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Lighthouse Project Hand
Using the ICF Core Sets for hand conditions in clinical routine - implementation in Clinical Information Systems

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WHO/CTS to insert

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Abstract The "Lighthouse Project Hand" aims to operationalize and implement the ICF Core Sets for hand conditions as a monitoring tool in the treatment and rehabilitation of persons with hand conditions in the institutions of the statutory accident insurance in Germany. This poster informs about the implementation of the ICF Core Sets for hand conditions in Clinical Information Systems, which is one task within the project.

Introduction

An ICF-based assessment addressing the ICF categories of the *Brief ICF Core Set for hand conditions* (*Rudolf et al, 2012*) was defined following a multi-step decision-making process (systematic literature reviews, expert survey, consensus conference). This assessment aims to systematically collect standardized data of functioning of patients with any kind of hand injuries and hand diseases in clinical practice along the continuum of care. It is based on the following two-step assessment procedure:

-1- Screening
8 clinical tests, 34 screening questions and 22 medical examinations/observations

-2- Detailed clinical assessment
Specific clinical tests if indicated based on the screening.

Example: b265 Touch function

Ten Test   Moberg Test

Additionally, the DASH (Disability of the arm, shoulder and hand) questionnaire (*Hudak et al, 1996*) is being used to address the patient perspective.

The ICF-based assessment tool was already tested in a cross-sectional multicenter study involving patients with hand injuries and hand disorders (N=294).

For its use in clinical routine an electronic tool (e-tool) is being developed and implemented in the Clinical Information Systems (CIS; *medico//s*; Siemens Healthcare, Medical Solutions) of the collaborating hospitals.

BUKH Hamburg
UKB Berlin
UK RUB Bergmannsheil
BG-Kliniken Bergmannstrost Halle
BGU Duisburg
Rhön-Klinikum Bad Neustadt
BGU Frankfurt
BG-Klinik Ludwigshafen
BG-Klinik Tübingen
BGU Murnau

References

Hudak PL, Amadio PC, Bombardier C. Development of an upper extremity outcome measure: the DASH (disabilities of the arm, shoulder and hand). American Journal of Industrial Medicine, 1996: 29(6): 602-608.

Rudolf KD, Kus S, Chung KC, Johnston M, LeBlanc A, Cieza A. Development of the international classification of functioning, disability and health core sets for hand conditions – results of the world health organization international consensus process. Disability & Rehabilitation 2012; 34(8):681-693.

Methods

The e-tool will be tested in a longitudinal multi-center study involving at least 330 patients with the following diagnoses:
- Fracture of finger(s) (S62.6, S62.7)
- Traumatic amputation of finger(s) (S68.0, S68.1, S68.2)
- Injury of flexor tendon (S66.0, S66.1)
- Arthrosis of first carpometacarpal joint (M18)
- Palmar fascial fibromatosis (M72.0)
- Algoneurodystrophy (M89.0)
- Allergic contact dermatitis (L23, L24, L25).

The e-tool is structured as follows:

Start page
- Shows important patient data (linkage with CIS & medical records)
- Guides the ICF-based assessment
- Provides an overview on functioning status using a predefined algorithm based on the results of the screening

🟢 No problem
🟡 Mild problem ⎫ Detailed clinical assessment
🔴 Severe problem ⎬ indicated
⚪ *Screening not performed*

- Provides the possibility to request report on functioning status (standardized print version).

Functioning modules
- Records information on impaired body structures using hand graphics
- Records data of ICF-based assessment (screening and detailed clinical assessment) along the continuum of care (body functions, activities and participation)
- Provides information on changes in functioning over time.
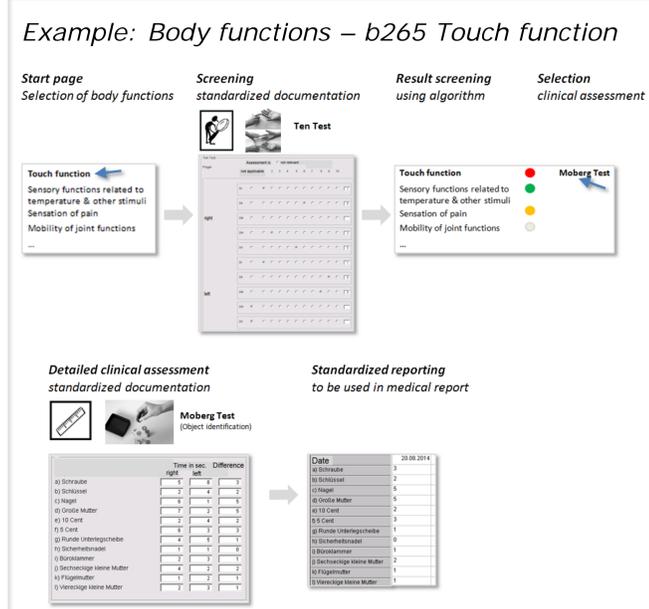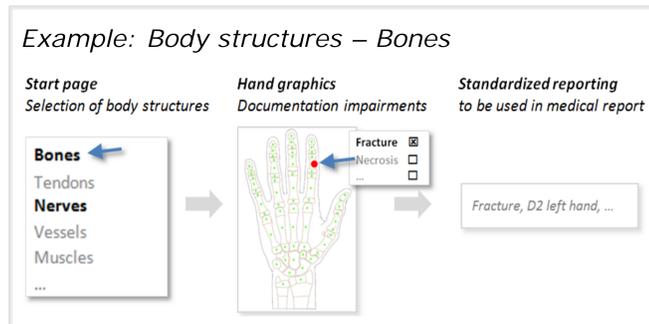
Environmental factors module
- records data of Environmental factors (e.g., medication, social support, rehabilitation needs)

In addition, there are other modules to record data or use data of CIS in a standardized way:

- Anamnesis & case history
- Treatment procedures (acute, post-acute, rehabilitative)

Results – ongoing work

The implementation of the **Functioning modules** in the e-tool was established as follows:

Example: Body structures – Bones

Start page
Selection of body structures
Bones / Tendons / **Nerves** / Vessels / Muscles / ...

Hand graphics
Documentation impairments
Fracture ☒ / Necrosis ☐

Standardized reporting
to be used in medical report
Fracture, D2 left hand, ...

Example: Body functions – b265 Touch function

Start page
Selection of body functions
Touch function
Sensory functions related to temperature & other stimuli
Sensation of pain
Mobility of joint functions

Screening
standardized documentation
Ten Test

Result screening
using algorithm
Touch function
Sensory functions related to temperature & other stimuli
Sensation of pain
Mobility of joint functions

Selection
clinical assessment
Moberg Test

Detailed clinical assessment
standardized documentation
Moberg Test
(Object identification)

Standardized reporting
to be used in medical report

Participants of this study will be followed up for 24 weeks along the continuum of care using the e-tool. Data collection will start in Autumn 2014 in 11 study sides.

Conclusion

The longitudinal study will be the starting point to use the e-tool in clinical routine for patients with any kind of hand injuries and diseases along the continuum of care.

Acknowledgements or Notes

ICF Implementation
Lighthouse Project Hand

BG Berufsgenossenschaftliches Unfallkrankenhaus Hamburg

LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

DGUV Deutsche Gesetzliche Unfallversicherung