

# Therapeutic Management of Hemiplegia: Contemporary Clinical Practice from a Bobath Occupational Therapist's Perspective

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# Introduction

## ~ clarifying expectations ~

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- ❖ What this is & what it is not!
- ❖ Proposed Learning Outcomes for Session
  - ❖ To outline the main trends/topics relevant to therapeutic management of Hemiplegia.
  - ❖ To demonstrate the use of the ICF as a framework to guide assessment, clinical reasoning and application of knowledge/skills.
  - ❖ To clarify current practice within the Bobath Concept.
  - ❖ To demonstrate application through brief case examples.

# Relevant sources informing & guiding my clinical practice

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- ❖ Cochrane Library documents
- ❖ NICE spasticity guidelines
- ❖ Recent Systematic Reviews
- ❖ Various Medical/Therapy Journals & Books (eg DMCN, MacKeith Press textbook - “Improving Hand Function in Children with Cerebral Palsy”)
- ❖ Bobath Course Notes (8-week Foundation Course, Hemiplegia course, Advanced Upper Limb course, ‘3-Centres-OTs’-Study-Days)
- ❖ Dr Brian Hoare CP Teaching Courses: Functional Hand Use in Hemiplegia, Botulinum Toxin as an Adjunct to Upper Extremity Rehabilitation.
- ❖ International Classification of Functioning, Disability & Health (ICF)

(Please refer to attached Reference List for specific references)

# Pathway for care: a personal perspective

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- ❖ Collation of referral & supplementary info from community therapy & education colleagues and the family
- ❖ **Goal setting** with family and child/young person
- ❖ Further Ax to identify main issues & use of outcome measures (OMs)
- ❖ Select key principles & strategies to try in the context of PLAY or typical DAILY activities
  - ❖ EGs managing tone and movement patterns that interfere with function, **seating**, **assistive technology & AAC**, elements of **mCIMt**, **bimanual training**, kinesiotape, **orthotics**, **home-programs**, sensory strategies, visual strategies, promoting weight-shift, tubigrip, **parent training**
- ❖ Implementation of Rx (Ax <> Rx: adjusting as required)
- ❖ Review goals & OMs

# Being clear from the start...

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What are you actually treating?

- ❖ timing of insult
- ❖ cause & site of damage
- ❖ associated difficulties
- ❖ co-morbidity
- ❖ readiness, stage of accepting input, improvement curves?

# What are we aiming for? ~ Whose goal is this anyway? ~

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- Who is the client - the child/young person and/or the carer?

- Kids & parent set goals can be highly achievable

(Vroland-Nordstrand et al 2013)

- Manual Ability Classification System (MACS) as a starting point

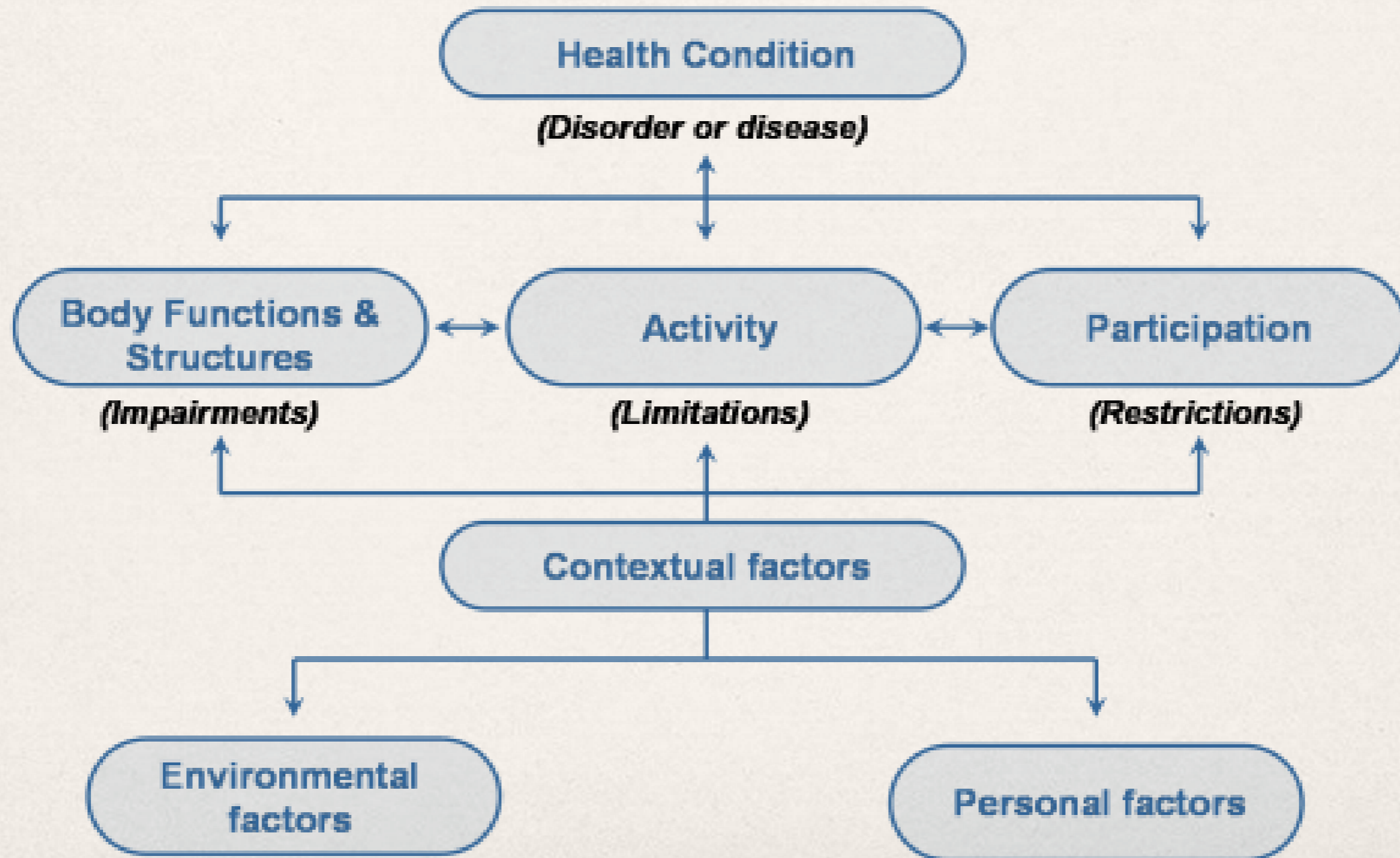
# Assessment

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“We sometimes measure what we measure because we can measure it...we do not measure what we should measure because it is more difficult and more complex. We then use the easy measure to infer things about the difficult measure.”

(Simmonds 1997 as quoted by Krumlinde-Sundholm 2008)

# The ICF





# ICF ~ Assessments & Outcome Measures

(adapted from Hoare 2012 course notes)

Body Structure & Function	Activity	Participation
<p>ROMs, Strength eg Grip Strength,</p> <p>Sensation: eg Stereognosis, 2-Point-Discrimination, monofilaments</p> <p>Measures of tone/spasticity, pain</p> <p>Shriner Hospital Upper Extremity Evaluation (SHUEE)</p> <p>Quality of Upper Extremity Skills Test (QUEST)</p> <p>Melbourne Assessment of Unilateral Upper Limb</p> <p>Functional Visual</p> <p>Perceptual Tests: DTVP, M-FVPT</p>		

# ICF ~ Assessments & Outcome Measures

(adapted from Hoare 2012 course notes)

BSF	Activity	Participation
	<p><b><u>PERFORMANCE</u></b></p> <p>Assisting Hand Assessment (AHA)</p> <p>ABILHAND-Kids</p> <p>Children's Hand-use Experience Questionnaire (CHEQ)</p> <p>Canadian Occupational Performance Measure (COPM)</p> <p>Goal Attainment Scale (GAS)</p> <p><b><u>CAPACITY</u></b></p> <p>Jebsen-Taylor Test of Hand Function</p> <p>Box &amp; Blocks Test</p> <p>Peg Board Test</p>	

# ICF ~ Assessments & Outcome Measures

(adapted from Hoare 2012 course notes)

BSF	Activity	Participation
		<p>ABILHANDS-Kids</p> <p>Children's Hand-use Experience Questionnaire (CHEQ)</p> <p>Children's Assessment of Participation &amp; Enjoyment (CAPE)</p> <p>Canadian Occupational Performance Measure (COPM)</p> <p>Pediatric Evaluation of Disability Inventory (PEDI)</p> <p>Assessment of Motor &amp; Process Skills (AMPS)</p>



Goals, assessment and then what...?

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# Interventions ICF Table

BSF	Activity	Participation
Surgery	Goal orientated therapy	Goal orientated therapy
BotoxA	Bimanual	Bimanual
Oral Medications	Constraint Induced Movement Therapy (m/CIMT)	Bobath (based on first two!)
Strengthening	Bobath	Cognitive Orientation to daily Occupational Performance (CO-OP)
Orthoses, Kinesiotape	Mirror Box	
Bobath	Cognitive Orientation to daily Occupational Performance (CO-OP)	
Mirror Box		

# Therapeutic Interventions: what seems to be in vogue or not?!

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- ❖ Constraint Induced Movement Therapy (CIMT & mCIMT)
- ❖ Bimanual Therapy
- ❖ Hybrid therapies eg combination of mCIMT & Bimanual
- ❖ Kinesiotaping, splinting
- ❖ Mirror Box
- ❖ Sensory Strategies
- ❖ Upper Limb Botox
- ❖ NDT

# What is Bobath anyway?

## What it is not!

- ❖ about inhibiting primitive reflexes or breaking movement patterns
- ❖ a set of exercises or passive stretches
  - ❖ insistent on following developmental hierarchy
- ❖ does not assume changes in 'centrally driven spasticity'
- ❖ is not only a bottom-up approach

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# What is Bobath anyway?

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- ❖ Analytical approach across the contexts of rest & activity (postural tone, movement, responses, incorporating sensation, vision etc)
- ❖ Problem-solving based approach
- ❖ (Child/Carer-set) goal-directed therapy
- ❖ Aims for functional outcomes
- ❖ Trans-disciplinary
- ❖ Intensive blocks of input





# The Bobath Approach....

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**“Specific Preparation  
for  
Specific Function”**

# Bobath Approach

## ~ Specific Preparation ~

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- ❖ Positioning & awareness: including postural tone, management of associated-reactions & goal pre-requisite skills
  - ❖ general
  - ❖ extremities
  - ❖ activity
  - ❖ self
- ❖ Environment & Activity Selection
- ❖ Education (child/young person & carers)

# Bobath Approach ~ Specific Function ~

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- ❖ Environment ~ influence on CNS development (eg Martin et al 2012)
- ❖ Graded
  - back/forward chaining of task components
  - scaffolding
- ❖ Similar > Actual > Practice > Variety
- ❖ Real life is best!

# Some final thoughts

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Listening to & learning from adults with Hemiplegia

Promoting understanding among the whole family

Don't forget the wood for the trees

Keeping abreast of research but not throwing out our art, our clinical reasoning & creativity.

# Some final thoughts...

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Avoid nagging!



Don't be afraid to set boundaries

Who is sweating most?

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“If we haven’t helped the child do something then we haven’t done anything at all.”

~ THANK YOU ~

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