

Setting Goals and Measuring change

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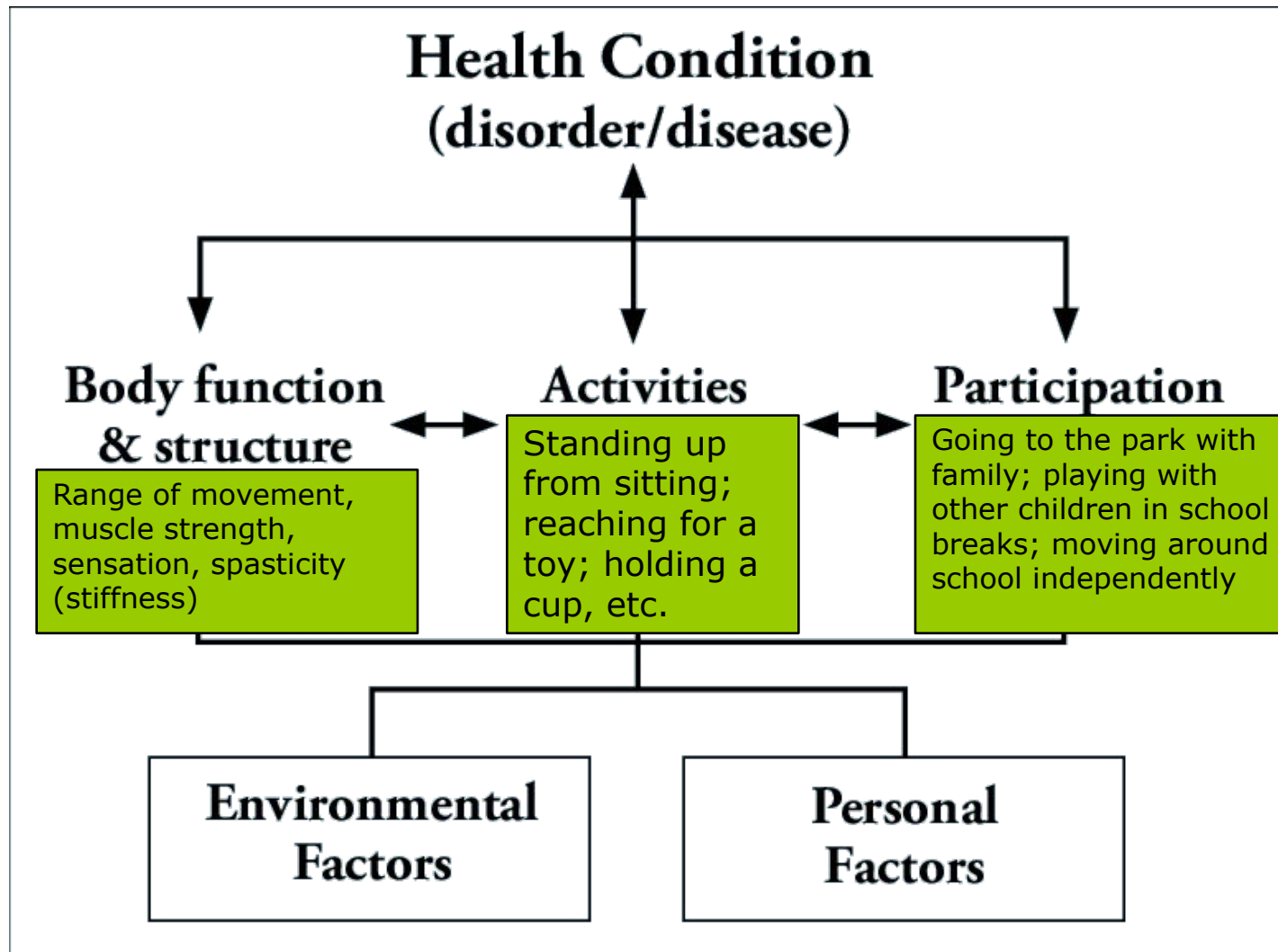


Objectives

- To understand the purpose of setting treatment goals
- To be able to write specific goals for treatment
- To understand the purposes of using outcome measures
- To provide information on a range of standardised outcome measures suitable for children with neuro-disabilities



Goal setting and Measuring change using the International Classification of Function ICF



Why is it important to set treatment goals?

To help plan treatment and therapy

To give a focus to our treatment and therapy

To detect progress, plateauing or deterioration

To measure amount and type of progress in therapy

To give children, parents and carers feedback



What do we need to think about when setting goals?

- What are the main concerns and goals of the child or young person and their family?
- Which activity limitations and participation restrictions need to be prioritised in therapy?



SMART Goals

□ Specific

Is the goal detailed enough, that another therapist would understand it and could assess if the child had achieved it?

□ Measurable

Is it possible to assess when the goal is achieved and when it is not achieved, i.e. is it measurable



SMART Goals

- ▶ **Achievable**

Is this goal attainable for this child, is it possible?

- ▶ **Realistic**

Is it reasonable to expect this child to achieve *this* goal in *this* time-frame?

- ▶ **Timed**

By when am I hoping that the child will have achieved this goal?



SMART goals?

- ▶ Sit up from lying down
- ▶ To move from lying on the back via the right side to sitting in 6 weeks time
- ▶ Reach for toys with hands when lying on back in 4 weeks
- ▶ While lying on back, reach up (so elbow is straight) and grasp a toy in the midline (above chest) with right arm three times during 5 minutes of play, in four weeks.
- ▶ Drink from a cup
- ▶ When sitting on a chair up to a table, hold a 2 handled cup, half filled with a drink in both hands and take to mouth without spilling, by 30th November 2021.



SMART goals?

- ▶ Improve walking with his walking frame by the end of the school term
- ▶ To walk the length of the therapy room (4 metres) without crossing legs, using the walking frame with a carer assisting child to steer in a straight line, by end of school term.
- ▶ Feed self with a spoon from a bowl
- ▶ Sitting in school chair up to a waist high table, hold bowl on table with left hand and feed self using a spoon with right hand, >3 spoonfuls by 31st October 2021
- ▶ To start to assist with easier dressing tasks
- ▶ Push each arm into sleeve of a long-sleeved jumper while sitting in wheelchair, in 6 weeks.



Goal Attainment Scaling



Goal Attainment Scaling

- A structured way to measure change using individualised child/family centred goals
- Five levels of achievement



GAS Scores

	Goal 1	Goal 2	Goal 3
+2 Much more than expected			
+1 somewhat more than expected			
0 expected level of outcome			
- 1 somewhat less than expected			
- 2 baseline level of function			



	GAS goal: Independently Play in Side lying
- 2	In supported side lying (head on pillow, lying on a wedge cushion), reach and explore toys for 5 minutes with continuous adult assistance (to support arm, take hands to toys or re-adjust posture).



	GAS goal: Independently Play in Side lying
- 1	In supported side lying (head on pillow, lying on a wedge cushion), reach and explore toys for 5 minutes with intermittent adult assistance (to support arm, or to take hands to toys or to re-adjust posture) .
- 2	In supported side lying, (head on pillow lying on a wedge cushion) reach and explore toys for 5 minutes with continuous adult assistance (to support arm, take hands to toys or re-adjust posture).



GAS goal: Independently Play in Side lying	
0	In supported side lying (head on pillow lying on wedge), reach and explore toys for 5 minutes with intermittent adult assistance (to support arm) .
- 1	In supported side lying (head on pillow, lying on a wedge cushion), reach and explore toys for 5 minutes with intermittent adult assistance (to support arm, or to take hands to toys or to re-adjust posture) .
- 2	In supported side lying, reach and explore toys for 5 minutes with continuous adult assistance (to support arm, take hands to toys or re-adjust posture).



	GAS goal: Independently Play in Side lying
+1	In supported side lying (head on pillow lying on wedge), reach and explore toys for 5 minutes without adult assistance
0	In supported side lying (head on pillow lying on wedge), reach and explore toys for 5 minutes with intermittent adult assistance (to support arm) .
-1	In supported side lying (head on pillow, lying on a wedge cushion), reach and explore toys for 5 minutes with intermittent adult assistance (to support arm, or to take hands to toys or to re-adjust posture) .
-2	In supported side lying, reach and explore toys for 5 minutes with continuous adult assistance (to support arm, take hands to toys or re-adjust posture).



	GAS goal: Independently Play in Side Lying
+2	In supported side lying (head on pillow lying on wedge), reach and explore toys for 10 minutes without adult assistance
+1	In supported side lying (head on pillow lying on wedge), reach and explore toys for 5 minutes without adult assistance
0	In supported side lying (head on pillow lying on wedge), reach and explore toys for 5 minutes with intermittent adult assistance (to support arm) .
-1	In supported side lying (head on pillow, lying on a wedge cushion), reach and explore toys for 5 minutes with intermittent adult assistance (to support arm, or to take hands to toys or to re-adjust posture).
-2	In supported side lying, reach and explore toys for 5 minutes with continuous adult assistance (to support arm, take hands to toys or re-adjust posture).



An Outcome Measure is:

- 'a test or scale administered and interpreted by therapists that has been shown to measure accurately a particular attribute of interest to patients and therapists and is expected to be influenced by intervention'

Mayo et al, 1994



Outcome Measures

- Why should we use outcome measures?



Why use standardised outcome measures?

Research

Measure
status
provide a baseline

Monitor Change
feedback for parents
and children

Treatment
planning

Accountability
Professional and
Financial

Evaluate
different therapy
interventions



Characteristics of Outcome Measures

- Standardised: clear instructions so everyone can administer and score the test in the same way
- Reliable: results are reproducible within the same rater and between different raters
- Sensitive: responsive to change and stable in the absence of change
- Valid: measures what it intends to measure



Gross Motor Assessments

- Measures of activity
 - Gross Motor Function Measure GMFM
 - Mobility Questionnaire
 - Walking speed and function



Gross Motor Function Measure

Mackeith Press

❑ **Type of Measure:**

Observational measure of gross motor function. Assesses how much of an activity a child accomplishes, not quality of movement.

Consists of 88 items arranged in 5 dimensions:
Lying & rolling; Sitting; Crawling & Kneeling;
Standing; Walk, Run & Jump

❑ **Time to test:** 45-90 minutes

❑ **Manual available from**

<https://www.mackeith.co.uk/shop/gross-motor-function-measure-gmfm-66-gmfm-88-users-manual-3rd-edition-ebook/>



Gross Motor Function Measure

- **Scoring:** Each item is scored on a 4 point scale:

0 = unable to initiate (0%)

1 = initiates (<10%)

2 = partially completes (10 - <100%)

3 = completes (100%)

e.g.

3 = Supine: brings hands to midline, fingers one with the other

2 = Supine: brings hands towards midline (in front of chest)

1 = Supine: Initiates bringing hands to midline (*some movement in right direction*)

0 = Supine: Does not initiate bringing hands to midline

Training video available from: <https://canchild.ca/en/shop>



Mobility Questionnaire

van Ravesteyn et al, 2009, 2010 (DMCN 52 (2)194–199); Dallmeijer, et al, 2011

- Measures mobility limitations in children with CP for indoor and outdoor activities
- Response options:
 - 0 = impossible without help
 - 1 = very difficult
 - 2 = somewhat difficult
 - 3 = slightly difficult
- How difficult was it for your child to, e.g.
 - Sit down on a bed, turn over in bed etc.
 - Get up from the toilet, get in/out of a car, in the shower
 - Walk on grass, tar, sand, barefoot, for 30 min etc.
 - Get off a bicycle

<https://www.vumc.nl/zorg/informatie-voor-professionals/revalidatiegenezeskunde-voor-professionals.htm>



Simple, quick to use....

- **Timed Up and Go TUG**

Dhote et al, 2012

child stands up, walks to
line 3m away, touches target
turns around, walks back to chair,
sits down

- **Timed up and down stairs TUDS**

Zaino et al, 2004

Child walks up/down flight of 14 stairs



Simple, quick to use....

- ▣ 6 minute walk test *Maier et al, 2008*
- ▣ 10 metre walk test *Chrisagis et al, 2014*
- ▣ Sit to stand test (5 repetitions) *Kumban et al, 2013*
- ▣ Lateral Step Up Test *Chrisagis et al, 2013*
- ▣ https://iaacd.net/2020/08/12/quick-gross-motor-measures-for-children-with-cerebral-palsy/?tx_category=cerebral-palsy&_page=3



Daily Living Skills, Participation & Quality of Life

PEDI-Computer Adaptive Test (PEDI-CAT)

Care & Comfort Hypertonicity Questionnaire

Assistance to Participate Scale

Cerebral Palsy Quality of Life CPQoL



Pediatric Evaluation of Disability Inventory- Computer Adaptive Test PEDI-CAT

- Children with physical & cognitive disabilities (0 – 21 yrs)

- 3 Functional skills domains (218 items)
 - daily activities, mobility and social/cognitive function
 - 4-point scale: unable/hard/a little hard/easy

- 4th domain: Degree of Responsibility for 53 items
 - 5-point scale: Adult has full responsibility to Child has full responsibility

- Mid range item scored. On basis of score, computer selects next item etc. until stopping rule satisfied

Publisher
Distributor

<http://pedicat.com>
<http://shop.crecare.com>



Care & Comfort Hypertonicity Questionnaire CCHQ

Nemer McCoy et al, 2006

- Measure for caregivers about ease of caregiving and comfort of child in personal care tasks , positioning, transferring and communication/interaction

- Examples of Items
 - Is there pain or discomfort during nappy changes?
 - Ease of getting in/out of wheelchair
 - Washing upper/lower body

- Scored on 7-point scale, e.g.
 - always to never
 - very easy to impossible

https://apcp.csp.org.uk/system/files/care_and_comfort_questionnaire.pdf



Assistance to Participate Scale APS

www.canchild.ca *Free to download*

- Assistance that a school-aged child with a disability requires to participate in 8 play/leisure activities at home or in community *E.g. watch TV, play with a friend, at a playground, attend a club*

Unable to participate

Participates with my assistance at all stages of the activity

Participates after I have set him/her up and help at times during activity

Participates with my supervision only

Participates independently

- Predict the amount & type of adaptations/equipment necessary to enhance participation
- Evaluate change in participation



Cerebral Palsy Quality of Life Questionnaire

CPQOL - Child

Waters et al, 2006

- Child questionnaire (9-12yr) – 53 items
- Parent questionnaire (4-12yr) – 66 items
- Measures:
 - Social wellbeing & acceptance e.g. going on trips with family
 - Participation and physical health
 - Functioning e.g. how you sleep
 - Emotional wellbeing
 - Pain and impact of disability
 - Access to services
 - Family health e.g. are you bothered by hospital visits?
- Scale 1 (very unhappy) to 9 (very happy)
- Download: <https://www.ausacpdm.org.au/research/cpqol/>

