The Ontario Motor Growth Study

The Motor Growth Curves report patterns of gross motor development in children with cerebral palsy, classified according to each of the five levels of the Gross Motor Function Classification System (GMFCS) (Palisano et al., 1997). Children in this study were followed longitudinally for several years. The findings were published in a paper entitled 'Prognosis for Gross Motor Development in Cerebral Palsy. Creation of Motor Growth Curves', Rosenbaum et al., JAMA 2002; 288; 1357-63.

Motor Growth Curves from the Ontario Motor Growth Study

All 5 Curves (Levels I to V)

This graph shows the observed and predicted GMFM-66 scores for children in GMFCS Levels I through V. The curved solid lines indicate average performance. The horizontal dotted lines on the right of the figures indicate the band expected to encompass 95% of children's limits of development. The solid vertical lines indicate the average age-90 (the age in years by which children are expected to reach 95% of their motor development potential). The dotted vertical lines indicate the bands expected to encompass 50% of age-90 values around the average. The absence of 50% bands in level IV and level V indicates low variation in age-90 values.
This graph shows the observed and predicted GMFM-66 scores for children in GMFCS Level I. The curved solid line indicates average performance. The horizontal dotted lines on the right of the figures indicate the band expected to encompass 50% of children's limits of development. The solid vertical line indicates the average age (in years by which children are expected to reach 90% of their motor development potential). The dotted vertical lines indicate the bands expected to encompass 50% of age-90 values around the average.
GMFCS LEVEL II

This graph shows the observed and predicted GMFM-66 scores for children at GMFCS Level II. The curved solid line indicates average performance. The horizontal dotted lines on the right of the figure indicate the band expected to encompass 50% of children's limits of development. The solid vertical line indicates the average age 90 (the age in years by which children are expected to reach 90% of their motor development potential). The dotted vertical lines indicate the bands expected to encompass 50% of age 90 values around the average.

GMFCS LEVEL III

This graph shows the observed and predicted GMFM-66 scores for children in GMFCS Level III. The curved solid line indicates average performance. The horizontal dotted lines on the right of the figures indicate the band expected to encompass 50% of children’s limits of development. The solid vertical line indicates the average age 90 (the age in years by which children are expected to reach 90% of their motor development potential). The dotted vertical lines indicate the bands expected to encompass 50% of age-90 values around the average.

This graph shows the observed and predicted GMFM-66 scores for children in GMFCS Level IV. The curved solid line indicates average performance. The horizontal dotted lines on the right of the figures indicate the band expected to encompass 50% of children’s limits of development. The solid vertical line indicates the average age-90 (the age in years by which children are expected to reach 90% of their motor development potential). There are no 50% bands around the average age-90 line for children in Level IV because of low variation in age-90 values.

This graph shows the observed and predicted GMFM-66 scores for children in GMFCS Level V. The curved solid line indicates average performance. The horizontal dotted lines on the right of the figure indicate the band expected to encompass 95% of children’s limits of development. The solid vertical line indicates the average age-90 (the age in years by which children are expected to reach 90% of their motor development potential). There are no 50% bands around the average age-90 line for children in Level V because of low variation in age-90 values.