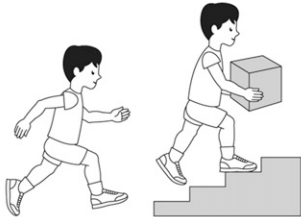
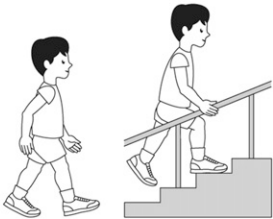
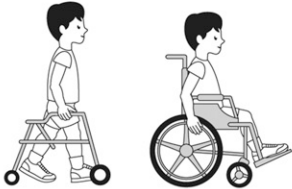
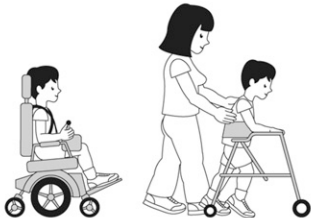
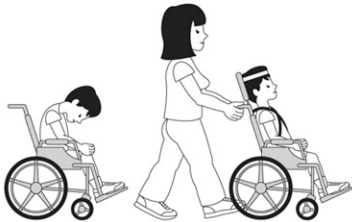


GMFCS E & R between 6th and 12th birthday: Descriptors and illustrations

	<p>GMFCS Level I</p> <p>Children walk at home, school, outdoors and in the community. They can climb stairs without the use of a railing. Children perform gross motor skills such as running and jumping, but speed, balance and coordination are limited</p>
	<p>GMFCS Level II</p> <p>Children walk in most settings and climb stairs holding onto a railing. They may experience difficulty walking long distances and balancing on uneven terrain, inclines, in crowded areas or confined spaces. Children may walk with physical assistance, a hand-held mobility device or used wheeled mobility over long distances. Children have only minimal ability to perform gross motor skills such as running and jumping.</p>
	<p>GMFCS Level III</p> <p>Children walk using a hand-held mobility device in most indoor settings. They may climb stairs holding onto a railing with supervision or assistance. Children use wheeled mobility when traveling long distances and may self-propel for shorter distances.</p>
	<p>GMFCS Level IV</p> <p>Children use methods of mobility that require physical assistance or powered mobility in most settings. They may walk for short distances at home with physical assistance or use powered mobility or a body support walker when positioned. At school, outdoors and in the community children are transported in a manual wheelchair or use powered mobility.</p>
	<p>GMFCS Level V</p> <p>Children are transported in a manual wheelchair in all settings. Children are limited in their ability to maintain antigravity head and trunk postures and control leg and arm movements.</p>

GMFCS descriptors: Palisano et al. (1997) Dev Med Child Neurol 39:214-23
CanChild: www.canchild.ca

Illustrations copyright © Kerr Graham, Bill Reid and Adrienne Harvey,
The Royal Children's Hospital, Melbourne

Fig. E-1

The GMFCS. E & R = expanded and revised. (Reproduced with permission of Kerr Graham, Bill Reid, and Adrienne Harvey, The Royal Children's Hospital, Melbourne, Australia.)

The Melbourne Cerebral Palsy Hip Classification Scale (Expanded and Revised)


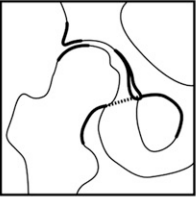

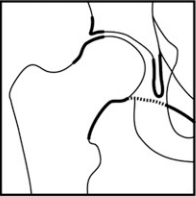









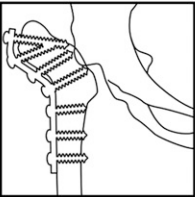
		Grade 1: Normal Hip – Migration Percentage <10% <ol style="list-style-type: none"> Shenton's arch intact Femoral head round (within 2mm using Mose circles) Acetabulum – normal acetabular development with a normal horizontal sourcil, an everted lateral margin and normal tear drop development Pelvic obliquity <5° No degenerative change, no pain
		Grade 2: Near Normal Hip – Migration Percentage ≥10% ≤15% <ol style="list-style-type: none"> Shenton's arch intact Femoral head round or almost round Acetabulum – normal or near normal development Pelvic obliquity <5° Low risk of degenerative change, usually pain free
		Grade 3: Dysplastic Hip – Migration Percentage >15% ≤30% <ol style="list-style-type: none"> Shenton's arch intact or broken by ≤5mm Femoral head round or mildly flattened Acetabulum normal or mildly dysplastic including blunting of the acetabular margin and a widened tear drop Pelvic obliquity <10° Low risk of degenerative change, occasionally mild pain
		Grade 4: Dysplasia With Mild Subluxation – Migration Percentage >30% <60% <ol style="list-style-type: none"> Shenton's arch broken by >5mm Femoral head some flattening – Appendix 1 Acetabulum dysplastic – Appendix 2 Pelvic obliquity variable – Appendix 3 Risk of degenerative change, pain variable
		Grade 5: Moderate to Severe Subluxation – Migration Percentage ≥60% <100% <ol style="list-style-type: none"> Shenton's arch broken by >10mm Femoral head variable deformity – Appendix 1 Acetabulum variable deformity – Appendix 2 Pelvic obliquity variable – Appendix 3 Degenerative change frequent, pain frequent
		Grade 6: Dislocated Hip – Migration Percentage ≥100% <ol style="list-style-type: none"> Shenton's arch completely disrupted Femoral head variable deformity – Appendix 1 Acetabulum variable deformity – Appendix 2 Pelvic obliquity variable – Appendix 3 Degenerative change frequent, pain frequent
		Grade 7: Salvage Surgery <ol style="list-style-type: none"> Valgus osteotomy Arthrodesis Excision arthroplasty (Castle) ± valgus osteotomy (McHale) Replacement arthroplasty Pain relief following salvage surgery: variable

Fig. E-2

The revised and expanded MCPHCS. (Reproduced, with permission, from: Burns F, Stewart R, Reddihough D, Scheinberg A, Ooi K, Graham HK. The cerebral palsy transition clinic: administrative chore, clinical responsibility, or opportunity for audit and clinical research? J Child Orthop. 2014 May;8[3]:203-13. Epub 2014 Apr 12.)

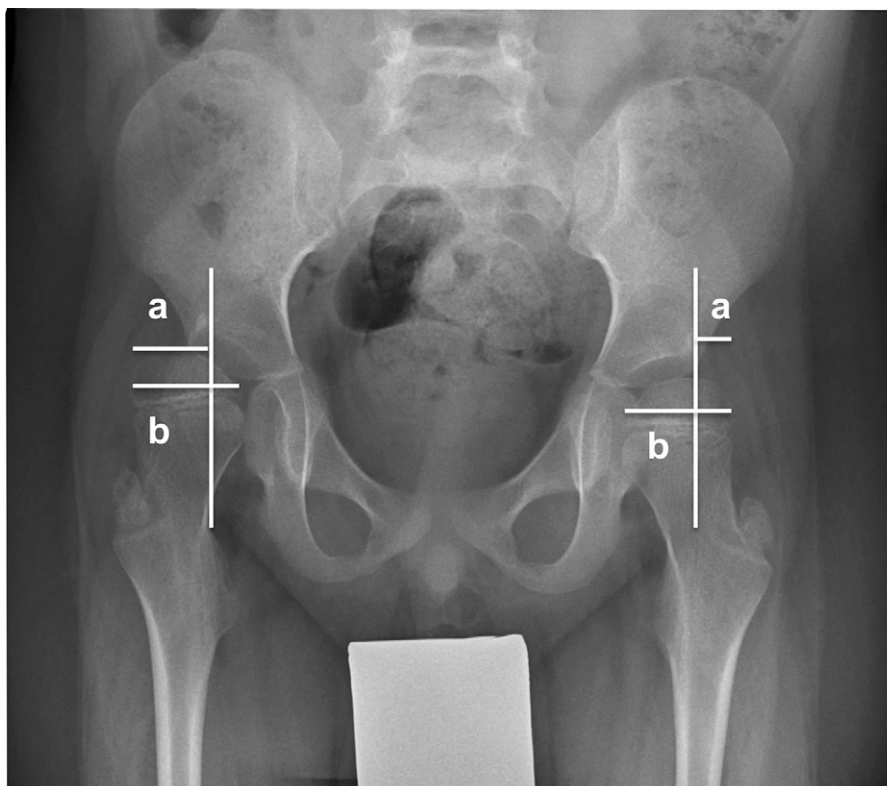


Fig. E-3

The MP is a percentage equal to 100 times the ratio of the amount of uncovered femoral head (distance a) to the width of the femoral head itself (distance b).








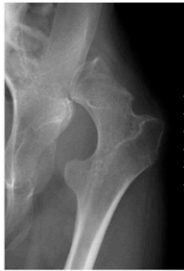
	<p><u>Shape A:</u></p> <p><i>No Deformity</i></p> <p>Femoral head is round, no deformity can be appreciated.</p>	
	<p><u>Shape B:</u></p> <p><i>Mild Deformity</i></p> <p>The femoral head has lost its round contour due to medial flattening</p>	
	<p><u>Shape C:</u></p> <p><i>Moderate Deformity</i></p> <p>Medial flattening as well as loss of cartilage on the lateral side.</p>	
	<p><u>Shape D:</u></p> <p><i>Severe Deformity</i></p> <p>More of 50% of the head is deformed, extending from lateral to medial</p>	

Fig. E-4

The system for classification of head shapes that was used as a potential outcome predictor.

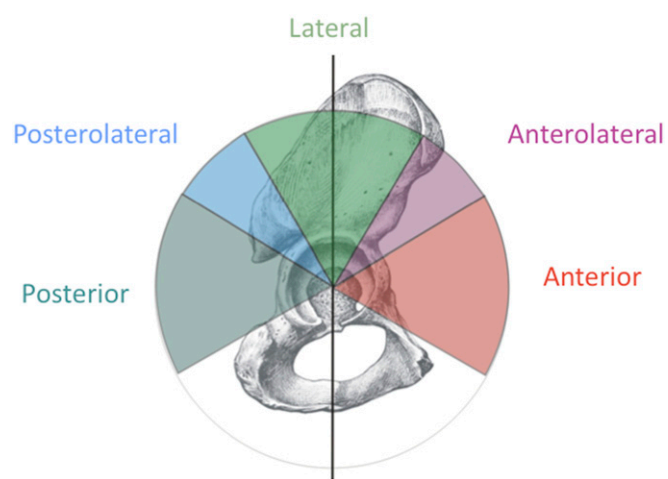


Fig. E-5

The direction of migration was classified as anterior, anterolateral, straight lateral, posterolateral, or posterior and was included as a potential outcome predictor.