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Applies to all products administered or underwritten by Blue Cross and Blue Shield of Louisiana and its subsidiary, HMO Louisiana, Inc. (collectively referred to as the "Company"), unless otherwise provided in the applicable contract. Medical technology is constantly evolving, and we reserve the right to review and update Medical Policy periodically.

Note: Botulinum Toxins is addressed separately in medical policy 00012.

Note: Intra-Articular Hyaluronan Injections for Osteoarthritis of the Knee is addressed separately in medical policy 00075.

Note: Electrical Nerve Stimulation is addressed separately in medical policy 00142.

Note: Percutaneous Electrical Nerve Stimulation (PENS) and Percutaneous Neuromodulation Therapy (PNT) is addressed separately in medical policy 00144.

Diagnostic Procedures

When Services Are Eligible for Coverage

Coverage for eligible medical treatments or procedures, drugs, devices or biological products may be provided only if:

- Benefits are available in the member's contract/certificate, and
- Medical necessity criteria and guidelines are met.

Based on review of available data, the Company may consider **ANY** of the following *diagnostic procedures* in the diagnosis of temporomandibular joint dysfunction (TMJD) to be **eligible for coverage****:

- Diagnostic x-ray, tomograms, and arthrograms; **OR**
- Computed tomography (CT) scan (in general, computed tomography [CT] scans are reserved for presurgical evaluations, preferred for intraarticular loose bodies and temporomandibular joint osteoarthritis); **OR**
- Magnetic resonance imaging (MRI) of the temporomandibular joint (TMJ) for evaluation of internal derangement or disc displacement when **BOTH** of the following requirements are met:
 - Mechanical symptoms (such as locking, popping, or clicking) which have not improved after at least 3 months of conservative management, including nonsteroidal anti-inflammatory drugs or acetaminophen, a short-term trial of soft diet and proper chewing techniques, and an oral appliance (such as a bite block); **AND**
 - Surgical intervention is being considered; **OR**

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- Cephalograms (x-rays of jaws and skull); **OR**
- Pantograms (x-rays of maxilla and mandible).

Note: (Cephalograms and pantograms should be reviewed on an individual basis.)

When Services Are Considered Investigational

Coverage is not available for investigational medical treatments or procedures, drugs, devices or biological products.

Based on review of available data, the Company considers other uses of *diagnostic procedures* in the diagnosis of temporomandibular joint dysfunction (TMJD), including but not limited to the following procedures, to be **investigational***:

- Electromyography (EMG), including surface electromyography (EMG);
- Kinesiography;
- Thermography;
- Neuromuscular junction testing;
- Somatosensory testing;
- Transcranial or lateral skull x-rays; intraoral tracing or gnathic arch tracing (intended to demonstrate deviations in the positioning of the jaw that are associated with temporomandibular joint dysfunction [TMJD]);
- Muscle testing;
- Standard dental radiographic procedures;
- Range-of-motion measurements;
- Computerized mandibular scan (measures and records muscle activity related to movement and positioning of the mandible and is intended to detect deviations in occlusion and muscle spasms related to temporomandibular joint dysfunction [TMJD]);
- Ultrasound imaging/sonogram;
- Arthroscopy of the temporomandibular joint (TMJ) for purely diagnostic purposes;
- Joint vibration analysis.

Criteria Applicable to Nonsurgical and Surgical Treatments

When Services May Be Eligible for Coverage

Coverage for eligible medical treatments or procedures, drugs, devices or biological products may be provided only if:

- Benefits are available in the member's contract/certificate, and
- Medical necessity criteria and guidelines are met.
- I. Based on review of available data, the Company may consider **eligible for coverage**** treatment of temporomandibular disorder (TMD) when **ALL** of the following diagnostic criteria in section I are met, and criteria for specific treatments listed in sections II and III are met:

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- Individual had comprehensive TMD assessment including history, physical examination, and range of motion measurements of the jaw; **AND**
- **ALL** of the following conditions have been ruled out by a medical provider as a cause of TMD symptoms:
 - Acute and chronic rhinosinusitis; **AND**
 - Cervical spine pathology; AND
 - Disorders of the parotid gland; AND
 - Headache disorders (e.g., migraine, cluster, tension); AND
 - Otologic disorders; AND
 - Trigeminal neuralgia;

AND

- Imaging confirms internal derangement, disc displacement, or degenerative joint disease of the temporomandibular joint; **AND**
- Symptoms of TMD persist despite simple analgesics (e.g., NSAIDs, acetaminophen), including **TWO OR MORE** of the following:
 - Pain in the jaw, temple, ear, or in front of the ear;
 - Headache;
 - Radiating facial pain;
 - Limited movement of the jaw;
 - Locking of the jaw;
 - Painful clicking, popping, or grating in the jaw when opening or closing the mouth;
 - Painful chewing;
 - Jaw joint and/or muscles tender to palpation;
 - Changes in the way the upper and lower teeth fit together;

AND

- A full odontogenic exam has been completed and any dental pathology, including but not limited to dental caries, gingivitis, malocclusion, or bruxism, has been identified and treated by a qualified dentist; **AND**
- Diagnosed by a qualified dentist trained and experienced in the overall care of oral health, the temporomandibular joint, dental occlusion, and associated orofacial structures.

Required documentation:

The following documentation must be submitted:

1. Clinical notes from a recent detailed oral examination and a panoramic x-ray (panorex or orthopantomogram, a 2D dental x-ray with a wide view of the upper and lower jaws, teeth, sinuses and temporomandibular joints) documenting the absence of pathology (e.g., dental caries, gingivitis);



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- 2. Clinical records from a medical provider documenting that other pathology (e.g., trigeminal neuralgia, otologic disorders) has been ruled out;
- 3. Surgical treatment requests require a formal imaging report from an independent radiologist.

Nonsurgical Treatments

When Services Are Eligible for Coverage

Coverage for eligible medical treatments or procedures, drugs, devices or biological products may be provided only if:

- Benefits are available in the member's contract/certificate, and
- Medical necessity criteria and guidelines are met.
- II. Based on review of available data, the Company may consider **ANY** of the following *nonsurgical treatments* in the treatment of temporomandibular joint dysfunction (TMJD) to be **eligible for coverage****when the diagnostic criteria in section I have been met:
 - Intraoral removable prosthetic devices/appliances providing full-occlusal coverage (encompassing fabrication, insertion, adjustment); **OR**
 - Behavioral/psychological therapy (i.e., relaxation training, cognitive behavioral therapies); **OR**
 - Pharmacologic treatment (e.g., anti-inflammatory, muscle relaxing, analgesic medications).

When Services Are Considered Not Medically Necessary

Based on review of available data, the Company considers use of multiple occlusal splints (i.e., daytime and nighttime, maxillary and mandibular splints) in the treatment of temporomandibular joint dysfunction (TMJD) to be **not medically necessary****.

Note:

Member contract needs to be considered first as most health insurance contracts have an exclusion under medical benefits for treatment of malocclusion and dental conditions. Treatment of pain caused by malocclusion and dental conditions may be excluded from coverage.

When Services Are Considered Investigational

Coverage is not available for investigational medical treatments or procedures, drugs, devices or biological products.

Based on review of available data, the Company considers other uses of *nonsurgical treatments* in the treatment of temporomandibular joint dysfunction (TMJD), including but not limited to the following treatments, to be **investigational***:

• Electrogalvanic stimulation;



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- Iontophoresis;
- Biofeedback;
- Dermal fillers;
- Ultrasound;
- Devices promoted to maintain joint range of motion and to develop muscles involved in jaw function;
- Orthodontic services;
- Dental restorations/prostheses;
- Transcutaneous electrical nerve stimulation;
- Percutaneous electrical nerve stimulation;
- Acupuncture;
- Hyaluronic acid;
- Platelet concentrates;
- Dextrose prolotherapy.

Surgical Treatments

When Services Are Eligible for Coverage

Coverage for eligible medical treatments or procedures, drugs, devices or biological products may be provided only if:

- Benefits are available in the member's contract/certificate, and
- Medical necessity criteria and guidelines are met.
- III. Based on review of available data, the Company may consider ANY of the following *surgical treatments* in the treatment of temporomandibular joint dysfunction (TMJD) to be eligible for coverage** when the diagnostic criteria in section I have been met:
 - Arthrocentesis; **OR**
 - Manipulation for reduction of fracture or dislocation of the temporomandibular joint (TMJ); **OR**
 - Arthroscopic surgery in patients with objectively demonstrated (by physical examination and MRI or CT) internal derangements (displaced discs) or degenerative joint disease who have persistent TMJ pain despite at least 6 months of conservative treatment (e.g., intraoral appliances, behavioral changes, pharmacological therapy); **OR**
 - Open surgical procedures including arthroplasties, condylectomies, meniscus or disc plication, and disc removal when TMJ dysfunction is the result of congenital anomalies, trauma, or disease in individuals who have failed at least 6 months of conservative treatment (e.g., intraoral appliances, behavioral changes, pharmacological therapy).

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When Services Are Considered Investigational

Coverage is not available for investigational medical treatments or procedures, drugs, devices or biological products.

Based on review of available data, the Company considers all other *surgical treatments* in the treatment of temporomandibular joint dysfunction (TMJD) to be **investigational.***

Background/Overview

Diagnosis of Temporomandibular Joint Disorder

In the clinical setting, temporomandibular joint disorder (TMJD) is often a diagnosis of exclusion and involves physical examination, patient interview, and a review of dental records. Diagnostic testing and radiologic imaging are generally only recommended for patients with severe and chronic symptoms. Diagnostic criteria for TMJD have been developed and validated for use in both clinical and research settings.

Symptoms attributed to TMJD vary and include, but are not limited to, clicking sounds in the jaw; headaches; closing or locking of the jaw due to muscle spasms (trismus) or displaced disc; pain in the ears, neck, arms, and spine; tinnitus; and bruxism (clenching or grinding of the teeth).

Treatment

For many patients, symptoms of TMJD are short-term and self-limiting. Conservative treatments (eg, eating soft foods, rest, heat, ice, avoiding extreme jaw movements) and anti-inflammatory medication are recommended before considering more invasive and/or permanent therapies (eg, surgery).

Note that botulinum toxin for TMJD is addressed in medical policy 00012.

FDA or Other Governmental Regulatory Approval

U.S. Food and Drug Administration (FDA)

Since 1981, several muscle-monitoring devices have been cleared for marketing by the U.S. Food and Drug Administration (FDA) through the 510(k) process. Some examples are the K7x Evaluation System (Myotronics), the BioEMG $\text{III}^{\text{TM}^{+}}$ (Bio-Research Associates), M-Scan^{TM‡} (Bio-Research Associates), and the GrindCare Measure^{®‡} (Medotech A/S). These devices aid clinicians in the analysis of joint sound, vibrations, and muscle contractions when diagnosing and evaluating TMJD. FDA product code: KZM.

Table 1. Muscle-Monitoring Devices Cleared by the U.S. Food and Drug Administration

Devices	Manufacturer	Date Cleared	510(k) No.	Indication
K7x Evaluation System	Myotronics, Inc	Nov 2000	K003287	Electromyography

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BioEMG IIITM	Bio-Research Associates, Inc	Feb 2009	K082927	Electromyography, Joint Vibration Recording
GrindCare Measure	Medotech A/S	Apr 2012	K113677	Electromyography, Nocturnal Bruxism
M-ScanTM	Bio-Research Associates	Jul 2013	K130158	Electromyography
TEETHAN 2.0	BTS S.P.A.	Dec 2016	K161716	Electromyography
GrindCare System	Sunstar Suisse S.A.	Sep 2017	K163448	Electromyography, Sleep Bruxism
Nox Sleep System	Nox Medical	Nov 2019	K192469	Electromyography, Sleep Bruxism

FDA product code: KZM.

Rationale/Source

This medical policy was developed through consideration of peer-reviewed medical literature generally recognized by the relevant medical community, U.S. Food and Drug Administration approval status, nationally accepted standards of medical practice and accepted standards of medical practice in this community, technology evaluation centers, reference to federal regulations, other plan medical policies, and accredited national guidelines.

Description

Temporomandibular joint disorder (TMJD) refers to a group of disorders characterized by pain in the temporomandibular joint and surrounding tissues. Initial conservative therapy is generally recommended; there are also a variety of nonsurgical and surgical treatment possibilities for patients whose symptoms persist.

Summary of Evidence

For individuals with suspected temporomandibular joint disorder (TMJD) who receive ultrasound, surface electromyography, or joint vibration analysis, the evidence includes systematic reviews of diagnostic test studies. Relevant outcomes are test validity and other performance measures. None of the systematic reviews found that these diagnostic techniques accurately identified patients with TMJD, and many of the studies had methodologic limitations. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals with a confirmed diagnosis of TMJD who receive intraoral devices or appliances or pharmacologic treatment, the evidence includes randomized controlled trials (RCTs) and systematic reviews of RCTs. Relevant outcomes are symptoms, functional outcomes, quality of life, and treatment-related morbidity. A systematic review of intraoral appliances (44 studies) and meta-analyses of subsets of these studies found a significant benefit of intraoral appliances compared with control interventions. Several studies, meta-analyses, and systematic reviews exploring the



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effectiveness of stabilization splints on TMJD pain revealed conflicting results. Overall, the evidence shows that stabilizing splints may improve pain and positively impact depressive and anxiety symptoms. The evidence related to pharmacologic treatment varies because studies, systematic reviews, and meta-analyses lack consistency in evaluating specific agents. Some systematic reviews have found a significant benefit of several pharmacologic treatments (eg, analgesics, muscle relaxants, and anti-inflammatory medications [vs. placebo]), but other studies showed a lack of benefit with agents such as methylprednisolone and botulinum toxin type A. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

For individuals with a confirmed diagnosis of TMJD who receive acupuncture, biofeedback, transcutaneous electric nerve stimulation, orthodontic services, hyaluronic acid, platelet concentrates, or dextrose prolotherapy, the evidence includes RCTs, systematic reviews of these RCTs, and observational studies. Relevant outcomes are symptoms, functional outcomes, quality of life, and treatment-related morbidity. Systematic reviews evaluating acupuncture for TMJD have found inconsistent improvement in outcomes compared with sham or active controls. A 2023 meta-analysis of 22 RCTs failed to find improved pain or maximum mouth opening with acupuncture compared with active controls. Systematic reviews evaluating hyaluronic acid have found similar outcomes to corticosteroids or placebo. Platelet-rich plasma has been compared with hyaluronic acid in a number of systematic reviews and RCTs, but the studies are small and have methodologic limitations. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals with a confirmed diagnosis of TMJD who receive arthrocentesis or arthroscopy, the evidence includes RCTs, systematic reviews of RCTs, and observational studies. Relevant outcomes are symptoms, functional outcomes, quality of life, and treatment-related morbidity. One review, which included 3 RCTs, compared arthrocentesis or arthroscopy with nonsurgical interventions for TMJD. Pooled analyses of the RCTs found that arthrocentesis and arthroscopy resulted in superior pain reduction compared with control interventions. A network meta-analysis, which included 36 RCTs, revealed that arthroscopy and arthrocentesis improve pain control and maximum mouth opening. Two recent meta-analyses identified RCTs comparing arthrocentesis to various conservative management strategies. At 6 months, one analysis found improved maximum mouth opening with arthrocentesis while the other found similar outcomes between arthrocentesis and conservative treatments. Similarly, pain was improved with arthrocentesis in one analysis, but not the other. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

Supplemental Information

Practice Guidelines and Position Statements

Guidelines or position statements will be considered for inclusion in 'Supplemental Information if they were issued by, or jointly by, a US professional society, an international society with US representation, or National Institute for Health and Care Excellence (NICE). Priority will be given to guidelines that are informed by a systematic review, include strength of evidence ratings, and include a description of management of conflict of interest.



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American Association for Dental, Oral, and Craniofacial Research

In 2010 (reaffirmed in 2015), the American Association for Dental Research (now the American Association for Dental, Oral, and Craniofacial Research) policy statement recommended the following for the diagnosis and treatment of temporomandibular joint disorders (TMJDs):

"It is recommended that the differential diagnosis of TMDs [temporomandibular disorders] or related orofacial pain conditions should be based primarily on information obtained from the patient's history, clinical examination, and when indicated, TMJ [temporomandibular joint] radiology or other imaging procedures. The choice of adjunctive diagnostic procedures should be based upon published, peer-reviewed data showing diagnostic efficacy and safety. However, the consensus of recent scientific literature about currently available technological diagnostic devices for TMDs is that except for various imaging modalities, none of them shows the sensitivity and specificity required to separate normal subjects from TMD patients or to distinguish among TMD subgroups...."

"It is strongly recommended that, unless there are specific and justifiable indications to the contrary, treatment of TMD patients initially should be based on the use of conservative, reversible and evidence-based therapeutic modalities. Studies of the natural history of many TMDs suggest that they tend to improve or resolve over time. While no specific therapies have been proven to be uniformly effective, many of the conservative modalities have proven to be at least as effective in providing symptomatic relief as most forms of invasive treatment...."

American Society of Temporomandibular Joint Surgeons

In 2001, the American Society of Temporomandibular Joint Surgeons issued consensus clinical guidelines focused on TMJDs associated with internal derangement and osteoarthritis. For diagnosis of this type of TMJD, a detailed history and, when indicated, a general physical examination was recommended. Imaging of the temporomandibular and associated structures was also recommended. Options for basic radiography to provide information on temporal bone and condylar morphology included the use of plain films, panoramic films, and tomograms. Also recommended was imaging of the disc and associated soft tissue with magnetic resonance imaging or arthrography. Other diagnostic procedures indicated included computed tomography, magnetic resonance imaging (MRI), arthrography (for selected cases) and isotope bone scans.

Nonsurgical treatment was recommended as first-line therapy for all symptomatic patients with this condition. Recommended treatment options included a change in diet, nonsteroidal antiinflammatory drugs, maxillomandibular appliances, physical therapy, injections of corticosteroids or botulinum toxin, and behavior modification. If adequate symptom relief did not occur within 2 to 3 weeks, surgical consultation was advised. The guideline stated the following surgical procedures were considered accepted and effective for patients with TMJDs associated with internal derangement or osteoarthritis:

- Arthrocentesis;
- Arthroscopy;
- Condylotomy;

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- Arthrotomy (prosthetic joint replacement may be indicated in selected patients who have severe joint degeneration, destruction, or ankylosis);
- Coronoidotomy/coronoidectomy;
- Styloidectomy.

BMJ Rapid Recommendations

The BMJ Rapid Recommendations panel developed guidelines for the management of patients with chronic pain (\geq 3 months) associated with TMJD. The international expert panel included representation from an academic center in the United States.

The panel favored the following therapies:

- Cognitive behavior therapy (strong recommendation)
- Therapist-assisted mobilization (strong recommendation)
- Manual trigger point therapy (strong recommendation)
- Supervised postural or jaw exercise (strong recommendation)
- Usual care including home exercises, stretching, reassurance, and education (strong recommendation)
- Manipulation (conditional recommendation)
- Supervised jaw exercise with mobilization (conditional recommendation)
- Cognitive behavior therapy with non-steroidal anti-inflammatory drugs (conditional recommendation)
- Manipulation with postural exercise (conditional recommendation)
- Acupuncture (conditional recommendation)

The panel recommended against the following therapies:

- Reversible occlusal splints (conditional recommendation)
- Arthrocentesis (conditional recommendation)
- Cartilage supplement with or without hyaluronic acid injection (conditional recommendation)
- Low level laser therapy (conditional recommendation)
- Transcutaneous electrical nerve stimulation (conditional recommendation)
- Gabapentin (conditional recommendation)
- Botulinum toxin (conditional recommendation)
- Hyaluronic acid (conditional recommendation)
- Relaxation therapy (conditional recommendation)
- Trigger point injection (conditional recommendation)
- Acetaminophen (conditional recommendation)
- Topical capsaicin (conditional recommendation)
- Biofeedback (conditional recommendation)
- Corticosteroid injection (conditional recommendation)
- Benzodiazepines (conditional recommendation)

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- Beta-blockers (conditional recommendation)
- Irreversible oral splints (strong recommendation)
- Discectomy (strong recommendation)
- Non-steroidal anti-inflammatory drugs with opioids (strong recommendation)

U.S. Preventive Services Task Force Recommendations

Not applicable.

Medicare National Coverage

There is no national coverage determination. In the absence of a national coverage determination, coverage decisions are left to the discretion of local Medicare carriers.

Ongoing and Unpublished Clinical Trials

Some currently ongoing and unpublished trials that might influence this review are listed in Table 2.

NCT No.	Trial Name	Planned Enrollment	Completion Date
Ongoing			
NCT05989217	Conservative Therapies in the Treatment of Temporomandibular Disorders: a Randomized Controlled Clinical Trial	96	Sep 2024
NCT04936945	Comparative Study Between the Outcome of Intra-articular Injection of Platelet Rich Plasma Versus Hyaluronic Acid in Arthroscopic Management of Temporomandibular Degenerative Joint Diseases: A Randomized Clinical Trial	20	Jun 2023
NCT04884763ª	A Randomized, Double Blind, Placebo- Controlled Single Center Phase 2 Pilot Study to Assess the Safety and Efficacy of Off-label Subcutaneous Administration of Erenumab-aooe in Patients With Temporomandibular Disorder	30	Jan 2024
NCT04726683	Trigger Point Dry Needling vs Injection in Patients With Temporomandibular Disorders: a Randomized Placebo-controlled Trial	64	Dec 2024
Unpublished			

Table 2. Summary of Key Trials

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NCT04298554	Comparison of Cannabinoids to Placebo in Management of Arthralgia and Myofascial Pain Disorder of the Temporomandibular Region: A Randomized Clinical Trial.	59	May 2022
NCT05027243	Outcomes of Bilateral Temporomandibular Joint Arthroscopy and the Role of a Second Intervention - Timings and Results	46	July 2021

NCT: national clinical trial.

^aDenotes industry sponsored or co-sponsored trial

References

- 1. Carelon Medical Benefits Management, Clinical Appropriateness Guidelines for Advanced Imaging, "Imaging of the Head and Neck", April 14, 2024.
- Schiffman E, Ohrbach R, Truelove E, et al. Diagnostic Criteria for Temporomandibular Disorders (DC/TMD) for Clinical and Research Applications: recommendations of the International RDC/TMD Consortium Network* and Orofacial Pain Special Interest Group[†]. J Oral Facial Pain Headache. 2014; 28(1): 6-27. PMID 24482784
- Ohrbach R, Turner JA, Sherman JJ, et al. The Research Diagnostic Criteria for Temporomandibular Disorders. IV: evaluation of psychometric properties of the Axis II measures. J Orofac Pain. 2010; 24(1): 48-62. PMID 20213031
- Schiffman E, Ohrbach R. Executive summary of the Diagnostic Criteria for Temporomandibular Disorders for clinical and research applications. J Am Dent Assoc. Jun 2016; 147(6): 438-45. PMID 26922248
- 5. Almeida FT, Pacheco-Pereira C, Flores-Mir C, et al. Diagnostic ultrasound assessment of temporomandibular joints: a systematic review and meta-analysis. Dentomaxillofac Radiol. Feb 2019; 48(2): 20180144. PMID 30285469
- 6. Manfredini D, Guarda-Nardini L. Ultrasonography of the temporomandibular joint: a literature review. Int J Oral Maxillofac Surg. Dec 2009; 38(12): 1229-36. PMID 19700262
- Klasser GD, Okeson JP. The clinical usefulness of surface electromyography in the diagnosis and treatment of temporomandibular disorders. J Am Dent Assoc. Jun 2006; 137(6): 763-71. PMID 16803805
- Sharma S, Crow HC, McCall WD, et al. Systematic review of reliability and diagnostic validity of joint vibration analysis for diagnosis of temporomandibular disorders. J Orofac Pain. 2013; 27(1): 51-60. PMID 23424720
- 9. List T, Axelsson S. Management of TMD: evidence from systematic reviews and meta-analyses. J Oral Rehabil. May 2010; 37(6): 430-51. PMID 20438615
- Yao L, Sadeghirad B, Li M, et al. Management of chronic pain secondary to temporomandibular disorders: a systematic review and network meta-analysis of randomised trials. BMJ. Dec 15 2023; 383: e076226. PMID 38101924
- 11. Fricton J, Look JO, Wright E, et al. Systematic review and meta-analysis of randomized controlled trials evaluating intraoral orthopedic appliances for temporomandibular disorders. J Orofac Pain. 2010; 24(3): 237-54. PMID 20664825



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- 12. Ivorra-Carbonell L, Montiel-Company JM, Almerich-Silla JM, et al. Impact of functional mandibular advancement appliances on the temporomandibular joint a systematic review. Med Oral Patol Oral Cir Bucal. Sep 01 2016; 21(5): e565-72. PMID 27475694
- Randhawa K, Bohay R, Côté P, et al. The Effectiveness of Noninvasive Interventions for Temporomandibular Disorders: A Systematic Review by the Ontario Protocol for Traffic Injury Management (OPTIMa) Collaboration. Clin J Pain. Mar 2016; 32(3): 260-78. PMID 25924094
- 14. Ebrahim S, Montoya L, Busse JW, et al. The effectiveness of splint therapy in patients with temporomandibular disorders: a systematic review and meta-analysis. J Am Dent Assoc. Aug 2012; 143(8): 847-57. PMID 22855899
- Zhang C, Wu JY, Deng DL, et al. Efficacy of splint therapy for the management of temporomandibular disorders: a meta-analysis. Oncotarget. Dec 20 2016; 7(51): 84043-84053. PMID 27823980
- 16. Riley P, Glenny AM, Worthington HV, et al. Oral splints for temporomandibular disorder or bruxism: a systematic review. Br Dent J. Feb 2020; 228(3): 191-197. PMID 32060462
- 17. Al-Moraissi EA, Farea R, Qasem KA, et al. Effectiveness of occlusal splint therapy in the management of temporomandibular disorders: network meta-analysis of randomized controlled trials. Int J Oral Maxillofac Surg. Aug 2020; 49(8): 1042-1056. PMID 31982236
- Zhang L, Xu L, Wu D, et al. Effectiveness of exercise therapy versus occlusal splint therapy for the treatment of painful temporomandibular disorders: a systematic review and meta-analysis. Ann Palliat Med. Jun 2021; 10(6): 6122-6132. PMID 33977737
- 19. Alajbeg IZ, Vrbanović E, Lapić I, et al. Effect of occlusal splint on oxidative stress markers and psychological aspects of chronic temporomandibular pain: a randomized controlled trial. Sci Rep. Jul 03 2020; 10(1): 10981. PMID 32620810
- 20. Melo RA, de Resende CMBM, Rêgo CRF, et al. Conservative therapies to treat pain and anxiety associated with temporomandibular disorders: a randomized clinical trial. Int Dent J. Aug 2020; 70(4): 245-253. PMID 32153038
- 21. Ram HK, Shah DN. Comparative evaluation of occlusal splint therapy and muscle energy technique in the management of temporomandibular disorders: A randomized controlled clinical trial. J Indian Prosthodont Soc. 2021; 21(4): 356-365. PMID 34810363
- 22. Tonlorenzi D, Brunelli M, Conti M, et al. An observational study of the effects of using an high oral splint on pain control. Arch Ital Biol. Sep 30 2019; 157(2-3): 66-75. PMID 31821530
- 23. Häggman-Henrikson B, Alstergren P, Davidson T, et al. Pharmacological treatment of oro-facial pain health technology assessment including a systematic review with network meta-analysis. J Oral Rehabil. Oct 2017; 44(10): 800-826. PMID 28884860
- 24. Mena M, Dalbah L, Levi L, et al. Efficacy of topical interventions for temporomandibular disorders compared to placebo or control therapy: a systematic review with meta-analysis. J Dent Anesth Pain Med. Dec 2020; 20(6): 337-356. PMID 33409363
- 25. Machado D, Martimbianco ALC, Bussadori SK, et al. Botulinum Toxin Type A for Painful Temporomandibular Disorders: Systematic Review and Meta-Analysis. J Pain. 2020; 21(3-4): 281-293. PMID 31513934
- 26. Isacsson G, Schumann M, Nohlert E, et al. Pain relief following a single-dose intra-articular injection of methylprednisolone in the temporomandibular joint arthralgia-A multicentre randomised controlled trial. J Oral Rehabil. Jan 2019; 46(1): 5-13. PMID 30240024



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- Tchivileva IE, Hadgraft H, Lim PF, et al. Efficacy and safety of propranolol for treatment of temporomandibular disorder pain: a randomized, placebo-controlled clinical trial. Pain. Aug 2020; 161(8): 1755-1767. PMID 32701836
- Jung A, Shin BC, Lee MS, et al. Acupuncture for treating temporomandibular joint disorders: a systematic review and meta-analysis of randomized, sham-controlled trials. J Dent. May 2011; 39(5): 341-50. PMID 21354460
- 29. Liu GF, Gao Z, Liu ZN, et al. Effects of Warm Needle Acupuncture on Temporomandibular Joint Disorders: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. Evid Based Complement Alternat Med. 2021; 2021: 6868625. PMID 34873409
- 30. Park EY, Cho JH, Lee SH, et al. Is acupuncture an effective treatment for temporomandibular disorder?: A systematic review and meta-analysis of randomized controlled trials. Medicine (Baltimore). Sep 22 2023; 102(38): e34950. PMID 37746950
- 31. Manfredini D, Piccotti F, Guarda-Nardini L. Hyaluronic acid in the treatment of TMJ disorders: a systematic review of the literature. Cranio. Jul 2010; 28(3): 166-76. PMID 20806734
- 32. Machado E, Bonotto D, Cunali PA. Intra-articular injections with corticosteroids and sodium hyaluronate for treating temporomandibular joint disorders: a systematic review. Dental Press J Orthod. 2013; 18(5): 128-33. PMID 24352399
- 33. Goiato MC, da Silva EV, de Medeiros RA, et al. Are intra-articular injections of hyaluronic acid effective for the treatment of temporomandibular disorders? A systematic review. Int J Oral Maxillofac Surg. Dec 2016; 45(12): 1531-1537. PMID 27374020
- 34. Liu Y, Wu J, Fei W, et al. Is There a Difference in Intra-Articular Injections of Corticosteroids, Hyaluronate, or Placebo for Temporomandibular Osteoarthritis?. J Oral Maxillofac Surg. Mar 2018; 76(3): 504-514. PMID 29182905
- Al-Hamed FS, Hijazi A, Gao Q, et al. Platelet Concentrate Treatments for Temporomandibular Disorders: A Systematic Review and Meta-analysis. JDR Clin Trans Res. Apr 2021; 6(2): 174-183. PMID 32464073
- 36. Gokçe Kutuk S, Gökçe G, Arslan M, et al. Clinical and Radiological Comparison of Effects of Platelet-Rich Plasma, Hyaluronic Acid, and Corticosteroid Injections on Temporomandibular Joint Osteoarthritis. J Craniofac Surg. Jun 2019; 30(4): 1144-1148. PMID 31166260
- 37. Gorrela H, Prameela J, Srinivas G, et al. Efficacy of Temporomandibular Joint Arthrocentesis with Sodium Hyaluronate in the Management of Temporomandibular Joint Disorders: A Prospective Randomized Control Trial. J Maxillofac Oral Surg. Dec 2017; 16(4): 479-484. PMID 29038631
- 38. Manfredini D, Rancitelli D, Ferronato G, et al. Arthrocentesis with or without additional drugs in temporomandibular joint inflammatory-degenerative disease: comparison of six treatment protocols*. J Oral Rehabil. Apr 2012; 39(4): 245-51. PMID 21999138
- 39. Bjørnland T, Gjaerum AA, Møystad A. Osteoarthritis of the temporomandibular joint: an evaluation of the effects and complications of corticosteroid injection compared with injection with sodium hyaluronate. J Oral Rehabil. Aug 2007; 34(8): 583-9. PMID 17650168
- Bertolami CN, Gay T, Clark GT, et al. Use of sodium hyaluronate in treating temporomandibular joint disorders: a randomized, double-blind, placebo-controlled clinical trial. J Oral Maxillofac Surg. Mar 1993; 51(3): 232-42. PMID 8445463

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- 41. Sit RW, Reeves KD, Zhong CC, et al. Efficacy of hypertonic dextrose injection (prolotherapy) in temporomandibular joint dysfunction: a systematic review and meta-analysis. Sci Rep. Jul 19 2021; 11(1): 14638. PMID 34282199
- 42. Haggag MA, Al-Belasy FA, Said Ahmed WM. Dextrose prolotherapy for pain and dysfunction of the TMJ reducible disc displacement: A randomized, double-blind clinical study. J Craniomaxillofac Surg. May 2022; 50(5): 426-431. PMID 35501215
- 43. Vos LM, Huddleston Slater JJ, Stegenga B. Lavage therapy versus nonsurgical therapy for the treatment of arthralgia of the temporomandibular joint: a systematic review of randomized controlled trials. J Orofac Pain. 2013; 27(2): 171-9. PMID 23630689
- 44. Al-Moraissi EA, Wolford LM, Ellis E, et al. The hierarchy of different treatments for arthrogenous temporomandibular disorders: A network meta-analysis of randomized clinical trials. J Craniomaxillofac Surg. Jan 2020; 48(1): 9-23. PMID 31870713
- 45. Hu Y, Liu S, Fang F. Arthrocentesis vs conservative therapy for the management of TMJ disorders: A systematic review and meta-analysis. J Stomatol Oral Maxillofac Surg. Sep 07 2022. PMID 36084892
- 46. Thorpe ARDS, Haddad Y, Hsu J. A systematic review and meta-analysis of randomized controlled trials comparing arthrocentesis with conservative management for painful temporomandibular joint disorder. Int J Oral Maxillofac Surg. Aug 2023; 52(8): 889-896. PMID 36732095
- 47. Hossameldin RH, McCain JP. Outcomes of office-based temporomandibular joint arthroscopy: a 5-year retrospective study. Int J Oral Maxillofac Surg. Jan 2018; 47(1): 90-97. PMID 28751180
- 48. American Association for Dental, Oral, and Craniofacial Research (AADOCR). Science Policy: Temporomandibular disorders (TMD). 1996 (revised 2010, reaffirmed 2015); https://www.iadr.org/science-policy/temporomandibular-disorders-tmd.
- 49. American Society of Temporomandibular Joint Surgeons. Guidelines for diagnosis and management of disorders involving the temporomandibular joint and related musculoskeletal structures. Cranio. Jan 2003; 21(1): 68-76. PMID 12555934
- 50. Busse JW, Casassus R, Carrasco-Labra A, et al. Management of chronic pain associated with temporomandibular disorders: a clinical practice guideline. BMJ. Dec 15 2023; 383: e076227. PMID 38101929
- 51. Al-Moraissi EA, Alradom J, Aladashi O, et al. Needling therapies in the management of myofascial pain of the masticatory muscles: A network meta-analysis of randomized clinical trials. J Oral Rehabil. 2020 Jul;47(7):910-922.
- 52. Al-Moraissi EA, Farea R, Qasem KA, et al. Effectiveness of occlusal splint therapy in the management of temporomandibular disorders: network meta-analysis of randomized controlled trials. Int J Oral Maxillofac Surg. 2020c Aug;49(8):1042-1056.
- 53. American Academy of Orthopedic Surgeons (AAOS). https://orthoinfo.aaos.org/en/treatment/arthroscopy/.
- 54. Li J, Zhang Z, Han N. Diverse therapies for disc displacement of temporomandibular joint: A systematic review and network meta-analysis. Br J Oral Maxillofac Surg. 2022 Apr 20:S0266-4356(22)00116-4.
- 55. American Academy of Oral and Maxillofacial Surgery (AAOMS). Parameters of care: clinical practice guidelines for oral and maxillofacial surgery. 2017. Available at:



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https://members.aaoms.org/PersonifyEbusiness/AAOMSStore/Product-Details/productId/1518255.

- 56. American Association of Oral and Maxillofacial Surgeons (AAOMS). Clinical condition statements: temporomandibular disorders. 2017. Available at: http://www.aaoms.org/practice-resources/aaoms-advocacy-and-position-statements/clinical-resources.
- 57. American Association for Dental Research (AADR). Policy statement: temporomandibular joint disorders (TMJ). Adopted 1996; reaffirmed 2015. Available online at: http://www.aadocr.org/science-policy/temporomandibular-disorders-tmd.
- 58. de Souza RF, Lovato da Silva CH, Nasser M, et al. Interventions for the management of temporomandibular joint osteoarthritis. Cochrane Database Syst Rev. 2012;(4):CD007261.
- 59. National Institutes National Institute of Dental and Craniofacial Research (NIDCR). 2018a. Prevalence of TMJD and its Signs and Symptoms. Last reviewed July 2018. Available at: https://www.nidcr.nih.gov/research/data-statistics/facial-pain/prevalence.
- 60. National Institutes National Institute of Dental and Craniofacial Research (NIDCR). 2024. TMJ (Temporomandibular Joint & Muscle Disorders). Last updated October 2024. Available at: https://www.nidcr.nih.gov/health-info/tmj/more-info.

Policy History

Original Effecti	ve Date: 01/01/2018
Current Effectiv	ve Date: 02/01/2025
12/07/2017	Medical Policy Committee review
12/20/2017	Medical Policy Implementation Committee approval. New policy.
08/01/2018	Coding update.
08/16/2018	Coding update
12/06/2018	Medical Policy Committee review
12/19/2018	Medical Policy Implementation Committee approval. Coverage eligibility
	unchanged.
12/05/2019	Medical Policy Committee review
12/11/2019	Medical Policy Implementation Committee approval. Coverage eligibility
	unchanged.
07/02/2020	Medical Policy Committee review
07/08/2020	Medical Policy Implementation Committee approval. Created a separate
	requirement bullet for temporomandibular joint dysfunction for MRI only with 3
	sub-bullets to track AIM Guidelines. For MRI criteria, defined conservative
	management to be at least 3 months duration for mechanical symptoms.
08/25/2020	Coding update
02/04/2021	Medical Policy Committee review
02/10/2021	Medical Policy Implementation Committee approval. Removed the 3 rd open bullet
	requirement for MRI for Diagnostic Procedures that are eligible for coverage.
	Added platelet concentrates as investigational to nonsurgical treatments for
	temporomandibular joint dysfunction.

02/03/2022 Medical Policy Committee review

Policy # 0058	3		
Original Effective Date: 01/01/2018			
Current Effectiv	ve Date: 02/01/2025		
02/09/2022	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.		
02/02/2023	Medical Policy Committee review		
02/08/2023	Medical Policy Implementation Committee approval. Added dextrose prolotherapy		
	to the list of investigational treatments.		
09/07/2023	Medical Policy Committee review		
09/13/2023	Medical Policy Implementation Committee approval. Coverage eligibility		
	unchanged.		
06/06/2024	Coding update		
06/06/2024	Medical Policy Committee review		
06/12/2024	Medical Policy Implementation Committee approval. Coverage eligibility and		
	diagnostic criteria added for treatment of temporomandibular disorder. Clinical		
	Practice Guidelines AADOCR and AAOMS added with Temporomandibular		
	Disorders reference support added to policy.		
11/07/2024	Medical Policy Committee review		
11/13/2024	Medical Policy Implementation Committee approval. Added "preferred for		
	intraarticular loose bodies and temporomandibular joint osteoarthritis" to the end		
	of the second bullet on computed tomography for the Diagnostic Procedures		
	criteria. Added panoramic x-ray with a description to #1 of the required		
	documentation for the Nonsurgical and Surgical Treatment criteria. Revised #3 of		
	the required documentation for the Nonsurgical and Surgical Treatment criteria to		
	require the independent radiologist read for surgical treatments only. Added a Not		
	Medically Necessary section for use of multiple occlusal splints (i.e., daytime and		
	nighttime, maxillary and mandibular splints) in the treatment of		
	temporomandibular joint dysfunction. Added dermal filters as investigational for		
	Nonsurgical Treatments.		
Next Scheduled	Review Date: 11/2025		

Coding

The five character codes included in the Blue Cross Blue Shield of Louisiana Medical Policy Coverage Guidelines are obtained from Current Procedural Terminology $(CPT^{\$})^{\ddagger}$, copyright 2023 by the American Medical Association (AMA). CPT is developed by the AMA as a listing of descriptive terms and five character identifying codes and modifiers for reporting medical services and procedures performed by physician.

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contained herein. Any use of CPT outside of Blue Cross Blue Shield of Louisiana Medical Policy Coverage Guidelines should refer to the most current Current Procedural Terminology which contains the complete and most current listing of CPT codes and descriptive terms. Applicable FARS/DFARS apply.

CPT is a registered trademark of the American Medical Association.

Codes used to identify services associated with this policy may include (but may not be limited to) the following:

Code Type	Code
СРТ	20605, 20606, 21010, 21050, 21060, 21073, 21085, 21110, 21116, 21240, 21242, 21243, 29800, 29804, 70336 Add codes effective 03/01/2025: 21070
HCPCS	D0370, D7840, D7850, D7852, D7854, D7856, D7858, D7860, D7865, D7872, D7873, D7874, D7875, D7876, D7877, D7880, D7899, E1700, E1701, E1702, M0076, Delete code effective 07/01/2024: S8948 Add code effective 03/01/2025: D9944, D9945, D9946
ICD-10 Diagnosis	M26.00-M26.09, M26.10-M26.19, M26.4, M26.50-M26.59, M26.601-M26.69, M26.9, M79.11, R68.89, S02.412A-S02.412S All related Diagnoses

*Investigational – A medical treatment, procedure, drug, device, or biological product is Investigational if the effectiveness has not been clearly tested and it has not been incorporated into standard medical practice. Any determination we make that a medical treatment, procedure, drug, device, or biological product is Investigational will be based on a consideration of the following:

- A. Whether the medical treatment, procedure, drug, device, or biological product can be lawfully marketed without approval of the U.S. Food and Drug Administration (FDA) and whether such approval has been granted at the time the medical treatment, procedure, drug, device, or biological product is sought to be furnished; or
- B. Whether the medical treatment, procedure, drug, device, or biological product requires further studies or clinical trials to determine its maximum tolerated dose, toxicity, safety, effectiveness, or effectiveness as compared with the standard means of treatment or diagnosis, must improve health outcomes, according to the consensus of opinion among experts as shown by reliable evidence, including:
 - 1. Consultation with technology evaluation center(s);
 - 2. Credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community; or
 - 3. Reference to federal regulations.

**Medically Necessary (or "Medical Necessity") - Health care services, treatment, procedures, equipment, drugs, devices, items or supplies that a Provider, exercising prudent clinical judgment,

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would provide to a patient for the purpose of preventing, evaluating, diagnosing or treating an illness, injury, disease or its symptoms, and that are:

- A. In accordance with nationally accepted standards of medical practice;
- B. Clinically appropriate, in terms of type, frequency, extent, level of care, site and duration, and considered effective for the patient's illness, injury or disease; and
- C. Not primarily for the personal comfort or convenience of the patient, physician or other health care provider, and not more costly than an alternative service or sequence of services at least as likely to produce equivalent therapeutic or diagnostic results as to the diagnosis or treatment of that patient's illness, injury or disease.

For these purposes, "nationally accepted standards of medical practice" means standards that are based on credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community, Physician Specialty Society recommendations and the views of Physicians practicing in relevant clinical areas and any other relevant factors.

‡ Indicated trademarks are the registered trademarks of their respective owners.

NOTICE: If the Patient's health insurance contract contains language that differs from the BCBSLA Medical Policy definition noted above, the definition in the health insurance contract will be relied upon for specific coverage determinations.

NOTICE: Medical Policies are scientific based opinions, provided solely for coverage and informational purposes. Medical Policies should not be construed to suggest that the Company recommends, advocates, requires, encourages, or discourages any particular treatment, procedure, or service, or any particular course of treatment, procedure, or service.

NOTICE: Federal and State law, as well as contract language, including definitions and specific contract provisions/exclusions, take precedence over Medical Policy and must be considered first in determining eligibility for coverage.

