



**Center of knowledge in work incapacity :
research and development for and with
social security**

**"EUMASS-meeting"
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**Decuman Saskia, PhD, Expert R&D, Department of Disability of
The National Institute of Health and Disability Insurance,
Brussels, Belgium**



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- The others are ...
- Q & A



Introduction (1)

- **NIHDI:**
 - Sickness benefits
 - Reintegration initiatives
 - Employees (white, blue collar workers) / unemployed AND independants
 - Not able to work due to private accident/ disease
 - Evaluation work incapacity (< 1 year versus > 1 year) + réintégration plan
 - Medical advisors (+ team)– sickness funds
- **Other regulations (other institutions responsible):**
 - civil servants
 - occupational diseases
 - work accidents



Introduction (2)

- **High rates of work incapacity:**
 - mental disorders
 - MSD
- **Complex**
 - Legislation (federal – regions)
 - Jobmatching (capacities – requirements)
 - Communication
- **⇒ Initiatives to stimulate RTW**
 - Progressive reintegration
 - Professional re-education



Introduction (3)

- **Offering tools: two levels**

- **Knowledge**

- Research
- Developing tools - guidelines
- Networking

- **Education:** implementation of the DM educational framework

- ⇒ **Development**



Center of knowledge

- **Aims**

- Develop knowledge on work incapacity and re-integration (large).
- Make this knowledge available.
- Develop guidelines based on this knowledge.
- Give input to stakeholders (for policy/education reasons, ...).
- (Inter)national networking

- **Tasks**

- Organize multidisciplinary working groups.
- Launch (& finance) studies (calls – study program).
- Follow-up of projects from third parties.
- Communicate results (incl. implementation support if necessary)



Center of knowledge

• Organisation

- Daily
 - Department of Disability Benefits of the NIHDI
 - Scientific coordinator – coordinating logistics
 - Support by multidisciplinary team (MD, OT, P, economist/datamanager)
- Formal
 - Meeting 3-4 times a year
 - Stakeholders:
 - NIHD
 - Insurance companies
 - Employers – trade unions
 - Universities
 - 'Experts'
 - Secretary = daily coordinator
 - President: member (may 2019)



Center of knowledge

• Figures

- Working groups:
 - Active: 4
 - eg. Classification, WD-FAB
 - On hold: 2
 - eg. CFS
 - Just launched: 2
 - eg. Development of study program
 - Finished
 - eg. directives for medical advisors on evaluating patients on work incapacity due to low back pain

• Studies



Center of knowledge

Status	Number
Finished	16
Last stage	0
Data collection	17
Literature study	0
Protocol has been approved, steering group and guidance committee are developed	0
Study waits approval	0
Protocol is in development	1



Focus on some studies

- **Development of a RTW (care) pathway for patients with burn-out**
 - Literature study – interviews/focus groups
 - RCT
 - GP
 - Coordinator
 - Diagnosis
 - Referral to psychologist
 - Psychologist
 - Confirmation
 - 10 sessions
 - Medical advisor/ occupational physician





Focus on some studies

- **Individual Placement and Support**
 - Place-and-then-train ; regular labor market (same conditions)
 - RCT
 - Medical advisor – regional employment services (IPS-coaches)
 - Psychological – psychiatric disorders (ICF)
 - RTW – quality of life – (family) income



Focus on some studies

- **Questionnaire to support “quickscan”**
 - Measure to support ‘new’ legislation
 - Combines
 - Questions selected by insurance companies
 - Questions selected through scientific study (literature – validity studies)
 - 8th week work incapacity





Focus on some studies

- **RTW for independants 'after' cancer**
 - Systematic literature review (lack of knowledge)
 - Individual interviews
 - Cohort study – longitudinal
 - Barriers – facilitators RTW



ICF – case management - Lombalgie

- **Perception of medical advisors/HP's on the added value of the ICF in the evaluation of work incapacity or in RTW-trajectories**
 - Field study
 - “Normal” consultation by medical advisor
 - Assessment using ICF by HP
 - Measuring perception before and after ICF-assessment.





ICF – case management - Lombalgie

- **Chronic pain**

- 4 studies – 1 steering group
- Each own focus: case management, screening tool, '10' steps to successful RTW, CBT/SE
- (policy) recommendations for all pain centres



Focus on some studies

- **WD-FAB**

- EUMASS
- USA
- 300 questions - CAT
- ICF: activity
- Belgian implementation – testing
 - Working group
 - Slides Mr T Brunois (OT, MSc) & Mr Chan

Why Build a New Disability Instrument?

- ❑ Provides comprehensive & feasible assessment for use on a large scale
- ❑ Computer-based: much more efficient than traditional questionnaires
- ❑ User friendly: reduces irrelevant questions
- ❑ Can provide required accuracy & precision
- ❑ Allows for identification of aberrant response patterns to protect against gaming
- ❑ Instrument can be replenished & improved

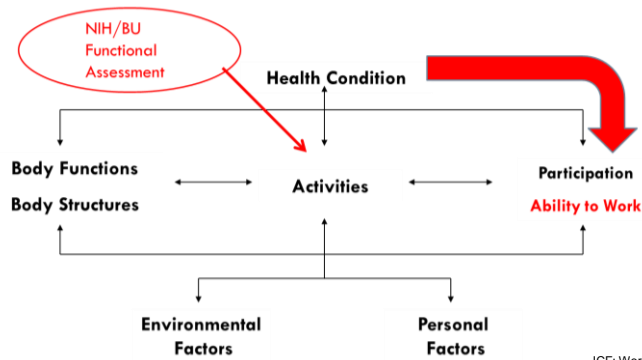
Framing the Problem

- ❑ Historical focus: work disability = physical and mental impairments
- ❑ Diagnosis and impairment alone are frequently poor predictors of work disability



- ❑ Contemporary disability models such as the ICF depict disability as the gap between an individual's functional capabilities and environmental demands

The ICF



Item Response Theory (IRT) Methodology

- Questions are chosen to cover the range of function in one dimension (e.g., mobility)
- Each question provides different information about the domain of functioning
- Scores are calibrated to an equal interval score
- IRT scales provide the platform for more efficient computer adaptive test (CAT) administration



CAT Outcome Measurement

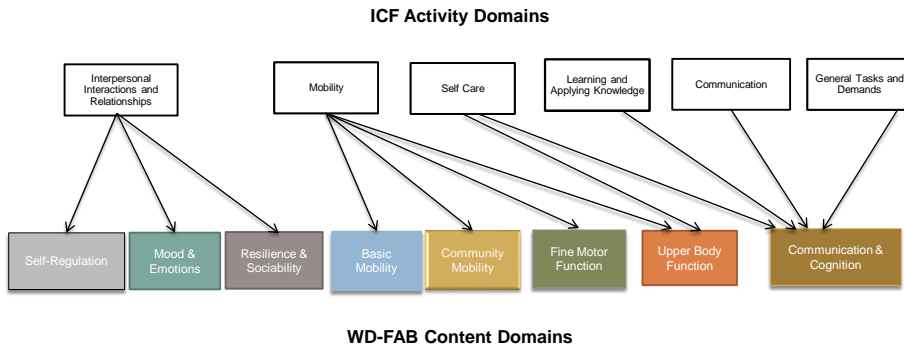


- Items selected from a large IRT calibrated 'question bank'
- A computerized algorithm selects items based on how a person responds to previous items
- Provides for efficient measurement without loss of precision
- Desired level of precision can be obtained using the minimal possible number of questions

Scientifically Rigorous Development Process

- Used the *ICF* to conceptualize function
- Extensive literature review
- Focus groups with providers & individuals with disability
- Met with content experts
- Performed Cognitive Testing of all items to check clarity & comprehension
- Administered items to user groups

ICF Content Coverage in WD-FAB

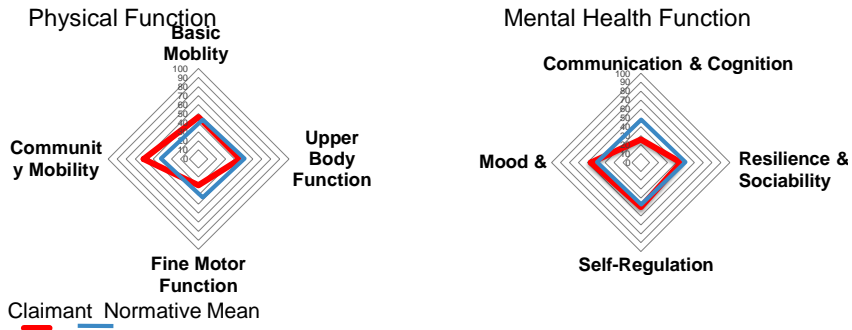


Sample WD-FAB Items

WD-FAB Scale	Item Content	Response Scale	Activity Measured
Basic Mobility	Are you able to bend to look under a car?	Ability (Yes, without difficulty; Unable to do)	Bending
Upper Body Function	Are you able to push open a heavy door?	Ability (Yes, without difficulty; Unable to do)	Pushing
Fine Motor Function	Are you able to remove a gas cap from a car?	Ability (Yes, without difficulty; Unable to do)	Turning or twisting the hands or arms
Community Mobility	Are you able to get on to a bus or train?	Ability (Yes, without difficulty; Unable to do)	Using public motorized transportation
Communication & Cognition	I have trouble putting my thoughts together.	Agreement (Strongly agree; Strongly disagree)	Thinking
Self-Regulation	I have difficulty following the rules.	Agreement (Strongly agree; Strongly disagree)	Interacting according to social rules
Self-Regulation	In the past 7 days I had trouble controlling my temper.	Frequency (Never; Always)	Regulation of emotion

WD-FAB Functional Profiles

Claimant vs. Normative Population



Validation of the WD-FAB

Reliability and Validity of the WD-FAB

- Key findings:
 - The Physical Function and Mental Health domains demonstrated good test-retest reliability in adults with work-disability and general adult samples
 - Studies revealed minimal missing data, substantial score variation, absence of clustering at the floor and ceiling
 - Measurement accuracy was very high for the Physical Function domain; Mental Health measures demonstrated more variability
 - Convergent validity correlations for the median Physical and Mental Health FAB domains with legacy measures were moderate to strong

WD-FAB Strengths

- WD-FAB uses computer adaptive testing to select only those questions most relevant to the respondent
 - Low respondent burden
- Efficient (<2 min/scale, 15-20 minutes total)
 - Use of IRT/CAT methods comprehensively assesses functional activity
- IRT/CAT instruments have been successfully translated into other languages

WD-FAB Strengths cont.

- User friendly
 - ▣ Multiple administration modes depending on user needs (in-person, phone, web-based, paper/pencil via short forms)
- Track functional changes over time
- Item pools are not static and may be replenished and improved
- Provides a standardized and consistent approach to the assessment of function
- Instrument precision may be adjusted
- Thresholds for minimal detectable differences have been established

WD-FAB Limitation

- WD-FAB outcomes should be linked to workplace demand
 - ▣ WD-FAB measures at the activity level, according to WHO's ICF
 - ▣ Work disability must link activity (whole person functioning) to participation (work)
 - No known gold standard
 - A challenge confronted by all social security programs
 - Potential approach to this key issue
 - WD-FAB could be used to develop functional profiles by occupation

WD-FAB Limitation

□ Gaming/Manipulation

- No way to eliminate this
- Hard to memorize 300 questions
- Can add effort measures
- Can add "nonsense" questions
- Can add unscored "draft" questions
- Those that do not converge or have abnormal response patterns can be invalidated of subject to additional review.
- **NOTE: Scores are meant to supplement, not replace clinical judgement.**

WD-FAB Demonstration:

<https://ysurvey.alphce.com/>



Focus on some studies

- **Literature**
 - Publications : Chan et al (develop + board)
 - Not necessary a problem but keep in mind
- **Support EC**
 - Translation
 - Juridical aspects
 - Collaboration with USA
 - Privacy – intellectual property
- **Sharing knowledge between EUMASS-members (Germany)**



Focus on some studies

- Translation + face/content validity
- Algorithm: indepth analyses + discussion on development of software
- Parallel: agreement with US (extended confidential agreement OR separate document)
 - Legal aspects on 'right to use' for research etc.
 - After final validation, before publication or implementation: check by US and decision on 'WD-FAB' or NOT. In both cases: we can proceed



And the others are...

- Barometer
- “TRIO”
- Link between work disability – unemployment – (early) retirement
- DCM – member of the rehabilitation team
- ROI rehabilitation with focus on RTW – added value ICF
- “Feared back”
- ROI patient expert as CRTWC
- PBE cancer and RTW
- ...



Conclusions

- In line with other countries: ↑ workdisability (due to MSD + mental disorders)
- Legal initiatives for reintegration already present + continuously in further development
- Specific research on this topic is emerging
- Upcoming years: focus on implementation (and evaluation)



saskia.decuman@riziv.fgov.be