

MEDICAL POLICY – 9.02.501

Orthognathic Surgery


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RELATED MEDICAL/DENTAL POLICIES:

2.01.535	Temporomandibular Joint Disorder
7.01.554	Surgical Treatment of Snoring and Obstructive Sleep Apnea Syndrome
9.02.500	Orthodontic Services for Treatment of Congenital Craniofacial Anomalies
9.02.503	Computerized Diagnostic Imaging for Complex Maxillofacial Procedures
10.01.514	Cosmetic and Reconstructive Services

Select a hyperlink below to be directed to that section.

[POLICY CRITERIA](#) | [DOCUMENTATION REQUIREMENTS](#) | [CODING](#)
[RELATED INFORMATION](#) | [EVIDENCE REVIEW](#) | [REFERENCES](#) | [HISTORY](#)

 Clicking this icon returns you to the hyperlinks menu above.

Introduction

Orthognathic surgery is surgery to correct conditions of the jaw. Severe problems with the jawbone can interfere with being able to speak or chew. Orthognathic surgery treats and corrects problems with the facial bones, specifically the upper jaw (maxilla) and lower jaw (mandible). Some of these corrective surgeries involve lengthening or shortening the lower jawbone. This policy identifies when corrective jaw surgery is considered medically necessary.

Note: The Introduction section is for your general knowledge and is not to be taken as policy coverage criteria. The rest of the policy uses specific words and concepts familiar to medical professionals. It is intended for providers. A provider can be a person, such as a doctor, nurse, psychologist, or dentist. A provider also can be a place where medical care is given, like a hospital, clinic, or lab. This policy informs them about when a service may be covered.

Policy Coverage Criteria

Condition	Medical Necessity
Contract limitations	Some health plan contracts may not have benefits to cover orthognathic surgery. Refer to member contract language for benefit determination.
Congenital anomalies	<p>Orthognathic surgery for correction of congenital (apparent at birth) deformities may be considered medically necessary for the following diagnoses (list may not be all inclusive):</p> <ul style="list-style-type: none"> • Apert syndrome • Cleft deformity • Crouzon syndrome • Hemifacial microsomia (HFM) • Pfeiffer syndrome • Pierre Robin syndrome • Treacher Collins syndrome <p>Note: Abnormal growth of the jaws (resulting in maxillary and/or mandibular hypo- or hyperplasia) is NOT considered a congenital anomaly</p>
Traumatic injury or tumor	Orthognathic surgery may be considered medically necessary for restoration of function related to an acute traumatic injury or surgical removal of a tumor
Maxillary and/or mandibular facial skeletal deformities associated with masticatory malocclusion	<p>Orthognathic surgery for correction of skeletal deformities of the maxilla or mandible may be considered medically necessary when ALL of the following criteria (1, 2 and 3) are met:</p> <ol style="list-style-type: none"> 1. ONE of the following significant functional impairments is present and persists for at least 4 months: <ul style="list-style-type: none"> ○ Impaired masticatory or incisive function (difficulty chewing) ○ Chewing-induced trauma to the soft tissues of the mouth ○ Impaired swallowing or choking on incompletely chewed solid foods ○ Abnormal tongue thrust is present ○ Speech abnormality impairs the individual's ability to communicate and is determined by a speech pathologist or



Condition	Medical Necessity
	<p>therapist to be due to skeletal malocclusion and the speech deficit cannot be resolved by speech therapy</p> <p>AND</p> <p>2. ONE of the following facial skeletal deformities is present:</p> <ul style="list-style-type: none"> ○ Mandibular excess or maxillary deficiency with a reverse overjet (ROJ) of at least 3 mm ○ Maxillary excess or mandibular deficiency with an overjet (OJ) of at least 6 mm ○ Open bite (OB) of at least 2 mm ○ Deep bite (DB) of at least 7mm ○ Significant transverse maxillary arch deficiency presenting with ONE of the following: <ul style="list-style-type: none"> ▪ Crowded maxillary teeth with first or second bicuspid extracted and no other orthognathic procedures ▪ Unilateral maxillary arch expansion (asymmetries greater than 3 mm with concomitant occlusal asymmetry) ▪ Transverse maxillary arch (bilateral) of more than 7 mm <p>AND</p> <p>3. An orthodontic specialist has documented that orthodontia (conservative therapy) is not recommended for the condition. or orthodontia has already been tried and was not adequate</p>
<p>Treatment of severe malocclusion that contributes to TMJ syndrome symptoms</p>	<p>Treatment of severe malocclusion that contributes to temporomandibular joint (TMJ) syndrome symptoms may be considered medically necessary when ONE of each of the following elements (1, 2 and 3) are met:</p> <p>1. ONE of the following symptoms is present and has persisted for at least 4 months:</p> <ul style="list-style-type: none"> ○ Painful chewing clearly related to the TMJ ○ Frequent and significant headaches clearly related to TMJ ○ Significant temporomandibular joint and/or muscle tenderness <p>AND</p>



Condition	Medical Necessity
	<p>2. Symptoms persist after 4 months of treatment with ONE of the following conservative measures:</p> <ul style="list-style-type: none"> ○ Elimination of aggravating factors such as: gum chewing, chewing hard or tough foods ○ Use of anti-inflammatory medications, unless contraindicated ○ Treatment with splint therapy, unless not tolerated <p>AND</p> <p>3. Malocclusion or dental misalignment is present and supported by ONE of the following measurements:</p> <ul style="list-style-type: none"> ○ Mandibular excess or maxillary deficiency with a reverse overjet (ROJ) of at least 3 mm; ○ Maxillary excess or mandibular deficiency with an overjet (OJ) of at least 6 mm; ○ Open bite (OB) of at least 4 mm ○ Deep bite (DB) of at least 7mm ○ Significant transverse maxillary arch deficiency presenting with ONE of the following: <ul style="list-style-type: none"> ▪ Crowded maxillary teeth with first or second bicuspid extracted and no other orthognathic procedures ▪ Unilateral maxillary arch expansion (asymmetries greater than 3 mm with concomitant occlusal asymmetry) ▪ Transverse maxillary arch (bilateral) of more than 7 mm
<p>Mandibular and maxillary deformities contributing to airway dysfunction and associated obstructive sleep apnea (OSA)</p>	<p>Maxillofacial surgery for treatment of mandibular and maxillary deformities contributing to airway dysfunction and associated obstructive sleep apnea (OSA) may be considered medically necessary when ALL of the following are present and documented:</p> <ul style="list-style-type: none"> • Moderate to severe OSA (AHI* \geq 15, confirmed by a sleep study) • Individual has trialed and failed a minimum 90-day use of positive airway pressure (PAP) • Individual participated in a PAP compliance program



Condition	Medical Necessity
	<ul style="list-style-type: none"> A qualified sleep specialist has documented that other surgical options are not recommended for OSA or another surgical option has already been tried and was not adequate. <p>Note: *AHI: apnea/hypopnea index</p>
Orthognathic surgical splints	The use of two orthognathic surgical splints may be considered medically necessary. Any use of greater than two orthognathic surgical splints is considered not medically necessary.

Condition	Investigational
Endoscopically-assisted nasomaxillary expansion	Endoscopically assisted nasomaxillary expansion as a treatment for OSA is considered investigational
Other indications	<p>The use of condylar positioning devices in orthognathic surgery is considered investigational.</p> <p>Orthognathic surgery is considered investigational for all other indications.</p>

Condition	Cosmetic
Unaesthetic facial features and psychological impairments	<p>Orthognathic surgery is considered cosmetic for correction of unaesthetic facial features, regardless of whether these are associated with psychological disorders.</p> <p>Orthognathic surgery performed to reshape or enhance the size of the chin to restore facial harmony and chin projection (e.g., mentoplasty, chin augmentation, chin implants, genioplasty, or mandibular osteotomies/ostectomies); to address genial hypoplasia, hypertrophy, or asymmetry; or when performed as an isolated procedure or with other procedures, is considered cosmetic in nature.</p>

Condition	Cosmetic
	<p>No benefits are available for orthognathic surgery when performed primarily for cosmetic purposes.</p> <p>Note: Cosmetic services are addressed in a separate policy. See Related Policies.</p>

Documentation Requirements

The individual's medical records submitted for review for all conditions should document that medical necessity criteria are met. The record should include the following:

- A written explanation of the member's clinical course, including dates and nature of any previous treatment, and specialist clinical documentation (e.g., Orthodontic and Sleep Specialist).

AND

- A detailed description of the functional impairment considered to be the direct result of the skeletal abnormality

AND

- Physical evidence of a skeletal, facial, or craniofacial deformity defined by study models and pre-orthodontic imaging such as cephalometric radiographs and cephalometric diagrams with standard computer-generated measurements

AND

- Clear frontal/full face and lateral view photographs (digital or film)

Coding

Code	Description
CPT	
21085	Impression and custom preparation; oral surgical splint
21088	Impression and custom preparation; facial prosthesis
21141	Reconstruction midface, LeFort I; single piece, segment movement in any direction (e.g., for Long Face Syndrome), without bone graft
21142	Reconstruction midface, LeFort I; 2 pieces, segment movement in any direction, without bone graft



Code	Description
21143	Reconstruction midface, LeFort I; 3 or more pieces, segment movement in any direction, without bone graft
21145	Reconstruction midface, LeFort I; single piece, segment movement in any direction, requiring bone grafts (includes obtaining autografts)
21146	Reconstruction midface, LeFort I; 2 pieces, segment movement in any direction, requiring bone grafts (includes obtaining autografts) (e.g., ungrafted unilateral alveolar cleft)
21147	Reconstruction midface, LeFort I; 3 or more pieces, segment movement in any direction, requiring bone grafts (includes obtaining autografts) (e.g., ungrafted bilateral alveolar cleft or multiple osteotomies)
21150	Reconstruction midface, LeFort II; anterior intrusion (e.g., Treacher-Collins Syndrome)
21151	Reconstruction midface, LeFort II; any direction, requiring bone grafts (includes obtaining autografts)
21154	Reconstruction midface, LeFort III (extracranial), any type, requiring bone grafts (includes obtaining autografts); without LeFort I
21155	Reconstruction midface, LeFort III (extracranial), any type, requiring bone grafts (includes obtaining autografts); with LeFort I
21159	Reconstruction midface, LeFort III (extra and intracranial) with forehead advancement (e.g., mono bloc), requiring bone grafts (includes obtaining autografts); without LeFort I
21160	Reconstruction midface, LeFort III (extra and intracranial) with forehead advancement (e.g., mono bloc), requiring bone grafts (includes obtaining autografts); with LeFort I
21188	Reconstruction midface, osteotomies (other than LeFort type) and bone grafts (includes obtaining autografts)
21193	Reconstruction of mandibular rami, horizontal, vertical, C, or L osteotomy; without bone graft
21194	Reconstruction of mandibular rami, horizontal, vertical, C, or L osteotomy; with bone graft (includes obtaining graft)
21195	Reconstruction of mandibular rami and/or body, sagittal split; without internal rigid fixation
21196	Reconstruction of mandibular rami and/or body, sagittal split; with internal rigid fixation
21198	Osteotomy, mandible, segmental;
21206	Osteotomy, maxilla, segmental (e.g., Wassmund or Schuchard)
21208	Osteoplasty, facial bones; augmentation (autograft, allograft, or prosthetic implant)



Code	Description
21209	Osteoplasty, facial bones; reduction
21240	Arthroplasty, temporomandibular joint, with or without autograft (includes obtaining graft)
21242	Arthroplasty, temporomandibular joint, with allograft
21243	Arthroplasty, temporomandibular joint, with prosthetic joint replacement
21247	Reconstruction of mandibular condyle with bone and cartilage autografts (includes obtaining grafts) (e.g., for hemifacial microsomia)
21270	Malar augmentation, prosthetic material
21295	Reduction of masseter muscle and bone (e.g., for treatment of benign masseteric hypertrophy); extraoral approach
21296	Reduction of masseter muscle and bone (e.g., for treatment of benign masseteric hypertrophy); intraoral approach
40702	Plastic repair of cleft lip/nasal deformity; primary bilateral, 1 of 2 stages
40720	Plastic repair of cleft lip/nasal deformity; secondary, by recreation of defect and reclosure
40799	Unlisted procedure, lips
CDT	
D0330	Panoramic film
D0340	Cephalometric film
D0350	Oral/facial photographic images
D0470	Diagnostic Casts
D5954	Palatal augmentation prosthesis
D5955	Palatal lift prosthesis, definitive
D5958	Palatal lift prosthesis, interim
D5959	Palatal lift prosthesis, modification
D7283	Placement of device to facilitate eruption of impacted tooth
D7881	Occlusal orthotic device adjustment
D7940	Osteoplasty – for orthognathic deformities
D7941	Osteotomy – mandibular rami



Code	Description
D7943	Osteotomy – mandibular rami with bone graft; includes obtaining the graft
D7944	Osteotomy – segmented or subapical
D7945	Osteotomy – body of mandible
D7946	LeFort I (maxilla – total)
D7947	LeFort I (maxilla – segmented)
D7948	LeFort II or LeFort III (osteoplasty of facial bones for midface hypoplasia or retrusion) – without bone graft
D7949	LeFort II or LeFort III with bone graft
D7950	Osseous, osteopaperiosteal, or cartilage graft of the mandible or maxilla - autogenous or nonautogenous, by report
D7951	Sinus augmentation with bone or bone substitutes via a lateral open approach
D7952	Sinus augmentation via a vertical approach
D7953	Bone replacement graft for ridge preservation – per site
D7955	Repair of maxillofacial soft and/or hard tissue defect
D8010	Limited Orthodontic Treatment of the Primary Dentition
D8020	Limited orthodontic treatment of the transitional dentition
D8030	Limited orthodontic treatment of the adolescent dentition
D8040	Limited orthodontic treatment of the adult dentition
D8070	Comprehensive orthodontic treatment of the transitional dentition
D8080	Comprehensive orthodontic treatment of the adolescent dentition
D8090	Comprehensive orthodontic treatment of the adult dentition
D8210	Removable appliance therapy
D8220	Fixed appliance therapy
D8660	Pre-orthodontic treatment visit
D8670	Periodic orthodontic treatment visit (as part of contract)
D8680	Orthodontic retention (removal of appliances, construction and placement of retainer(s))
D8681	Removable orthodontic retainer adjustment



Code	Description
D8999	Unspecified Orthodontic Procedure, by report

Note: CPT codes, descriptions, and materials are copyrighted by the American Medical Association (AMA). HCPCS codes, descriptions and materials are copyrighted by Centers for Medicare Services (CMS). CDT codes, descriptions and materials are copyrighted by the American Dental Association (ADA).

Related Information

Background

Orthognathic surgery is the revision by ostectomy, osteotomy or osteoplasty of the upper jaw (maxilla) and/or the lower jaw (mandible) intended to alter the relationship of the jaws and teeth. These surgical procedures are intended (i) to correct skeletal jaw and cranio-facial deformities that may be associated with significant functional impairment, and (ii) to reposition the jaws when conventional orthodontic therapy alone is unable to provide a satisfactory, functional dental occlusion within the limits of the available alveolar bone.

Congenital or developmental defects can interfere with the normal development of the face and jaws. These birth defects may interfere with the ability to chew properly and may also affect speech and swallowing. In addition, trauma to the face and jaws may create skeletal deformities that cause significant functional impairment. Functional deficits addressed by this type of surgery are those that affect the skeletal masticatory apparatus such that chewing, speaking and/or swallowing are impaired.

Certain jaw and cranio-facial deformities may cause significant functional impairment. These deformities include apertognathia (either lateral or anterior not correctable by orthodontics alone), significant asymmetry of the lower jaw, significant class 2 and class 3 occlusal discrepancies, and cleft palate. Orthognathic surgery may help to reduce the flattening of the face that is characteristic of severe cleft deformity. Treatment approaches include maxillary advancement, a type of orthognathic surgery which surgically moves the maxilla and fixes it securely into place using sophisticated bone mobilizing techniques. This method of surgery is used when there is a need to improve the facial contour and normalize dental occlusion due to relative deficiency of the mid-face region. The approach utilized is case dependent and may include surgery on the mandible, depending on the soft tissue profile of the face and/or severity of an occlusal discrepancy, and problems present in the lower face. By using osteotomy

techniques along with bone and cartilage grafts, the upper and lower jaws and facial skeletal framework are moved and appropriately reconstructed.

Studies demonstrate that persons with vertical hyperplasia of the maxilla have an associated increase in nasal resistance, as do persons with maxillary hypoplasia with or without clefts. Following orthognathic surgery, such individuals routinely demonstrate decreases in nasal airway resistance and improved respiration.

Benefit Application

Refer to member contract language for benefit determination on orthognathic surgery.

Evidence Review

Rationale

Evidence presented in the literature supports the relationship between facial skeletal abnormalities and malocclusions, which includes Class II and Class III asymmetry and open bite deformities. Studies indicate a strong correlation between the degree of occlusion present in an individual and the efficiency of chewing, bite force and restriction of mandibular excursions. Findings indicate the presence of a variety of functional impairments associated with facial skeletal abnormalities and malocclusions, including diminished bite forces, restricted excursions, and abnormal chewing patterns. The result of orthognathic surgery has led to significant improvement in the types of skeletal deformities that contribute to chewing, breathing, and swallowing dysfunctions in cases where dental therapeutics or orthodontics have failed.

For individuals with OSA who receive endoscopically assisted maxillary expansion, the evidence includes a retrospective study with no control group and a sample size of 100 and no comparator. Cone beam computed tomography was conducted preoperatively and four weeks post completion of the maxillary expansion process. The results showed that 96% had successful expansion defined as separation of the midpalatal suture at least 1mm from anterior nasal spine to posterior nasal spine and showed improved air flow dynamics demonstrated by computational fluid dynamics⁵⁴. However, there was no pre and post measurement of OSA findings or correlations with this study and no long-term durability measurements beyond that of four weeks. There is insufficient evidence in the peer-reviewed published scientific literature

to support the safety and efficacy of endoscopically assisted maxillary expansion as a treatment for obstructive sleep apnea.

Practice Guidelines and Position Statements

The American Association of Oral and Maxillofacial Surgeons (AAOMS) Criteria for Orthognathic Surgery (2008, last updated in 2023)³⁷ have become widely adopted as a tool to assist in determining whether orthognathic surgery is medically indicated. As listed below, these maxillary and/or mandibular facial skeletal deformities associated with masticatory malocclusion relate verifiable clinical measurements to significant facial skeletal deformities:

Antero-posterior discrepancies:

- Maxillary/mandibular incisor relationship: overjet of 5 millimeter (mm) or more, or a 0 to a negative value (norm 2 mm)
- Maxillary/mandibular antero-posterior molar relationship discrepancy of 4 mm or more (norm 0 to 1 mm)

Note: These values represent 2 or more standard deviations (SDs) from published norms

Vertical discrepancies:

- Presence of a vertical facial skeletal deformity which is 2 or more SDs from published norms for accepted skeletal landmarks
- Open Bite
 - No vertical overlap of anterior teeth greater than 2 mm
 - Unilateral or bilateral posterior open bite greater than 2 mm
- Deep overbite with impingement or irritation of buccal or lingual soft tissues of the opposing arch
- Supraeruption of a dento-alveolar segment due to lack of opposing occlusion creating dysfunction not amenable to conventional prosthetics

Transverse discrepancies:

- Presence of a transverse skeletal discrepancy which is 2 or more SDs from published norms.
- Total bilateral maxillary palatal cusp to mandibular fossa discrepancy of 4 mm or greater, or a unilateral discrepancy of 3 mm or greater, given normal axial inclination of the posterior teeth

Asymmetries:



- Antero-posterior, transverse or lateral asymmetries greater than 3 mm with concomitant occlusal asymmetry

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History



Date	Comments
04/14/14	New policy. Add to Dental section. Orthognathic surgery may be considered medically necessary for correction of the certain skeletal deformities of the maxilla or mandible when it is documented that these skeletal deformities are contributing to significant dysfunction, and where the severity of the deformities precludes adequate treatment through dental therapeutics and orthodontics alone when criteria are met.
01/22/15	Update Related Policies. Change title to 2.01.503.
04/24/15	Annual Review. Literature review performed; no change in policy statements.
09/25/15	Coding update. ICD-10-CM codes added.
02/18/16	Coding update. Added D7881
04/12/16	Annual Review. Literature review performed; no change in policy statements.
10/11/16	Policy moved into new format; no change to policy statements.
02/14/17	Annual review. No changes to policy statements.
04/14/17	Coding update; codes that were previously listed as a range are now listed individually. Minor formatting update.
01/01/18	Minor update; removed 2.01.503 from Related Policies as it was archived.
07/01/18	Annual Review, approved June 29, 2018. Changes effective October 5, 2018. Literature review performed. References 31, 32 added. Orthognathic surgery for correction of articulation disorders and other impairments in the production of speech statement removed as a policy statement, medical necessity criteria added for treatment of severe malocclusion that contributes to TMJ syndrome symptoms, and criteria for treatment of mandibular and maxillary deformities contributing to airway dysfunction and associated OSA specified to include report of AHI of ≥ 30 , 90 day trial of PAP, along with participation in PAP compliance program.
05/01/19	Annual Review, approved April 18, 2019. References 33, 34 added. Added hemofacial microsomia and Treacher Collins syndrome to medically necessary congenital deformities that may require correction. Added medically necessary statement for restoration of function related to acute traumatic injury and removal of tumor. Added medical necessity statement for orthognathic surgical splints.
07/01/20	Annual Review, approved June 4, 2020. Policy reviewed. Policy statements unchanged. References added.
12/01/20	Interim Review, approved November 19, 2020. Minor edits made to functional impairment policy statement for greater clarity.
07/01/21	Interim Review, approved June 8, 2021. Reference added. Added the following edits to maxillary and/or mandibular facial skeletal deformities associated with masticatory malocclusion criteria: impaired masticatory or incisive function, chewing-induced trauma to the soft tissues of the mouth, impaired swallowing or choking on incompletely chewed solid foods, or abnormal tongue thrust is present. Facial skeletal deformities criteria for open bite changed from 4 mm to 2 mm. Added criteria that an



Date	Comments
	orthodontic specialist has documented that orthodontia is not recommended for the condition or has been tried and not found adequate. Criteria changed from severe OSA to moderate to severe OSA for mandibular and maxillary deformities contributing to airway dysfunction and associated obstructive sleep apnea (OSA) and added that a qualified sleep specialist documents that that other surgical options are not recommended for OSA or another surgical option has already been tried and was not adequate.
09/01/21	Annual Review, approved August 3, 2021. Policy updated with literature review. References added. Policy statement unchanged.
03/01/22	Coding update. Removed duplicate CDT code range D8020-D8999.
09/01/22	Annual Review, approved August 22, 2022. Policy reviewed. References added. Policy statements unchanged.
11/01/22	Coding update. Added 1/1/2022 termination date to CDT codes D8050, D8060, D8690, D8691, D8692, D8693, D8694. Revised descriptions on CDT codes D0330, D0340, D7948, & D7950. Removed CPT codes 21083, 21084, 21172, 21175, 21179, 21180, 21181, 21182, 21183, 21184, 21210, 21215, 21230, 21235, 21255, 21275, 40650, 40652, 40654, 40700, 40701, 40720, 40761, 42200, 42225, 42226, 42227, 42235, 42260, 44280, and 44281.
09/01/23	Annual Review, approved August 8, 2023. Policy reviewed. References added. Changed the wording from "patient" to "individual" throughout the policy for standardization. Added medical necessity criteria for significant transverse maxillary arch deficiency.
01/01/24	Interim Review, approved December 12, 2023. References added. Policy statement added that endoscopically assisted nasomaxillary expansion as a treatment for OSA is considered investigational.
11/01/24	Annual Review, approved October 21, 2024. Policy reviewed. References updated; no references added. Policy statements unchanged.

Disclaimer: This medical policy is a guide in evaluating the medical necessity of a particular service or treatment. The Company adopts policies after careful review of published peer-reviewed scientific literature, national guidelines and local standards of practice. Since medical technology is constantly changing, the Company reserves the right to review and update policies as appropriate. Member contracts differ in their benefits. Always consult the member benefit booklet or contact a member service representative to determine coverage for a specific medical service or supply. CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). ©2024 Premera All Rights Reserved.

Scope: Medical policies are systematically developed guidelines that serve as a resource for Company staff when determining coverage for specific medical procedures, drugs or devices. Coverage for medical services is subject to the limits and conditions of the member benefit plan. Members and their providers should consult the member benefit booklet or contact a customer service representative to determine whether there are any benefit limitations applicable to this service or supply. This medical policy does not apply to Medicare Advantage.

