Orthognathic (Jaw) Surgery (for Kentucky Only)

Policy Number: CS088KY.07
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Instructions for Use

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Related Policies

- Obstructive and Central Sleep Apnea Treatment (for Kentucky Only)
- Treatment of Temporomandibular Joint Disorders (for Kentucky Only)

Application

This Medical Policy only applies to the state of Kentucky.

Coverage Rationale

This policy does not address surgical treatment for obstructive sleep apnea or temporomandibular joint disorders; refer to the Medical Policy titled Obstructive and Central Sleep Apnea Treatment (for Kentucky Only) or Treatment of Temporomandibular Joint Disorders (for Kentucky Only).

Orthognathic (jaw) surgery may be considered Reconstructive and medically necessary in certain circumstances. For medical necessity clinical coverage criteria, refer to the InterQual® CP: Procedures:

- Osteotomy, Anterior Segment, Maxilla
- Osteotomy, LeFort I
- Osteotomy, Maxillary Buttress, +/- Mid Palatal Osteotomy
- Osteotomy, Sagittal Split, Mandible Ramus
- Osteotomy, Anterior Segment, Mandible
- Procedures, Maxillomandibular Advancement

Click here to view the InterQual® criteria.

Orthognathic (jaw) surgery not addressed in the above criteria may also be considered Reconstructive and medically necessary when the following criteria are met:

- The presence of one or more of the following facial skeletal deformities associated with masticatory malocclusion:
  - Anteroposterior discrepancies (established norm = 2 mm), with one of the following:
    - Maxillary/mandibular incisor relationship: Horizontal overjet of 5 mm or more or a 0 to a negative value
    - Maxillary/mandibular anteroposterior molar relationship discrepancy of 4 mm or more (norm 0 to 1 mm)

    Note: These values represent two or more standard deviations from published norms.
  - Vertical discrepancies with one of the following:

        - 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 one of the following:
            - No vertical overlap of anterior teeth; or
            - Unilateral or bilateral posterior open bite greater than 2 mm; or
        - Deep overbite with impingement or irritation of buccal or lingual soft tissues of the opposing arch
        - Supraeruption of a dentoalveolar segment due to lack of occlusion
    - Transverse Discrepancies, with one of the following:
        - Presence of a transverse skeletal discrepancy which is two or more standard deviations 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: Anteroposterior, transverse or lateral asymmetries greater than 3 mm with concomitant occlusal asymmetry

    and
- The individual must also have one or more of the following Functional Impairments:
    - Masticatory (chewing) and swallowing dysfunction due to skeletal malocclusion (e.g., inability to incise/and or chew solid foods, choking on incompletely masticated solid foods, damage to soft tissue during mastication, malnutrition); or
    - Documentation of speech deficits to support existence of speech impairment due to skeletal malocclusion

Orthognathic surgery is not considered Reconstructive and medically necessary for all other indications including when performed for Cosmetic purposes only.

Definitions

Check the definitions within the federal, state, and contractual requirements that supersede the definitions below.

Cosmetic Procedures: Procedures or services that change or improve appearance without significantly improving physiological function.

Functional or Physical Impairment: Functional or Physical or Physiological Impairment causes deviation from the normal function of a tissue or organ. This results in a significantly limited, impaired, or delayed capacity to move, coordinate actions, or perform physical activities and is exhibited by difficulties in one or more of the following areas: physical and motor tasks; independent movement; performing basic life functions.

Reconstructive Procedures: Reconstructive Procedures when the primary purpose of the procedure is either of the following:
- Treatment of a medical condition
- Improvement or restoration of physiologic function

Reconstructive Procedures include surgery or other procedures which are related to an Injury, Sickness or Congenital Anomaly. The primary result of the procedure is not a changed or improved physical appearance.

Procedures that correct an anatomical Congenital Anomaly without improving or restoring physiologic function are considered Cosmetic Procedures. The fact that you may suffer psychological consequences or socially avoidant behavior as a result of an Injury, Sickness or Congenital Anomaly does not classify surgery (or other procedures done to relieve such consequences or behavior) as a reconstructive procedure.

Applicable Codes

The following list(s) of procedure and/or diagnosis codes is provided for reference purposes only and may not be all inclusive. Listing of a code in this guideline does not imply that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by the member specific benefit plan document and applicable laws that may require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee claim payment. Other Policies and Guidelines may apply.

CPT Code	Description
21076	Impression and custom preparation; surgical obturator prosthesis
21079	Impression and custom preparation; interim obturator prosthesis
21080	Impression and custom preparation; definitive obturator prosthesis
21081	Impression and custom preparation; mandibular resection prosthesis
21082	Impression and custom preparation; palatal augmentation prosthesis
21083	Impression and custom preparation; palatal lift prosthesis
21120	Genioplasty; augmentation (autograft, allograft, prosthetic material)
21121	Genioplasty; sliding osteotomy, single piece
21122	Genioplasty; sliding osteotomies, 2 or more osteotomies (e.g., wedge excision or bone wedge reversal for asymmetrical chin)
21123	Genioplasty; sliding, augmentation with interpositional bone grafts (includes obtaining autografts)
21125	Augmentation, mandibular body or angle; prosthetic material
21127	Augmentation, mandibular body or angle; with bone graft, onlay or interpositional (includes obtaining autograft)
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
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 grafts (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
21199	Osteotomy, mandible, segmental; with genioglossus advancement
21206	Osteotomy, maxilla, segmental (e.g., Wassmund or Schuchard)

CPT Code	Description
21210	Graft, bone; nasal, maxillary or malar areas (includes obtaining graft)
21215	Graft, bone; mandible (includes obtaining graft)
21244	Reconstruction of mandible, extraoral, with transosteal bone plate (e.g., mandibular staple bone plate)
21245	Reconstruction of mandible or maxilla, subperiosteal implant, partial
21246	Reconstruction of mandible or maxilla, subperiosteal implant; complete
21247	Reconstruction of mandibular condyle with bone and cartilage autografts (includes obtaining grafts) (e.g., for hemifacial microsomia)

CDT Code	Description
D5934	Mandibular resection prosthesis with guide flange
D5935	Mandibular resection prosthesis without guide flange
D5982	Surgical stent
D5988	Surgical splint
D7471	Removal of lateral exostosis (maxilla or mandible)
D7472	Removal of torus palatinus
D7473	Removal of torus mandibularis
D7490	Radical resection of maxilla or mandible
D7610	Maxilla – open reduction (teeth immobilized, if present)
D7630	Mandible – open reduction (teeth immobilized, if present)
D7650	Malar and/or zygomatic arch – open reduction
D7671	Alveolus – open reduction, may include stabilization of teeth
D7680	Facial bones – complicated reduction with fixation and multiple surgical approaches
D7710	Maxilla – open reduction
D7730	Mandible – open reduction
D7750	Malar and/or zygomatic arch – open reduction; Incision required to reduce fracture
D7770	Alveolus – open reduction stabilization of teeth
D7780	Facial bones – complicated reduction with fixation and multiple approaches
D7940	Osteoplasty - for orthognathic deformities
D7941	Osteotomy – mandibular rami
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, osteoperiosteal or cartilage graft of the mandible or maxilla – autogenous or nonautogenous, by report
D7953	Bone replacement graft for ridge preservation – per site
D7955	Repair of maxillofacial soft and/or hard tissue defect
D7995	Synthetic graft - mandible or facial bones, by report
D7996	Implant - mandible for augmentation purposes (excluding alveolar ridge), by report

CDT Code	Description
D7997	Appliance removal (not by dentist who placed appliance), includes removal of archbar

Description of Services

Orthognathic surgery is the surgical correction of skeletal abnormalities of the mandible (lower jaw), maxilla (upper jaw) or both. These abnormalities may be recognized at or shortly after birth (congenital anomaly) or may not become apparent until the individual grows and develops. The abnormalities may also be the result of traumatic injuries or secondary to systemic diseases. The primary goal of treatment is to improve facial form and function by correcting the skeletal abnormality. Often the severity of these abnormalities necessitates surgical correction in combination with other rehabilitative and non-surgical therapies (AAOMS, 2020).

Clinical Evidence

Mulier et al. (2021) conducted a systematic review to evaluate long-term stability of dental and dentolabial changes following combine orthodontic and orthognathic surgical treatment with a minimum follow-up period of 5 years. 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.

Wei et al. (2018) conducted a systematic review of the literature to compare the difference in postoperative stability between a surgery first/early orthognathic approach (SFEA) and a conventional orthodontics-first approach (COA). A total of 12 observational studies met the inclusion criterion with a total of 498 participants. The studies were published from 2010 to 2017. Of the studies reviewed, 7 studies used the Le Fort I osteotomy and bilateral sagittal split osteotomy (BSSO), 4 studies uses BSSO alone and 1 study used the Le Fort I osteotomy and intraoral vertical ramus osteotomy (IVRO). In all studies, rigid or semi-rigid internal fixation to fix the bony segment was used. A limitation of the is review is that all studies were conducted retrospectively which makes control for the confounding factors difficult. The authors concluded that SFEA may yield poorer postoperative stability than COA, specifically the mandible tends to rotate counter-clockwise more in SFEA. Recommendations include careful consideration for patient screening, amount of surgical movement and method of operation and fixation when designing surgical plan. Additional long term and high-quality prospective studies specific to evaluating postoperative stability of the SFEA are needed to evaluate these findings.

Haas Junior et al. (2017) performed a systemic review of the literature on the stability and surgical complications of segmental Le Fort I osteotomy. A total of 599 titles/abstracts possibility related were identified. The inclusion criteria included intervention study, analysis of stability and/or complications after maxillary osteotomy. Exclusion criteria included case reports, review of the literature and patient samples. A total of twenty-three studies were included: 14 evaluating stability as the outcome and 9 evaluating surgical complications. The studies were mostly retrospective (three used prospective design) and published over a 25 year period (1991 - 2016). These studies included a total of 2594 patients, primarily women, with an age range of 19.5 to 28.5 years. The selected studies that addressed outcome measure of stability were organized by stratifying surgical movement outcomes in the sagittal, vertical and transverse planes. In the authors analysis of these outcomes, instability is greater in terms of dental movement than in skeletal movement was inferred, which implies that preoperative and postoperative orthodontic treatment are the main factor of recurrence after maxillary expansion and heightened by the fact that the main goal of such combined orthodontic-surgical treatment is to correct crossbite. In this systematic review, surgical complications were also analyzed. Nine studies evaluated this outcome in a sample of 2078 patients. Overall, only 177 patients (8.5%) experienced a complication. The authors believe that the retrospective design of the included studies may lead to an underestimation but the prevalence of complication is actually overestimated because of the convenience sampling strategy that included studies reporting surgical complications only. The authors concluded that the risk of complications after segmental Le Fort I osteotomy is in face lower than 8.5%. Limitations of this systematic review included: inclusion of non-peer-reviewed literature and conclusion relying primarily on observational studies.

Yang et al. (2017) performed a systematic literature review and meta-analysis of published comparative studies on the stability, efficacy, and surgical results of the surgery-first approach (SFA) versus conventional 3-stage method (CTM) orthognathic surgery. Ten nonrandomized controlled studies with a total of 513 patients met the inclusion criteria. These studies were published from 2010 to 2016. The outcomes consisted of treatment duration, postoperative stability, surgical movement and postoperative occlusion. The primary limitation is that only 10 nonrandomized studies were included - this small sample and non-randomization could increase the risk of bias. The findings indicate that patients in the SFA group benefited from shorter total treatment duration (weighted mean difference [WMD], -5.25; 95% confidence interval [CI], -8.21 to -2.29; p = .0005), similar postoperative stability of the mandible (WMD, 0.35 mm; 95% CI, -0.24 to 0.94; p = .55) and maxilla (WMD, 0.13 mm; 95% CI, -0.35 to 0.60; p = .60), similar surgical movements, and other surgical results. The authors concluded that SFA is an efficient alternative to CTM with a shorter total treatment duration, similar postoperative stability, and other surgical results but had longer postoperative time in orthodontics.

Abrahamsson et al. (2015) conducted a study of 121 patients (treatment group) to investigate the self-estimated masticatory ability and performance in patients with dentofacial deformities before and after orthognathic treatment (including surgery) in comparison to an age and gender match control group. The sample included 98 patients (81%) that met the inclusion criteria and comprised of 38 males and 60 females with a mean age 22.4 ±7.5 years. After 18 months of treatment, 98 patients (81%) were assessed at follow-up examination for masticatory ability assessed on a visual analog scale and for masticatory performance evaluated by a masticatory test using round silicon tablets. Clinical examination and a questionnaire captured any signs and symptoms of temporomandibular disorders (TMD). There were 56 age and gender match subjects in the control group who were examined at baseline. The investigators concluded that patients with dentofacial deformities that were corrected by orthognathic surgery had a significant positive treatment outcome in respect of masticatory ability and masticatory performance; the severity of overall symptoms of TMD and the number of occlusal contacts influenced both the masticatory ability and performance; and that open bite had a negative effect on masticatory performance. Limitations of this study included lack of randomization and lack of longitudinal data on the control participants.

Clinical Practice Guidelines

American Association of Oral and Maxillofacial Surgeons (AAOMS)

Clinical practice guidelines have been published by AAOMS on criteria for orthognathic surgery (2020). The guidelines state that surgery may be indicated and medically necessary for:

- Anteroposterior discrepancies: established norm = 2mm
  - Maxillary/mandibular incisor relationship
    - Horizontal overjet of + 5mm or more
    - Horizontal overjet of zero to a negative value
  - Maxillary/mandibular anteroposterior molar relationship discrepancy of 4mm or more (norm 0 to 1mm)
  - These values represent two or more standard deviation from published norms
- Vertical discrepancies
  - Presence of a vertical facial skeletal deformity, which is two or more standard deviations from published norms for accepted skeletal landmarks
  - Open bite
    - No vertical overlap of anterior teeth
    - Unilateral or bilateral posterior open bite greater than 2mm
  - Deep overbite with impingement or irritation of buccal or lingual soft tissues of the opposing arch
  - Supraeruption of a dentoalveolar segment due to lack of occlusion
- Transverse discrepancies
  - Presence of a transverse skeletal discrepancy, which is two or more standard deviations from published norms
  - Total bilateral maxillary palatal cusp to mandibular fossa discrepancy of 4mm or greater, or a unilateral discrepancy of 3mm or greater, given normal axial inclination of the posterior teeth
- Asymmetries
  - Anteroposterior, transverse or lateral asymmetries greater than 3mm with concomitant occlusal asymmetry

These indications provide verifiable clinical measurements to significant facial skeletal deformities, maxillary and/or mandibular facial skeletal deformities associated with masticatory malocclusion. In addition to these conditions, orthognathic surgery may be indicated in cases where there are specific documented signs of dysfunction which may include airway dysfunction (e.g. sleep apnea), temporomandibular joint disorders, psychosocial disorders and speech disorders.

U.S. Food and Drug Administration (FDA)

This section is to be used for informational purposes only. FDA approval alone is not a basis for coverage.

Orthognathic surgery is a procedure and, therefore, not subject to regulation by the FDA.

References

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Policy History/Revision Information

Date	Summary of Changes
03/01/2024	**Related Policies** • Updated reference link to reflect current policy title for *Treatment of Temporomandibular Joint Disorders (for Kentucky Only)*
08/01/2023	**Applicable Codes** • Revised description for CDT code D7750 **Supporting Information** • Updated *Description of Services*, *Clinical Evidence*, and *References* sections to reflect the most current information • Archived previous policy version CS088KY.06

Instructions for Use

This Medical Policy provides assistance in interpreting UnitedHealthcare standard benefit plans. When deciding coverage, the federal, state, or contractual requirements for benefit plan coverage must be referenced as the terms of the federal, state, or contractual requirements for benefit plan coverage may differ from the standard benefit plan. In the event of a conflict, the federal, state, or contractual requirements for benefit plan coverage govern. Before using this policy, please check the federal, state, or contractual requirements for benefit plan coverage. UnitedHealthcare reserves the right to modify its Policies and Guidelines as necessary. This Medical Policy is provided for informational purposes. It does not constitute medical advice.

UnitedHealthcare uses InterQual for the primary medical/surgical criteria, and the American Society of Addiction Medicine (ASAM) for substance use, in administering health benefits. If InterQual does not have applicable criteria, UnitedHealthcare may also use UnitedHealthcare Medical Policies, Coverage Determination Guidelines, or Utilization Review Guidelines that have

been approved by the Kentucky Department for Medicaid Services. The UnitedHealthcare Medical Policies, Coverage Determination Guidelines, or Utilization Review Guidelines are intended to be used in connection with the independent professional medical judgment of a qualified health care provider and do not constitute the practice of medicine or medical advice.