



## **ORTHOGNATHIC SURGERY**

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**Coverage for services, procedures, medical devices and drugs are dependent upon benefit eligibility as outlined in the member's specific benefit plan. This Medical Coverage Guideline must be read in its entirety to determine coverage eligibility, if any.**

**The section identified as “Description” defines or describes a service, procedure, medical device or drug and is in no way intended as a statement of medical necessity and/or coverage.**

**The section identified as “Criteria” defines criteria to determine whether a service, procedure, medical device or drug is considered medically necessary or experimental or investigational.**

**State or federal mandates, e.g., FEP program, may dictate that any drug, device or biological product approved by the U.S. Food and Drug Administration (FDA) may not be considered experimental or investigational and thus the drug, device or biological product may be assessed only on the basis of medical necessity.**

**Medical Coverage Guidelines are subject to change as new information becomes available.**

**For purposes of this Medical Coverage Guideline, the terms "experimental" and "investigational" are considered to be interchangeable.**

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### **Description:**

Orthognathic surgery is performed to correct mandible and/or maxilla abnormalities that may be:

- Present at birth (congenital)
- A skeletal anomaly that may become evident as the individual grows and develops
- The result of traumatic injuries
- The result of an illness or disease process
- The result of surgery or therapeutic intervention

Depending upon the severity of the abnormality, reconstructive surgical procedures may be performed to correct a malpositioned or malformed mandible and/or maxilla, correcting a functional impairment.



## **ORTHOGNATHIC SURGERY (cont.)**

### **Definitions:**

#### **Apneic-Hypopneic Index (AHI):**

The AHI is the average number of episodes of apnea and hypopnea per hour as recorded by a polysomnography based on a minimum of 2 hours of actual sleep. The polysomnography must be performed by a certified sleep laboratory, either in an overnight laboratory or in the home setting, and reviewed by a certified practitioner and BCBSAZ eligible provider.

#### **Distraction Osteogenesis (DO):**

A surgical process that has been investigated for the correction of craniofacial abnormalities. Bone is surgically fractured to promote callus formation. As the callus forms, the bony segments are incrementally separated with specialized hardware to gradually lengthen and reshape the bone. Hardware may be externally or internally placed.

#### **Functional Impairment:**

A state in which the normal or proper action of any body part or organ is damaged or deficient as a result of a malpositioned or malformed mandible and/or maxilla, facial skeletal discrepancy or a congenital defect.

#### **Genioplasty:**

Surgery to reshape the chin. Types of surgeries include chin augmentation with the use of an implant to correct a receding chin and a sliding genioplasty to reduce a prominent chin.



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## **ORTHOGNATHIC SURGERY (cont.)**

### **Criteria:**

**COVERAGE FOR TREATMENT TO CORRECT A CONGENITAL DEFECT OR BIRTH ABNORMALITY IS DEPENDENT UPON BENEFIT PLAN LANGUAGE AND IS SUBJECT TO THE PROVISIONS OF THE RECONSTRUCTIVE BENEFIT AND THE COSMETIC BENEFIT EXCLUSION. REFER TO MEMBER'S SPECIFIC BENEFIT PLAN BOOKLET TO VERIFY BENEFITS AND THE FUNCTIONAL IMPAIRMENT REQUIREMENT.**

### **Facial Skeletal Discrepancy:**

- Radiological documentation of **ONE** of the following:
  1. Macrogenia
  2. Mandibular hyperplasia
  3. Mandibular hypoplasia
  4. Maxillary hyperplasia or asymmetry
  5. Maxillary hypoplasia
  6. Microgenia
  7. Prognathism
  8. Retrognathism

### **Functional Impairment:**

- Clinical records must document the presence of **ONE** of the following conditions as the result of a facial skeletal discrepancy:
  - Airway defect
  - Masticatory malocclusion
  - Severe sleep apnea as documented by an apneic-hypopneic index (AHI) (see Description section) of 15 or more
  - Soft tissue discrepancies resulting in functional impairment
  - Speech impairment secondary to the functional deformity/deficiency



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## **ORTHOGNATHIC SURGERY (cont.)**

### **Criteria: (cont.)**

**Serial orthognathic surgeries may be required to correct a functional impairment when the impairment is the result of a congenital defect. Timing of these procedures may extend beyond 18 years of age in order to maximize the medical appropriateness of the surgical correction(s).**

- The following orthognathic surgeries to correct a functional impairment (as defined above) resulting from a facial skeletal discrepancy (as defined above) are considered **medically necessary** with clinical documentation, radiological report and preoperative intraoral and facial photographs:
  1. Anterior segment osteotomy of mandible
    - **ONE** of the following:
      - Prominent anterior segment of mandible and **one** of the following <sup>1</sup>:
        - a. Malocclusion without bimaxillary protrusion
        - b. Bimaxillary protrusion
      - Uneven AP mandibular occlusal plane with malocclusion <sup>1</sup>
    - 2. Anterior segment osteotomy of maxilla
      - Malocclusion with **ONE** of the following:
        - Abnormal premaxilla and malocclusion without bimaxillary protrusion and **one** of the following:
          - a. Premaxillary vertical excess
          - b. Premaxillary vertical deficiency
          - c. Prognathic premaxilla
        - Abnormal premaxilla with bimaxillary protrusion and **one** of the following:
          - a. Premaxillary vertical excess
          - b. Prognathic premaxilla



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## **ORTHOGNATHIC SURGERY (cont.)**

### **Criteria: (cont.)**

➤ The following orthognathic surgeries to correct a functional impairment (as defined above) resulting from a facial skeletal discrepancy (as defined above) are considered **medically necessary** with clinical documentation, radiological report, and preoperative intraoral and facial photographs: (cont.)

3. Osteotomy of mandible ramus

- **ONE** of the following:
  - Mandibular prognathism and **one** of the following:
    - a. Negative overjet (reverse overbite)
    - b. Class III malocclusion
    - c. Bimaxillary protrusion
  - Mandibular retrognathism with Class II malocclusion
  - Mandibular asymmetry with facial asymmetry
  - Mandibular occlusal cant



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## ORTHOGNATHIC SURGERY (cont.)

### Criteria: (cont.)

- The following orthognathic surgeries to correct a functional impairment (as defined above) resulting from a facial skeletal discrepancy (as defined above) are considered **medically necessary** with clinical documentation, radiological report, and preoperative intraoral and facial photographs: (cont.)
  4. LeFort I osteotomy
    - Anterior open bite/no overbite
    - Maxillary occlusal cant > 4 degrees
    - Vertical maxillary excess and **ALL** of the following:
      - Lip incompetence
      - Ratio of lower face height to total face height > 60%
    - Vertical maxillary deficiency and **ALL** of the following:
      - Malocclusion
      - Ratio of lower face height to total face height < 50%
    - Retrognathic maxilla and **ALL** of the following:
      - Nasolabial angle > 100 degrees
      - Malocclusion
      - Sella-Nasion-A (SNA) decreased for norms
    - Prognathic maxilla and **ALL** of the following:
      - Nasolabial angle < 75 degrees
      - Lip incompetence
      - Sella-Nasion-A (SNA) increased for norms
- If above criteria not met, orthognathic surgery for the improvement of an individual's facial structure is considered **cosmetic** and **not eligible for coverage** even when the procedure will improve emotional, psychological or mental condition or performance, based upon **ANY** of the following:
  1. Intent to enhance or improve appearance
  2. Absence of a functional physical impairment



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## ORTHOGNATHIC SURGERY (cont.)

### Criteria: (cont.)

- Genioplasty performed in conjunction with orthognathic surgery is considered **cosmetic** and **not eligible for coverage**.
- Physician fabricated oral surgical splint in association with orthognathic surgery is considered **medically necessary**.
- Distraction osteogenesis for the treatment of craniofacial abnormalities is considered **experimental or investigational** based upon:
  1. Insufficient scientific evidence to permit conclusions concerning the effect on health outcomes, and
  2. Insufficient evidence to support improvement of the net health outcome, and
  3. Insufficient evidence to support improvement of the net health outcome as much as, or more than, established alternatives.

<sup>1</sup> Intraoral and facial photographs not required

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### Resources:

1. Choi SH, Kang DY, Hwang CJ. Adult patient with hemifacial microsomia treated with combined orthodontics and distraction osteogenesis. *Am J Orthod Dentofacial Orthop.* Jan 2014;145(1):72-84.
2. InterQual® Care Planning, Procedures. Osteotomy, Anterior Segment, Maxilla.
3. InterQual® Care Planning, Procedures. Osteotomy, LeFort I.
4. InterQual® Care Planning, Procedures. Osteotomy, Sagittal Split, Mandible Ramus.
5. InterQual® Care Planning Procedures. Osteotomy, Anterior Segment, Mandible.
6. Murage KP, Tholpady SS, Friel M, Havlik RJ, Flores RL. Outcomes analysis of mandibular distraction osteogenesis for the treatment of Pierre Robin sequence. *Plast Reconstr Surg.* Aug 2013;132(2):419-421.



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## **ORTHOGNATHIC SURGERY (cont.)**

### **Resources: (cont.)**

7. Nevzatoglu S, Kucukkeles N, Guzel Z. Long-term stability of intra-oral maxillary distraction in unilateral cleft lip and palate: a case report. *Aust Orthod J*. Nov 2013;29(2):200-208.
8. Suh J, Choi TH, Baek SH, Kim JC, Kim S. Mandibular distraction in unilateral craniofacial microsomia: longitudinal results until the completion of growth. *Plast Reconstr Surg*. Nov 2013;132(5):1244-1252.
9. Tahiri Y, Viezel-Mathieu A, Aldekhayel S, Lee J, Gilardino M. The effectiveness of mandibular distraction in improving airway obstruction in the pediatric population. *Plast Reconstr Surg*. Mar 2014;133(3):352e-359e.
10. Yamaguchi K, Imai K, Fujimoto T, et al. Cranial distraction osteogenesis for syndromic craniosynostosis: long-term follow-up and effect on postoperative cranial growth. *J Plast Reconstr Aesthet Surg*. Feb 2014;67(2):e35-41.