Plagiocephaly And Brachycephaly
Clinical Guideline

V3.0

November 2020
Summary

Referral Pathway for Abnormal Head Shape

Was the baby born with an abnormal head shape that is not improving or worsening?

No, the baby has developed flattening

Has the baby developed flattening at the back of the head (brachycephaly)? YES

Has the baby developed flattening at the side of the head (plagiocephaly)?

Yes and I am also concerned about craniosynostosis, hydrocephalus, or abnormal head growth and shape

Examination including neck movements & hips for DDH (Developmental Dysplasia of Hips) and refer for hip ultrasound (orthopaedic sonographer via maxims internal referral)

The baby has no restriction in neck movement

The baby also has restriction of neck movements (torticollis)

No further action is needed over and above the advice given in parent information leaflet

Consider eye check

Refer to the Paediatric Orthopaedic physiotherapy team

Are you and the parent reassured by this advice and happy that things are improving with simple measures?

If yes then no further action is needed

If no, and/or the family still wish to consider helmet therapy

Resolving and full range of cervical spine movement. Discharge from Physiotherapy

General Practitioner Referral to the Paediatric Neurosurgeons at Bristol Children's Hospital

Physiotherapist or carers have on going concern

Refer to the General Paediatricians for review and possible investigation with onward referral
1. **Aim/Purpose of this Guideline**

1.1. This guidance applies to Health Care Professionals, children and families.

1.2. This version supersedes any previous versions of this document.

### Data Protection Act 2018 (General Data Protection Regulation – GDPR)

**Legislation**

The Trust has a duty under the DPA18 to ensure that there is a valid legal basis to process personal and sensitive data. The legal basis for processing must be identified and documented before the processing begins. In many cases we may need consent; this must be explicit, informed and documented. We cannot rely on opt out, it must be opt in.

DPA18 is applicable to all staff; this includes those working as contractors and providers of services.

For more information about your obligations under the DPA18 please see the *Information Use Framework Policy* or contact the Information Governance Team rch-tr.infogov@nhs.net

2. **The Guidance**

2.1. Many babies develop a flattened head when they are a few months old, usually from sleeping on their back. It often corrects itself over time and is nothing to worry about.

It happens because a baby's skull is still soft enough to be molded and to change shape if there is constant pressure on one area of their head. The skull is made of plates of bone, which only start to strengthen and fuse together as the child grows older.

Flattening of the head is just a cosmetic problem. It doesn't cause any symptoms and doesn't affect the baby's brain, so their development is unaffected. It is very common with some reports estimating that nearly half of babies have the problem to some degree.

2.2. The following information explains:

- the difference between the two types of "flat head syndrome" in babies (plagiocephaly and brachycephaly)
- why some babies are affected
- what can be done to help correct it
- the outlook for the child
2.2.1. **Brachycephaly and plagiocephaly**

There are two main ways that a baby's head can become flattened:

- The head can become flattened at one side, causing the head to look asymmetrical and distorted (for example, so that the ears are not aligned). This is known as plagiocephaly.

- The whole back of the head can become flattened, causing a widening of the head. This is known as brachycephaly. Sometimes, the front of the skull may bulge out in compensation.

2.2.2. **Why some babies are affected**

The main cause of brachycephaly or plagiocephaly is usually the baby's sleeping position, although other factors play a part too. These are described below.

2.2.3. **Factors in the womb**

Flattening of the skull can sometimes occur in the mother's womb. There may not be enough amniotic fluid inside the womb to cushion the baby (known as oligohydramnios). This means the baby's head can become temporarily deformed which can also happen as they travel down the birth canal. This also tends to happen more often in a multiple birth, for example when twins squash against each other in the womb.

2.2.4. **Giving birth prematurely**

Premature babies are more likely to have a deformed skull because they are squeezed through the birth canal when their skulls have not fully developed (the skull becomes stronger in the last few weeks of pregnancy).

2.2.5. **Muscle problems**

Sometimes, a baby will have tightened muscles in their neck, which prevents them from turning their head one way. This is called torticollis. This means they will always rest their head on the other side, causing this side to flatten. Physiotherapy can help correct this problem (see "What you can do" below).

2.2.6. **Sleeping position**

Brachycephaly and plagiocephaly are commonly caused by the baby sleeping on their back every night. The back or one side of the baby's head (if their head naturally rolls to the side) is squashed against a firm mattress for a long time, which eventually forces the soft bone of the skull to flatten. Once flattened, the
baby's head will automatically stay on or roll towards this side. It will become the preferred side for sleeping and for resting their head during the day. However, the solution is NOT to change the baby's sleeping position from lying on their back at night. It is important for babies to sleep on their back as this reduces the risk of sudden infant death syndrome (SIDS / cot death).

Instead, change the baby's position during the day to take some pressure of the flattened area (see "What you can do").

2.2.7. **Craniosynostosis**

A flattened head may sometimes be caused by the bony plates of a baby's skull joining together abnormally early. This is known as craniosynostosis. ([www.nhs.uk/conditions/craniosynostosis/Pages/Introduction.aspx](https://www.nhs.uk/conditions/craniosynostosis/Pages/Introduction.aspx))

This can pull the baby's head out of shape and does need review by a medical professional to consider investigation and treatment.

2.2.8. **Clinical Assessment**

Assessment of the baby should include examination of:

- Head position and normal passive neck movements - Limitation suggests torticollis.
- Head shape and sutures (plagiocephaly and facial asymmetry are common) – refer to general paediatrician if concern about craniosynostosis, hydrocephalus, or abnormal head growth and shape.
- Eye movements – consider referral to ophthalmology if torticollis present.
- Back and spine, and movement of upper and lower limbs.
- Hips and referral for hip ultrasound via orthopaedic sonographer - Developmental Dysplasia of the Hip (DDH) is a common association.

2.2.9. **What you can do**

No treatment is necessary for mild cases of brachycephaly and plagiocephaly. The baby's skull should naturally correct itself over time if simple measures are taken to take pressure off the flattened part of their head and encourage them to try different positions.
You may find the following advice helpful:

- Give the baby time on their tummy during the day; the baby may be happier if a rolled up towel is put under the shoulders, and encourage them to try new positions during play time.

- Switch the baby between a sloping chair, a sling and a flat surface so there is not constant pressure on one part of their head.

- Change the position of toys and mobiles in their cot to encourage them to turn their head to the non-flattened side.

- Refer to paediatric orthopaedic physiotherapy if the child seems to only be able to turn their head one way. Tight muscles in their neck may be preventing them from turning their head both ways.

It may take six to eight weeks of trying these measures before any improvement is noticed in the baby's head shape and the head shape can continue to improve up to 2 years of age.

2.2.10. **Helmet or skull band therapy**

You may have heard about helmets or headbands, known as cranial orthoses, that aim to improve symmetry of a baby's skull. These custom-made devices are designed to be used in infants aged 6 to 12 months (the period of greatest skull growth), to apply pressure to "bulgy" parts of the skull and relieve pressure from other parts, enabling growth in the flatter areas of the skull. The device may also prevent the baby from lying on the flattened part of their head. However, their use is controversial. There is currently not enough evidence to say for sure whether a helmet or headband will make any additional improvement to the baby's head shape if the above measures are taken early on. NICE (The National Institute of Clinical Excellence) has made no recommendations as to use. Helmet therapy is available both on the NHS and privately (Costs are between £1,700-2,500). Consideration of helmet therapy by the NHS requires referral to the Paediatric Neurosurgeons in Bristol and referral does not guarantee this therapy.

Also consider that:

- The device usually needs to be worn for up to 23 hours a day, for 6-24 weeks.

- The baby will need to be reviewed regularly in Bristol to check the device is allowing and not restricting head growth, and for any necessary adjustments to be made.

- The baby may find the device uncomfortable, and there's a risk of it causing pressure sores on their head.
2.2.11. **Outlook**

Mild flattening of the head usually corrects itself if you use simple measures to take pressure off the affected area of the skull. If there is restriction of neck movements then physiotherapy may be helpful. More severe cases of brachycephaly or plagiocephaly can still be improved over time, but some flattening usually remains. A helmet or headband may help correct the baby’s skull shape, but this is not certain to work. You should weigh up the inconvenience and possible discomfort to the child before trying this.

**There is a helpful leaflet for parents linked from the Child Health Intranet site. Go to Child Health (Intranet)/Advice leaflets for parents and carers/Plagiocephaly - (Great Ormond Street Hospital plagiocephaly parent information leaflet).**

https://www.gosh.nhs.uk/conditions-and-treatments/conditions-we-treat-index-page-group/positional-plagiocephaly

### 3. **Monitoring compliance and effectiveness**

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<th>Element to be monitored</th>
<th>Compliance with referral pathway</th>
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<tr>
<td>Lead</td>
<td>Community paediatricians and general paediatricians. Audit lead</td>
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<td>Tool</td>
<td>Individual review of referrals using Excel to record findings.</td>
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<td>Frequency</td>
<td>As required on individual basis</td>
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<td>Reporting arrangements</td>
<td>Audit and guidelines – Child Health</td>
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<td>Acting on recommendations and Lead(s)</td>
<td>Required actions will be identified and completed in 3-6 months.</td>
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<tr>
<td>Change in practice and lessons to be shared</td>
<td>Required changes to practice will be identified and actioned within 3-6 months. A lead member of the team will be identified to take each change forward where appropriate. Lessons will be shared with all the relevant stakeholders</td>
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### 4. **Equality and Diversity**

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the ‘Equality, Inclusion & Human Rights Policy’ or the Equality and Diversity website.

4.2. **Equality Impact Assessment**

The Initial Equality Impact Assessment Screening Form is at Appendix 2.
## Appendix 1. Governance Information

<table>
<thead>
<tr>
<th>Document Title</th>
<th>Plagiocephaly And Brachycephaly Clinical Guideline V3.0</th>
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<tr>
<td>This document replaces (exact title of previous version):</td>
<td>PLAGIOCEPAHLY AND BRACHYCEPHALY-GUIDELINE FOR HEALTH CARE PROFESSIONALS V2.0</td>
</tr>
<tr>
<td>Date Issued/Approved:</td>
<td>November 2020</td>
</tr>
<tr>
<td>Date Valid From:</td>
<td>November 2020</td>
</tr>
<tr>
<td>Date Valid To:</td>
<td>November 2023</td>
</tr>
<tr>
<td>Directorate / Department responsible (author/owner):</td>
<td>Dr. Rebecca Garland; Community Paediatric Registrar</td>
</tr>
<tr>
<td>Contact details:</td>
<td>01872 254516</td>
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<tr>
<td>Brief summary of contents</td>
<td>Advice and guidance including referral pathway.</td>
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<tr>
<td>Suggested Keywords:</td>
<td>Plagiocephaly, Brachycephaly, Head shape, Baby, Children, Paediatric</td>
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<td>Executive Director responsible for Policy:</td>
<td>Medical Director</td>
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<tr>
<td>Approval route for consultation and ratification:</td>
<td>Paediatric Business and Guidelines Consultation with general paediatric and physiotherapy colleagues</td>
</tr>
<tr>
<td>General Manager confirming approval processes</td>
<td>Mary Baulch</td>
</tr>
<tr>
<td>Name of Governance Lead confirming approval by specialty and care group management meetings</td>
<td>Caroline Amukusana</td>
</tr>
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<td>Links to key external standards</td>
<td>None required</td>
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<td>Training Need Identified?</td>
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<td>Publication Location (refer to Policy on Policies – Approvals and Ratification):</td>
<td>Internet &amp; Intranet</td>
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<td>Document Library Folder/Sub Folder</td>
<td>Clinical/ Paediatrics</td>
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Version Control Table

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<th>Version No</th>
<th>Summary of Changes</th>
<th>Changes Made by (Name and Job Title)</th>
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<tr>
<td>July 14</td>
<td>V1.0</td>
<td>Initial Issue</td>
<td>Dr Jo Lewis. Community Paediatrician</td>
</tr>
<tr>
<td>July 17</td>
<td>V2.0</td>
<td>Review of content – no changes</td>
<td>Dr Jo Lewis. Community Paediatrician</td>
</tr>
<tr>
<td>November 2020</td>
<td>V3.0</td>
<td>Addition of recommendation for hip ultrasound. Neurosurgical team now based at Bristol Children’s Hospital. Paragraph 2.2.8 – information about clinical assessment added. Link to parental information leaflet updated.</td>
<td>Dr Rebecca Garland Community Paediatric Registrar</td>
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This document is only valid on the day of printing

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## Appendix 2. Initial Equality Impact Assessment

### Section 1: Equality Impact Assessment Form

<table>
<thead>
<tr>
<th>Name of the strategy / policy / proposal / service function to be assessed</th>
<th>Directorate and service area:</th>
<th>Is this a new or existing Policy?</th>
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<td>Plagiocephaly and Brachycephaly Clinical Guideline V3.0</td>
<td>Child Health</td>
<td>Existing</td>
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<table>
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<tr>
<th>Name of individual/group completing EIA</th>
<th>Contact details:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Rebecca Garland</td>
<td>01872 253516</td>
</tr>
</tbody>
</table>

1. **Policy Aim**
   - Who is the strategy / policy / proposal / service function aimed at?
   - Clear guidance and information including referral pathway

2. **Policy Objectives**
   - Clear guidance and information including referral pathway

3. **Policy Intended Outcomes**
   - Standardised referral pathways.

4. **How will you measure the outcome?**
   - See section 3

5. **Who is intended to benefit from the policy?**
   - Children and families

6a). **Who did you consult with?**
   - Workforce
   - Patients
   - Local groups
   - External organisations
   - Other
   - x

b). **Please list any groups who have been consulted about this procedure.**
   - Child Health Audit and Guidelines Group

c). **What was the outcome of the consultation?**
   - Approved- 19th November 2020
7. The Impact
Please complete the following table. If you are unsure/don’t know if there is a negative impact you need to repeat the consultation step.

Are there concerns that the policy could have a positive/negative impact on:

<table>
<thead>
<tr>
<th>Protected Characteristic</th>
<th>Yes</th>
<th>No</th>
<th>Unsure</th>
<th>Rationale for Assessment / Existing Evidence</th>
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<td></td>
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<tr>
<td>Sex (male, female non-binary, asexual</td>
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<td>X</td>
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<td>etc.)</td>
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<td>Gender reassignment</td>
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<tr>
<td>Race/ethnic communities/groups</td>
<td></td>
<td>X</td>
<td></td>
<td>Any information provided should be in an accessible format for the parent/carer’s needs – i.e. available in different languages if required/access to an interpreter if required</td>
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<tr>
<td>Disability (learning disability,</td>
<td></td>
<td>X</td>
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<td>Those parent/carers with any identified additional needs will be referred for additional support as appropriate - i.e to the Liaison team or for specialised equipment. Written information will be provided in a format to meet the family’s needs e.g. easy read, audio etc</td>
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<td>physical disability, sensory impairment, mental health problems and some long term health conditions)</td>
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<td>Religion/other beliefs</td>
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<td>heterosexual, lesbian)</td>
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If all characteristics are ticked ‘no’, and this is not a major working or service change, you can end the assessment here as long as you have a robust rationale in place.

I am confident that section 2 of this EIA does not need completing as there are no highlighted risks of negative impact occurring because of this policy.

Name of person confirming result of initial impact assessment: Child Health Audit and Guidelines Group

If you have ticked ‘yes’ to any characteristic above OR this is a major working or service change, you will need to complete section 2 of the EIA form available here: Section 2. Full Equality Analysis

For guidance please refer to the Equality Impact Assessments Policy (available from the document library) or contact the Human Rights, Equality and Inclusion Lead debby.lewis@nhs.net