

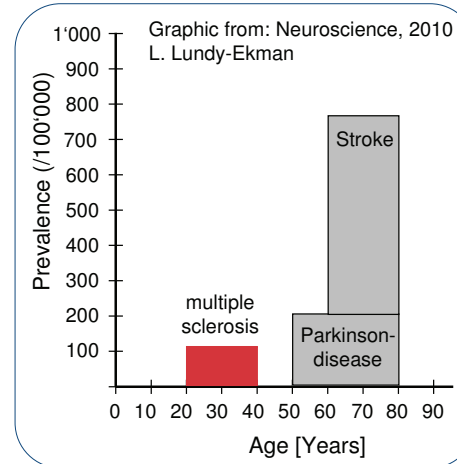
Integrating goal setting and outcome measures in daily practice

RIMS 2012 - Hamburg

01. June 2012

Kurt Luyckx

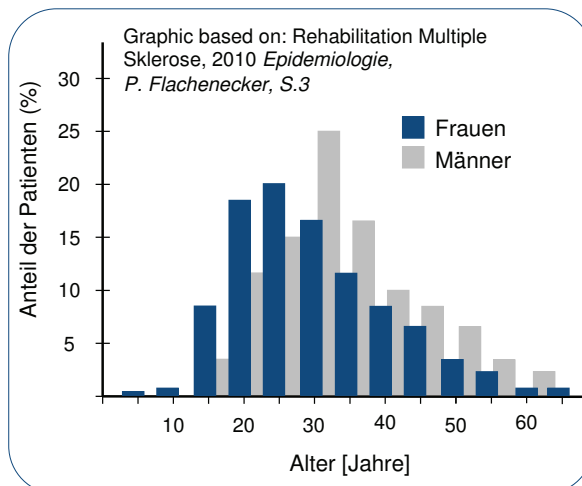
Multiple sclerosis



the most common neurological disorder and cause of disability among young adults ¹

¹ Kesselring, 2005

Age distribution of MS



in 70% of all PwMS the first symptoms occurs between the 2nd and 4th decade ¹

¹ Kesselring, 2005

Epidemiology

The majority of PwMS are in the **most active period** of their life.

Accordingly MS has a great impact on **many areas of their life** (education, family, profession etc.).



Epidemiology

- An increasing number and range of new signs and **symptoms develop over time** ¹
- **Symptoms vary** widely in a given individual and from individual to individual ¹
- Rate and pattern of the deterioration is **not predictable** ¹
- significant implications for the performance of activities of daily living, participation in social life, quality of life and costs to society ^{3, 4}
- MS is a highly complex, heterogeneous disease with a high prevalence of **long-term disability** ²

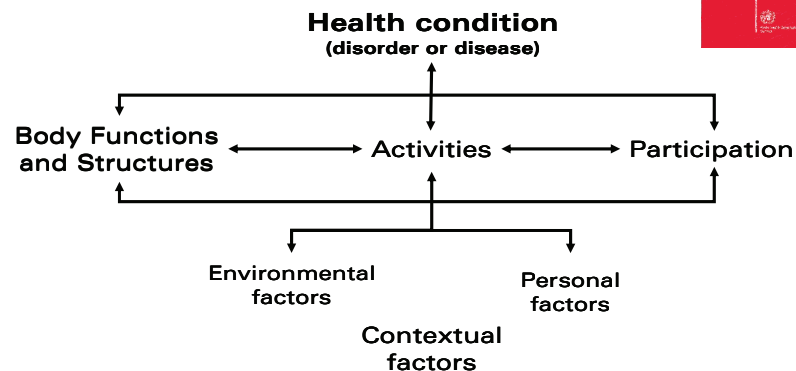
¹ Freeman 2009 ; ² Beer et al, 2012 ; ³ Coenen et al, 2006; ⁴ Kobolt et al, 2006

Overview is needed

There is a **need for a continuous, comprehensive assessment** of health and multidisciplinary long-term management.

ICF could build a framework and can be **used as a clinical tool**.

ICF-Model



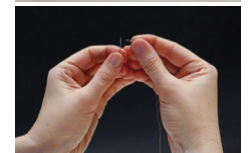
⁵ WHO, 2001

Activities and Participation

Activity is the **execution of a task** or Action by an individual.

Participation is **involvement** in a life situation.

⁵ WHO, 2001



Body Functions and Structures

Body functions are the physiological **functions of body systems** (including psychological functions).

Body structures are **anatomical parts of the body**, such as organs, limbs and their components.

⁵ WHO, 2001



Contextual Factors

Environmental factors make up the physical, social and attitudinal environment in which people live and conduct their lives.

Personal Factors comprise features of the individual that are not part of a health condition or health states

Expl. age, gender, coping styles, habits, social background, education, profession, etc.

⁵ WHO, 2001



Contextual Factors

Contextual Factors represent the complete background of an individual's life and living.

Environmental Factors and

Personal Factors

can have a positive (facilitators) or negative (barriers) influence.

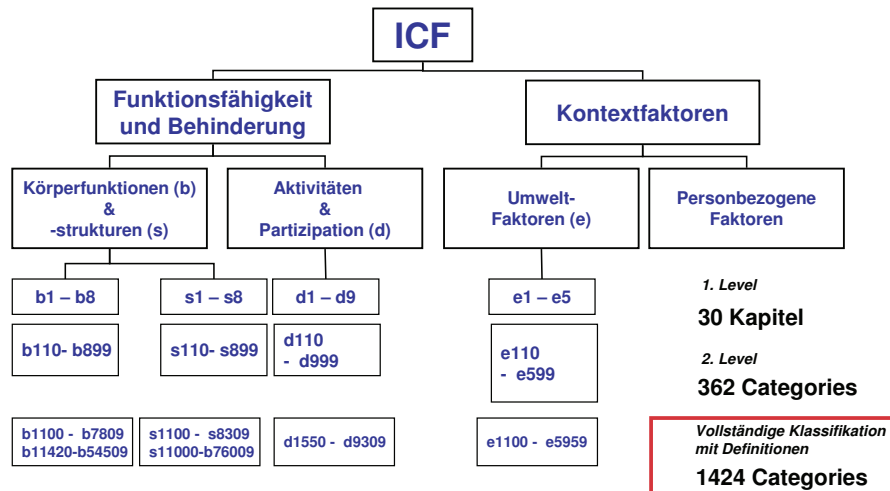
⁵ WHO, 2001

Bio-psycho-social Model

The ICF is helpful for communicating about the functional limitations of PwMS, rehabilitation goals, and interventions applied.

⁸ Holper et al, 2010; ⁹ Conrad et al, 2012

ICF-Classification



Development ICF-Core Sets

To systematically and comprehensively describe functioning and disability in Multiple sclerosis (MS), an ICF-Core Set has been developed.

Definition ICF-Core Set MS

Pool of categories relevant to PwMS

The aim is to include:

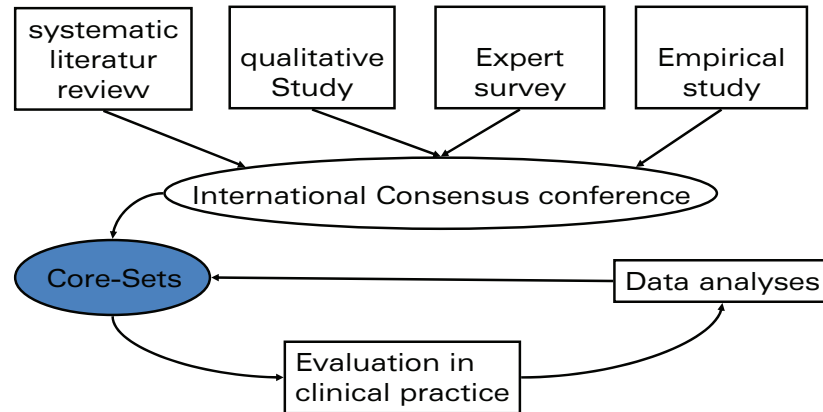
- as few categories as possible to be practical
- as many as necessary to sufficiently cover the spectrum of limitations in functioning experienced by PwMS

Consensus conference MS

21 experts from 16 different countries and diverse health professionals - Valens Mai 2008



Multistage and evidence based



Comprehensive ICF-Core Set MS

[illegible]

138 ICF categories

- 40 bodyfunction,
- 7 bodystructure,
- 53 activity- and participation categories
- 38 environmental faktors

Brief ICF Core Set MS

Brief ICF Core Set for Multiple Sclerosis

Body Functions	
b130	Energy and drive functions
b152	Emotional functions
b164	Higher-level cognitive functions
b210	Seeing functions
b280	Sensation of pain
b620	Urination functions
b730	Muscle power functions
b770	Gait pattern functions
Body Structures	
s110	Structure of brain
s120	Spinal cord and related structures
Activities & Participation	
d175	Solving problems
d230	Carrying out daily routine
d450	Walking
d760	Family relationships
d850	Remunerative employment
Environmental Factors	
e310	Immediate family
e355	Health professionals
e410	Individual attitudes of immediate family members
e580	Health services, systems and policies

19 ICF Kategorien

- 8 Körperfunktions-,
- 2 Körperstruktur-,
- 5 Aktivitäts- und Partizipationskategorien
- 4 Umweltfaktoren

Rehabilitation process

Admission

Requirements Patients and other interested parties

Rehab-Process

Patient-centred

Admission

Requirements Patients and other interested parties



Rehab-Process

Patient-centred

Admission

Requirements Patients and other interested parties



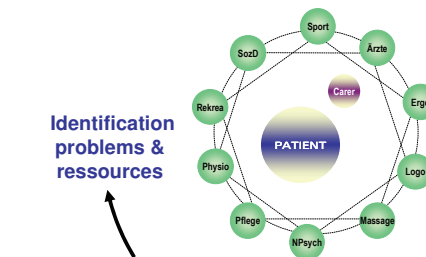
Expectations of the patient

Rehab-Process

Admission

Rehabilitation

Requirements Patients and other interested parties



Identification problems & resources

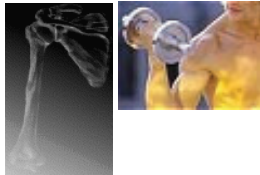
Expectations of the patient

Rehab-Process

Identification of

Functioning

Bodystructure
and Bodyfunction

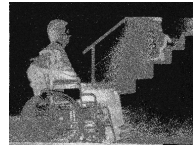


Disability

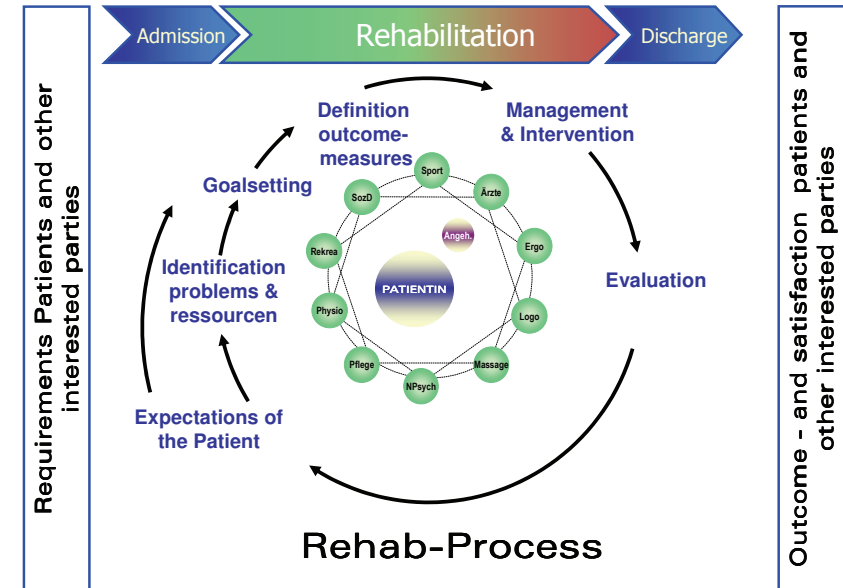
Impairments
Limitations of
Activity and
Participation

Contextual Factors

Facilitators
Barriers



Activities and
Participation



Clinical case

Documentation in a Clinical Information System

J.B., 1978

Multiple Sclerosis (relapsing remitting)

- First symptoms: Paresthesia 2010
- EDSS 5 after relaps in April 2012
- Clinical: right Hemiparese and reduced sensibility

Ms. B is **married**, lives with her husband in a 3-room **apartment** on the **5th** floor with an elevator. The **last** floor is reached by a **stair with handrail**.

Ms B. has a **son of 11 months** and has she has done her **household** independently until April 2012. She didn't need any assistance or device. She worked **50% as a secretary** in a law firm.

Expectations of the patient

- Return back home as soon as possible to take care of her 11-month old son!
- Doing household
- Walking safely on the road
- Reduced tiredness (heat-sensitive)
- Better using her right hand
- More strength in her right leg

Documentation in CIS

Expectations

Interdisziplinärer Eintritt Eintritsdatum: 12.04.2006 Kostengutsprache bis:

Vorsichtsmassnahmen / Kontraindikationen (wird von den Ärzten ausgefüllt)

☐ keine Kontraindikationen ☐ Osteoporose ☐ Skelettmietastasen ☐ Lungenkrankheiten ☐ koronare Herzkrankheiten ☐ Epilepsie

Muskuloskelettale Stabilität ☐ übungsstabil ☐ belastungsstabil bis kg ☐ Vollbelastung ab

Metallimplantate ☐ Nein ☐ Ja, wo? ☐ Ja ☐ Nein ☐ Kardiovask. belastbar ☐ Kardiovask. limiten

Schulter-Hand-Syndrom ☐ SHS - ausgeprägtes Oedem (Stadium Rot) ☐ SHS - leichte Schwellung (Stadium Gelb) Verantwortl. Person:

Erwartungen / Ziele PatientIn und Angehörige

18.04.2012 Patient Kurt Luydix Return back home as soon as possible and to take care of her 11-month old son! Doing household

Kontextfaktoren (Umwelt- und Personenbezogene) Soziale Anamnese (Arzt)

Beziehungen und Unterstützung Familienstand: verheiratet Mitbewohner: ☐ Mitbewohner arbeitet ☐ Hilfs- und Pflegepersonen: ☐ Sprache:

Wohnsituation Wohnung: Geographie Umgebung: ☐ Lift ☐ Treppe ☐ Geländer aufwärts ☐ Etage: 5 ☐ Stufe: 18 ☐ Rollstuhlgang: ☐ ja ☐ nein ☐ Infrastruktur:

Arbeit und Beschäftigung / Bildung und Ausbildung Ausbildung: Sekretärin Hobbies:

Arbeitsunfähigkeit zu % von 11.11.2006 bis 04.11.2006 Belastung am Arbeitsplatz:

Beschaffung lebenswichtigen Gütern:

Hilfsmittel bei Eintritt (Produkte und Technologien):

Vorangegangene Therapien ambulanteTherapien stationärer Rehaufenthalt:

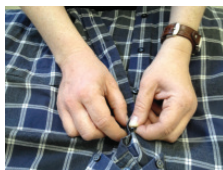
Sonstiges:

Environmental and personal factors

Problem-identification



Lifting and carrying objects (d430)



Fine hand use (d440)



Moving around in different locations (incl. Stairs) (d460)



Maintaining a body position (d415)

Problem-identification



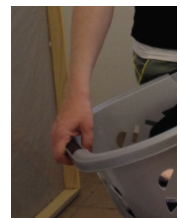
Involuntary movement reaction function (b755)

Proprioceptive function (b260)



Muscle power functions (b730)

Muscle tone functions (b735)



Rehab-Goalsetting

living independently with additional tasks

- She can move around in different locations (climbing a stair with 18 Steps) in 3 weeks (normal velocity)
- Cardio respiratory endurance is 20% increased until discharge
- She can hold a laundry basket in 3 weeks
- She can carry her 11-month old son (10 kg) until discharge.
- She has received information on fatigue management and translate this knowledge in daily routine

Documentation in CIS

Main-Rehab goal

short-term goals

Documentation Rehab-Goal

Rehab-goal

4 goal-categories

- living
- working
- sociocultural life
- Body function & body structure

Documentation of Rehab-Goal

Rehab-goal

Documentation short-term Goals

REHAB-goal

short-term goals

Documentation short-term Goals

REHAB-goal

short-term goals

Second level of ICF-classification

Documentation short-term Goals

REHAB-goal

short-term goals

Second level of ICF-classification

Documentation short-term Goals

REHAB-goal

short-term goals

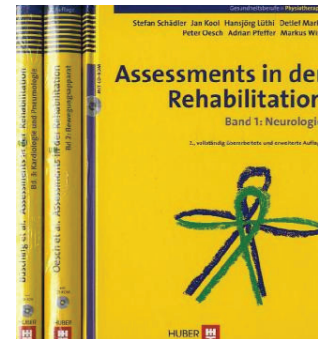
Specific
Measurable
Achievable
Realistic
Time framed

Choosing a measurement

REHAB-goal

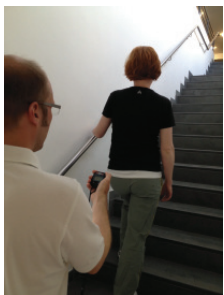
short-term goals

Linking ICF Categories and Measures



“Assessments in Rehabilitation”
St. Schädler et al,
2012

Outcome measures



Stair measure
Stair climbing

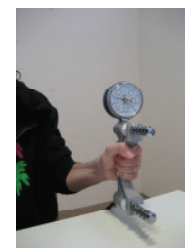


6 MWT
(incl. Borgscale)
Endurance and
walking ability



**Sensory
Organisation
Test**
Balance

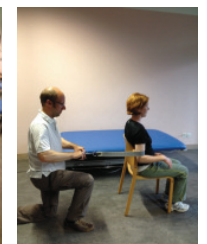
Outcome measures



JAMAR
Manual force
(Flexion)



**Purdue
Pegboard**
Coordination,
Fine hand use



Dynamometry
Strength Shoulder-,
Elbowflexors and
Kneeextensors

Documentation outcome measure

REHAB-goal

short-term goals

and

Outcome-measure

Documentation outcome measure

REHAB-goal

short-term goals

and

Outcome-measure

Documentation outcome measure

REHAB-goal

short-term goals

and

Outcome-measure

Interventions on Body functions and -structure level

ROM und Sensibility

Mobility foot

Sensory stimulation



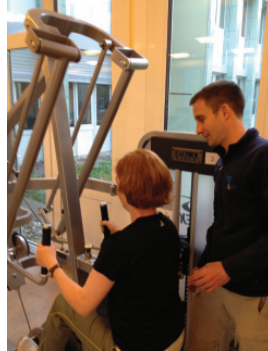
Interventions on Body functions and –structure level

Strength training

Strength hand

Upper extremity

Shoulder stability

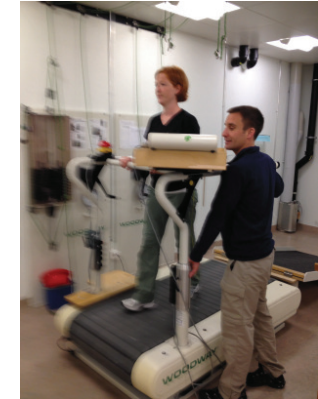


Interventions on Body functions and –structure level

Endurance training

Ergometer bicycle

Treadmill training



Interventions on Body functions and –structure level

Coordination- and balance training

coordination /
Proprioception

Proprioception

Balance- and
protective reactions



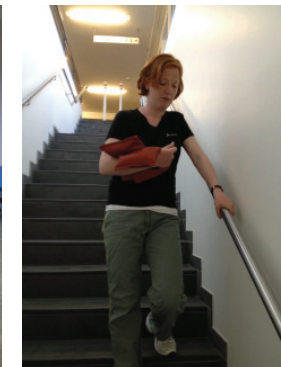
Interventions on activity level

Task specific Training

Managing
obstacles

Simulation
„Son-carrying“

Simulation
HH-Activities



Intervention on Participation

Information und Patient-Education

Copingstrategies
„Fatigue-Management“



Devices in household



Intervention on participation level

Information und Patient-Education (Home Exercise Programm)

„staying active“



relaxation



Intervention on contextual Faktors

Orthosis and external device management

Centriorthosis



Cooling vest



Documentation of progress

Zielsetzungsprozess

Hauptziele: Selbstständiges Wohnen mit zusätzlichen Aufgaben (alles was nicht auf die eigene Person ...)

Start: 18.04.12

Stop: offen

Mobilität

Körper-Funktion

Unterziele:

PT	Def. Ziel	Zielerreichung
Cardio respiratory	Endurance is 20% increased until discharge	Def. Ziel: offen
	Aktuelle Evaluation:	Messparameter: 6-Minute Walk Test
		Sehe z. Test: Evaluation
She can move around in different locations	(climbing a stair with 18 Steps) in 3 weeks (normal velocity)	Def. Ziel: offen
	Aktuelle Evaluation:	Messparameter: Star-Measure
		Sehe z. Test: Evaluation

1 / 2

Eigene Offene Alle

Outcome measure at discharge

Outcome-measure

The screenshot shows the 'Zielsetzungstests' (Target Setting Tests) application window. The title bar reads 'Zielsetzungstests'. The main interface is divided into several sections for configuring different types of tests.

Geh- und Gleichgewichtstests (Gait and Balance Tests):

- Gehst:** Distance (10 Meter, 20 Meter, normal, maximal) and Gangbild (Gait pattern) selection.
- Hilfsmittel:** Assistance device selection.
- Bemerkung:** Remarks field.
- Testergebnis (Test Result):** Zeit (Time) in Min and Sek, Schritte (Steps), and Geschw. (Speed) in m/s. Includes fields for Datum / Prüfer (Date / Examiner).

Gehstrecke – Zeit/Distanz (Gait Distance – Time/Distance):

- Time selection: 2 Min, 3 Min, 6 Min, maximal.
- Hilfsmittel and Bemerkung fields.
- Testergebnis:** Distanz (Distance) in Meter, Geschw. (Speed) in m/s, Borg-Skala (Borg Scale) selection, and Datum / Prüfer.

Expanded Timed Get-Up-and-Go:

- Vom Sitzen zum Stehen (From sitting to standing), Gangniederlegung (Gait lowering), Gehbreite 1 (Gait width 1), Umdrehen (Turning), Gehbreite 2 (Gait width 2), Verlangsamten, Abstoppen, Umdrehen und Absetzen (Slowing down, stopping, turning and setting down) – all with time selection in Min and Sek.
- Hilfsmittel, Anzahl Schritte für GS1 (Number of steps for GS1), and Bemerkung fields.
- Testergebnis:** Total time in Min and Sek, Geschw. in m/s, and Testdatum / Prüfer.

Mod. Stair-Measure-Test:

- Zeit and Hilfsmittel selection.
- Testergebnis:** Zeit and Geschw. in m/s.

Navigation buttons (back, forward, etc.) and a 'Zurück' (Back) button are present at the bottom. The bottom status bar shows icons for file operations and a 'OK' button.

Outcome and satisfaction

short-term goals

The block contains three photographs of a woman with red hair wearing a striped shirt. The first photo shows her carrying a blue basket of toys down a flight of stairs. The second photo shows her pushing a stroller with a child in a shopping area with a 'GLOBUS' sign. The third photo shows her carrying a baby up a flight of stairs.

Literatur

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Literatur

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- ⁷ Berno S, Coenen M, Leib A, Cieza A, Kesselring J. Validation of the Comprehensive International Classification of Functioning, Disability, and Health Core Set for multiple sclerosis from the perspective of physicians. J Neurol 2012; Published online: 24 January 2012
- ⁸ Holper L, Coenen M, Weise A, Stucki G, Cieza A, Kesselring J. Characterization of functioning in multiple sclerosis using the ICF. J Neurol 2010; 257:103-113
- ⁹ Conrad A, Coenen M, Schmalz H, Kesselring J, Cieza A. Validation of the comprehensive ICF Core Set for Multiple Sclerosis from the perspective of physical therapists. Phys Ther Published online March 8, 2012

Thank you for your attention



Rehazentrum Valens



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