

International Classification of Functioning, Disability and Health (ICF)

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Lecture Outline



This lecture reviews the use of outcome measures (OMs) in physical therapy (PT) practice under the following headings;

- ❖ Terminology related to uses of ICF in clinical practice
- ❖ Implement and understand how it can be used in the context of measurement.

ICF background

The ICF provides a standard language and framework for the description of health and health-related states (WHO2001).

It is a classification of health and health-related domains, that help to describe

Changes in body function and structure,

What a person can do in a standard environment (level of capacity),

What a person can do in their usual environment (level of performance).

ICF online Browser

- <http://apps.who.int/classifications/icfbrowser/>

The screenshot shows the ICF Browser web application. At the top, there is a blue browser window title bar with the text "ICF Browser". Below this is a red header bar with the text "ICF Browser" on the left and "Language Version : ICF - English" on the right. The main content area is white. On the left side, there is a vertical navigation menu with icons and text: "ICF", "b BODY FUNCTIONS", "s BODY STRUCTURES", "d ACTIVITIES AND PARTICIPATION", and "e ENVIRONMENTAL FACTORS". The "b BODY FUNCTIONS" option is currently selected. In the center of the page, the text "BODY FUNCTIONS" is displayed. Below this, there is a search interface with a "Search Fields" label, a text input field, and a "Search" button. Below the search field, there is a section titled "Check the fields to be included in the search" with four checkboxes: "Titles" (checked), "Descriptions" (checked), "Inclusions" (checked), and "Exclusions" (unchecked).

Key ICF Definitions

Body Functions
&
Structures



Functions

Structures

Activities
&
Participation



Capacity

Performance

Environmental
Factors



Barriers

Facilitators

Individual level

Institutional level

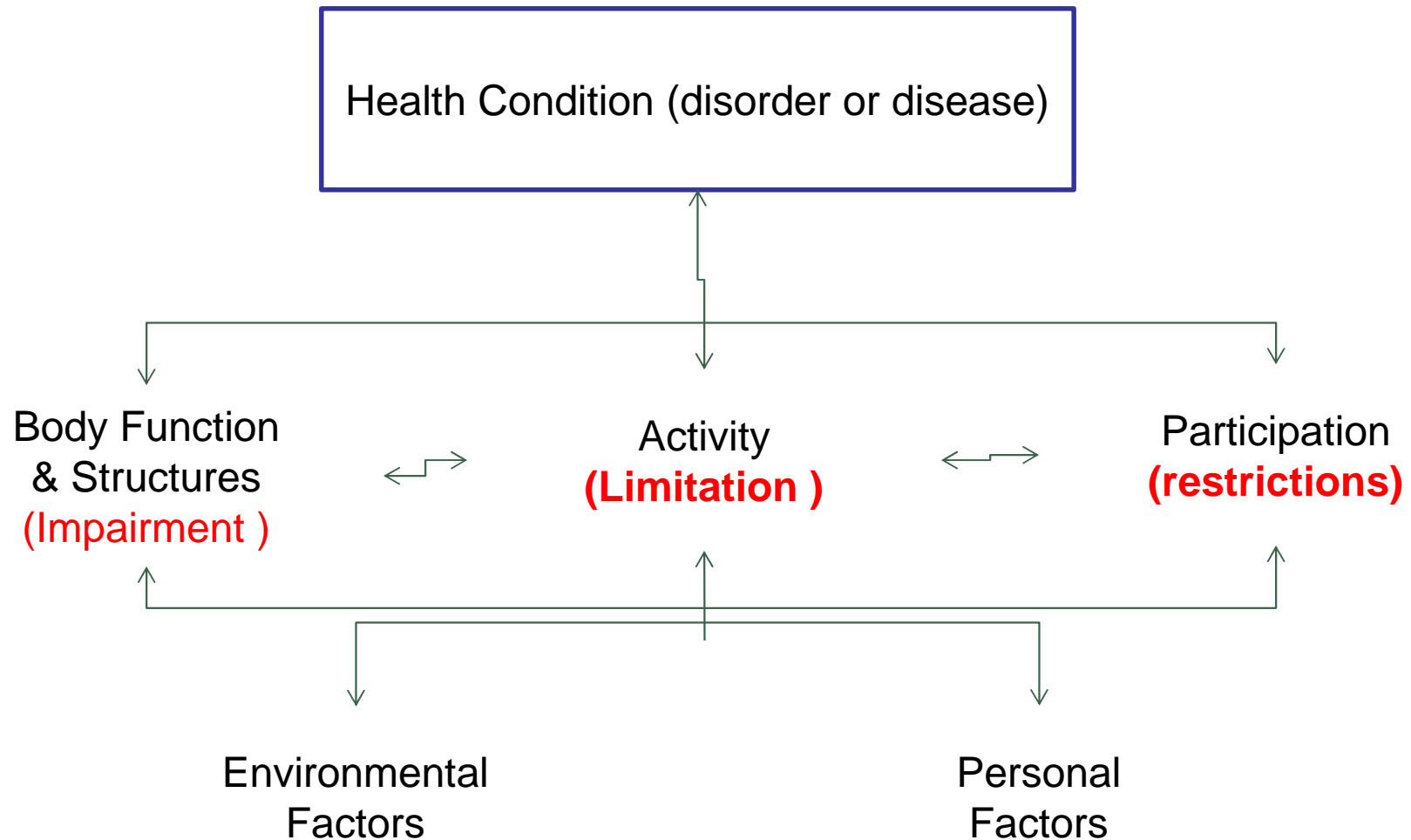
Social level

Impairment

**Activities limitation
Participation restrictions**

Environmental

Conceptual Model of ICF



An overview of the ICF (WHO, 2002)

	Part 1: Functioning and Disability		Part 2: Contextual Factors	
Components	Body Functions and Structures	Activities and Participation	Environmental Factors	Personal Factors
Domains	Body functions Body structures	Life areas (tasks, actions)	External influences on functioning and disability	Internal influences on functioning and disability
Constructs	Change in body functions (physiological) Change in body structures (anatomical)	Capacity Executing tasks in a standard environment Performance Executing tasks in the current environment	Facilitating or hindering impact of features of the physical, social and attitudinal world	Impact of attributes of the person
Positive aspect	Functional and structural integrity	Activities Participation	Facilitators	not applicable
	Functioning			
Negative aspect	Impairment	Activity limitation Participation restriction	Barriers / hindrances	not applicable
	Disability			

Body Functions and Structures

• Body Functions

- Chapter 1 Mental Functions
- Chapter 2 Sensory Functions and Pain
- Chapter 3 Voice and Speech Functions
- Chapter 4 Functions of the Cardiovascular, Hematological, Immunological and Respiratory Systems
- Chapter 5 Functions of the Digestive, Metabolic, and Endocrine Systems
- Chapter 6 Genitourinary and Reproductive Functions
- Chapter 7 Neuromusculoskeletal and Movement-related Functions
- Chapter 8 Functions of the Skin and Related Structures

Body Structures

- Chapter 1 Structures of the Nervous System
- Chapter 2 The Eye, Ear and Related Structures
- Chapter 3 Structures Involved in Voice and Speech
- Chapter 4 Structures of the Cardiovascular, Immunological and Respiratory Systems
- Chapter 5 Structures Related to the Digestive, Metabolic, and Endocrine Systems
- Chapter 6 Structures Related to the Genitourinary and Reproductive Systems
- Chapter 7 Structures Related to Movement
- Chapter 8 Skin and Related Structures

Activities and Participation

- Activities & Participation
 - Chapter 1 Learning and Applying Knowledge
 - Chapter 2 General Tasks and Demands
 - Chapter 3 Communication
 - Chapter 4 Mobility
 - Chapter 5 Self-care
 - Chapter 6 Domestic life
 - Chapter 7 Interpersonal Interactions and Relationships
 - Chapter 8 Major Life Areas
 - Chapter 9 Community, Social and Civic Life

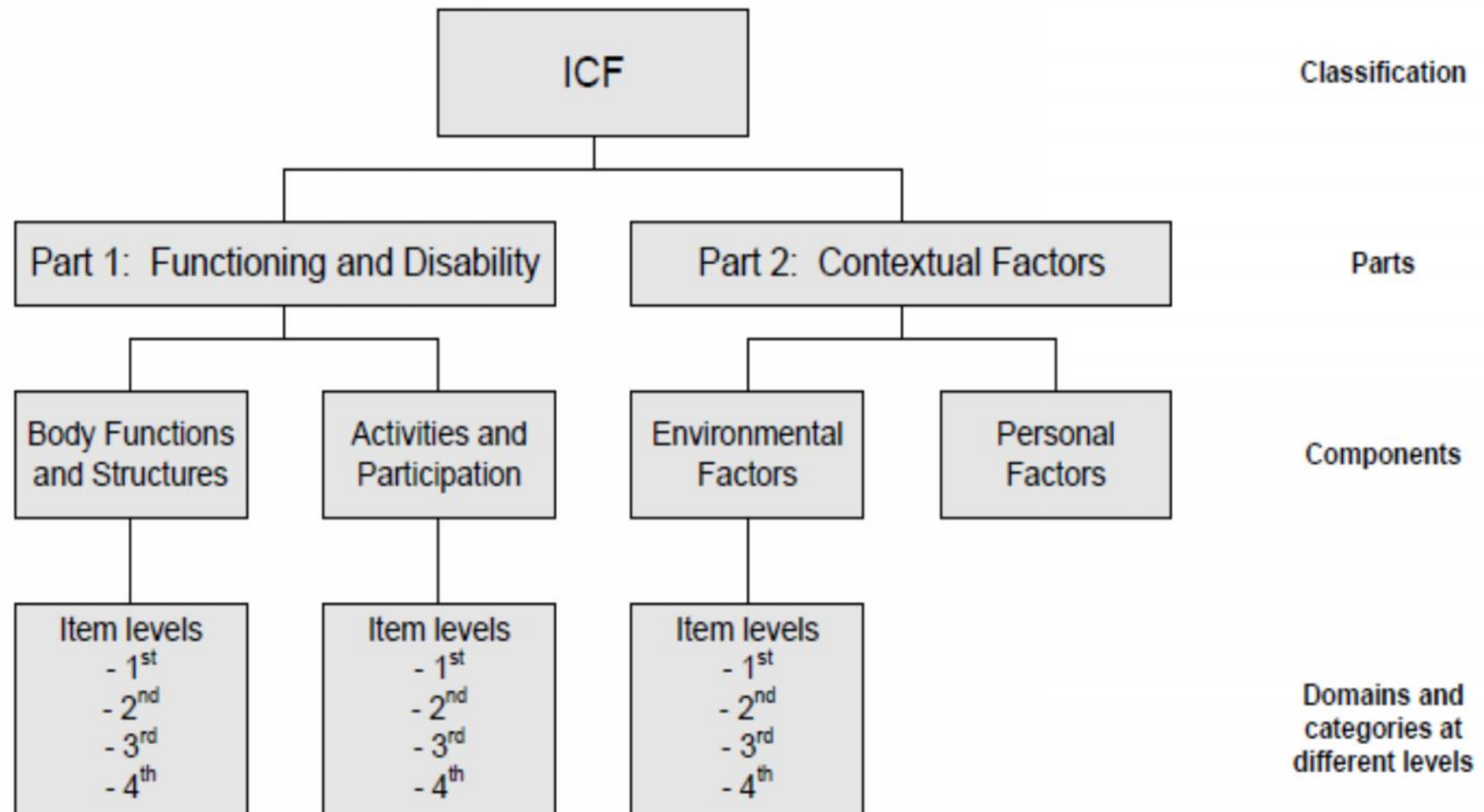


Environmental/personal Factors

- Chapter 1 Products and Technology
 - Chapter 2 Natural Environment and Human-Made Changes to Environment
 - Chapter 3 Support and Relationships
 - Chapter 4 Attitudes
 - Chapter 5 Services, Systems and Policies[
- Age
 - Race
 - Gender
 - Food preferences
 - Individual psychological assets
 - Fitness
 - Lifestyle
 - Habits
 - Upbringing
 - Coping Styles
 - Education
 - Social Background



Each ICF Component has Multiple Domains (cont.)



Example coding of body function

- The impairment of patient with hemiparesis can be described with code b7302; power of muscle in one side of the body
- <http://apps.who.int/classifications/icfbrowser/>

One impairment is Not Present/ present can be scaled in severity using 1st generic qualifier

b7302.0 no impairment (0-4%)

b7302.1 mild impairment (5-24%)

b7302.2 moderate impairment (25-49%)

b7302.3 severe impairment (50-95%)

b7302.4 complete impairment (96-100%)

If impairment is not specified will be coding as b7302.8

Example coding of body structure

- The impairment of patient with hemiparesis is in structure of ankle and foot , lower limb region
- <http://apps.who.int/classifications/icfbrowser/>

s7502 Structure of ankle and foot

s75020 Bones of ankle and foot

s75021 Ankle joint and joints of foot and toes

s75022 Muscles of ankle and foot

s75023 Ligaments and fasciae of ankle and foot

s75028 Structure of ankle and foot, other specified

s75029 Structure of ankle and foot, unspecified

s7508 Structure of lower extremity, other specified

s7509 Structure of lower extremity

Amis of ICF

Provide a scientific basis for understanding and studying health and health-related states, outcomes and determinants;

Establish a common language for describing health and health related states in order to improve communication between health care workers, researchers, policy and people with disabilities;

Allow data comparison across countries, health care disciplines, services and time;

provide a systematic coding scheme for health information systems' (WHO 2001).



Outcome Measures Across the ICF

ICF Core Sets are sets of categories (lists of domains that cover the range of functioning) that apply to particular patient groups or conditions (diseases) and have been developed using rigorous professional consensus techniques involving international experts

It is intended that these subsets can serve as “minimal standards for the assessment, communication and reporting of functioning and health for clinical studies, clinical encounters and multi-professional comprehensive assessment and management purposes”.

Outcome Measures Across the ICF

Phase I:

Developed core sets of ICF for 12 chronic diseases

• Breast cancer
• Chronic ischaemic heart disease
• Chronic widespread pain
• Depression
• Diabetes mellitus
• Low back pain
• Obesity
• Obstructive pulmonary diseases
• Osteoarthritis
Osteoporosis
Rheumatoid arthritis
Stroke

phase II

the ICF core sets in a range of countries.

Outcome Measures Across the ICF

A project to develop an ICF core set for spinal cord injury,, and multiple sclerosis to facilitate standardized assessment and documentation and as a quality management to is currently underway.

The ICF Research Branch (2008) website provides information about the ongoing research work in this area.

<https://www.icf-research-branch.org>

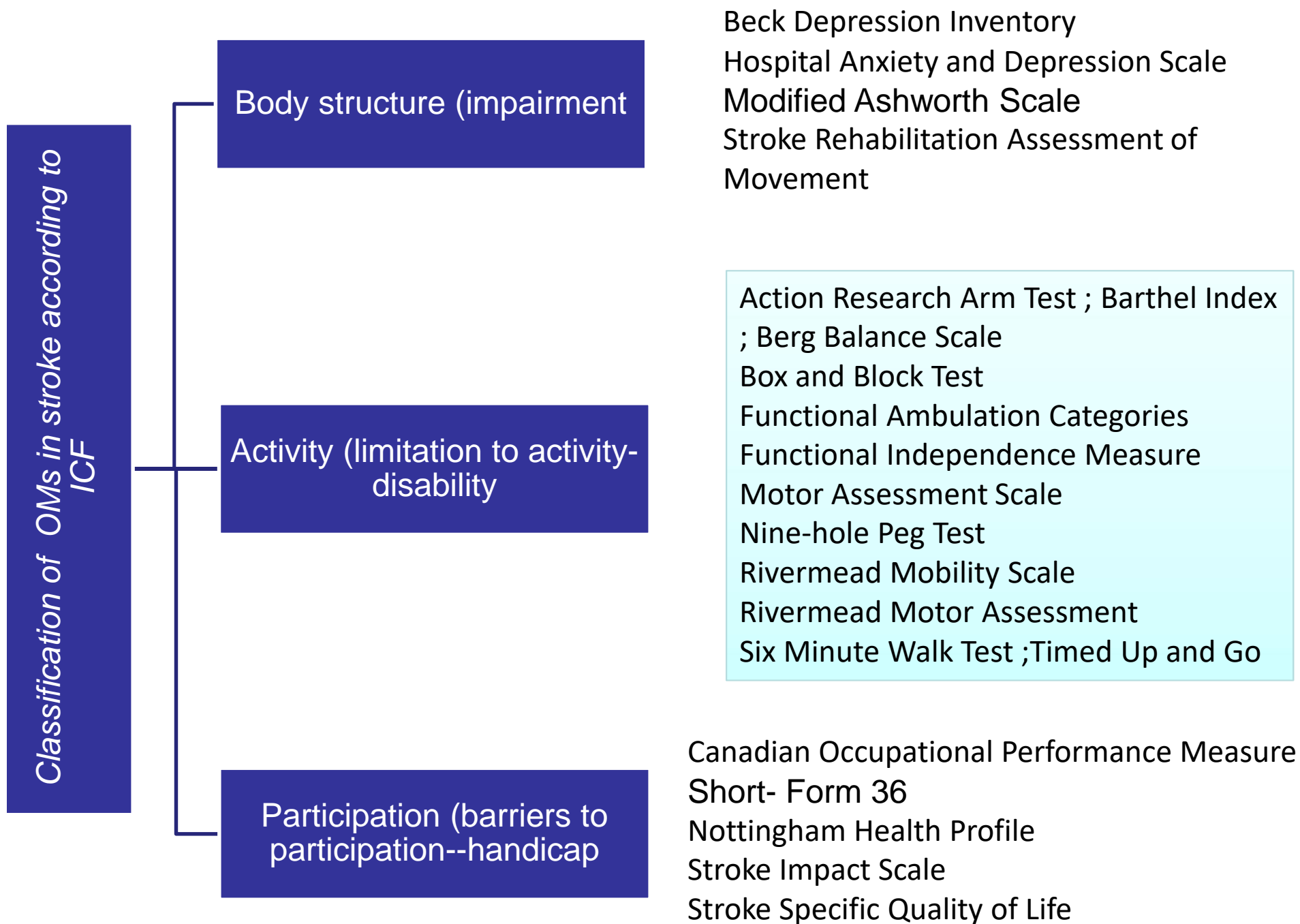
- Neurological Conditions

- ICF Core Set for CP
- [Development of ICF Core Sets for Multiple Sclerosis \(MS\)](#)
- [Development of ICF Core Sets for Spinal Cord Injury \(SCI\)](#)
- [Development of ICF Core Sets for Traumatic Brain Injury \(TBI\)](#)

Outcome Measures Across ICF

*Classification of OMs in stroke
according to ICF*





SIS-16 items	Moriello et al	Geyh et al	Jette et al	Final classification	
				ICF domain	Core set
Control your Bladder	No consensus	BSF		BSF	b620
Control you Bowel	No consensus	BSF		BSF	b525
Stay sitting without losing your balance	ACT + PART	BSF		BSF	b755
Stand without losing your balance	ACT + PART	BSF		BSF	b755
Walk without losing your balance	ACT + PART	BSF		BSF	b755
Bathe yourself	ACT + PART			ACT	d510
Get to the toilet on time	ACT + PART			ACT	d530
Move from bed to chair	ACT + PART			ACT	d420
Walk fast	ACT + PART			ACT	d450
Climb one flight of stairs	ACT + PART			ACT	d455
Walk one block	ACT + PART			ACT	d450
Get in and out of a car	No consensus		ACT	ACT	d420
Carry objects with your affected hand	ACT + PART			ACT	d430
Dress the top part of your body	ACT + PART			ACT	d540
Do heavy household chores	ACT + PART		PART	PART	d640
Go shopping	ACT + PART		PART	PART	d620

BSF – Body Structure and Functioning domain; ACT – Activity domain; PART – Participation domain; ACT + PART – Combined Activity and Participation domain

Link between first-level ICF categories of body functions, body structures and activities and participation on the one hand and outcome measures frequently used in stroke rehabilitation on the other

ICF Category	BI	BBS	CMSA	EQ5D	FIM
Body functions					
b1 Mental functions				1	1
b2 Sensory functions and pain			1	1	
b3 Voice and speech functions					
b5 Functions of the digestive, metabolic and endocrine systems	1				1
b6 Genito-urinary and reproductive functions	1				1
b7 Neuromusculoskeletal and movement-related functions			15		
Body structures					
s7 Structures related to movement			1		

Link between first-level ICF categories of body functions, body structures and activities and participation on the one hand and outcome measures frequently used in stroke rehabilitation or the other

ICF Category	BI	BBS	CMSA	EQ5D	FIM
Mental functions					
b114 Orientation functions					
b126 Temperament and personality functions					
b130 Energy and drive functions					
b134 Sleep functions					
b140 Attention functions					
b144 Memory functions					1
b152 Emotional functions				1	
b160 Thought functions					
b167 Mental functions of language					
Sensory functions and pain					
b210 Seeing functions					
b280 Sensation of pain			1	1	
Voice and speech functions					
b330 Fluency and rhythm of speech functions					
Functions of the digestive, metabolic and endocrine systems					
b525 Defecation functions	1				1
Genito-urinary and reproductive functions					
b620 Urination functions	1				1
Neuromusculoskeletal and movement-related functions					
b710 Mobility of joint functions			1		
b730 Muscle power functions					
b750 Motor reflex functions			1		
b760 Control of voluntary movements			13		
Structures related to movement					
s720 Structure of the shoulder region			1		

Outline of the 8 linking rules

Before links are made between the concepts contained within an existing outcome measure and the ICF, those involved in linking should be very familiar with the ICF

Each meaningful concept within the OM is linked to the most precise ICF category.

Do not use the description categories 'other specified'.

Do not use the description categories 'other unspecified'.

Outline of the 8 linking rules

If an item within the OM does not provide sufficient detail for it to be linked with an ICF category it is assigned 'not definable' (nd).

If an item within the OM is not contained within the ICF categories it is assigned 'not covered' (nc).

If an item within the OM is a personal factor as defined by the ICF, it is assigned 'personal factor' (pf).

If an item within the OM relates to a health condition or diagnosis, it is assigned 'health condition' (hc).

Conclusion

ICF can be used to measure clinical outcomes as described above.

it can also be used to describe the health or health related state of users of your service; this description may be useful for you when describing your service, when comparing your service with another one that uses the same ICF descriptors and when assessing if your service actually matches the needs of the services users. It is a language that is accessible and understandable to all members of the multidisciplinary team, to the commissioners of services and indeed to the users of services.

Thank You !!

