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## Orthognathic Surgery

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Related Policies (if applicable)
SUR717.001: Gender Assignment Surgery and Gender Reassignment Surgery with Related Services
SUR705.010: Temporomandibular Joint Disorders
SUR706.009: Sleep Related Breathing Disorders: Surgical Management

### 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:**

Orthognathic surgery **is considered cosmetic** when performed in the absence of significant functional impairment, including but not limited to:

- When used for altering or improving bite; or
- When performed solely for the purpose of improving or altering appearance or self-esteem; or
- To treat psychological or psychosocial symptoms or complaints related to the member's appearance.

Genioplasty (chin augmentation/implant) performed alone or in conjunction with other orthognathic surgical procedures **is considered cosmetic**. **EXCEPTION:** See Medical Policy SUR717.001 Gender Assignment Surgery and Gender Reassignment Surgery with Related Services.

#### **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.

### Dental Notation

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.

### Orientation Terms

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.

### Dental Anatomic Terms

- 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).

- Osteotomy - 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 as 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

Studies demonstrate the altered speech production may be associated with facial skeletal deformities, the most common impairment of which is a distortion within the sibilant sound class. (1) Such studies also demonstrate the beneficial effects of orthognathic surgery on speech production, documenting improvement in a high percentage of patients after the correction of abnormal jaw relationships. In the age of information, the ability to accurately communicate with an articulate speech pattern is of great importance. Prior to surgery, speech evaluation should be obtained to demonstrate the nature of the problem and to determine if improvement can be expected." A 2004 study by, Janulewicz et al., (2) "...confirmed previous findings that patients with clefts of the lip and palate or palate alone are predisposed to velopharyngeal function alteration after maxillary advancement, particularly with borderline function preoperatively. However, the results show that surgical correction of skeletal relationships and occlusion may translate into improvement in certain aspects of speech disorders."

Risk factors for postoperative complications are many, including underlying medical condition, bleeding dyscrasias, factors that affect normal wound healing, a patient with unrealistic expectations, a noncompliant patient, and patients with poor oral hygiene. This was confirmed in a systematic review reported on by Jadrzejewski et al. in 2015. (6) A total of 1924 publications were identified, yielding the 44 articles for the final analysis. A large number of varied complications were identified and associated with orthognathic surgery. Prevention and correct patient selection should reduce complications and increase the safety of orthognathic procedures. The outcome of the surgical procedure depends on many factors before, during, and after treatment, as the success of each phase of treatment depends on the success of the preceding phase. There exists a potential for relapse even in the most ideal situations and with the use of rigid internal fixation. Soft tissue forces directed against the vector of the surgical



movement are significant. Generally, the most stable moves are superior and posterior maxillary impactions and mandibular setback. Maxillary and mandibular advancements are inherently less stable. (3-5) Given these factors, the decision to proceed with orthognathic surgery should be made with caution and should be made to correct functional impairment.

Surgery-first has emerged as advantageous protocol to shorten treatment times and provide for immediate esthetic improvements. A 2016 study from Hernandez-Alfaro et al. conducted a systematic review of surgery-first treatment for 15 years. (7) The authors identified 179 publications, yielding the final 11 articles meeting the strict selection criteria determined by the study group. In total, 295 patients were managed with surgery-first approach. A Class III malocclusion was the most prevalent underlying malocclusion (84.7%). Total treatment duration was shorter in the surgery-first patients than in those treated conventionally. Similarities were documented within the articles regarding patient selection criteria, inclusion or exclusion, orthodontic and surgery protocols, and the stability of results. The conclusion reported by the authors, studies show satisfactory outcomes and high acceptance. However, the surgery-first results should be interpreted with caution because of the wide varieties of study designs and outcome variables, reporting bias, and lack of prospective long-term follow-ups. The results did not include whether study designs followed the accepted patient selection criteria widely followed from the American Association of Oral and Maxillofacial Surgeons.

Cleft lip and palate are one of the most common birth defects and can cause difficulties with feeding, speech and hearing, as well as psychosocial problems. Treatment of orofacial clefts is prolonged; it typically commences after birth and lasts until the child reaches adulthood or even into adulthood. Residual deformities, functional disturbances, or both, are frequently seen in adults with a repaired cleft. Conventional orthognathic surgery, such as Le Fort I osteotomy, is often performed for the correction of maxillary hypoplasia. An alternative intervention is distraction osteogenesis, which achieves bone lengthening by gradual mechanical distraction. This review is an update of the original version that was published in 2016.

Kloukos et al. (2018) published a review of RCTs comparing maxillary distraction osteogenesis to conventional Le Fort I osteotomy for the correction of cleft lip and palate maxillary hypoplasia in non-syndromic cleft patients aged 15 years or older to provide evidence regarding the effects and long-term results of maxillary distraction osteogenesis compared to orthognathic surgery for the treatment of hypoplastic maxilla in people with cleft lip and palate. (8) Two review authors assessed studies for eligibility. Two review authors independently extracted data and assessed the risk of bias in the included studies. The authors contacted trial authors for clarification or missing information whenever possible. This review found only one small RCT concerning the effectiveness of distraction osteogenesis compared to conventional orthognathic surgery. The available evidence is of very low quality, which indicates that further research is likely to change the estimate of the effect. Based on measured outcomes, distraction osteogenesis may produce more satisfactory results; however, further prospective research comprising assessment of a larger sample size with participants with different facial characteristics is required to confirm possible true differences between interventions.

Mulier et al. (2021) conducted a systematic review to evaluate long-term stability of dental and dentolabial changes following combined orthodontic and orthognathic surgical treatment with a minimum follow-up period of 5 years. (9) The search was conducted up to December 2019 using PubMed, Embase, Web of Science, and Cochrane Central. A total of 11 studies (2 randomized control trials and 9 retrospective) with a postoperative follow-up conducted from 5 to 15 years. Quality of evidence was limited due to retrospective design and small sample size of some of the studies. Despite these limitations, the length of follow-up and detailed review of dental changes were considered strengths. Long-term changes were evaluated for overjet, overbite, maxillary, and mandibular incisor position and relationship of lip position to maxillary and mandibular incisors. The authors concluded that the current evidence suggests variability of dental and dentolabial stability in both skeletal class II and III patients. Recommendations include further prospective studies to develop guidelines for long-term follow-up assessment using computer tomography or cone-beam computed tomography imaging before a final conclusion can be determined.

In 2023, Inchingolo et al. published the results of a systematic review looking at orthognathic surgery and relapse. (20) They looked at a total of 14 articles, and despite the value of any inclusion of number needed to treat, confidence intervals (95% CI), risk analysis and number needed to harm in the study, the main topic was the qualitative review of literature on orthognathic surgery and recurrence. The risk of relapse is greater in individuals with cleft lip and palate (CL/P) than in the general population due to more risk factors. The authors concluded that recurrence is a constant in the post-surgical course after orthognathic surgery, with recurrences observed most frequently within six months to one year following surgery. The use of bone grafts in the bone gap established in Le Fort 1 or the use of absorbable plates rather than titanium plates is an example of factors that lower the risk of relapse. As opposed to that, it is easier to have a relapse when it is necessary to make large mandibular advances, and it makes no difference whether a third-grade patient has a CL/P or not. The limitation of their research is that most of the studies were retrospective; therefore, their study also has the limitations linked to these studies, which are that study events already occurred and the fact that only studies with small sample sizes were available.

## **Practice Guidelines and Position Statements**

### **American Association of Oral and Maxillofacial Surgeons (AAOMS)**

The AAOMS has published Criteria for Orthognathic Surgery (2023), which relate verifiable clinical measurements to significant facial skeletal deformities. (11) The guidelines state, “Prior to surgical treatment, such patients should be properly evaluated to determine the cause and site of their disorder with appropriate non-surgical treatment attempted when indicated. 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 2023 AAOMS criteria 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.” (11)

## Summary

The American Association of Oral and Maxillofacial Surgeons Guidelines: Criteria for Orthognathic Surgery and Evaluation of Impairment of the Oral and Maxillofacial Region, has been the criterion standard and widely adopted for patient surgical selection. The literature is sufficient to determine the net health outcomes for orthognathic surgery for selected patients when dental and/or orthodontic treatment is prevented due to the severity of the impairments and deformities. Therefore, orthognathic surgery is considered medically necessary when meeting specific criteria.

## 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.

<b>CPT Codes</b>	21085, 21110, 21120, 21121, 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
<b>HCPCS Codes</b>	None

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

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## 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
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