Mandibular/Maxillary (Orthognathic) Surgery

☐ Medicare Advantage  X Commercial

I. Purpose
This policy addresses medically necessary, reconstructive and cosmetic procedures involving the mandible, maxilla or both.

II. Scope
All Utilization Management (UM) staff conducting physical and behavioral health UM review.

III. Exceptions
A. This policy does not apply to temporomandibular disorders, obstructive sleep apnea or orthodontia (braces) services.

B. Mandibular/Maxillary (orthognathic) surgery is considered cosmetic and not medically necessary when intended to change a physical appearance that would be considered within normal human anatomic variation.

C. A genioplasty (or anterior mandibular osteotomy) is considered cosmetic and not medically necessary when not associated with masticatory malocclusion.

D. Not all benefit contracts include benefits for reconstructive services as defined by this document. Benefit language supersedes this document.

IV. Definitions
Medically Necessary – procedures are considered medically necessary if there is a significant physical functional impairment AND the procedure can be reasonably expected to improve the physical functional impairment.

Reconstructive – procedures are considered reconstructive when intended to address significant variation from normal related to accidental injury, disease, trauma, and treatment of a disease or congenital defect.

Cosmetic – procedures are considered cosmetic when intended to change a physical appearance that would be considered within normal human anatomic variation. Cosmetic services are often
described as those that are primarily intended to preserve or improve appearance.

**Anomaly** – deviation from normal

**Anteroposterior** – from front to back

**Asymmetry** – the lack of balance or symmetry

**Cephalometric** – A scientific measurement of the head

**Cephalometrics** – the interpretation of lateral skull x-rays taken under standardized condition. Two of the more popular methods of analysis used in orthodontology are the Steiner analysis and the McNamara analysis.

**Class I occlusion** – exists with the teeth in a normal relationship when the mesial-buccal cusp of the maxillary first permanent molar coincides with the buccal groove of the mandibular first molar.

**Class II malocclusion** – occurs when the mandibular teeth are distal or 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, and therefore, presents two types: 1) Division I is when the mandibular arch is behind the upper jaw with a consequential protrusion of the upper front teeth. 2) Division II exists when the mandibular teeth are behind the upper teeth, with a retraction of the maxillary front teeth. Both of these malocclusions have a tendency toward a deep bite because of the uncontrolled migration of the lower front teeth upwards. Commonly referred to as an overbite.

**Class III malocclusion** – occurs when the lower dental arc is in front of (mesial to) the upper dental arch. People with this type of occlusion usually have a strong or protrusive chin, which can be due to either horizontal mandibular excess or horizontal maxillary deficiency. Commonly referred to as an under bite.

**Dentoalveloar** – relating to a tooth and the part of the alveolar bone that immediately surrounds it.

**Dysphagia** – difficulty swallowing

**Genioplasty** – plastic surgery of the chin

**Malformation** – an abnormal shape or structure

**Malocclusion** – imperfect contact with the mandibular and maxillary teeth

**Mandibular** – the horseshoe-shaped bone forming the lower jaw

**Mastication** – biting and grinding food in the mouth so it becomes soft enough to swallow

**Maxilla** – a paired bone that forms the skeletal base of the upper face, roof of the mouth, sides of the nasal cavity and floor of the orbit (contains the eye); the upper jaw

**McNamara analysis** – one of the most popular methods of cephalometric analyses. It combines the anterior reference plane with a description of the length of the individual’s jaw and the relationship between them.
Occlusion – bringing the opposing surfaces of the teeth of the two jaws (mandible and maxilla) into contact with each other.

Orthodontics – the division of dentistry dealing with the prevention and correction of abnormally positioned or aligned teeth.

Panoramic radiograph – radiograph of the maxilla and mandible extending from the left to right glenoid fossa. An x-ray image of a curved body surface, such as the upper and lower jaws, on a single film.

Radiograph – X-ray

Skeletal discrepancies – an orthodontic term used to describe the nature of a malocclusion as being a mal relationship of the bony base rather than merely of the teeth; often assessed via cephalometrics.

Steiner analysis – one of the most commonly used cephalometric analysis methods. Utilizing the SNA angle to assess the anteroposterior position of the maxilla in regard to the cranial base. Steiner’s Analysis follows the belief that the most important measurements in his analysis were the ANB angle, which is formed by the difference between SNA and SNB angles.

Supraeruption – the occurrence of a tooth continuing to grow out of the gum if the opposing tooth in the opposite jaw is missing.

Tomogram – an image of a tissue section produced by tomography

Tomography – imaging by sections or sectioning, through the use of any kind of penetrating wave.

V. Policy Statements

A. Mandibular/Maxillary (orthognathic) surgery is considered medically necessary to treat a significant physical functional impairment when the procedure can be reasonably expected to improve the physical functional impairment. Significant physical impairment includes any one of the following:

1. Dysphagia when all of the following criteria are met:
   a. Symptoms related to difficulty chewing such as choking due to incomplete mastication, or difficulty swallowing chewed solid food, or ability to chew only soft food or reliance on liquid food
   b. Symptoms must be documented in the medical record, must be significant and must persist for at least 4 months
   c. Other causes of swallowing or choking problems have been ruled out by history, physical exam and appropriate diagnostic studies

2. Speech abnormalities determined by a speech pathologist or therapist to be due to a malocclusion and not helped by orthodontia or at least 6 months of speech therapy

3. Intra-oral trauma while chewing related to malocclusion (for example, loss of food through the lips during mastication, causing recurrent damage to the soft tissues of the mouth during mastication)

4. Masticatory dysfunction or malocclusion when all of the following criteria in a, b, and c are met:
   a. Completion of skeletal growth with long bone x-ray or serial cephalometrics
showing no change in facial bone relationships over the last 3- to 6-month period (Class II malocclusions and individuals age 18 and over do not require this documentation)

b. Documentation of malocclusion with either intra-oral casts (if applicable), bilateral lateral x-rays, cephalometric radiograph with measurements, panoramic radiography or tomograms

c. Any **one of the following** described in i, ii, iii, iv is documented

i. Anteroposterior discrepancies defined as **one of the following**:
   1. Maxillary/Mandibular incisor relationship (established norm = 2 mm) defined as **one of the following**:
      a. Horizontal overjet of 5 mm or more
      b. Horizontal overjet of zero to a negative value (Note: Overjet up to 5 mm may be treatable with routine orthodontic therapy
   2. Maxillary/Mandibular anteroposterior molar relationship discrepancy of 4 mm or more (norm 0 to 1 mm)

ii. Vertical discrepancies defined as **any one of the following**:
   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 defined as **one of the following**
      a. No vertical overlap of anterior teeth
      b. Unilateral or bilateral posterior open bite greater than 2 mm;
   3. Deep overbite with impingement or irritation of buccal or lingual soft tissues of the opposing arch
   4. Supra-eruption of a dentoalveolar segment due to lack of occlusion

iii. Transverse discrepancies defined as **one of the following**:
   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.

iv. Asymmetries defined as the following:
   1. Anteroposterior, transverse or lateral asymmetries greater than 3 mm with concomitant occlusal asymmetry.

**NOTE:** When the condition involves treatment of skeletal deformity, the deformity must be documented either by computed tomography (CT), magnetic resonance imaging (MRI), or x-ray.

B. Mandibular/maxillary (orthognathic) surgery is considered reconstructive when intended to address a significant variation from normal related to accidental injury, disease, trauma, or treatment of a disease or congenital defect.

VI. Variations
A. When the condition involves treatment of skeletal deformity, the deformity must be documented either by computed tomography (CT), magnetic resonance imaging (MRI), or x-ray.

**See Also:**
PA-010 – Durable Medical Equipment and Corrective Appliances

VI. **Background**
Orthognathic surgery is the surgical correction of skeletal anomalies or malformations involving the mandible (lower jaw) or the maxilla (upper jaw). These malformations may be present at birth or they may become evident as the individual grows and develops. Orthognathic surgery can be performed to correct malocclusion, which cannot be improved with routine orthodontic therapy and where the functional impairments are directly caused by the malocclusion. The overall goal of treatment is to improve function through correction of the underlying skeletal deformity.

Maxillary advancement is a type of orthognathic surgery that may be necessary to improve the facial contour and normalize dental occlusion when there is a relative deficiency of the midface region. This is done by surgically moving the maxilla with sophisticated bone mobilization techniques and fixing it securely into place.

Depending on the soft tissue profile of the face or the severity of an occlusal discrepancy, problems with the lower face may require surgery of the mandible. This can be performed in conjunction with or separate from maxillary surgery. The mandible can be advanced, set back, tilted or augmented with bone grafts. A combination of these procedures may be necessary. Following any significant surgical movement of the mandible, fixation may be accomplished with mini-plates and screws or with a combination of interosseous wires and intermaxillary fixation (IMF). Rigid fixation (screws and plates) has the advantage of needing limited or no IMF. However, if interosseous wiring is used, IMF is maintained for approximately 6 weeks.

### Codes:

<table>
<thead>
<tr>
<th>CPT Codes / HCPCS Codes / ICD-10 Codes</th>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td></td>
<td>21120-21123</td>
<td>Genioplasty (includes codes 21120, 21121, 21122, 21123)</td>
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<tr>
<td></td>
<td>21125</td>
<td>Augmentation, mandibular body or angle; prosthetic material</td>
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<td>21127</td>
<td>Augmentation, mandibular body or angle; with bone graft, onlay or interpositional (includes obtaining autograft)</td>
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<td>21141-21147</td>
<td>Reconstruction midface, LeFort I (includes codes 21141, 21142, 21143, 21145, 21146, 21147)</td>
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<td></td>
<td>21150-21151</td>
<td>Reconstruction midface, LeFort II</td>
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<td>21154-21155</td>
<td>Reconstruction midface, LeFort III</td>
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<td>21188</td>
<td>Reconstruction midface, osteotomies (other than LeFort type) and bone grafts (includes obtaining autografts)</td>
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<tr>
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<td>21193-21196</td>
<td>Reconstruction of mandibular rami (includes codes 21193, 21194, 21195, 21196)</td>
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<td></td>
<td>21198</td>
<td>Osteotomy, mandible, segmental</td>
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<tr>
<td>Code</td>
<td>Description</td>
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<tr>
<td>21199</td>
<td>Osteotomy, mandible, segmental; with genioglossus advancement</td>
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<td>21206</td>
<td>Osteotomy, maxilla, segmental (e.g., Wassmund or Schuchard)</td>
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<td>21208</td>
<td>Osteoplasty, facial bones; augmentation (autograft, or prosthetic implant)</td>
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<td>21209</td>
<td>Osteoplasty, facial bones; reduction</td>
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<td>21210</td>
<td>Graft, bone; nasal, maxillary or malar areas (includes obtaining graft)</td>
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<td>21215</td>
<td>Graft, bone; mandible (includes obtaining graft)</td>
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<td>21244</td>
<td>Reconstruction of mandible, extraoral, with transosteal bone plate (e.g., mandibular staple bone plate)</td>
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<td>21245-21246</td>
<td>Reconstruction of mandible or maxilla, subperiosteal implant</td>
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<tr>
<td>21247</td>
<td>Reconstruction of mandibular condyle with bone and cartilage autografts (includes obtaining grafts) (e.g., for hemifacial microsomia)</td>
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**HCPCS**

<table>
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<tr>
<th>Code</th>
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<tr>
<td>D7940</td>
<td>Osteoplasty – for orthognathic deformities</td>
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<tr>
<td>D7941</td>
<td>Osteotomy – mandibular rami</td>
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<tr>
<td>D7943</td>
<td>Osteotomy – mandibular rami with bone graft; includes obtaining the graft</td>
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<tr>
<td>D7944</td>
<td>Osteotomy – segmented or subapical</td>
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<tr>
<td>D7945</td>
<td>Osteotomy – body of mandible</td>
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<tr>
<td>D7946-</td>
<td>LeFort I (maxilla – total, maxilla segmented)</td>
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<td>D7947</td>
<td></td>
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<td>D7948-</td>
<td>LeFort II or LeFort III (osteoplasty of facial bones for midface hipoplasia or retrusion) – without/with bone graft</td>
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<td>D7949</td>
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<td>D7950</td>
<td>Osseous, osteoperiosteal, or cartilage graft of the mandible or maxilla – autogenous or nonautogenous, by report</td>
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<tr>
<td>D7995</td>
<td>Synthetic graft – mandible or facial bones, by report</td>
</tr>
<tr>
<td>D7996</td>
<td>Implant – mandible for augmentation purposes (excludes alveolar ridge), by report</td>
</tr>
</tbody>
</table>

**ICD-10 Diagnosis**

**VII. Procedures**

None

**VIII. References/Citations**

Peer Reviewed Publications:
20. Wolford LM, Karras SC, Mehra P. Consideration for orthognathic surgery during growth,
21. Yamada K, Handa K, Hayashi T, Ito J. Condylar bony change, disk displacement, and

Government Agency, Medical Society, and Other Authoritative Publications:

Dentition and Occlusion in Pediatric Dentistry. 2014. Available at:
http://www.aapd.org/media/policies_guidelines/g_developdentition.pdf

Surgery. 2017. Available at:

3. American Association of Oral and Maxillofacial Surgeons. Guidelines to the evaluation
of impairment of the oral and maxillofacial region. 2015. Available at:

4. American Association of Oral and Maxillofacial Surgeons. Parameters of Care: Clinical
Practice Guidelines for Oral and Maxillofacial Surgery, 2012. Available at:

IX. Forms/Appendices