Policy Number	SUR705.030
Policy Effective Date	01/01/2026

Orthognathic Surgery

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Disclaimer

Carefully check state regulations and/or the member contract.
Each benefit plan, summary plan description or contract defines which services are covered, which services are excluded, and which services are subject to dollar caps or other limitations, conditions or exclusions. Members and their providers have the responsibility for consulting the member's benefit plan, summary plan description or contract to determine if there are any exclusions or other benefit limitations applicable to this service or supply. **If there is a discrepancy between a Medical Policy and a member's benefit plan, summary plan description or contract, the benefit plan, summary plan description or contract will govern.**

Legislative Mandates

EXCEPTION: For Illinois only: Illinois Public Act 103-0123 (IL HB 1384) Coverage for Reconstructive Services requires the following policies amended, delivered, issued, or renewed on or after January 1, 2025 (Individual and family PPO/HMO/POS; Student; Group [Small Group; Mid-Market; Large Group Fully Insured PPO/HMO/POS] or Medicaid), to provide coverage for medically necessary services that are intended to restore physical appearance on structures of the body damaged by trauma.

EXCEPTION: For HCSC members residing in the state of Arkansas, § 23-79-150 relating to musculoskeletal disorders of the face, neck, or head, requires coverage, when such coverage is elected by the group policyholder, for the medical treatment of musculoskeletal disorders affecting any bone or joint in the face, neck, or head, including temporomandibular joint disorder and craniomandibular disorder. Treatment shall include both surgical and nonsurgical procedures. This coverage shall be provided for medically necessary diagnosis and treatment of these conditions whether they are the result of accident, trauma, congenital defect, developmental defect, or pathology. This applies to the following: Fully Insured Group, Student, Small Group, Mid-Market, Large Group, HMO, EPO, PPO, POS. Unless indicated by the group, this mandate or coverage will not apply to ASO groups.

EXCEPTION: For HCSC members residing in the state of Mississippi, §83-9-45 requires coverage for diagnostic and surgical treatment of temporomandibular joint disorder and craniomandibular disorder.

Coverage for diagnostic services and surgery shall be the same as that for treatment to any other joint in the body and shall apply if the treatment is administered or prescribed by a physician or dentist. This applies to the following: Fully Insured Group, Small Group, Mid-Market, Large Group, HMO, EPO, PPO, POS.

Coverage

CAREFULLY REVIEW: Coverage for orthognathic surgery may be dependent on benefit plan language (i.e., may be subject to the provisions of a cosmetic or reconstructive surgery benefit), and/or may be subject to legislative mandates. Please refer to the benefit plan language and/or legislative mandates to determine terms, limitations, and conditions of coverage.

This medical policy does NOT address Gender Reassignment Services (Transgender Services). This medical policy IS NOT TO BE USED for Gender Reassignment Services. Refer to SUR717.001, Gender Assignment Surgery and Gender Reassignment Surgery with Related Services

NOTE 1: For criteria for orthognathic surgery related to the temporomandibular joint (TMJ), see medical policy SUR705.010, Temporomandibular Joint (TMJ) Disorders (TMJD).

NOTE 2: For criteria for orthognathic surgery related to sleep apnea, see medical policy SUR706.009, Sleep Related Breathing Disorders: Surgical Management.

Maxillary and/or Mandibular Facial Deformities Associated with Masticatory Malocclusion:
When not specifically excluded from coverage in a health benefit contract, orthognathic surgery **may be considered medically necessary** when **ALL** the following criteria are met:

1) **Surgery is proposed for correction of skeletal deformities when it is documented that:**

- These facial skeletal deformities are contributing to significant functional impairment, defined as persistent difficulties with mastication and swallowing as manifested by inability to incise and/or chew solid foods, choking on incompletely masticated solid foods, and/or damage to soft tissue during mastication; **AND**
- Deformity and impairment are not correctable with non-surgical modalities (e.g., dental therapeutics, orthodontics); **AND**

2) **Skeletal deformity falls under one of the following categories:**

- Anteroposterior discrepancies (**NOTE 3:** These values represent two or more standard deviations from published norms):
  - Maxillary/mandibular incisor relationship: overjet of 5 mm or more, or a 0 to a negative value (norm=2 mm); or
  - Maxillary/mandibular anteroposterior molar relationship discrepancy of 4 mm or more (norm=0 to 1 mm); **OR**
- Vertical discrepancies:
  - Presence of a vertical facial skeletal deformity which is two or more standard deviations from published norms for accepted skeletal landmarks; or

    - Open bite with no vertical overlap of anterior teeth or unilateral or bilateral posterior open bite greater than 2 mm; or
    - Deep overbite with impingement of palatal soft tissue; or
    - Supraeruption of a dentoalveolar segment resulting from lack of occlusion when dentition in segment is intact; **OR**
- Transverse discrepancies:
    - Presence of a transverse skeletal discrepancy which is two or more standard deviations from published norms; or
    - 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; **OR**
- Asymmetries:
    - Anteroposterior, transverse, or lateral asymmetries greater than 3 mm, with concomitant occlusal asymmetry.

Speech Impairment:
Orthognathic surgery **may be considered medically necessary** for treatment of speech dysfunction that is directly related to a facial skeletal deformity, as determined by a speech and language pathologist (e.g., sibilant distortions, velopharyngeal distortion).

Orthognathic surgery **is considered not medically necessary** for correction of articulation disorders and other speech impairments that are not related to facial skeletal deformity.

Aesthetic and Psychological Indications: Please refer to Medical Policy SUR716.001 Cosmetic and Reconstructive Procedures for information concerning reconstructive and cosmetic indications.

Other Indications:
Orthognathic surgery **is considered not medically necessary** for any other indication.

Policy Guidelines

None.

Description

The word orthognathic originated from the Greek words for “straight” and “jaw”. Orthognathic surgery is the surgical correction of abnormalities of the mandible (lower jaw), maxilla (upper jaw), or both. The underlying abnormality may be present at birth, may become evident as an individual grows and develops, or may be the result of traumatic injuries. Orthognathic surgery is performed to correct malocclusion or deformity that is related to functional impairment, and that cannot be improved with routine dental or orthodontic therapy.

Background

Maxillofacial deformities can be divided broadly into three major categories: dental dysplasias, skeletal dysplasias, and dentoskeletal dysplasias. Dental dysplasias are malocclusions that result from abnormal spatial relationship of the dentition and not from the skeletal position of the upper and lower jaws. These can be corrected with orthodontic treatment. In patients with skeletal dysplasia, the dentition is in good alignment, but the maxilla and/or mandible are dysplastic. Skeletal dysplasias require correcting the skeletal deformity without altering the occlusion. In dentoskeletal dysplasias, the dentition is malpositioned within each arch and with each other. Additionally, the skeletal relationship of the upper and lower jaws is abnormal; correction requires aligning the dentition within each arch with orthodontic treatment and restoring the maxillary-mandibular dental relationship with skeletal osteotomies and repositioning.

Skeletal/facial anomalies are referenced as spatial (refers to space) planes: horizontal, vertical, transverse, or a combination. Examples of conditions for which orthognathic surgery is used are mandibular prognathism, crossbite, open bite, overbite, underbite, mandibular deformity, and maxillary deformity. Orthognathic procedures include osteotomy, ostectomy, or osteoplasty, and the insertion of material to hold bones together such as plates, screws, and wires. Depending on the severity of the deformity, several surgical methods may be used. In addition, orthognathic surgery is usually preceded by orthodontic therapy to attempt to correct malocclusion by conservative therapy or in preparation for surgery; orthodontic therapy may also be required in the post-operative phase.

<u>Dental Notation</u>

Universal dental notation is the most common system for numerically identifying permanent dentition. The maxillary dentition is numbered sequentially from 1-16 starting with the right maxillary third molar as 1. The numbering system continues from 17-32 beginning with the left mandibular third molar as 17.

<u>Orientation Terms</u>

Orientation with respect to intraoral anatomy is referenced to the following terms:

- Mesial - Toward the dental midline.
- Distal - Away from the dental midline.
- Labial - Toward the lips.
- Buccal - Toward the cheek.
- Apex - Toward the root tip.
- Lingual - Toward the tongue.
- Incisal - Toward the biting surface (anterior dentition).
- Occlusal - Toward the biting surface (posterior dentition).
- Angulation - Mesiodistal tipping of the long axis of the tooth.
- Inclination - Labiolingual or buccolingual tipping of the long axis of the tooth.

<u>Dental Anatomic Terms</u>

- Cusp - Pronounced elevation on the occlusal surface.

- Groove - Depression on the occlusal surface.
- Crown - Visible portion of the tooth covered by enamel.
- Cingulum - Bulbous convexity of the cervical one third of the lingual surface of anterior dentition.
- Cervix (neck) - Junction of the crown and root.
- Root - Portion of the tooth covered by cementum within the alveolar bone.
- Curvature of the dental arches - Normal reciprocal curvature in the dental arches with the maxilla convex and the mandible concave (allows the dentition maximal contact during function).
- Curve of Spee - Normal curvature of the dental arch in the sagittal plane.
- Curve of Wilson - Normal curvature of the dental arch in the coronal plane.

Occlusal Classification

- Angle Class I (neutro-occlusion): The mesiobuccal cusp of the maxillary first molar articulates within the mesiobuccal groove of the mandibular first molar.
- Angle Class II (disto-occlusion): The mandibular first molar articulates distal to the mesiobuccal cusp of the maxillary first molar, i.e., the mandibular teeth are behind the normal relationship with the maxillary teeth. This can be due to a deficiency of the lower jaw or an excess of the upper jaw; may be referred to as a deep bite deformity.
- Angle Class III (mesio-occlusion): The mesiobuccal groove of the mandibular first molar is mesial to the mesiobuccal cusp of the maxillary first molar, i.e., the lower dental arch is in front of the (mesial to) the upper dental arch. People with this type of malocclusion usually have a strong or protrusive chin commonly referred to as an underbite.

Upper and Lower Arch Dentition

- Overjet - Horizontal distance between the incisal edges of the maxillary incisor to the mandibular incisor.
- Overbite - Vertical distance between the incisal edge of the maxillary incisor and the mandibular incisor.
- Crossbite - Lingual-buccal malposition of the normal relationship between the upper and lower dentition (negative overjet).
- Deep bite - Condition of excessive overbite.
- Open bite - Condition of negative overbite (teeth do not meet).

Imaging Studies

- Ortho-Panorex x-rays provide an overview of the stage of dental development, the mandibular anatomy, and gross pathology. Specific films such as occlusal and periapical views can be obtained to further assess the dentition, supporting bone, and interdental spaces.
- Cephalometric x-rays are standardized skull and/or facial views that allow for comparison over time to assess growth in an individual and for comparison of that individual against standardized population norms.
- Periapical films are obtained to determine if sufficient space exists for interdental osteotomies.

- On occasion, hand wrist films are useful to help determine skeletal age based on the known timing of sequential closure of the epiphyseal growth plates. However, typically facial skeletal maturity is determined by comparison of serial lateral cephalometric films obtained at 6-month intervals.
- Three-dimensional computerized tomography is being increasingly used for surgical evaluation and planning in academic university settings. In the future, such three-dimensional visualization of the patient's anatomic deformity is likely to replace today's conventional two-dimensional cephalometric analysis.

Surgical Therapy

The elements of the facial skeleton can be repositioned, redefining the face through a variety of well-established osteotomies, including LeFort (I, II, and III) osteotomies, maxillary segmental osteotomies, sagittal split osteotomy of the mandibular ramus, vertical ramal osteotomy, inverted L- and C-osteotomies, mandibular body segmental osteotomies, and mandibular symphysis osteotomies. Most maxillofacial deformities can be managed with three basic osteotomies: the midface with the LeFort I osteotomy, the lower face with the sagittal split ramal osteotomy of the mandible, and the horizontal osteotomy of the symphysis of the chin.

The LeFort osteotomies are named after the three classic lines of weakness of the facial skeleton described by Rene LeFort in 1901. The LeFort I osteotomy allows for correction primarily at the occlusal level affecting the upper lip position, nasal tip and alar base region, and the columella labial angle without altering the orbitozygomatic region. The LeFort II osteotomy allows the surgeon to alter the nasomaxillary projection without altering the orbital volume and zygomatic projection. Complete craniofacial dysjunction by the LeFort III osteotomy allows the surgeon to alter the orbital position and volume, zygomatic projection, position of the nasal root, frontonasal angle, and position of the maxilla and to lengthen the nose. These standard LeFort osteotomies may be modified for a specific clinical situation. For most midfacial maxillofacial deformities, the LeFort I osteotomy and its variations are adequate.

Currently, the sagittal split ramal osteotomy is the primary choice for correcting most cases of mandibular retrognathism and prognathism. In extreme cases of mandibular prognathism, some surgeons prefer the intraoral vertical osteotomy or the inverted L-osteotomy. In situations of mandibular advancement in which the mandibular rami are hypoplastic and cannot be sagittally split, the inverted L- and the C-osteotomy with bone grafts are preferred.

Over the last several years, timing of surgical intervention has evolved to handle dento-maxillofacial deformities. Six new timing schemes have emerged: “surgery-first”, “surgery-early”, “surgery-late”, “surgery-last”, “surgery-only”, and “surgery-never”. Patient gender, age at time of surgery, main treatment motivation, orthodontic treatment, and number of orthodontic appointments are considered as part of the timing of orthognathic surgery, which requires a team approach with the patient, orthodontist, and surgeon.

Additional Terminology

- Alveolar or Alveolus - The portion of the upper and lower jaws that contain the teeth and form the dental arches.
- Apertognathia - A type of malocclusion characterized by the premature occlusion of posterior teeth and the absence of anterior occlusion; sometimes referred to as open bite.
- Dentition - The natural teeth, as considered collectively, in the dental arch; may be deciduous, permanent, or mixed.
- Dysplasia - Abnormal tissue development.
- Genial - Pertaining to the chin.
- Genioplasty - Surgical alteration of the chin; also called mentoplasty.
- Hyperplasia - An abnormal increase in cells in an organ or a tissue with consequent enlargement.
- LeFort - An operation for reconstruction of the midface in which the teeth-bearing part of the maxilla is separated from its bony attachments and repositioned.
- Mandible - Lower jaw.
- Maxilla - Upper jaw.
- Mentoplasty - Surgical alteration of the chin; also called genioplasty.
- Masticatory - Refers to masticatory muscles or chewing.
- Maxillary hyperplasia - Overgrowth of the maxilla, or upper jaw, often presenting as excess vertical height of the maxilla.
- Maxillary hypoplasia - An abnormally small or posteriorly positioned maxilla, or upper jaw, often accompanying cleft palate or other craniofacial syndromes.
- Micrognathia - An abnormally small mandible or lower jaw.
- Occlusal - In dentistry, pertaining to the contacting surfaces of opposing occlusal units (teeth or occlusion rims) or the masticating surfaces of the posterior teeth.
- Occlusion - The way the teeth bite or come together. Occlusions may be normal or abnormal (malocclusion) and are classified as Class I, Class II, or Class III.
- Malocclusion - Any deviation from a physiologically acceptable relationship of the upper and lower teeth with each other.
- Orthodontics - The dental specialty and practice of preventing and correcting irregularities of the teeth, as by the use of braces.
- Osteotomy - The incision, sectioning, or cutting of a bone, without removing any of its parts, for the purpose of repositioning it into a structurally correct location with itself and adjacent structures (bone cut).
- Ostectomy - The excision, sectioning, or cutting of a bone for the purpose of removing a portion of the bone and repositioning it into a more structurally balanced relationship with itself and adjacent structures (bone removal).
- Osteoplasty - A surgical procedure that is designed to change or modify the shape or configuration of a bone (bone graft).
- Prognathia - An abnormally large mandible or lower jaw.
- Prosthodontics - The dental specialty concerned with the making of artificial replacements for missing parts of the mouth and jaw -- called also prosthetic dentistry, prosthodontia.
- Retrognathia - A posteriorly positioned mandible, or lower jaw; most common problem for which orthognathic surgery is performed (sometimes referred to overbite).

- Sibilant sound distortions - Children with repaired clefts that involve the gum ridge (alveolar ridge) will distort the sounds "s, z, ch, j (as in “judge”), sh, zh." These sounds are called "sibilants."
- Velopharyngeal distortion - Pertaining to the soft palate (velum palatinum) and the pharyngeal walls.

Rationale

This policy is based on a review of relevant professional association guidance.

American Association of Oral and Maxillofacial Surgeons (AAOMS)

The AAOMS has published Indications for Orthognathic Surgery (2025), which relate verifiable clinical measurements to significant facial skeletal deformities. (1) The AAOMS considers the following as indications for orthognathic surgery:

A. “Anteroposterior discrepancies: established norm=2 mm
    1. Maxillary/Mandibular incisor relationship:
        a. Horizontal overjet of +5 mm or more,
        b. Horizontal overjet of zero to a negative value.
    2. Maxillary/Mandibular anteroposterior molar relationship discrepancy of 4 mm or more (norm 0 to 1 mm).
    3. These values represent two or more standard deviations from published norms.”
B. “Vertical discrepancies:
    1. Presence of a vertical facial skeletal deformity, which is two or more standard deviations from published norms for accepted skeletal landmarks.
    2. Open Bite:
        a. No vertical overlap of anterior teeth.
        b. Unilateral or bilateral posterior open bite greater than 2 mm.
        c. Deep overbite with impingement or irritation of buccal or lingual soft tissues of the opposing arch.
        d. Supraeruption of a dentoalveolar segment due to lack of occlusion.”
C. “Transverse discrepancies:
    1. Presence of a transverse skeletal discrepancy which is two or more standard deviations from published norms.
    2. 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.”
D. “Asymmetries:
    1. Anteroposterior, transverse or lateral asymmetries greater than 3 mm with concomitant occlusal asymmetry.”

The 2025 AAOMS document also has the following position on orthognathic surgery for facial skeletal discrepancies associated with documented speech impairments: “Abnormal jaw relationships affect many of the structures involved in the production of speech, including the

position of the lips, tongue and soft palate. Studies demonstrate that altered speech production may be associated with facial skeletal deformities, the most common impairment of which is distortion within the sibilant sound class." (1)

Coding

Procedure codes on Medical Policy documents are included **only** as a general reference tool for each policy. **They may not be all-inclusive.**

The presence or absence of procedure, service, supply, or device codes in a Medical Policy document has no relevance for determination of benefit coverage for members or reimbursement for providers. **Only the written coverage position in a Medical Policy should be used for such determinations.**

Benefit coverage determinations based on written Medical Policy coverage positions must include review of the member's benefit contract or Summary Plan Description (SPD) for defined coverage vs. non-coverage, benefit exclusions, and benefit limitations such as dollar or duration caps.

CPT Codes	21085, 21110, 21120, 21122, 21123, 21125, 21127, 21141, 21142, 21143, 21145, 21146, 21147, 21150, 21151, 21154, 21155, 21159, 21160, 21188, 21193, 21194, 21195, 21196, 21198, 21199, 21206, 21208, 21209, 21210, 21215, 21230
HCPCS Codes	None

*Current Procedural Terminology (CPT®) ©2024 American Medical Association: Chicago, IL.

References

Professional Society Guidance:

1. American Association of Oral and Maxillofacial Surgeons. Clinical Paper. Indications for orthognathic surgery (2025). Available at <https://www.aaoms.org> (accessed December 7, 2025).
2. American Association of Oral and Maxillofacial Surgeons ParCare 2023. Surgical Correction of Maxillofacial Skeletal Deformities. J Oral Maxillofac Surg. 2023; 81(11):e95-e119 Suppl 11S. [ClinicalKey] website. <https://clinicalkey.com>. Published November 1, 2023. Accessed December 8, 2025.
3. American Association of Oral and Maxillofacial Surgeons. Clinical Paper. Guidelines to the Evaluation of Impairment of the Oral and Maxillofacial Region (2018). Available at <https://www.aaoms.org> (accessed December 7, 2025).
4. American Association of Oral and Maxillofacial Surgeons. Clinical Paper. Reconstructive Oral and Maxillofacial Surgery (2024). Available at <https://www.aaoms.org> (accessed December 8, 2025).

Centers for Medicare and Medicaid Services (CMS)

The information contained in this section is for informational purposes only. HCSC makes no representation as to the accuracy of this information. It is not to be used for claims adjudication for HCSC Plans.

The Centers for Medicare and Medicaid Services (CMS) does not have a national Medicare coverage position. Coverage may be subject to local carrier discretion.

A national coverage position for Medicare may have been developed since this medical policy document was written. See Medicare's National Coverage at <https://www.cms.hhs.gov>.

Policy History/Revision	
Date	**Description of Change**
01/01/2026	Document updated. The following changes were made to Coverage: 1) Removed genioplasty criteria and associated exception language; and 2) Removed previous statements specific to aesthetic and psychological indications and replaced with the following: Please refer to Medical Policy SUR716.001 Cosmetic and Reconstructive Procedures for information concerning reconstructive and cosmetic indications. Added references 2-4; others updated/removed.
02/01/2025	Document updated with literature review. Coverage unchanged. Reference 10 added; some removed, others updated.
07/15/2023	Reviewed. No changes.
01/15/2023	Document updated with literature review. Coverage unchanged. Reference 10 added, and others updated.
04/01/2021	Reviewed. No changes.
06/15/2020	Document updated with literature review. Coverage unchanged. Reference 9 added.
06/15/2018	Reviewed. No changes.
05/15/2017	Document updated with literature review. The following changes were made to Coverage: 1) Removed criteria statement requiring malnutrition and 2) Added coverage statement considering genioplasty to be cosmetic when performed alone or in conjunction with other orthognathic surgical procedures, along with exception note referring to SUR717.001.
10/15/2016	Document updated with literature review. The following criteria was added to coverage, “malnutrition, such as significant weight loss, failure to thrive,” has been moved from being included in the following criteria statement “under surgery is proposed for correction skeletal deformities when it is documented that… facial skeletal deformities are contributing to significant functional impairment…” to a separate criteria statement.
05/15/2015	Reviewed. No changes.
01/01/2015	Document updated with literature review. Coverage unchanged.
08/01/2012	Literature reviewed. No change.
05/15/2009	New medical document