

**CRANIAL HELMETS**

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Date Of Origin: January 19, 2005

Status: Current

**Summary of Changes**

Addition:

- A second cranial molding helmet may be necessary when criteria are met.
- New sections: Government/Regulations and Guidelines/Position Statements

**I. POLICY/CRITERIA**

- A. Cranial helmets may be medically necessary as a protective device for medical conditions (e.g., seizure disorder, synostotic skull deformity post-operative protection).
- B. Cranial molding helmets or bands for non-synostotic skull deformity (including positional plagiocephaly, scaphocephaly, and brachycephaly) are medically necessary when InterQual® criteria are met and covered under the orthotic benefit.
1. A second cranial remodeling band or helmet is considered medically necessary when the following are met:
    - i. InterQual criteria are met; And
    - ii. Asymmetry has not been resolved after the initiation of therapy;  
And
    - iii. The orthosis becomes ill-fitting or there is no room for new growth prior to the completion of treatment.
- C. Protective helmets used for sports or recreation (e.g., bike or ski helmets) are not a covered benefit.
- D. Replacement for loss or damage is not a covered benefit.
- E. **Medicaid/Healthy Michigan Plan members:** Cranial helmets may be considered medically necessary when the criteria specified in the Michigan Department of Health and Human Services (MDHHS) [Medicaid Provider Manual](#) (MDHHS [Medicaid Provider Manual](#)) are met.

**II. GOVERNMENT REGULATIONS**

CMS Coverage Determinations	Title and Number
National Coverage Determinations (NCDs)	N/A

**Local Coverage Determinations**

N/A

### III. GUIDELINES/POSITION STATEMENTS

Medical or Professional Society	Recommendation
Congress of Neurological Surgeons (CNS) and the AANS/CNS Joint Section on Pediatric Neurosurgery (2016)	<p>Guidelines for the Management of Patients with Positional Plagiocephaly</p> <p>The Role of Cranial Molding Orthosis (Helmet) Therapy</p> <p>Helmet therapy is recommended for infants with persistent moderate to severe plagiocephaly after a course of conservative treatment (repositioning and/or physical therapy).</p> <p>Strength of Recommendation: Level II – uncertain clinical certainty</p> <p>Recommendation: Helmet therapy is recommended for infants with moderate to severe plagiocephaly presenting at an advanced age.</p> <p>Strength of Recommendation: Level II – uncertain clinical certainty</p>

### IV. MEDICAL NECESSITY REVIEW

Prior authorization for certain drug, services, and procedures may or may not be required. In cases where prior authorization is required, providers will submit a request demonstrating that a drug, service, or procedure is medically necessary. For more information, please refer to the [Priority Health Provider Manual](#).

Commercial members: Prior authorization is not required unless >\$1000.00.

Medicaid/Healthy Michigan Plan members: Prior authorization is required for cranial helmets if the cost of the helmet exceeds \$500.00.

### V. APPLICATION TO PRODUCTS

Coverage is subject to member's specific benefits. Group specific policy will supersede this policy when applicable.

- ❖ **HMO/EPO:** *This policy applies to insured HMO/EPO plans.*
- ❖ **POS:** *This policy applies to insured POS plans.*
- ❖ **PPO:** *This policy applies to insured PPO plans. Consult individual plan documents as state mandated benefits may apply. If there is a conflict between this policy and a plan document, the provisions of the plan document will govern.*
- ❖ **ASO:** *For self-funded plans, consult individual plan documents. If there is a conflict between this policy and a self-funded plan document, the provisions of the plan document will govern.*
- ❖ **INDIVIDUAL:** *For individual policies, consult the individual insurance policy. If there is a conflict between this medical policy and the individual insurance policy document, the provisions of the individual insurance policy will govern.*
- ❖ **MEDICARE:** *Coverage is determined by the Centers for Medicare and Medicaid Services (CMS) and/or the Evidence of Coverage (EOC); if a coverage determination has not been adopted by CMS, this policy applies.*
- ❖ **MEDICAID/HEALTHY MICHIGAN PLAN:** *For Medicaid/Healthy Michigan Plan members, this policy will apply. Coverage is based on medical necessity criteria being met and the appropriate code(s) from the coding section of this policy being included on the Michigan Medicaid Fee Schedule located at: [http://www.michigan.gov/mdch/0,1607,7-132-2945\\_42542\\_42543\\_42546\\_42551-159815--,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2945_42542_42543_42546_42551-159815--,00.html). If there is a discrepancy between this policy and the Michigan Medicaid Provider Manual located at: [http://www.michigan.gov/mdch/0,1607,7-132-2945\\_5100-87572--,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2945_5100-87572--,00.html), the Michigan Medicaid Provider Manual will govern. If there is a discrepancy or lack of guidance in the Michigan Medicaid Provider Manual, the Priority Health contract with Michigan Medicaid will govern. For Medical Supplies/DME/Prosthetics and Orthotics, please refer to the Michigan Medicaid Fee Schedule to verify coverage.*

**Special Note:** This policy replaces “Cranial Molding Helmets for Positional Plagiocephaly”, No. 91471-R0.

## **VI. DESCRIPTION**

Plagiocephaly, or an asymmetrically shaped head, can be subdivided into synostotic and non-synostotic types. Synostotic plagiocephaly or craniosynostosis describes an asymmetrically shaped head due to premature closure of the sutures of the cranium. Craniosynostosis may require surgery to reopen the closed sutures.

The open approach requires an incision and may involve removal, reshaping or replacing the deformed cranial bone. For this extensive surgery, internal fixation is used to maintain the reshaped cranium post operatively. Since cranial shape correction was accomplished with the surgery, a postoperative helmet was not required.

Minimally invasive synostotic techniques involve removal of bone segments without insertion of plates or screws. Cranial orthotics can be used to maintain the surgical correction postoperatively.

In plagiocephaly without synostosis, also referred to as non-synostotic plagiocephaly, the sutures of the skull remain open. This type of plagiocephaly can also be referred to as positional or deformational plagiocephaly when it is due to environmental factors including, but not limited to, premature birth, restrictive intrauterine environment, birth trauma, torticollis, cervical anomalies, and sleeping position.

Plagiocephaly, regardless of suture closure status, can be classified as either brachycephaly or scaphocephaly. Brachycephaly refers to a head shape that is not asymmetric but is disproportionately short, with the head being abnormally wide. Scaphocephaly is the opposite, with the head being abnormally narrow.

**Cranial molding helmets for positional plagiocephaly:**

Plagiocephaly may be caused by mechanical factors acting on the head in-utero or during early infancy. Some cranial deformities are present at birth and are the result of in-utero or intra partum molding. Most improve spontaneously during the first few months of life. Postnatal plagiocephaly deformational is more common and is associated with congenital torticollis, vertebral anomalies, neurologic impairment, or forced sleeping position (Miller). The incidence of acquired plagiocephaly has increased an estimated 4 to 6 fold since 1992 when the American Academy of Pediatrics began its “Back to Sleep” program to prevent sudden infant death syndrome.

**Diagnosis:**

Typical findings include unilateral flattening of the occipital area, ipsilateral forehead and parietal bossing, contra-lateral occipital bossing and anterior ear displacement ipsilateral to the flattened occiput, and torticollis to contra-lateral side.

Because the diagnosis of positional skull deformity is made on the basis of history, findings on physical examination, and resolution over time with positional intervention, imaging studies are unnecessary in most situations (Laughlin, et. al.).

**Management:**

Most infants improve if the appropriate maneuvers are conducted during a 2 or 3 month time period. These include:

- Positioning the infants so the rounded side of the head is placed dependent against the mattress during sleep.
- Positioning the child in the crib to look away from the flattened side to see parents and others in the room.
- Placing the infant in the prone position during wakeful periods
- Neck exercises at each diaper change, to prevent or treat torticollis.

External orthotic treatment (repositioning and stretching exercise) has been effective in improving asymmetry in non-synostotic occipital plagiocephaly (Moss). If improvement is not seen in 2-3 months, patient should be fit with a custom-fitted molding helmet to facilitate passive skull recontouring (Pollack). Care should be taken to diagnosis early because late treatment, whether with a helmet or repositioning, may not correct deformities entirely (Argenta). In fact, the best outcomes were seen in patients who received a helmet before 6 months in age (Bruneteau).

Cranial molding helmets can be used to correct typical skull shapes but there is limited evidence that these are more effective than treatment and repositioning exercise in mild to moderate cases (Moss).

Management of positional skull deformity involves preventive counseling for parents, mechanical adjustments, and exercises. Parental compliance with the management plan is pivotal in lessening the likelihood and severity of positional skull deformity. Skull-molding helmets are an option for patients with severe deformity or skull shape that is refractory to therapeutic physical adjustments and position changes (Laughlin, et.al.).

There is currently no evidence that molding helmets work any better than positioning for infants with mild or moderate skull deformity. Because more than half of the infants will improve by 6 months of age, repositioning should be attempted as the initial treatment for infants younger than 6 months. In most situations, an improvement in response to repositioning and neck exercise is seen over a 2- to 3-month period if these measures are instituted as soon as the condition is recognized. For severe deformity, the best use of helmets occurs in the age range of 4 to 12 months, because of the greater malleability of the young infant skull bone and the normalizing effect of the rapid growth of the brain. There is less modification of the cranial configuration and more compliance problems when used after 12 months of age. The use of helmets and other related devices seems to be beneficial primarily when there has been a lack of response to mechanical adjustments and exercises (Laughlin, et. al.).

#### **Evaluation of Plagiocephaly:**

**Cephalic Index:** Evaluation of cranial asymmetry may be based on the cephalic index, a ratio between the width and length of the head. Head width is calculated by subtracting the distance from euryon (eu) on one side of the head to euryon on the other side of head and multiplying by 100. Head length is generally calculated by measuring the distance from glabella point (g) to opisthocranium point (op).

The cephalic index is then calculated as:

$$\frac{\text{Head width (eu - eu)} \times 100}{\text{Head length (g - op)}}$$

The cephalic index is considered abnormal if it is two standard deviations (SD) above or below the mean measurements (American Academy of Orthotists and Prosthetists [AAOP], 2004) as seen in Table 1:

**Table 1**  
**Cephalic Index**

Gender	Age	- 2 SD	- 1SD	Mean	+ 1SD	+ 2SD
Male	16 days–6 months	63.7	68.7	73.7	78.7	83.7
	6–12 months	64.8	71.4	78.0	84.6	91.2
Female	16 days–6 months	63.9	68.6	73.3	78.0	82.7
	6–12 months	69.5	74.0	78.5	83.0	87.5

**Anthropometric Measurements:** The evaluation of cranial asymmetry may also be made based on one or more of three anthropometric measures: cranial vault, skull base or orbitotragial depth measurements (AAOP, 2004). A physician or technician skilled in anthropometry should perform all anthropometric measurements. Table 2 below defines how these measurements are taken.

**Table 2**  
**Specifications for Taking Anthropometric Measurements**

Anthropometric Measure	Measurement
<b>Cranial Vault</b>	[left frontozygomatic point (fz) to right euryon (eu)] minus [right frontozygomatic point (fz) to left euryon (eu)]
<b>Skull Base</b>	[subnasal point (sn) to left tragus (t)] minus [subnasal point (sn) to right tragus (t)]
<b>Orbitotragial Depth</b>	[left exocanthion point (ex) to left tragus (t)] minus [right exocanthion point (ex) to right tragus (t)]

## VII. CODING INFORMATION

**ICD-10 Codes** that may apply:

G40.00 – G40.919 Epilepsy and recurrent seizures  
M95.2 Other acquired deformity of head  
M99.80 Other biomechanical lesions of head region  
P13.1 Other birth injuries to skull  
P13.8 Birth injuries to other parts of skeleton  
P13.9 Birth injury to skeleton, unspecified  
P15.8 Other specified birth injuries  
Q67.3 Plagiocephaly  
Q75.0 Craniosynostosis  
Q75.9 Congenital malformation of skull and face bones, unspecified

Z46.89 Encounter for fitting and adjustment of other specified devices

**CPT/HCPCS Codes**

- A8000 Helmet, protective, soft, prefabricated, includes all components and accessories
- A8001 Helmet, protective, hard, prefabricated, includes all components and accessories
- A8002 Helmet, protective, soft, custom fabricated, includes all components and accessories
- A8003 Helmet, protective, hard, custom fabricated, includes all components and accessories
- A8004 Soft interface for helmet, replacement only
- S1040 Cranial remolding orthosis, pediatric, rigid, with soft interface material, custom fabricated, includes fitting and adjustment(s) (*Code not payable for Priority Health Medicare.*)
- L0112 Cranial cervical orthotic, congenital torticollis type, with or without soft interface material, adjustable range of motion joint, custom fabricated
- L0113 Cranial cervical orthotic, torticollis type, with or without joint, with or without soft interface material, prefabricated, includes fitting and adjustment

**VIII. REFERENCES**

- American Academy of Orthotists and Prosthetists (AAOP). Orthotic Treatment of Deformational Plagiocephaly, Brachycephaly and Scaphocephaly. Clinical Standards of Practice (CSOP) Consensus Conference on Orthotic Management of Plagiocephaly, 2004.
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