

# How is my patient doing?

## SUPPORTING PATIENT-CENTERED CARE WITH THE USE OF AN OUTCOMES DASHBOARD

Increasingly clinicians collect patient-reported questionnaires and clinician-reported measures to ensure patient-centered care. However, it is difficult to visualize all this data to support clinicians in their daily consultations.<sup>1-3</sup>

We follow the International Consortium Health Outcome Measures (ICHOM) tracks for patients with hand and wrist problems.<sup>4</sup> This includes patient-reported outcome measures such as the Michigan Hand Outcome Questionnaire (MHQ) or Patient Specific Functional Scale (PSFS) and measurements taken by therapists such as strength or range of motion. Clinicians assign these tracks in the electronic patient record through which online questionnaires are sent to patients. We designed a dashboard for hand therapists and surgeons to provide meaningful data in a simple and compact overview. Color coding (red -orange- green) highlights values that deviate from the expected value based on patient data. This highlights if there is little room for improvement or if there are risk factors that imply potential poor recovery. This dashboard is integrated with our electronic patient record system and consists of three different sections.

### What matters to the patient?

The first section displays the patient-reported request for help, their personal goals, pain and

function scores, and the results from a screening instrument for psychological profile, such as patient concerns and catastrophizing. With this information, hand therapists can tailor care to individual needs, such as the patient's goal of returning to sports (Figure 1).

Patient Characteristics	
Help	After a collision half a year ago, my left wrist is still bothering me
Goal	To exercise again
Injured Side	Left
Dominant Side	Right
Work	I work in a supermarket
Hobby/ sport	Tennis, painting
Personal Injury Insurance	No
General Health - smoking	Yes, Passive smoke
BMI	20
Medical History	None
Screening	
Pain Level	5
Pain at rest	4
Function	1
Catastrophizing Pain	To a slight degree
Anxiety	Several days

Figure 1. Patient characteristics with information about the patient-reported request for help, their personal goal, hobbies/sport, and medical history. The second part shows results from a screening instrument for psychological profile.

This makes the conversation more focused and personalized. Clinicians can also manage the expectations of patients in case the patient wants to achieve something that may not be attainable. When the pain score is very high, the therapist can ask the patient about the influence of the pain on daily life. Or, if the patient is very worried, the conversation can be started by saying: 'I see that you are very concerned. Can you tell me more about this?'

### How is the patient doing?

The second section shows patient-reported and clinician-reported outcome measures to evaluate the patient's progress over time. For example, suppose strength is still reduced compared to preoperatively (Figure 2), then the therapist can discuss the outcome with the patient and adjust the therapy, focusing more on strength training. Patients' results are also plotted against the results of all previous patients for reference, helping therapists put the recovery phase in a broader perspective. Patients often ask: 'I still have much pain, is that normal?' This normative information can motivate or reassure patients about their treatment progress.



Figure 2. Patient-reported outcome measures to evaluate the patient's progress over time. Data presented on admission and at three months. The goal for hand therapy is displayed; in this example, the patient's goal is to return to her sport (tennis). Progress over time is measured at admission (intake), three months and (depending from the measurement track) twelve months.

### What outcomes can be expected?

The third section of the dashboard shows predicted outcomes for the individual patient. Based on our extensive outcomes database, we have developed prediction models that allow us to calculate the probability that a clinically meaningful improvement is reached. For important outcomes such as pain, return to work, and hand function, these probabilities are adjusted based on patient-specific characteristics such as age, gender, pain on admission, the severity of illness, and comorbidity<sup>5</sup>. These individual predictions can help manage expectations and may be used during shared decision-making to ensure the most appropriate treatment. The example illustrated in Figure 3 shows this patient's chance of a relevant pain reduction at rest is estimated at 69%.

### Future plans

We are currently assessing how the dashboard is used in practice and its effect on everyday service delivery, both from the clinician and patient perspectives. In particular, we are studying how clinicians use the dashboard, whether it supports discussing expectations, aids decision-making and goal setting, and facilitates treatment evaluation.

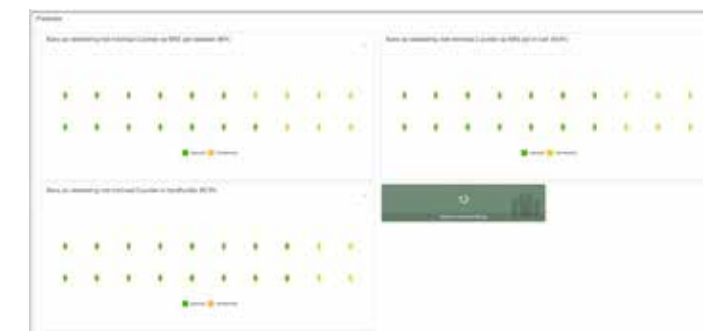


Figure 3. Personalized prediction models for expected pain, functionality, and return to work. In the example, you see that the return to work for this patient is estimated at twelve weeks. The green figures show the probability of someone improving at least 2 points on the NRS score for pain. The yellow ones indicate the probability that there will be no such improvement.

And from the patient side, what do they think about seeing outcomes presented in the dashboard and whether the information helps them in decision-making.

### References

1. Selles RW, Wouters RM, Poelstra R, van der Oest MJW, Porsius JT, Hovius SER, Moojen TM, van Kooij Y, Pennehouat PY, van Huis R, Vermeulen GM, Feitz R, Slijper HP; Hand-Wrist Study Group. Routine Health Outcome Measurement: Development, Design, and Implementation of the Hand and Wrist Cohort. *Plast Reconstr Surg*. 2020 Aug;146(2):343-354.
2. Feitz R, van Kooij YE, Ter Stege MHP, van der Oest MJW, Souer JS, Wouters RM, Slijper HP, Selles RW, Hovius SER; Hand-Wrist Study Group. Closing the loop: a 10-year experience with routine outcome measurements to improve treatment in hand surgery. *EFORT Open Rev*. 2021 Jun 28;6(6):439-450. doi: 10.1302/2058-5241.6.210012. eCollection 2021 Jun. PMID: 34267934 Free PMC article.
3. Mou D, Sisodia RC, Castillo-Angeles M, Ladin K, Bergmark RW, Pusic AL, Del Carmen MG, Heng M. The Surgeon's Perceived Value of Patient-reported Outcome Measures (PROMs): An Exploratory Qualitative Study of 5 Different Surgical Subspecialties. *Ann Surg*. 2022 Mar 1;275(3):500-505. doi: 10.1097/SLA.0000000000004253. PMID: 32657935.
4. Robbert M. Wouters, PhD, Adedayo O. Jobi-Odeneye, MSc, Alethse de la Torre, MD, PhD, Andria Joseph, MSc, the ICHOM Hand and Wrist Working Group, Steven E. R. Hovius, MD, PhD. A Standard Set for Outcome Measurement in Patients With Hand and Wrist Conditions: Consensus by the International Consortium for Health Outcomes Measurement Hand and Wrist Working Group. *J Hand Surg Am* 2021 Oct; 46: 841-855.
5. Hoogendam, Lisa BSc; Bakx, Jeanne A. C.; Souer, J. Sebastiaan; Slijper, Harm P.; Andrinopoulou,

Eleni-Rosalina; Selles, Ruud W.; Hand Wrist Study Group. Predicting Clinically Relevant Patient-Reported Symptom Improvement After Carpal Tunnel Release. *Neurosurgery*: January 2022; Volume 90; Issue 1:106-113, doi: 10.1227/NEU.0000000000001749



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**The dashboard development was a team effort from hand surgeons, hand therapists, patients, IT specialists, and researchers from Xpert Clinics, Xpert Handtherapie and Erasmus MC.**



### IFSHT NEWSLETTER - REACH VOLUME 2, NO. 3

IFSHT February 2023

The IFSHT is excited to present the third issue of the second volume of the IFSHT newsletter which is available here:

[https://ifsht.org/publications/?publications\\_category=29](https://ifsht.org/publications/?publications_category=29)

The publication aims to collate Research, Education, Achievement and Clinicians in Hand and upper limb therapy around the world.

This edition of REACH contains our last segment in the Levels of Evidence section, research highlights and clinical pearls. The Spotlight On! Section features the Swiss Society of Hand Rehabilitation and we also introduce our new "Volunteer" section, showcasing fabulous work by therapists and surgeons in the Ukraine. The issue also features some of the recipients of the prestigious Lifetime Achievement Awards at the Triennial Congress including Jennifer (Jenny) Ball and Sandra Artzberger.

We call on hand and upper limb therapy clinicians and researchers to submit any contributions for consideration to: [informationofficer@ifsht.org](mailto:informationofficer@ifsht.org).



### UPCOMING EVENTS



The FESSH-EFSHT 2023 Congress is being held from 10th -13th May 2023 in Rimini, Italy. Please follow the link for more details: <https://fessh-efsht2023.com/>

#### Other Recent National & International Events & Congresses

On 23rd February, the South African Society of Hand Therapists (SASHT) and The University of the Witwatersrand Occupational Therapy Department are holding a Consensus Development Conference (CDC) that will contribute towards strengthening hand-injury care services in the South African Public Sector. Please follow the below link for details: <https://www.quicket.co.za/events/199694-consensus-development-conference>