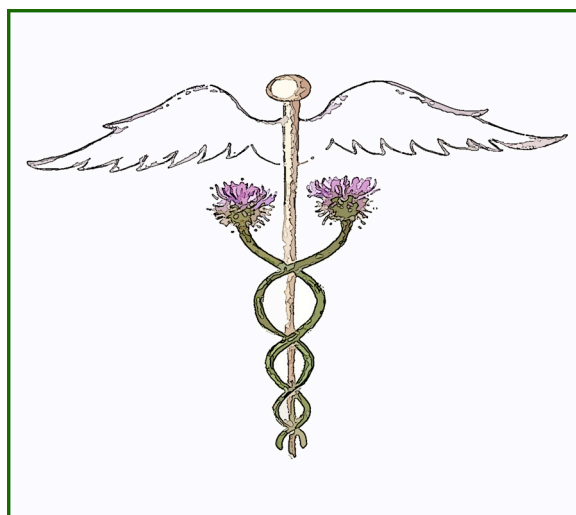


# Cerebral Palsy Integrated Pathway Scotland

## NHS Training for Physiotherapists & Physiotherapy Support Workers



### Learning Outcomes

- Be able to carry out a CPIPS assessment on a child with cerebral palsy
- Understand the risks children with cerebral palsy have of developing musculoskeletal problems.
- Understand the clinical rationale for hip surveillance.
- Be able to explain to parents, carers and other health professionals the benefits of hip surveillance.
- Be able to identify early concerns, which require either intervention or referral to orthopaedic consultant.

### References

Hagglund G, Lauge-Pedersen H, Wagner P et al. BMC Musculoskeletal Disorders 2007, 8:101

Soo B, Howard J, Boyd R et al. J Bone Surg Am 2006; 88:121-129

Robb J E, Hagglund G, J Child Orthop 2013; 7:407-413

<http://guidance.nice.org.uk/CG145>

<https://hic.tayside.scot.nhs.uk/CPIPS>

## **Self-learning**

- In depth knowledge of joint and muscle anatomy of the lower limbs.
- Knowledge of normal ranges of movement and muscle length.
- In depth knowledge of incidence of hip displacement in children with cerebral palsy and how it is measured (migration percentage of Reimers)
- Knowledge of how handling techniques can influence tone and thereby available ROM
- Knowledge of difference between slow and quick stretch on spastic muscle and how to carry out a Tardieu velocity of stretch assessment.
- Knowledge of tone management
- Knowledge of Functional Mobility Scale (FMS)
- Knowledge of Gross Motor Function Classification System (GMFCS)
- Knowledge of standardise x-ray protocol for pelvic radiography

## **Demonstrate / Observe**

- Select all necessary equipment and assessment forms
- Explain procedure clearly and in an appropriate manner to child and carers
- Position child appropriately ensuring comfort and dignity
- Position goniometer accurately over correct anatomical landmarks fixing appropriately those joints not being measured and measure joint angle.
- Identify end of range when the joint or muscle is at its fullest stretch.
- Measure R1 when appropriate
- Measure all required joints
- Complete assessment in keeping with guidelines.
- Awareness of the need to adhere to agreed guidelines to ensure consistent and accurate information.
- Input data from assessment on CPIPS website

## **Identifies and explains contraindications and cautions**

- Identify any medical contraindications to carrying out all or part of the assessment.
- Modify assessment accordingly
- Appreciate the inhibitory effect of pain on performance and consider the use of analgesia if appropriate

## **Evaluate outcome from Assessment**

- Demonstrate ability to explain findings to parents/carers and their significance in relation to their child.
- Identify early risk factors which require a change of physiotherapy intervention
- Identify early risk factors which require an early orthopaedic referral.

## **Intra-rater and Inter-rater Reliability**

Assessment of intra-rater and inter-rater reliability will be done annually in the following manner.

- a. Three measures will be taken by each person on:
  1. the same subject
  2. on the same day
  3. in the same position and with the same assistance
- b. Measures should be done in pairs with each participant taking alternate measures

Agreement of acceptable reliability has been determined as  $< 5^\circ$  by CMAS (Clinical Motion Analysis Society UK). Measures that exceed  $5^\circ$  should be repeated and technique reviewed.

# CPIPS Assessment Competency Completion

**Name:**

**Date:**

**Designation:**

Objective	Physiotherapist signature	Date
Be able to discuss with colleagues risk factors for hip displacement in children with cerebral palsy and how they relate to a child on your caseload.		
Discuss difference between slow and quick stretch on spastic muscle.		
Carry out a CPIPS assessment with a colleague on an appropriate child and complete online.		
Demonstrate accurate and correct positioning of goniometer for each joint/muscle length measured.		
Demonstrate correct R1 Tardieu assessment on an appropriate child.		
Be able to discuss with colleagues findings from the assessment and their significance.		
Be able to discuss findings of assessment and criteria for referral to orthopaedics		
Identify any medical contraindications and modifications required		

# CPIPS Measuring Competency

Name:

2<sup>nd</sup> Measurer:

Date:

Designation:

Movement measured	Assessor 1	Assessor 2	Inter-rater difference
Intra-rater difference			

Outcome:

		yes/no
1.	Is there intra-rater reliability	
2.	Is there inter-rater reliability	
3.	Competent in measuring	
4.	Additional training required	
5.	Additional comments	