### What is cerebral palsy?

People with cerebral palsy have only one thing in common: they have some difficulties with the way they move. The problems with movement may vary from very mild to severe; may effect one side of the body or all four limbs; may have only a minor impact on someone's daily functioning or may have a profound impact on communication, personal care and participation. Cerebral palsy may or may not be associated with impairments in the function of other body systems. Each person is unique with their own set of abilities, personality and life experience.

The term 'cerebral palsy' describes a group of developmental disorders of movement and posture, causing activity restriction or disability. These are attributed to injuries to, or functional and developmental differences of, the foetal or infant brain.

The General Practitioner (GP) plays a central role in assessing and working with both children and adults with cerebral palsy to optimise their health, function and wellbeing. Because of the complexity of the condition for some individuals, care from the GP, specialist medical practitioners and members of an allied health multidisciplinary team are usually required. The GP plays an essential role in the coordination of healthcare.

### The motor impairment of cerebral palsy is often associated with disorders of other body systems

The most common of these are:

- 1. Epilepsy ~ 40%
- 2. Visual impairment ~15%
- 3. Hearing impairment ~7%

25% of people with cerebral palsy also have difficulties with communication.

#### Cerebral palsy can be classified according to:

- 1. **The predominant type of movement disorder:** spasticity is the most common type, followed by dyskinesia (which includes dystonia, athetosis and chorea). More unusual motor types are ataxia and hypotonia. A mixture of more than one type of motor disorder is common, particularly the combination of spasticity and dystonia.
- 2. **The body distribution:** hemiplegia, diplegia (lower limbs predominantly affected) and quadriplegia.
- The severity of the motor disorder using the Gross Motor Function Classification System (GMFCS). This a system for describing five

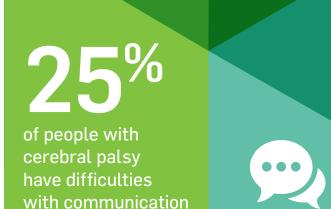
'levels' of motor function, with a particular emphasis on abilities and limitations in the areas of sitting, standing and walking. Originally developed for use in children, it has also been shown to be useful in adults. Individuals with GMFCS levels I and II walk independently, those with GMFCS level III require sticks, elbow crutches or walking frames, and those with GMFCS levels IV and V usually require a wheelchair.

#### For more information, see:

Gross Motor Function Classification system: <a href="www.cpqcc.org/sites/default/files/documents/HRIF\_QCI\_Docs/GMFCS-ER.pdf">www.cpqcc.org/sites/default/files/documents/HRIF\_QCI\_Docs/GMFCS-ER.pdf</a> The GMFCS does not provide information about other areas of function – only mobility.

Similar classifications have been developed for hand function – the Manual Abilities Classification System (MACS): <a href="www.macs.nu/files/MACS">www.macs.nu/files/MACS</a> English 2010.pdf and for communication – the Communication Function Classification System (CFCS): <a href="http://cfcs.us/wp-content/uploads/2014/02/CFCS">http://cfcs.us/wp-content/uploads/2014/02/CFCS</a> English 2011 09 01.pdf

Another helpful resource is the Therapeutic Guidelines. See *Management guidelines: developmental disability.* Version 3. Melbourne; Therapeutic Guidelines Limited; 2012.



These resources are designed to support General Practitioners in the care of their patients with cerebral palsy. They were developed in partnership by The Royal Children's Hospital; the Centre for Developmental Disability, Monash Health; and Murdoch Children's Research Institute. The project was funded by an Avant Quality Improvement Grant 2017.

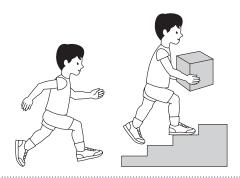






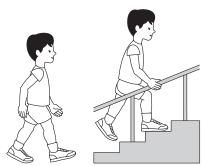


# GMFCS E & R between 6<sup>th</sup> and 12<sup>th</sup> birthday: Descriptors and illustrations



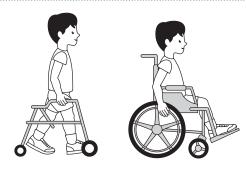
#### **GMFCS Level I**

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.



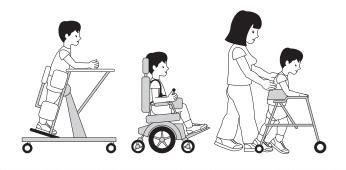
#### **GMFCS Level II**

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.



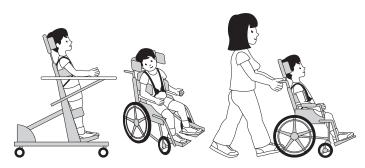
#### **GMFCS Level III**

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.



#### **GMFCS Level IV**

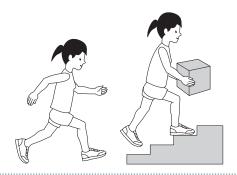
Children use methods of mobility that require physical assistance or powered mobility in most settings. They may walk for short distances at home with physical assistance or use powered mobility or a body support walker when positioned. At school, outdoors and in the community children are transported in a manual wheelchair or use powered mobility.



#### **GMFCS Level V**

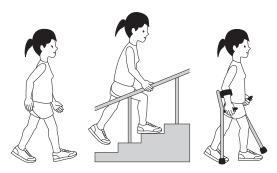
Children are transported in a manual wheelchair in all settings. Children are limited in their ability to maintain antigravity head and trunk postures and control leg and arm movements.

## GMFCS E & R between 12<sup>th</sup> and 18<sup>th</sup> birthday: Descriptors and illustrations



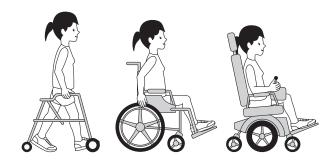
#### **GMFCS Level I**

Youth walk at home, school, outdoors and in the community. Youth are able to climb curbs and stairs without physical assistance or a railing. They perform gross motor skills such as running and jumping but speed, balance and coordination are limited.



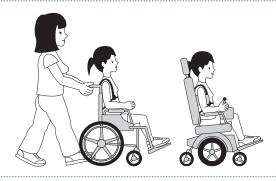
#### **GMFCS Level II**

Youth walk in most settings but environmental factors and personal choice influence mobility choices. At school or work they may require a hand held mobility device for safety and climb stairs holding onto a railing. Outdoors and in the community youth may use wheeled mobility when traveling long distances.



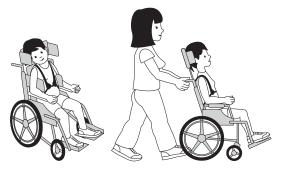
#### **GMFCS Level III**

Youth are capable of walking using a hand-held mobility device. Youth may climb stairs holding onto a railing with supervision or assistance. At school they may self-propel a manual wheelchair or use powered mobility. Outdoors and in the community youth are transported in a wheelchair or use powered mobility.



#### **GMFCS Level IV**

Youth use wheeled mobility in most settings. Physical assistance of 1–2 people is required for transfers. Indoors, youth may walk short distances with physical assistance, use wheeled mobility or a body support walker when positioned. They may operate a powered chair, otherwise are transported in a manual wheelchair.



#### **GMFCS Level V**

Youth are transported in a manual wheelchair in all settings. Youth are limited in their ability to maintain antigravity head and trunk postures and control leg and arm movements. Self-mobility is severely limited, even with the use of assistive technology.

 $GMFCS\ descriptors: Palisano\ et\ al.\ (1997)\ Dev\ Med\ Child\ Neurol\ 39:214-23 \quad CanChild:\ www.canchild.calllustrations\ Version\ 2\ \otimes\ Bill\ Reid,\ Kate\ Willoughby,\ Adrienne\ Harvey\ and\ Kerr\ Graham,\ The\ Royal\ Children's\ Hospital\ Melbourne\ Melbour$