

# An Abstraction Layer for Assessments in Physiotherapy – The Brandenburg Patient Profile for Health Services Research

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## Problem

There is a great need to establish measurements and methods for analyzing the effects of physiotherapy under the conditions of Health Services research. This requires a follow up of many patients in hospitals as well as in ambulant services to proof the potency of physiotherapeutic interventions. There is a great variety of assessments for detecting any kind of specific changes but it seems to be very difficult to find out if these changes have a positive impact on the daily routine of the patient.

## Solution

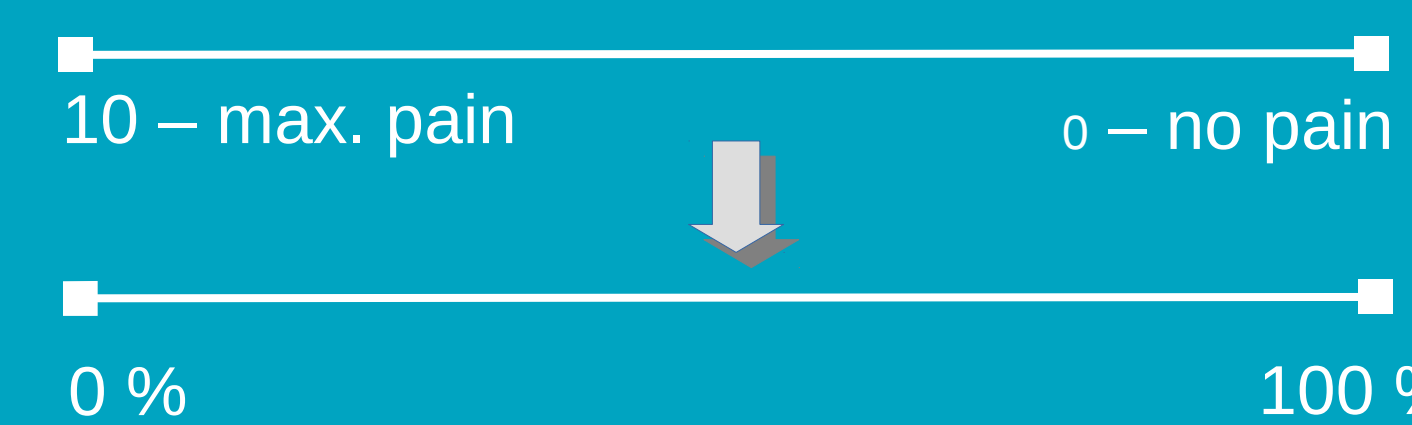
Delphi-Method: 25 physiotherapists  
**What are the general aims of physiotherapeutic interventions?**

- Reduction of pain
- Improvement of daily activities
- Improvement of quality of life
- Improvement of tone
- Improvement of muscle power
- Improvement of range of motion
- Improvement of coordination

Brandenburg Patient Profile			
Age:			
Gender/Sex:			
No. of prescriptions:			
No. of treatments per prescription:			
ICD-10:			
Domain	Assessment at beginning	Assessment at the end	Used assessment
Pain			
Activities of Daily Living			
Quality of Live, wellbeing			
Tonus			
Muscle power			
Range of Motion			
Coordination			
Therapeutic aims (patient view)			
Aims achieved?			

### Examples of normalisation transformation

Pain-Scale: Numeric Rate Scale



Range of Motion: e.g. hip ext/flex 10-0-130°

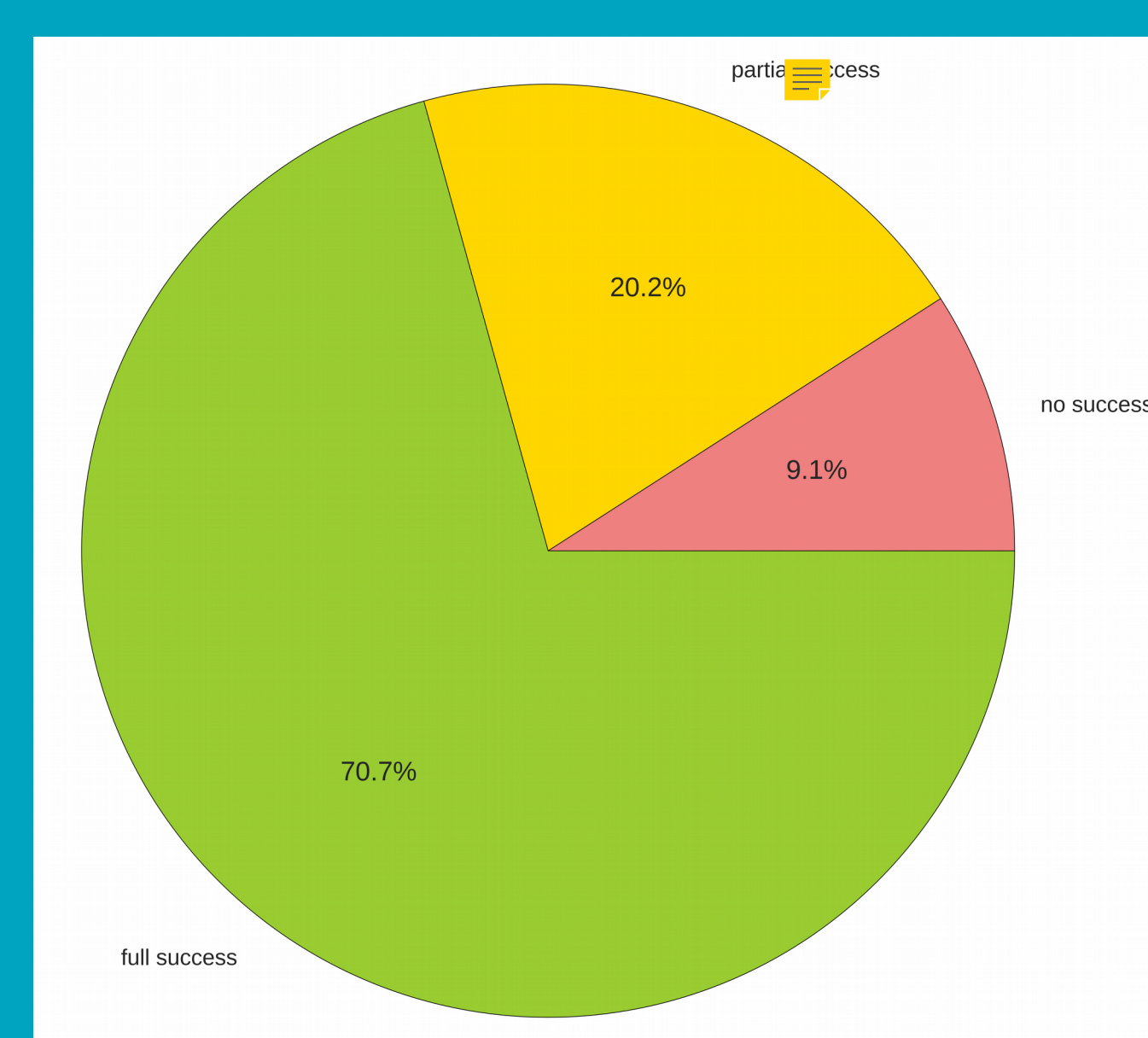
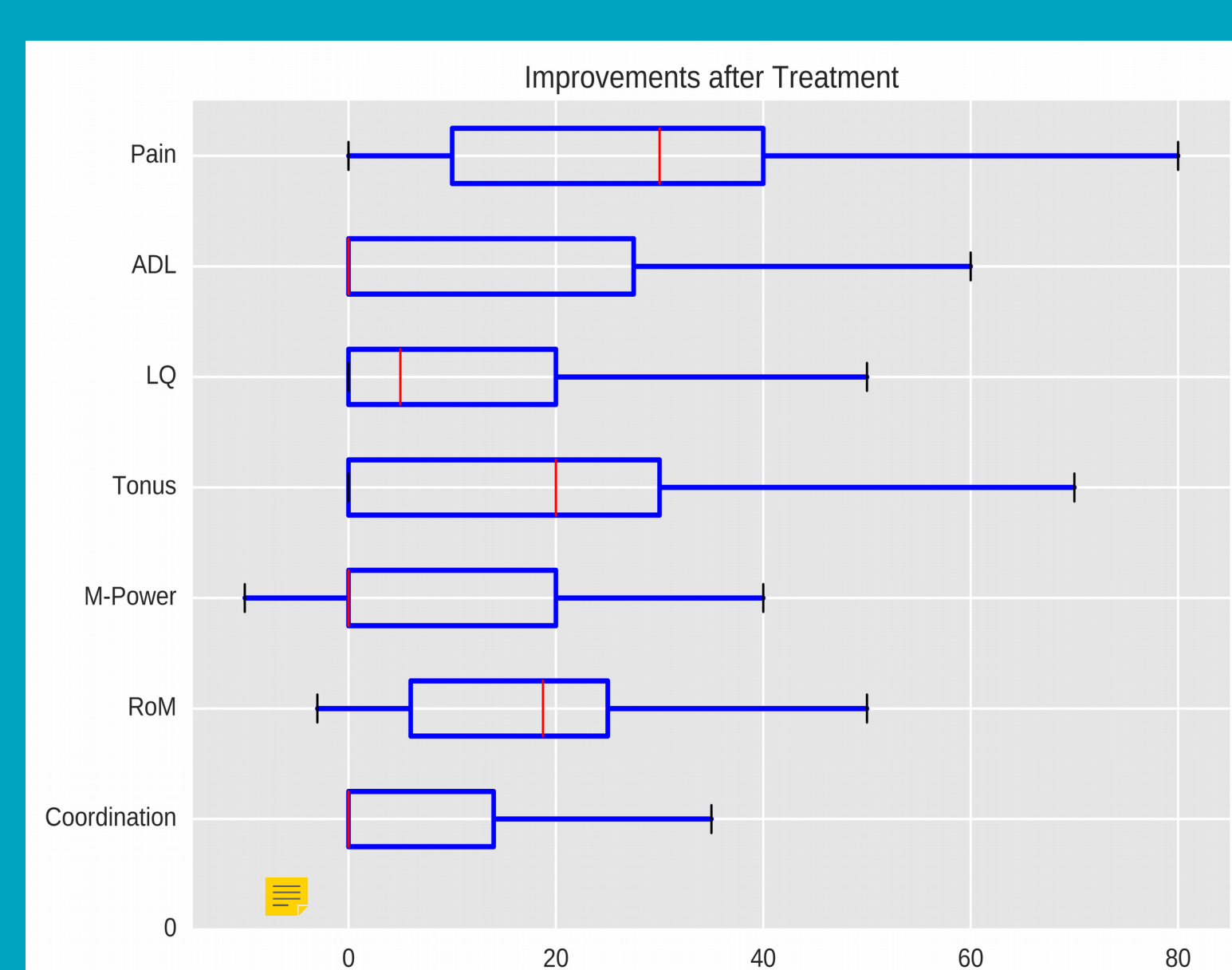
$$10 + 130 = 140 = 100\%$$

To use this Patient Profile we developed a survey including information about the ICD-10 Code, age, sex, amount of therapeutic interventions and the aim of therapeutic intervention from patient's viewpoint. The physiotherapist uses specific assessments at the beginning and at the end of a therapy.

## Study

Brandenburg Patient Profile			
Age:	56 years		
Gender/Sex:	Female		
No. of prescriptions:	1		
No. of treatments per prescription:	6		
ICD-10:	M54.17		
Domain	Assessment at beginning	Assessment at the end	Used assessment
Pain	5	3	NRS_max_10
Activities of Daily Living	14	20	Tweekit_max_28
Quality of Live, wellbeing	4	7	NRS_wellbeing_max_10
Tonus	3	1+	NRS_max_4 (0=normal)
Muscle power	3	4	MST_max_5
Range of Motion	0-0-70	0-0-90	ROM_HIP_ext-flex: 10-0-120
Coordination	45"	20"	Unterberger
Therapeutic aims (patient view)			
Better walking, reduction of pain			
Aims achieved?			
Yes (144)			

Collection of 99 surveys about the treatment (from hospital, rehabilitation center and ambulant services).



### Evaluation of data:

- Distribution of improvements
- Distribution of treated diseases
- Relation of diseases/problems
- Relation of diseases/satisfaction

The usage of BPP allows a broader analysis and an easier monitoring of physiotherapeutic treatment in hospital and ambulant services. This helps to proof not only the effects but also the success and misses in physiotherapy.