Assessment of paediatric head shape and management of craniosynostosis

**History**
- Was unusual head shape present at birth?
- Has head shape changed or remained stable?
- Has it worsened or improved?
- Prenatal history
- Family history of similar conditions
- Developmental milestones
- Any other identifiable anomalies

**Examination**
- Observe head shape from top down, sides, front and back
- Feel for anterior fontanelle – present or absent? Small or large? Soft or firm?
- Feel sutures – is there a ridge or is it flat? Metopic ridge? Overriding or visible sutures?
- Signs of syndromes involving craniosynostosis (e.g., syndactyl [fused digits], dysmorphic facial features)

**Deformational plagiocephaly**
- A parallelogram-shaped head when viewed from the top down
- Present, soft fontanelles
- No obvious ridging or visible sutures
- Anterior displacement of ipsilateral ear
- Head tilt
- May coincide with torticollis
- Contralateral facial flattening

**Craniosynostosis**
- An abnormal head shape that coincides with the shapes in Figure 1
- Vary widely depending on which suture is involved
- Absent, firm fontanelles
- Overriding or visible sutures with obvious ridging; may have metopic ridge
- Signs of syndromes involving craniosynostosis (e.g., syndactyl, dysmorphic facial features)

**Measurements**
- Head circumference
- Plot growth on growth chart
- Measure cephalic index with calipers if possible

**Confirm the cause is likely deformational plagiocephaly**
- Review again within 4–6 weeks
- Discuss conservative measures to reduce external pressure
- Physio referral if torticollis is present
- Consider referral to a helmet therapy service if head shape is severe

**Unable to exclude craniosynostosis**
- Refer to a multidisciplinary team by 8-10 weeks of age to ensure patient has maximal options for intervention if needed

Figure 2. Flowchart for clinical approach for general practitioners

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