apr;468(4):1096-106.
15. Garden F. Contractures. In: Frontera: Essentials of Physical Medicine and Rehabilitation, 1st ed. Ch 103. Copyright © 2002 Hanley and Belfus.
16. Gaur A, Sinclair M, Caruso E, Peretti G, Zaleske D. Heterotopic ossification around the elbow following burns in children: results after excision. *J Bone Joint Surg Am.* 2003 Aug;85-A(8):1538-43.
17. Ghani H, Maffulli N, Khanduja V. Management of stiffness following total knee arthroplasty: A systematic review. *Knee.* 2012 Apr 23.
18. Griffen LY. Frozen shoulder. In: DeLee: DeLee and Drez's Orthopaedic Sports Medicine, 2nd ed. Ch 13 The female athlete. Copyright © 2003 Saunders.
19. Gu A, Michalak AJ, Cohen JS, Almeida ND, McLawhorn AS, Sculco PK. Efficacy of Manipulation Under Anesthesia for Stiffness Following Total Knee Arthroplasty: A Systematic Review. *J Arthroplasty.* 2018 May;33(5):1598-1605.
20. Haffar A, Goh GS, Fillingham YA, Torchia MT, Lonner JH. Treatment of arthrofibrosis and stiffness after total knee arthroplasty: an updated review of the literature. *Int Orthop.* 2022 Jun; 46(6): 1253-1279. Doi:10.1007/s00264-022-05344-x. Epub 2022 Mar 18. PMID: 35301559
21. Hamdan TA, Al-Essa KA. Manipulation under anaesthesia for the treatment of frozen shoulder. *Int Orthop.* 2003;27(2):107-9. Epub 2002 Sep 13.
22. Hegmann KT, editor. Low back disorders. In: Glass LS, editor(s). Occupational medicine practice guidelines: evaluation and management of common health problems and functional recovery in workers. 2nd ed. American College of Occupational and Environmental Medicine (ACOEM); 2007. p. 366.
23. Hegmann KT, editor. Feinberg SD, Genovese E, Korevaar WC, Mueller KL, associate editors. Low back disorders. In: Glass LS, editor(s). Occupational medicine practice guidelines: evaluation and management of common health problems and functional recovery in workers. Update to Ch 6 of Occupational Medical Practice Guidelines 2007. Copyright 2008, 2004, 1997 by the American College of Occupational and Environmental Medicine.
24. Hegmann KT, Travis R, Andersson GBJ, Belcourt RM, Carragee EJ, Donelson R, Eskay-Auerbach M, Galper J, Goertz M, Haldeman S, Hooper PD, Lessinger JE, Mayer T, Mueller KL, Murphy DR, Tellin WG, Thiese MS, Weiss MS, Harris JS. Non-Invasive and Minimally Invasive Management of Low Back Disorders. *J Occup Environ Med.* 2020 Mar;62(3):e111-e138.

Accessed Aug 16, 2024. Available at URL address: Practice-Guidelines-Non_Invasive-Low-Back-Pain-March-2020-JOEM_1.pdf (acoem.org)

25. Hudnall, S. MD. Frozen shoulder (adhesive capsulitis). In: UpToDate, Waltham, MA 2023. Last updated: Feb 21, 2023. Accessed on July 9, 2025.
26. International Chiropractors Association (ICA). Policy Statement. "Manipulation" under anesthesia. <https://www.chiropractic.org>. Published 2017. Accessed Sep 8, 2024.
27. Ipach I, Mittag F, Lahrmann J, Kunze B, Kluba T. Arthrofibrosis after TKA - Influence factors on the absolute flexion and gain in flexion after manipulation under anaesthesia. *BMC Musculoskelet Disord*. 2011 Aug 12;12:184.
28. Issa K, Banerjee S, Kester MA, Khanuja HS, Delanois RE, Mont MA. The effect of timing of manipulation under anesthesia to improve range of motion and functional outcomes following total knee arthroplasty. *J Bone Joint Surg Am*. 2014a Aug 20;96(16):1349-57.
29. Issa K, Kapadia BH, Kester M, Khanuja HS, Delanois RE, Mont MA. Clinical, objective, and functional outcomes of manipulation under anesthesia to treat knee stiffness following total knee arthroplasty. *J Arthroplasty*. 2014b Mar;29(3):548-52.
30. Keating EM, Ritter MA, Harty LD, Haas G, Meding JB, Faris PM, Berend ME. Manipulation after total knee arthroplasty. *J Bone Joint Surg Am*. 2007 Feb;89(2):282-6.
31. Kim DH, Song KS, Min BW, Bae KC, Lim YJ, Cho CH. Early Clinical Outcomes of Manipulation under Anesthesia for Refractory Adhesive Capsulitis: Comparison with Arthroscopic Capsular Release. *Clin Orthop Surg*. 2020 Jun;12(2):217-223.
32. Kivimäki J, Pohjolainen T, Malmivaara A, Kannisto M, Guillaume J, Seitsalo S, Nissinen M. Manipulation under anesthesia with home exercises versus home exercises alone in the treatment of frozen shoulder: a randomized, controlled trial with 125 patients. *J Shoulder Elbow Surg*. 2007 Nov-Dec;16(6):722-6.
33. Kohatsu W. Low back pain. In: *Rakel: Integrative Medicine*, 2nd ed. Ch 63. Copyright © 2007 Saunders.
34. Kohlbeck FJ, Haldeman S, Hurwitz EL, Dagenais S. Supplemental care with medication-assisted manipulation versus spinal manipulation therapy alone for patients with chronic low back pain. *J Manipulative Physiol Ther*. 2005 May;28(4):245-52.
35. Kohlbeck FJ, Haldeman S. Medication-assisted spinal manipulation. Technical report. *Spine J*. 2002 Jul-Aug;2(4):288-302.
36. Lim JW, Park YB, Lee DH, Lee HJ. Effect of Manipulation under Anesthesia of the First Knee in Staged Bilateral Total Knee Arthroplasty on Clinical Outcome and Satisfaction. *J Knee Surg*. 2021 Nov;34(13):1429-1435. doi: 10.1055/s-0040-1709675. Epub 2020 Apr 24. PMID: 32330972.
37. Lindsey RW, Pneumaticos SG, Gugala Z. Thoracolumbar spine fractures. Management techniques for spinal injuries. In: *Browner: Skeletal Trauma: Basic Science, Management, and Reconstruction*, 3rd ed., Copyright © 2003. Ch 27.

38. Magit D, Wolff A, Sutton K, Medvecky MJ. Arthrofibrosis of the knee. *J Am Acad Orthop Surg*. 2007 Nov;15(11):682-94.
39. Maund E, Craig D, Suekarran S, Neilson A, Wright K, Brealey S, et al. Management of frozen shoulder: a systematic review and cost-effectiveness analysis. *Health Technol Assess*. 2012;16(11):1-264.
40. Miller RH, Azar FM, Throckmorton TW. Shoulder and Elbow Injuries. In: *Campbell's Operative Orthopaedics*, Chapter 46, 2374-2425. Copyright © 2021 Elsevier.
41. Mohammed R, Syed S, Ahmed N. Manipulation under anesthesia for stiffness following knee arthroplasty. *Ann R Coll Surg Engl*. 2009 Apr;91(3):220-3.
42. Namba RS, Inacio M. Early and late manipulation improve flexion after total knee arthroplasty. *J Arthroplasty*. 2007 Sep;22(6 Suppl 2):58-61.
43. Nirschl RP, Willett SG. Adhesive capsulitis. In; *Frontera: Essentials of Physical Medicine and Rehabilitation*, 1st ed. Ch 12. Copyright © 2002.
44. Paley D. Principles of deformity correction. In: *Browner: Skeletal Trauma: Basic Science, Management, and Reconstruction*, 3rd ed. Ch 62. Copyright © 2003 Saunders.
45. Palmieri NF, Smoyak S. Chronic low back pain: a study of the effects of manipulation under anesthesia. *J Manipulative Physiol Ther*. 2002 Oct;25(8):E8-E17.
46. Peterson CK, Humphreys BK, Vollenweider R, Kressig M, Nussbaumer R. Outcomes for chronic neck and low back pain patients after manipulation under anesthesia: a prospective cohort study. *J Manipulative Physiol Ther*. 2014 Jul-Aug;37(6):377-82.
47. Pivec R, Issa K, Kester M, Harwin SF, Mont MA. Long-term outcomes of MUA for stiffness in primary TKA. *Knee Surg*. 2013 Dec;26(6):405-10.
48. Randsborg PH, Tajet J, Negård H, Røtterud JH. Manipulation under Anesthesia for Stiffness of the Knee Joint after Total Knee Replacement. *Arthroplast Today*. 2020 Jun 28;6(3):470-474.
49. Rangan A, Brealey SD, Keding A, Corbacho B, Northgraves M, Kottam L, Goodchild L, Srikesavan C, Rex S, Charalambous CP, Hanchard N, Armstrong A, Brooksbank A, Carr A, Cooper C, Dias JJ, Donnelly I, Hewitt C, Lamb SE, McDaid C, Richardson G, Rodgers S, Sharp E, Spencer S, Torgerson D, Toye F; UK FROST Study Group. Management of adults with primary frozen shoulder in secondary care (UK FROST): a multicentre, pragmatic, three-arm, superiority randomised clinical trial. *Lancet*. 2020 Oct 3;396(10256):977-989. doi: 10.1016/S0140-6736(20)31965-6. Erratum in: *Lancet*. 2021 Jan 9;397(10269):98.
50. Rotman D, Factor S, Schermann H, Kadar A, Atlan F, Pritsch T, Rosenblatt Y. Manipulation under anesthesia for the postsurgical stiff elbow: a case series and review of literature. *Eur J Orthop Surg Traumatol*. 2019 Jul 6.
51. Rolle A. Frozen Shoulder. In: *Ferri's Clinical Advisor 2017*. 487. E3. Copyright © 2017 by Elsevier.
52. Sheridan MA, Hannafin JA. Upper extremity: emphasis on frozen shoulder. *Orthop Clin North Am*. 2006 Oct;37(4):531-9.

53. Srikesavan C, Toye F, Brealey S, Goodchild L, Northgraves M, Charalambous CP, et al. Experiences and perceptions of trial participants and healthcare professionals in the UK Frozen Shoulder Trial (UK FROST): a nested qualitative study. *BMJ Open*. 2021 Jun 11;11(6):e040829.
54. Spitler CA, Doty DH, Johnson MD, et al. Manipulation under anesthesia as a treatment of posttraumatic elbow stiffness. *J Orthop Trauma*. 2018;32(8):e304-e308
55. Taber DJ, James GD, Jacon A. Manipulation under anesthesia for lumbopelvic pain: a retrospective review of 18 cases. *J Chiropr Med*. 2014 Mar;13(1):28-34.
56. Tan V, Daluiski A, Simic P, Hotchkiss RN . Outcome of open release for post-traumatic elbow stiffness. *J Trauma* 2006 Sep;6(13);673-8.
57. Walsh, J. M., Sullivan, T. C., Varghese, B., Incavo, S. J., Brown, T. S., & Park, K. J. (2025). Manipulation Under Anesthesia After Primary Total Knee Arthroplasty. *The Journal of arthroplasty*, S0883-5403(25)00527-3. Advance online publication.
58. Wang JP, Huang TF, Hung SC, Ma HL, Wu JG, Chen TH. Comparison of idiopathic, post-trauma and post-surgery frozen shoulder after manipulation under anesthesia. *Int Orthop*. 2007 Jun;31(3):333-7. Epub 2006 Aug 23.
59. West DT, Mathews RS, Miller MR, Kent GM. Effective management of spinal pain in one hundred seventy-seven patients evaluated for manipulation under anesthesia. *J Manipulative Physiol Ther*.1999 Jun;22(5):299-308.

Revision Details

| Type of Revision | Summary of Changes | Date |
|------------------|--|------------|
| Focused Review | <ul style="list-style-type: none"> Removed policy statement for spinal manipulation under anesthesia Clarified statement regarding non-covered indications | 3/15/2026 |
| Annual Review | <ul style="list-style-type: none"> No clinical policy statement changes. | 9/15/2025 |
| Annual review | <ul style="list-style-type: none"> No clinical policy statement changes. | 10/15/2024 |

“Cigna Companies” refers to operating subsidiaries of The Cigna Group. All products and services are provided exclusively by or through such operating subsidiaries, including Cigna Health and Life Insurance Company, Connecticut General Life Insurance Company, Evernorth Behavioral Health, Inc., Cigna Health Management, Inc., and HMO or service company subsidiaries of The Cigna Group. ©2026 The Cigna Group.