

VIMED® TELEREHAB

Neurological telerehabilitation in a compact format

Telemedicine supported therapy for patient
with motor functional disabilities



Early start with rehabilitation is beneficial

Human movement patterns or motor patterns are the results of a complex functional system. All or parts of this complex system can fail due to damage caused by trauma or acute disease, such as acute stroke. Furthermore, control over the body's muscles is disturbed, so that the coordinated motions are compromised.

Parallel to the motion deficits there are often failures in speech or problems with swallowing (dysphagia). For the successful restoration of the sensorimotor abilities, rehabilitation should begin as early as possible in the hospital through intensive therapy control.



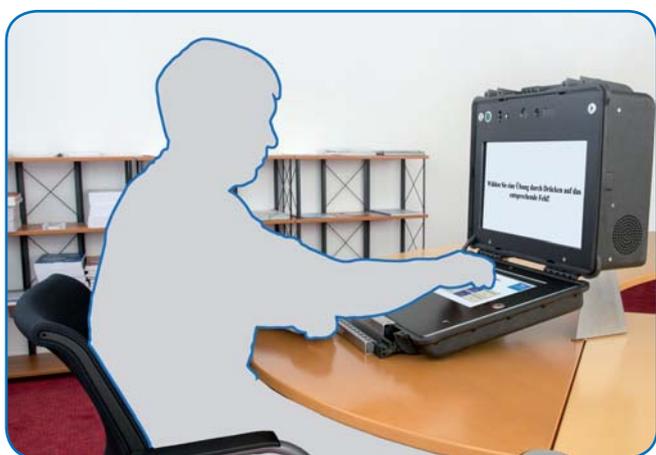
- › Mirror Therapy
- › Training of the elementary hand movements

- › Object manipulation
- › Music supported training

Equipment-based therapeutically training with VIMED® TELEREHAB

The equipment-based relearning of the specified movement patterns with VIMED® TELEREHAB provides the possibility to use evidence based and guideline-appropriate technologies of rehabilitation according to the individual plan of the therapy. The mobile platform VIMED® TELEREHAB has a modular design for clinical and post-clinical deployment that includes hard and software components as well as special gateway for mobile communication. The extension of the therapeutic offer with the new rehabilitation actions and equipment for the training is based on a plug-in model.

The VIMED® TELEREHAB equipment for the patient is already available in the rehabilitation center, so that the patient can get the opportunity to explore all features of the device and can start early with the training. The therapist can also perform the required controls and interventions into the therapy session via telemedicine. The patient gets an individual space for their independent training, while the training results are analyzed after every completed training unit electronically and provided into the data base for central administration of rehabilitation data.



Evidence based rehabilitation in telemedicine format

VIMED® TELEREHAB is primarily designed for patients with sensorimotor functional deficits of the upper limbs. The pathological movement patterns will be detected by the software to avoid the incorrect and contra productive compensatory movements through therapeutic interventions, while the therapist is not available locally with the patient. The feedbacks from the virtual therapist will be provided to

the patient in real time. Only evidence based therapeutical exercises for the motor training in off/on modes are available during the hospital stay as well as after leaving hospital in the home environment, i.e.. mirror therapy, object manipulation, training of the elementary hand movements, music supported training. Other therapeutical exercises for rehabilitation can be added if available.

The evidence based therapeutical exercises for the motor training in off/on modes are available for independent training during the hospital stay as well as after leaving hospital in the home environment.

Virtual assistance of the therapy at home

VIMED® TELEREHAB provides the possibility to continue the therapeutical supervised training in the home environment. Due to the compact design of VIMED® TELEREHAB it can be easily transported and implemented on site.

Animated instructions, evaluation and documentation of the individual's progress, as well as arranged audiovisual consultations with the therapist offer reassurance while training in the home environment. Furthermore it contributes positively to help overcome the life style changes caused by illness.

The virtual therapeutical assistance ensures that the patient's body position is correct and the affected limbs are engaged before the start and during the exercise. To reduce the compensatory movements to the minimum the movements are registered precisely and in the real time to provide feedback to the patient.

Animated instructions



Please, move your hand up and down as in the video showed



3D - movement control

Using VIMED® TELEREHAB the movement patterns relearnt in the rehabilitation center can be repeated in the home environment supervised continuously by with the virtual therapeutical assistant, to save and build upon the rehabilitation process.

Training video with sound and text instructions



Piano Play
Press the lit button as fast as possible while the music waits...

Please, take notice of the melody and try to press the lit buttons. Please, use the index, middle, ring- and the little finger to play the sequence.



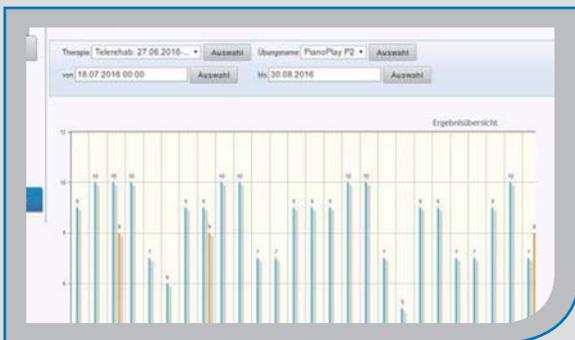
Promotion of the concentration and attention

Telerehabilitation data base

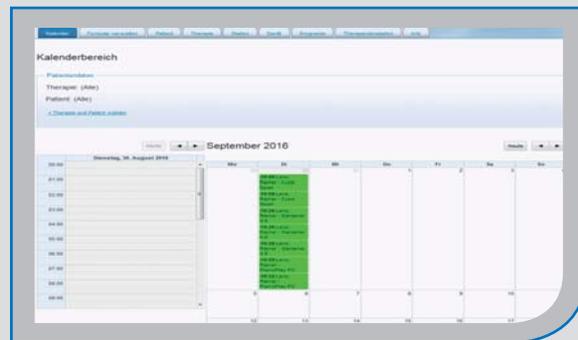
The organization and documentation of the rehabilitation process are as important as the medical rehabilitation process. The therapist can administrate the rehabilitation workflow using VIMED® TELEREHAB intuitive. The VIMED® TELEREHAB offers enables intervention and control over the whole process of the rehabilitation, from planning of the consultations and creating of the individual therapeutical units to the administration of the single therapeutical devices.

The personalized result of the training can be stored directly in the data-base for telerehabilitation ready for evaluation by the therapist. The assessment statistics (point value) for every passed exercise is collated using the name of the patient, time, level of difficulty and type of the therapy device. This information can be accessed using the patient's unique I.D. by the therapist.

Organization and administration of the therapy



The results of the therapy are visualized in diagram form



The results are provided to the data base automatically and are displayed into the calendar

24/7/365 on the pulse of the rehabilitation

VIMED® TELEREHAB helps with the intensity of execution of the therapeutical exercises during longer time periods, also in case of the physical absence of the therapist. VIMED® TELEREHAB remembers the patient teleconsultation to teleconsultation with the therapist and it offers additional functionality (video consultation-hour). The therapist can identify the individual goals of the rehabilitation and prescribe the rehabilitation plan utilizing a range of therapeutical measures. The patient executes the therapy independently from a range of prescribed training units. Both the patient and



the therapist can access to the results of the rehabilitation as a form. The stored results are used for the management of the therapy process. The patient is briefed fully in advance about the teletherapeutic process and must sign a data privacy agreement to participate.

The medical partner is responsible for queries relating to medical aspects, while the service provider ensures all-round support in case of technical questions through direct contact.

VIMED® TELEREHAB is a telemedicine system of MEYTEC GmbH Informationssysteme from the system family VIMED®

Last update: October 2016. All data without guarantee. Changes and mistakes reserve. All previous data sheets are invalid. Please note: Pictures may differ from the original.

Competence for Telemedicine and Medical Technology

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