

Medical Coverage Policy

UTILIZATION * ALERT*

- Prior to use of this MCP for evaluation of medical necessity, benefit MUST be verified in the member's EOC or benefit document if it includes the optional rider.
- Please refer to CMS guidelines or National Coverage Determination (NCD) for Medicare members
- Medicare does not currently have a National Coverage Determination (NCD) for TMD.
- Local Coverage Determinations (LCDs)/Local Coverage Articles (LCAs) currently do not exist.
- After searching the Medicare Coverage Database, if no NCD/LCD/LCA is found, then use the policy referenced above for coverage guidelines
- I. Service: Orthognathic Surgery
- II. Specialty: Otolaryngology, Oral Surgery

III. Clinical Indications for Referral

Orthognathic surgery is considered medically necessary when there is documentation that the facial skeletal discrepancy results in significant functional impairment or dysfunction. For an initial consultation, speech therapy and/or nutrition evaluations are required to demonstrate significant functional impairment or dysfunction. The only exception is for consultation specifically requested for sleep study documented Obstructive Sleep Apnea for those members who decline or have contraindications to non-surgical treatments for OSA. The patient should meet the required clinical measurements below based on the identified deformity for approval of any surgical procedures.

A. Significant Facial, Maxillary and/or Mandibular Facial Skeletal Deformities associated with Masticatory Malocclusion

These deformities contribute to significant masticatory dysfunction and the severity of the deformity precludes adequate dental therapeutics and orthodontic treatment.

1. Anteroposterior discrepancies:

- a. Maxillary/mandibular incisor relationship; overjet of 5mm or more, or a 0 to a negative value (norm 2mm);
- b. Maxillary/mandibular anteroposterior molar relationship discrepancy of 4mm or more (norm 0 to 1mm);
- c. These values represent two or more standard deviations from published norms.

2. Vertical discrepancies



- a. Presence of a vertical facial skeletal deformity, that is two or more standard deviations from published norms for accepted skeletal landmarks;
- b. Open bite
 - i. No vertical overlap of anterior teeth;
 - ii. Unilateral or bilateral posterior open bite greater than 2mm
- c. Deep overbite with impingement or irritation of buccal or lingual soft tissues of the opposing arch;
- d. Supra-eruption of a dentoalveolar segment due to lack of occlusion
 - i. No vertical overlap of anterior teeth; and
 - ii. Unilateral or bilateral posterior open bite greater than 2mm

3. Transverse discrepancies

- a. Presence of a transverse skeletal discrepancy, which is two or more standard deviations from published norms;
- b. 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.

4. Asymmetries

- a. Anteroposterior, transverse or lateral asymmetries greater than 3mm with concomitant occlusal asymmetry.
- **B.** Facial skeletal deformities associated with conditions affecting the airway, temporomandibular joint disorders, or speech impairments and contribute to severe or significant dysfunction.
 - a. Facial skeletal discrepancies associated with sleep apnea, airway defects, and soft tissue discrepancies
 - i. Obstructive Sleep Apnea (OSA) with underlying facial skeletal deformities; and
 - 1) vertical hyperplasia of the maxilla; or
 - 2) maxillary and/or mandibular hypoplasia with or without clefts.
 - b. Facial skeletal discrepancies associated with Temporomandibular Joint Disorder (TMD) and dysfunction
 - i. A documented diagnosis of TMD and dysfunction; and
 - ii. Severe class II deformity; and
 - iii. Speech and masticatory impairment; and
 - iv. Unresponsive to attempts of non-surgical TMD treatment or non-correctable by dental therapeutics or orthodontics alone.
 - c. Facial skeletal discrepancies associated with Speech Impairment



Medical Coverage Policy

- i. Abnormal jaw relationship to facial structures, including the position of the lips, tongue and soft palate can result in altered or impaired speech production; and
- ii. Meets the clinical measurement criteria cited in section III, A, B or C

IV. Limitations

Orthodontic treatments prior to orthognathic surgery are considered dental in nature and not covered under medical benefit.

V. Exclusions

Orthognathic Surgery is considered not medically necessary and not covered for the following:

- 1. For conditions other than those identified in section III; and
- 2. When the required criteria cited in section III have not been met; or
- 3. For cosmetic purposes, to improve or change the physical appearance with normal anatomic variation and without functional impairment including speech and nutritional abnormalities.

VI. Definition

Orthognathic surgery is defined by the American Association of Oral and Maxillofacial Surgeons as the surgical correction of severe abnormalities of the mandible, maxilla, or both, resulting from traumatic injury or underlying abnormality present at birth and becomes more evident as the member grows and develops. The severity of these underlying deformities require treatment beyond dental treatment alone with the primary goal to restore the form and improve the function of the affected anatomical structure(s) through correction of the underlying skeletal deformity



Medical Coverage Policy

References

- American Association of Oral and Maxillofacial Surgeons. Parameters of Care (AAOMS) Criteria for Orthognathic Surgery (AAOMS ParCare) Sixth Edition 2017. J Oral Maxillofac Surg 75:e12-e33, 2017, Suppl 1. <u>https://www.aaoms.org/images/uploads/pdfs/parcare_assessment.pdf</u>
- Gateno, J., Alfi, D., Xia, J. J., & Teichgraeber, J. F. (2015). A Geometric Classification of Jaw Deformities. *Journal of oral and maxillofacial surgery: official journal of the American Association of Oral and Maxillofacial Surgeons*, 73(12 Suppl), S26–S31. https://doi.org/10.1016/j.joms.2015.05.019
- 3. Eslamipour, F., Borzabadi-Farahani, A., Le, B. T., & Shahmoradi, M. (2017). A Retrospective Analysis of Dentofacial Deformities and Orthognathic Surgeries. *Annals of maxillofacial surgery*, 7(1), 3–77. <u>https://doi.org/10.4103/ams.ams_104_16</u>
- 4. Seo, H. J., & Choi, Y. K. (2021). Current trends in orthognathic surgery. *Archives of craniofacial surgery*, 22(6), 287–295. <u>https://doi.org/10.7181/acfs.2021.00598</u>
- 5. Pavwoski, P., & Shelgikar, A. V. (2017). Treatment options for obstructive sleep apnea. *Neurology. Clinical practice*, 7(1), 77–85. <u>https://doi.org/10.1212/CPJ.0000000000000220</u>
- Borges, T. M., Sol, I., de Castro Rodrigues, C. M., Peres Lima, F. G. G., Silva, C. J., & Furtado, L. M. (2021). Surgery First Approach in Orthognathic Surgery - Considerations and Clinical Case Report. *Annals of maxillofacial surgery*, *11*(2), 349–351. <u>https://doi.org/10.4103/ams.ams_8_21</u>
- Bezak, B. J., Arce, K. A., Jacob, A., & Van Ess, J. (2016). Orthognathic Surgery in Patients With Congenital Myopathies and Congenital Muscular Dystrophies: Case Series and Review of the Literature. *Journal of oral and maxillofacial surgery : official journal of the American Association of Oral and Maxillofacial Surgeons*, 74(3), 601–609. <u>https://doi.org/10.1016/j.joms.2015.07.023</u>
- Prado, D. G. A., Berretin-Felix, G., Migliorucci, R. R., Bueno, M. D. R. S., Rosa, R. R., Polizel, M., Teixeira, I. F., & Gavião, M. B. D. (2018). Effects of orofacial myofunctional therapy on masticatory function in individuals submitted to orthognathic surgery: a randomized trial. *Journal of applied oral science : revista FOB*, 26, e20170164. <u>https://doi.org/10.1590/1678-7757-2017-0164</u>
- Li, B., Wei, H., Jiang, T., Qian, Y., Zhang, T., Yu, H., Zhang, L., & Wang, X. (2021). Randomized Clinical Trial of the Accuracy of Patient-Specific Implants versus CAD/CAM Splints in Orthognathic Surgery. *Plastic and reconstructive surgery*, *148*(5), 1101–1110. <u>https://doi.org/10.1097/PRS.00000000008427</u>
- Kagawa, H., Kaku, M., Yamamoto, T., Yashima, Y., Sumi, H., Kamiya, T., Yamamoto, I., & Tanimoto, K. (2021). Changes in tongue-palatal contact during swallowing in patients with skeletal mandibular prognathism after orthognathic surgery. *PloS one*, *16*(5), e0251759. <u>https://doi.org/10.1371/journal.pone.0251759</u>
- 11. Kim, M., Hwang, C. J., Cha, J. Y., Lee, S. H., Kim, Y. J., & Yu, H. S. (2022). Correlation Analysis between Three-Dimensional Changes in Pharyngeal Airway Space and Skeletal Changes in Patients with Skeletal



Medical Coverage Policy

Class II Malocclusion following Orthognathic Surgery. *BioMed research international*, 2022, 3995690. <u>https://doi.org/10.1155/2022/3995690</u>

- 12. Abrahamsson, C., Henrikson, T., Bondemark, L., & Ekberg, E. (2015). Masticatory function in patients with dentofacial deformities before and after orthognathic treatment-a prospective, longitudinal, and controlled study. *European journal of orthodontics*, 37(1), 67–72. <u>https://doi.org/10.1093/ejo/cju011</u>
- Kretschmer, W. B., Baciuţ, G., Baciuţ, M., & Sader, R. (2019). Effect of bimaxillary orthognathic surgery on dysfunction of the temporomandibular joint: a retrospective study of 500 consecutive cases. *The British journal of oral & maxillofacial surgery*, 57(8), 734–739. <u>https://doi.org/10.1016/j.bjoms.2019.06.010</u>
- Zhai, Y., Han, J. J., Jung, S., Kook, M. S., Park, H. J., & Oh, H. K. (2020). Changes in the temporomandibular joint clicking and pain disorders after orthognathic surgery: Comparison of orthodontics-first approach and surgery-first approach. *PloS one*, *15*(9), e0238494. https://doi.org/10.1371/journal.pone.0238494
- Abrahamsson, C., Ekberg, E., Henrikson, T., & Bondemark, L. (2007). Alterations of temporomandibular disorders before and after orthognathic surgery: a systematic review. *The Angle orthodontist*, 77(4), 729– 734. <u>https://doi.org/10.2319/052906-215</u>
- Al-Moraissi, E. A., Perez, D., & Ellis, E., 3rd (2017). Do patients with malocclusion have a higher prevalence of temporomandibular disorders than controls both before and after orthognathic surgery? A systematic review and meta-analysis. *Journal of cranio-maxillo-facial surgery : official publication of the European Association for Cranio-Maxillo-Facial Surgery*, 45(10), 1716–1723. https://doi.org/10.1016/j.jcms.2017.07.015
- 17. Chigurupati, R., & Mehra, P. (2018). Surgical Management of Idiopathic Condylar Resorption: Orthognathic Surgery Versus Temporomandibular Total Joint Replacement. *Oral and maxillofacial surgery clinics of North America*, *30*(3), 355–367. <u>https://doi.org/10.1016/j.coms.2018.05.004</u>
- Haas Junior, O. L., Guijarro-Martínez, R., de Sousa Gil, A. P., da Silva Meirelles, L., de Oliveira, R. B., & Hernández-Alfaro, F. (2017). Stability and surgical complications in segmental Le Fort I osteotomy: a systematic review. *International journal of oral and maxillofacial surgery*, *46*(9), 1071–1087. <u>https://doi.org/10.1016/j.ijom.2017.05.011</u>
- Mulier, D., Gaitán Romero, L., Führer, A., Martin, C., Shujaat, S., Shaheen, E., Politis, C., & Jacobs, R. (2021). Long-term dental stability after orthognathic surgery: a systematic review. *European journal of orthodontics*, 43(1), 104–112. <u>https://doi.org/10.1093/ejo/cjaa022</u>
- Wei, H., Liu, Z., Zang, J., & Wang, X. (2018). Surgery-first/early-orthognathic approach may yield poorer postoperative stability than conventional orthodontics-first approach: a systematic review and metaanalysis. Oral surgery, oral medicine, oral pathology and oral radiology, 126(2), 107–116. <u>https://doi.org/10.1016/j.oooo.2018.02.018</u>
- 21. Medicare Local Coverage Determination for Facial Prostheses CGS Administrators (L33738) https://www.cms.gov/medicare-coverage-database/view/lcd.aspx?LCDId=33738
- 22. MCG 28TH edition. Copyright 2024. MCG Health, LLC ACG: Mandibular Osteotomy (AC-0247) and ACG: Maxillomandibular Osteotomy and Advancement (AC-0248). Accessed 12/15/2024



Medical Coverage Policy

- 23. American Association of Oral and Maxillofacial Surgeons (AAOMS). Criteria for Orthognathic Surgery (2020), Guidelines to the Evaluation of Impairment of the Oral and Maxillofacial Region (2018), Reconstructive Oral and Maxillofacial Surgery (2017), Oral and Craniomaxillofacial Implant Surgery (2017) and Temporomandibular Disorders (2017). Accessed: 01/05/2024 https://www.aaoms.org/docs/practice_resources/clinical_resources/impairment_guidelines.pdf https://www.aaoms.org/docs/practice_resources/clinical_resources/implant_surgery.pdf https://www.aaoms.org/docs/practice_resources/clinical_resources/implant_surgery.pdf https://www.aaoms.org/docs/practice_resources/clinical_resources/implant_surgery.pdf https://www.aaoms.org/docs/practice_resources/clinical_resources/implant_surgery.pdf https://www.aaoms.org/docs/practice_resources/clinical_resources/implant_surgery.pdf https://www.aaoms.org/docs/practice_resources/clinical_resources/implant_surgery.pdf
- Mahmood HT, Ahmed M, Fida M, Kamal AT, Fatima F. Concepts, protocol, variations and current trends in surgery first orthognathic approach: a literature review. Dental Press J Orthod 2018 May-June;23(3):36. <u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6072446/</u>

Approval History

Effective June 01, 2016, state filing is no longer required per Maryland House Bill HB 798 – Health Insurance – Reporting

Date approved by RUMC	Date of Implementation
04/25/2023	04/25/2023
04/25/2024	04/25/2024

*The Regional Utilization Management Committee received delegated authority in 2011 to review and approve designated Utilization Management and Medical Coverage Policies by the Regional Quality Improvement Committee.

Note: Kaiser Permanente Mid-Atlantic States (KPMAS) include referral and authorization criteria to support primary care and specialty care practitioners, as appropriate, in caring for members with selected conditions. Medical Coverage Policies are not intended or designed as a substitute for the reasonable exercise of independent clinical judgment by a practitioner in any particular set of circumstances for an individual member.

©2024, Kaiser Foundation Health Plan of the Mid-Atlantic States, Inc. ©2024, Mid-Atlantic Permanente Medical Group, P.C.