

# Paediatric Pearls

November 2012

Put together by: Dr Julia Thomson, Consultant Paediatrician, [julia.thomson@bartshealth.nhs.uk](mailto:julia.thomson@bartshealth.nhs.uk)

Previous editions are now all available at [www.paediatricpearls.co.uk](http://www.paediatricpearls.co.uk)

I am facilitating the "Stabilisation and Transfer" workshop at an APLS (Advanced Paediatric Life Support, [www.alsg.org](http://www.alsg.org)) course this month so have been revising what type of neurosurgical case constitutes a "time critical transfer", ie. one where the referring hospital has to transfer the patient instead of waiting for the dedicated retrieval team.

In 2009 the National Specialised Commissioning Group reviewed the safety and sustainability of [paediatric neurological services](#) in England. Salient points are:

- The need for immediate, life-saving neurosurgery is rare
- Children are likely to present to hospitals without paediatric neurosurgical services
- A CT scan should be performed within 30 minutes of the request (NICE says 1 hour)
- Children will come to more harm waiting for the PICU retrieval team than from being moved quickly by the local experienced anaesthetic team to a neurosurgical centre
- The local clinicians must liaise with the receiving neurosurgical and PICU teams

I have uploaded my Visual aids for the course [here](#) if you need a reminder of the CT appearances of different types of head injury. There is also a very clear description at <http://www.crash.ishtm.ac.uk/ctscanlarge.htm>.

The CATS (North London's [Children's Acute Transport Service](#)) acute neurosurgical emergency transfer check list and guidance is [here](#) and South Thames' guideline is [here](#).

## Introduction (Episode 1) to our Minor Injuries series....

Dr Jessica Spedding is a paediatric emergency medicine registrar who has kindly filled in the gaps in my knowledge and put together an excellent 6 part series on minor injuries.

- ◆ These are common and are mostly self limiting soft tissue injuries that heal with time.
- ◆ Some injuries are particular to paediatrics (pulled elbow) and others are more common in children than adults (supracondylar fracture).
- ◆ Children have growth plates and risk asymmetry if they do not heal in a good position.
- ◆ Use a *systematic approach* to assess for injuries that need specific management.
- ◆ **Always** include consideration of non-accidental injury.

Thinking about the upper limb first, a fall on the outstretched hand (FOOSH) will cause a range of different injuries, each *more prevalent* in different age groups:

- Age 1-3: distal radius fracture (usually greenstick or torus) or middle third clavicle fracture
- Age 4-8: supracondylar fracture
- Age 9-adulthood: distal radius fracture or scaphoid fracture

Wherever the obvious injury you must examine the whole limb to rule out added injuries. In the upper limb examine fingers to shoulder, clavicle and possibly neck. In the lower limb examine toes to hips, check pelvis and lower spine. [Read more...](#)

## Is this structural talipes or positional talipes and why does it matter?



With thanks to the paediatric physiotherapists at Whipps Cross Hospital and Dr Mujahid Hasan for [this article](#). Good diagrams, illustrations and explanations of paediatric orthopaedic problems also available at <http://www.zadeh.co.uk/paediatricorthopaedics/paediatricorthopaedics.htm>

### CTEV (Structural)

Congenital talipes equinovarus

"Manufacturing"  
Abnormal Anatomy  
The foot is in equinus, varus, cavus and adductus  
Cannot passively correct  
Never resolve spontaneously  
Ongoing paediatric orthopaedic follow-up  
Requires specialist paed ortho referral  
Most require tenotomy, some more surgery

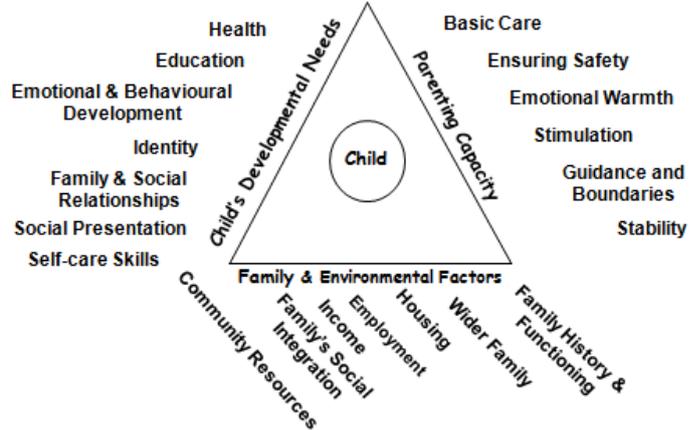
### Positional foot deformity

Positional talipes equinovarus

"Packaging"  
Normal Anatomy  
Involves forefoot varus/adductus or calcaneovalgus  
Passive correction to at least neutral  
Usually resolve spontaneously  
Minimal physiotherapy follow-up  
No surgery  
No long-term issues

CTEV affects 1-3 in every 1000 live births (UK statistics), 2:1 male to female ratio, bilateral in 55% of cases. Positional deformities are much more common (16-36/1000 live births). The Pirani method (<http://globalclubfoot.org/ponseti/pirani-scoring/>) is used to score both. Urgently refer babies **without a full passive range of movement** to a paediatric physio or orthopaedic team. Management of positional deformity consists of stretches, massage and reassurance. CTEV requires Ponseti casting to start between days 5 and 14 and follow up is for longer. More on this at [www.paediatricpearls.co.uk/2012/11/talipes-equinus-varus](http://www.paediatricpearls.co.uk/2012/11/talipes-equinus-varus).

## The Assessment Framework



[http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_4003256](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4003256)

A "Child in Need" according to Section 17 of the Children Act 1989 is one

- ☞ who is unlikely to achieve or maintain (or have the opportunity of achieving or maintaining) a reasonable standard of health or development without the provision of services by a local authority
- ☞ whose health or development is likely to be impaired (or further impaired) without the provision of such services and/or
- ☞ who is disabled

You do not have to have **child protection** concerns to identify a child as being **in need**.

Local authorities in the UK have a duty to safeguard and promote the welfare of children **in need**. We have a duty to assess and refer them appropriately. Use the triangle and the Section 17 wording above as a common language when you refer to children's social care and/or fill in a pre-CAF or CAF form (common assessment framework form available locally or from [Dept of Education](#)). Describe the situation under the 3 headings of *Child's Developmental Needs*, *Parenting Capacity* and *Family and Environmental Factors*.

The triangle also provides a structure for referring to children's social care where there are **child protection** concerns. In these cases, a CAF form is not necessary.

Intravenous hypotonic saline (0.18% saline/4% glucose infusion) is now contraindicated in children <16 years except when initiated and maintained under expert medical supervision in paediatric specialist settings – such as renal, liver, cardiac, high dependency and intensive care units. The MHRA published this warning last month after 4 children died of cerebral oedema caused by using this hypotonic intravenous solution. More at <http://www.mhra.gov.uk/Safetyinformation/DrugSafetyUpdate/CON199559>