

neuro **S**tatus SMART**C**ARE

Neurostatus-SMARTCARE in comparison to standard Neurostatus-EDSS® – a prospective Swiss multicenter randomized cross-over study

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Background

- The **barriers** to accessing Multiple Sclerosis (MS) healthcare are wide-ranging and complex and affect both clinical practice and clinical trials settings
- COVID-19 pandemic exacerbated limitations and acted as booster of changes and innovations
- Neurostatus-eEDSS is the standard assessment deployed in MS randomized clinical trials, typically serving as the primary endpoint.
- **Neurostatus-SMARTCARE** aims to reduce and smooth some of the disparities in accessing MS healthcare (clinical trial setting) by increasing the number of Non-Neurologist Health Care Professionals (HCPs) licensed to perform the Neurostatus-(e)EDSS
- Neurostatus-SMARTCARE is developed to be used in Home-setting



Objectives

NEUROSTATUS SCORING

Scoring Sheet for a standardised, quantified neurological examination and assessment of Kurtzke's Functional Systems and Expanded Disability Status Scale in Multiple Sclerosis

STUDY NAME		SYNOPSIS	
PERSONAL INFORMATION		1. Visual	Ambulation Score
Patient		2. Brainstem	
Date of Birth (04-Jun-1980)		3. Pyramidal	EDSS Step
Centre Nr/Country		4. Cerebellar	
Name of EDSS rater		5. Sensory	
Date of Examination		6. Bowel/Bladder	Signature
		7. Cerebral	
1. VISUAL (OPTIC) FUNCTIONS			
OPTIC FUNCTIONS		OD	OS
Visual acuity	<input type="checkbox"/> CC <input type="checkbox"/> SC		
Visual fields			
2. BRAINSTEM FUNCTIONS			
CRANIAL NERVE EXAMINATION		Hearing loss	
Extracocular movements (EOM) impairment		Dysarthria	
Nystagmus		Dysphagia	
Trigeminal damage		Other cranial nerve functions	
Facial weakness		FUNCTIONAL SYSTEM SCORE	
3. PYRAMIDAL FUNCTIONS			
REFLEXES		R	> < L
Biceps			
Triceps			
Brachioradialis			
Knee			
Ankle			
Plantar response			
Cutaneous reflexes			
* Palmomental reflex			
LIMB STRENGTH		R	L
Deltoid			
Biceps			
Triceps			
Wrist/finger flexors			
Wrist/finger extensors			
Hip flexors			
Knee flexors			
		Knee extensors	
		Plantar flexion (feet/toes)	
		Dorsiflexion (feet/toes)	
		* Position test UE, pronation	
		* Position test UE, downward drift	
		* Position test LE, sinking	
		* Able to lift only one leg at a time (grade in ?)	
		* Walking on heels	
		* Walking on toes	
		* Hopping on one foot	
SPASTICITY			
Arms			
Legs			
Gait			
OVERALL MOTOR PERFORMANCE			
FUNCTIONAL SYSTEM SCORE			

CC = corrected * = optional part of the examination
 SC = without correction † = converted FS Score

FIRST Objective

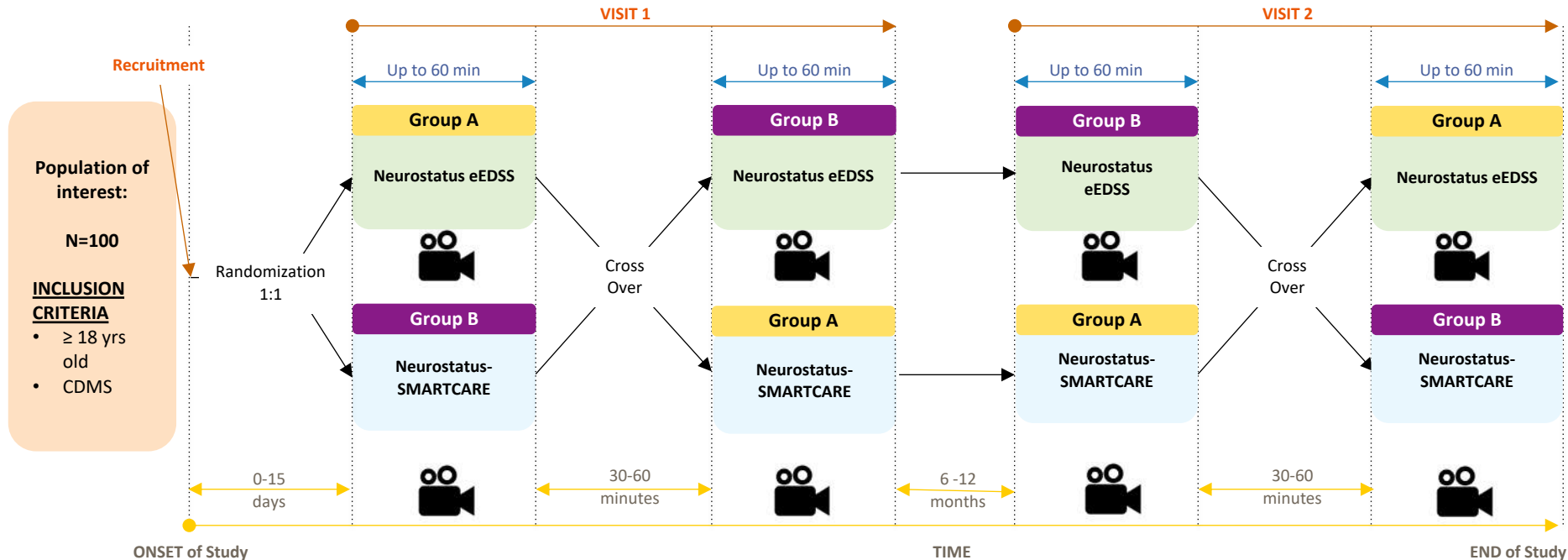
EDSS step concordance rate between the neurologist and HCP

Secondary Objective

- Subscores concordance rate between the neurologist and HCP
- FSs concordance rate between the neurologist and HCP
- To test if a recorded video of the assessment enables independent EDSS experts to determine the reasons of discordance
- To detect errors typical for an individual rater to offer targeted re-training
- To determine concordance with regard to capturing adequately changes in EDSS step



Study Design



We video record both groups at both times



Swiss multicenter study: University Hospital Basel; Kantonspital Luzern; Reha Rheinfelden