

The utility of the ICF in medical work capacity evaluation

Conference “ICF – a new look at the human being”
17 June 2014, Warsaw, Poland

Urban Schwegler, MSc
Empowerment, Participation and Social Integration Unit
Swiss Paraplegic Research

Schedule

Medical work capacity evaluation

The ICF in medical work capacity evaluation

Selected studies

Main promises and challenges

Application and implementation of ICF in social security



MEDICAL WORK CAPACITY EVALUATION



Medical work capacity evaluation - Definition and purpose

Key instrument in work reintegration process (SYN: disability evaluation)

Provides necessary information to determine...

- eligibility of persons with disabilities for support by social security insurance
- appropriate type and level of support

Definition of disability evaluation

*“Disability evaluation is the determination of the degree of a person’s physical, mental or emotional handicap. The **diagnosis** is applied to legal qualification for benefits and income under disability insurance and to eligibility for Social Security and workmen’s compensation benefits.”* (National Library of Medicine, 2013)

Different scenarios of medical work capacity evaluation

- (a) **Eligibility determination for disability benefits**
- (b) Assignment to return to work programs
- (c) Interactive process of (a) and (b)

Medical work capacity

In the return to work context

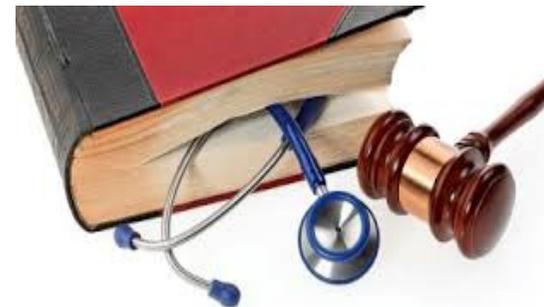
“(In)ability to work due to illness or injury in the light of influencing contextual factors”



In benefits eligibility determination

Legal concept with varying definitions worldwide

Usually: “(In)ability to work due to an illness or injury without considering the influence of contextual factors.”



Medical work capacity evaluation in Switzerland



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Legal definition of medical work (in)capacity

*“Refers to a total or partial inability to perform reasonable work in the former field of occupation **due to an impairment of the physical, mental or psychological health**. In case of long-term inability to work the reasonability of employment in other fields of occupations is being taken into consideration as well.” (ATSG, Article 6)*

Work reintegration before disability benefits

Biomedical approach

- Medical work capacity only reduced when functional limitations result from impairments and not from contextual factors
- Limitations have to be permanent and verifiable by physical or mental impairments

Usually performed by medical experts and documented in medical reports

Functioning assessments in medical work capacity evaluation

Core elements of the evaluations

- Assess ability to perform physical or mental work activities (e.g. lifting, focusing attention)

Purpose in medical work capacity evaluation

- Determination of functional capacity in a standardized environment without considering the influence of contextual factors
- Core information on the relation between impairments and functional limitations as the basis for determination of medical work capacity



Requirements for medical work capacity evaluation

Social security systems are supposed to provide **fair evaluations and decisions** on disability benefits eligibility

Table 1. Requirements for a fair disability evaluation process, their operationalization and potential solutions to achieve these requirements

Requirement	Operationalization	Potential solutions
Comparability	Interrater reliability, Content validity	Standardized documentation
Transparency	Comprehensibility, Plausibility	Comprehensive and accurate reporting of functioning
Practicability	Efficiency	Reporting of relevant aspects related to work functioning

Challenges of medical work capacity evaluation

Low transparency of reporting

Eligibility decisions based on diagnoses and not on functioning

- Impairment-oriented instead of disability-oriented
- Biomedical instead of biopsychosocial focus
- Diagnoses or impairments only loosely correlated with functional limitations at work (Loeser et al., 1997)
- Disability is the result of complex biopsychosocial interactions (WHO, 2001)



Transparent medical work capacity evaluation would require:

1. Comprehensive illustration of functioning and its determinants
2. Count away influence of environment from overall rating of medical work capacity

However:

- Unclear whether and how impairments or contextual factors affect work functioning
- Difficult to understand why claimants are considered able to work or not
- Judgment of the plausibility of work capacity decisions hampered

Challenges of medical work capacity evaluation

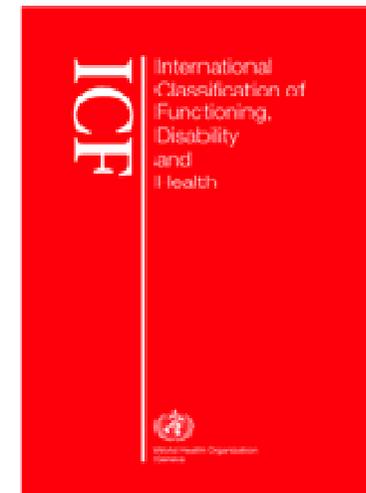
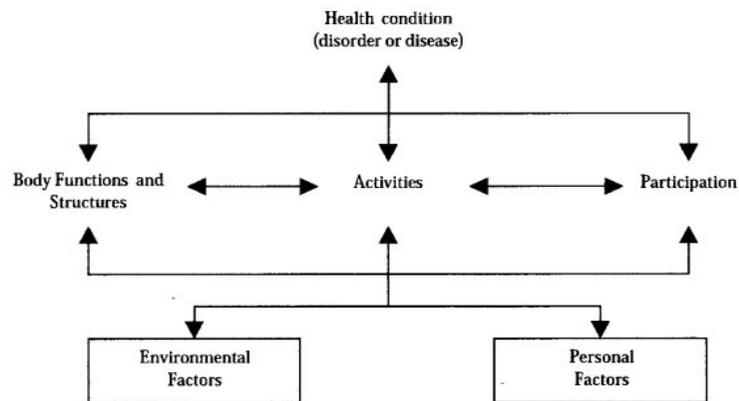
Poor comparability of work capacity decisions

Poor standardization of the documentation

- Lowers interrater reliability
- Affects comparability of work capacity decisions
- Raises issues regarding fairness of eligibility decisions process



THE ICF IN MEDICAL WORK CAPACITY EVALUATION



ICF framework - Transparency

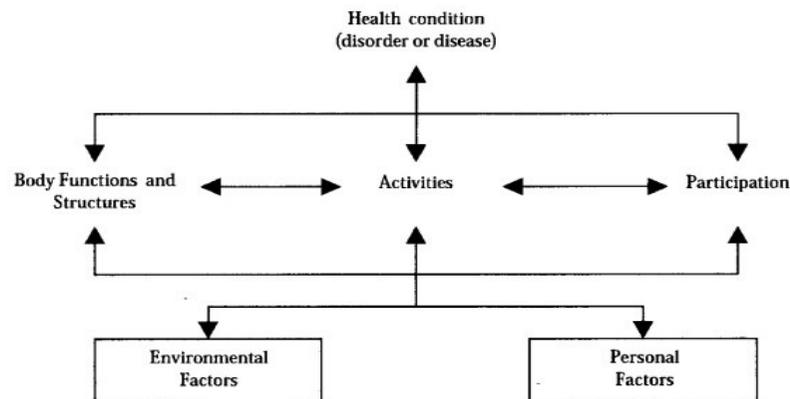
Holistic biopsychosocial conceptualization of functioning and disability

- Framework for comprehensive functioning documentation

Functioning as the interplay between different core components

- Illustration of relation between impairments, contextual factors and work functioning

⇒ **Comprehensible and transparent medical work capacity evaluations**



ICF taxonomy - Comparability

Worldwide standard for reporting on functioning and disability

Comprehensive spectrum of categories

- Including activities and participation as the core domains of functioning assessments

Common language for multidisciplinary evaluation process



⇒ **Standardized functioning documentation**

⇒ **Comparability of the evaluations in terms of interrater reliability**

ICF Core Sets - Practicability

ICF Core Set definition

“Short lists of ICF categories relevant to describe the lived experience of a person with a specific health condition or in a specific health or health-related setting.” (Biering-Sørensen et al., 2006; Grill et al., 2005)

- Developed by means of a consensus conference of experts



Brief ICF Core Sets

- Minimum number of categories to describe the most relevant aspects of functioning in persons with a specific health condition or in a specific setting

Comprehensive ICF Core Sets

- Additional categories to facilitate multidisciplinary assessments in the clinical context

35 ICF Core Sets developed so far

- Context-specific ICF Core Sets: vocational rehabilitation, social security (EUMASS)
- Condition-specific ICF Core Sets: e.g. low back pain, spinal cord injury, depression

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

ICF Core Sets - Practicability

ICF Core Sets make the ICF useable in clinical practice

- Preserve ICF in a useable mode and describe a person's functioning in a systematic way

⇒ **Practical standards for efficient documentation in medical work capacity evaluation**

**SELECTED STUDIES
ON THE ICF
IN MEDICAL WORK CAPACITY
EVALUATION**

PhD thesis: Potential applicability of the ICF and ICF Core Sets in medical work capacity evaluation

Objective

- To examine the potential applicability of the ICF and condition-specific ICF Core Sets as a basis for ensuring transparency and standardization in medical work capacity evaluation involving Swiss disability claimants with chronic pain

Main research question

- Do the ICF taxonomy and the ICF Core Sets capture the core content of medical work capacity evaluation on claimants with chronic pain disorders?

Schwegler 2014. The ICF – A way towards transparent and standardized medical work capacity evaluation on claimants with chronic pain. *PhD thesis*, University of Lucerne and Swiss Paraplegic Research (SPF), Nottwil (submitted).

Study 1 – Condition-specific ICF Core Sets in medical work capacity evaluation involving chronic pain

Condition-specific ICF Core Sets can be used for standardized reporting in medical work capacity evaluation involving chronic pain

Core content of the evaluations (functioning aspects and environmental factors) can be captured most effectively with a combination of ICF Core Sets for the index condition and major co-morbidities

- Index conditions: chronic widespread pain (CWP), low back pain (LBP)
- Major co-morbidities: depression (for CWP), obesity (for LBP)

Some content of the evaluations could not be classified with the ICF taxonomy

Schwegler et al., 2012. Aspects of functioning and contextual factors in medical work capacity evaluations of persons with chronic widespread pain and low back pain can be represented by a combination of applicable ICF Core Sets. *BMC Public Health* 12(1):1088.

Study 2 – Context-specific additions to the ICF for medical work capacity evaluation involving chronic pain

Context-specific additions to the ICF are needed for ensuring comprehensive documentation in medical work capacity evaluation involving chronic pain

Specification categories refer to

- Health condition-specific issues (e.g. pain quality and location)
- Work activities (e.g. overhead working)
- Personal factors (e.g. coping styles)

ICF taxonomy not geared toward accurate reporting of health condition-specific or context-specific issues

Schwegler et al., 2014. Towards comprehensive and transparent reporting: Context-specific additions to the ICF taxonomy for medical evaluations of work capacity involving claimants with chronic widespread pain and low back pain. *BMC Health Services Research* (Under review).

Study 3 – Personal factors in medical work capacity evaluation involving chronic widespread pain

Personal factors are not classified by the ICF, but commonly reported in and crucial features of medical work capacity evaluation

- Occupational, educational and biographical background
- Behavior patterns
- Personal emotions and cognitions

Explicit reporting of personal factors important for reasons of comprehensibility and transparency

- Possibility to formally object at the court against unwarranted decisions and statements

Personal factors can be reported by using alternative categorizations (e.g. Geyh et al., 2014; Grotkamp et al., 2014)

Schwegler et al., 2013. Toward transparent documentation in medical work capacity evaluations: Identifying personal factors in medical reports on Swiss disability claimants with chronic widespread pain. *International Journal of Rehabilitation Research* 36(4):298-307.

Study 4 – Towards an ICF-based standard for psychiatric evaluations on claimants with chronic widespread pain

List of ICF categories for psychiatric evaluations involving chronic widespread pain based on aspects commonly reported in psychiatric reports

- Personal factors and mental functions most common and relevant categories

Mental work activities are difficult to address with the ICF taxonomy

- Tasks requiring affective flexibility etc.
- Can be specified with the Mini ICF-APP, i.e. an ICF-based tools already applied for psychiatric evaluations in Switzerland

Starting point for an ICF-based standard in a particular discipline in the context of medical work capacity evaluation

Schwegler et al., 2014. Toward standardized documentation in psychiatric evaluations: Identifying functioning aspects and contextual factors in psychiatric reports on Swiss disability claimants with chronic widespread pain. *Swiss Medical Weekly* (In press).

ICF Core Sets for different scenarios in disability evaluation

Objective

- To illustrate the selection of ICF Core Sets for functioning assessments toward different scenarios in the context of disability evaluation

Scenarios

- (a) Assignment to return to work programs
- (b) Eligibility determination for benefits
- (c) Interactive process between (a) and (b)

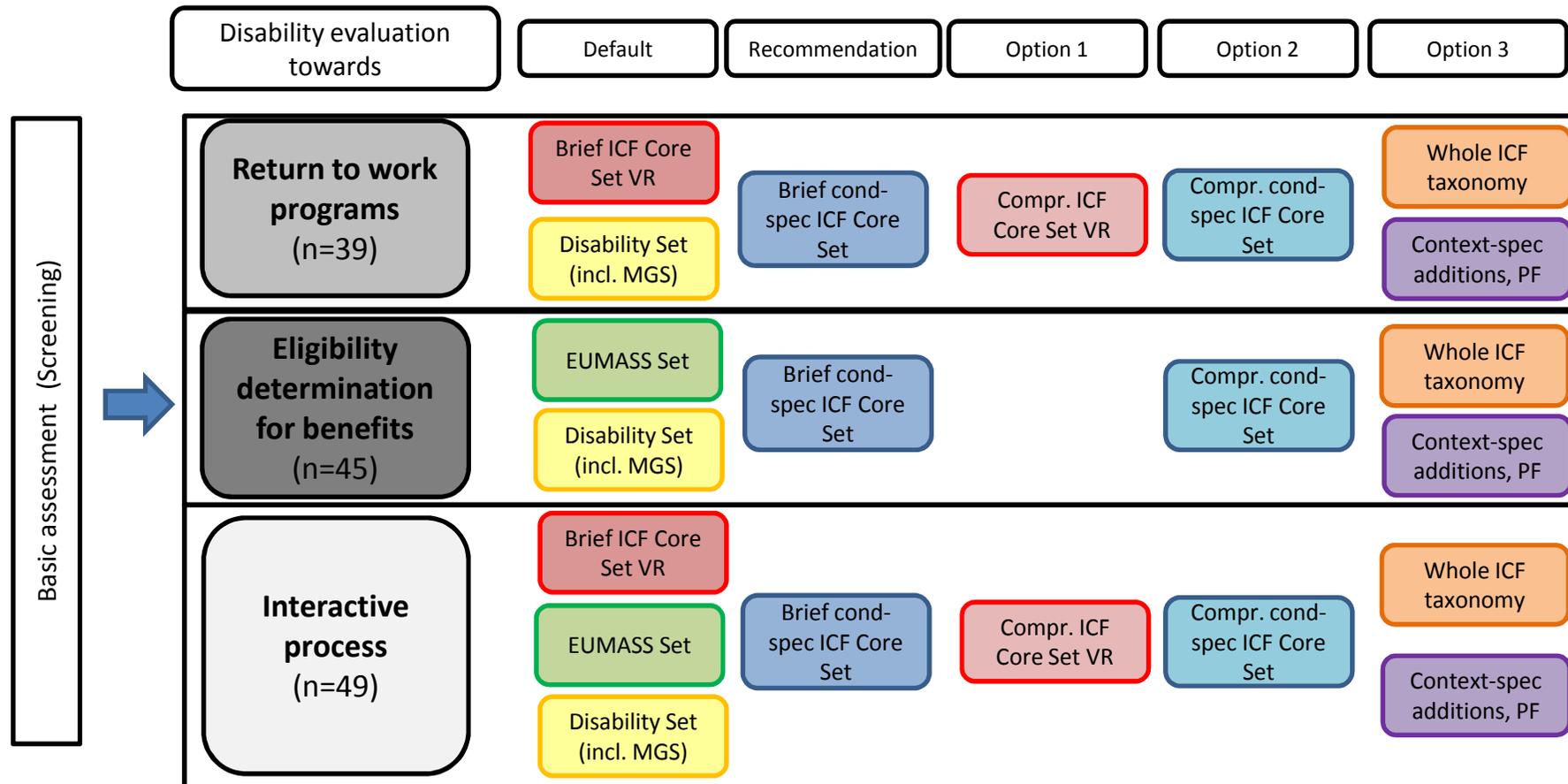
Generic and context-specific ICF Core Sets included in the analysis

- Disability Set (n=32; disability population)
- Minimal Generic Set (n=7; clinical and general population, included in Disability Set)
- EUMASS Set (n= 20; social security)
- ICF Core Sets for vocational rehabilitation (n=13 [brief]; n=90 [comprehensive])

Schwegler et al., 2014. Selection of ICF Core Sets for functioning assessment in disability evaluation towards the assignment to return to work programs and/or disability benefits. In: Escorpizo et al. (eds.) *Contemporary issues in vocational rehabilitation and disability evaluation: Application and implementation of the ICF*. Springer (In Press).

ICF Core Sets for different scenarios in disability evaluation

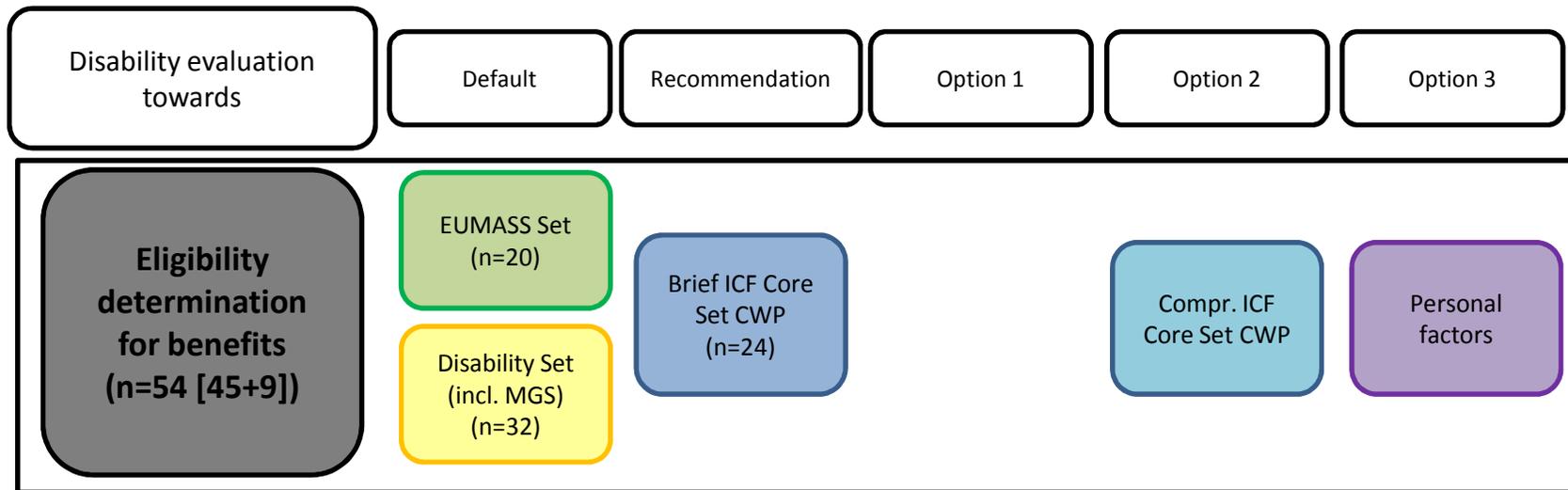
Combining context-specific and condition-specific ICF Core Sets in the scenarios



ICF Core Sets for different scenarios in disability evaluation

Case example – Scenario eligibility determination for benefits

- Claimant with chronic widespread pain (CWP)
- 54 categories to assess (EUMASS Set + Disability Set + Brief ICF Core Set CWP)
- Additional problem: *d415 Maintaining basic body position* - Comprehensive ICF Core Set for CWP
- Problematic *coping styles*: avoidance, substance use (Personal factors)





SUMMARY

-

PROMISES AND CHALLENGES OF USING ICF IN MEDICAL WORK CAPACITY EVALUATION

Promises of applying ICF



Transparent and standardized **documentation** of medical work capacity evaluation

ICF framework

- Comprehensive reporting of functioning as a basis for comprehensible evaluations
- Illustration of relations between work functioning and its determinants

ICF taxonomy

- Standardized reporting of functioning to enhance interrater reliability and comparability of work capacity decisions
- Common language for multidisciplinary disability evaluation process

ICF Core Sets

- Practical tools for standardized reporting
- Ideally: Combining context-specific and condition-specific ICF Core Sets and considering ICF Core Sets for co-morbidities

Promises of applying ICF



ICF builds an illuminating bridge between diagnosis and medical work capacity rating

- Comprehensive and standardized reporting of functioning and its determinants complementary to diagnoses



Case example – ICF in medical work capacity evaluation

Claimant A

- Health condition: Depression
- Motivation problems due to depression (b1301) - impairment
- Difficulties in performing daily routine (d230)
- Reduced work functioning (d850)

Claimant B

- Health condition: Adjustment disorder
- Difficult family situation (e310) - environmental factor
- Lack of work motivation – personal factor
- Difficulties in performing daily routine (d230)
- Reduced work functioning (d850)

Case example – ICF in medical work capacity evaluation

Claimant A

Disability benefits

Case example – ICF in medical work capacity evaluation

Claimant B

No disability benefits

ICF-based reporting – Functioning profiles

Comprehensible reporting of ICF-based information
=> Transparency

<http://www.icf-casestudies.org/>

<http://www.icf-core-sets.org/>

Table 1 — ICF Categorical Profile:

*ICF qualifiers range from 0 = no problem to 4 = complete problem in the components of body functions (b), body structures (s), activity and participation (d) and from -4 = complete barrier to +4 = complete facilitator for environmental factors. Among personal factors (pf), the signs + and - indicate to what extent a pf has a positive or negative influence on the individual's functioning.

*Specific cycle goals are indicated by CG1,2 and/or 3; SG = Service Program Goal, G = Global Goal

Assessment 6, August 2007 (2 months post-trauma)								
Global Goal: Independent living								0
Service-Program-Goal: Independence in daily living								1
Cycle goal 1: Mobility								1
Cycle goal 2: Self care								1
Cycle goal 3: Vocational reintegration								3
ICF categories								
		problem	ICF Qualifier				Goal relation	Goal Value
			0	1	2	3	4	
b260	Proprioceptive functions*							-
b265	Touch functions*							-
b270	Sensory functions related to temperature and other*							-
b280	Sensation of pain							CG1 0
b415	Blood vessel functions							0
b420	Blood pressure functions							CG1 1
b4450	Functions of the thoracic respiratory muscles*							-
b525	Defecation functions							-
b530	Weight maintenance functions							-
b550	Thermoregulation functions							-
b620	Urination functions							-
d640	Sexual functions							-
d710	Mobility of joint functions							CG1 0
d7300	Power of isolated muscles and muscle groups							CG1 0
d7303	Power of muscles on lower half of the body							-
d7305	Power of muscles of the trunk							CG1 1
d7353	Tone of muscles of lower half of body							CG1 1
d750	Motor reflex functions*							-
d755	Involuntary movement reaction functions*							CG1 1
d7601	Control of complex voluntary movements*							-
d7603	Supportive functions of arms							CG1 0
s810	Structure of areas of skin							0
d410	Changing basic body positions							CG1 1
d4153	Maintaining a sitting position							CG1 1
d420	Transferring oneself							CG1 1
d450	Walking							-
d4554	Swimming							CG1 -3
d460	Moving around in different locations							CG1 2
d465	Moving around using equipment							CG1 0
d4751	Driving motorized vehicles							CG1 2
d510	Washing oneself							CG2 0
d5200	Caring for skin							CG2 2
d5300	Regulating urination							-
d5301	Regulating defecation							CG2 2
d540	Dressing							CG2 0
d570	Looking after one's health							CG2 1
d850	Remunerative employment							CG3 3
d920	Recreation and leisure							-
		facilitator	barrier					
		4+ 3+ 2+ 1+ 0	1	2	3	4		
e1101	Drugs							SPG 2+
e1151	Assistive products...for personal use in daily living							CG1,2 4+
e1201	Assistive products...for personal...mobility							CG1 2+
e155	Design, construction... of buildings for private use							CG 2
e2250	Temperature							-
e310	Immediate family							-
e320	Friends							-
e355	Health professionals							-
e360	Social workers							-
e5800	Health services							-
		Influence						
		Positive	Neutral	Negative				
pf	Coping with disease							SPG 3+
pf	Acceptance of emotions							SPG 1
pf	Self competencies							SPG 1

ICF-based reporting – Functioning profiles

Core profile: Activities and participation categories most pertinent to work functioning

Separate profiles for body functions / structures and environmental / personal factors to illustrate their influence on work functioning

Comparing functioning profiles of claimants with a particular health condition to standard profiles for this health condition

- Testing fit between the individual and the standard profile
- Testing consistency of subjective claims and plausibility of work capacity decisions
- Ethics: Results only be interpreted if claimants fit standard profile

Challenges of applying ICF



Procedural challenges *beyond* functioning documentation

- Dynamic development of disability over time
- Causality between functional limitations, impairments and contextual factors
- Transfer of functional limitations into a percentage rating of medical work capacity

Anner et al., 2012. Evaluation of work disability and the international classification of functioning, disability and health: what to expect and what not. *BMC Public Health* 12:470.

Challenges *in* functioning documentation

- Lack of specificity of ICF categories for particular disciplines, contexts and conditions
=> Context-specific additions needed (e.g. work-related aspects, pain-related issues)
- ICF does not classify personal factors
=> Reporting by alternative categorizations for personal factors

Challenges of applying ICF



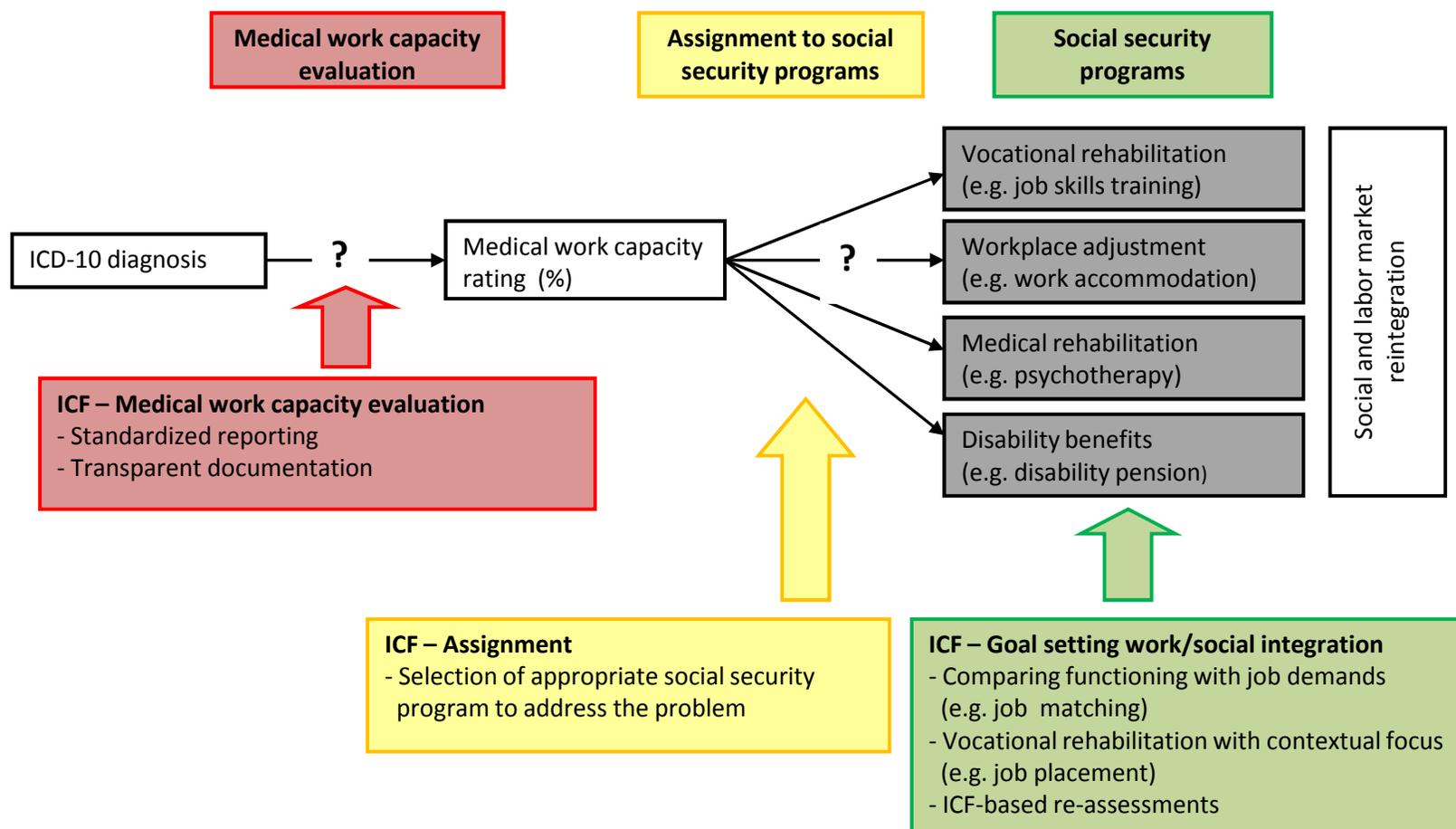
Operationalization and measurement of ICF categories

- ICF Core Sets only indicate what to measure
- ICF does currently not provide a proper operationalization of its categories
- Operationalization and measurement of ICF categories as a future research challenge
Current project at Swiss Paraplegic Research: Linking categories of validated measurement tools to the ICF

APPLICATION AND IMPLEMENTATION OF THE ICF IN SOCIAL SECURITY



Contribution of ICF-based reporting in social security systems



Implementing ICF in social security

Introducing a new procedure in social security usually leads to increased costs

ICF-based reporting leads to cost-savings in the long-term

- No change of eligibility criteria due to ICF-based reporting
- Transparent process promises a decrease in controversial legal proceedings

Importance of synergies between stakeholders in disability evaluation process

- Medical experts, claimants, insurers, judges/lawyers, politicians
- Integrating different ideas for an enhanced disability evaluation process as a basis for promising research in this context

Ensuring fair and effective social and work integration as the main goal of social security systems

- ICF-based reporting
 - ... improves coordination of the reintegration process
 - ... increases transparency and standardization as a basis for fair eligibility decisions



Thank you for your attention!

Urban Schwegler

Swiss Paraplegic Research

Guido A. Zächstrasse 4, 6207 Nottwil

urban.schwegler@paraplegie.ch

