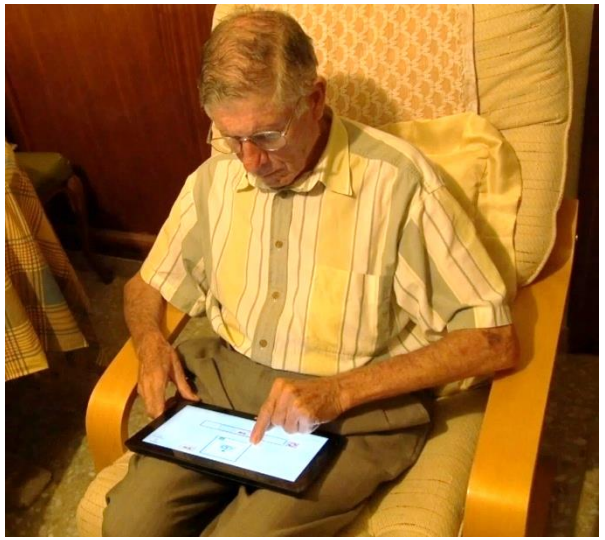
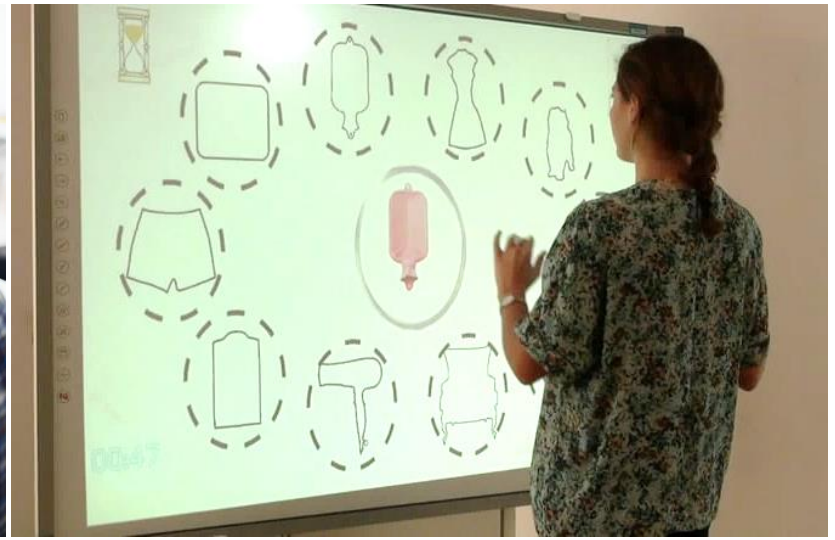
quantified physical and cognitive rehabilitation

www.rehametrics.com

what is rehametrics?







quantifying rehabilitation across care settings

how does rehametrics work?

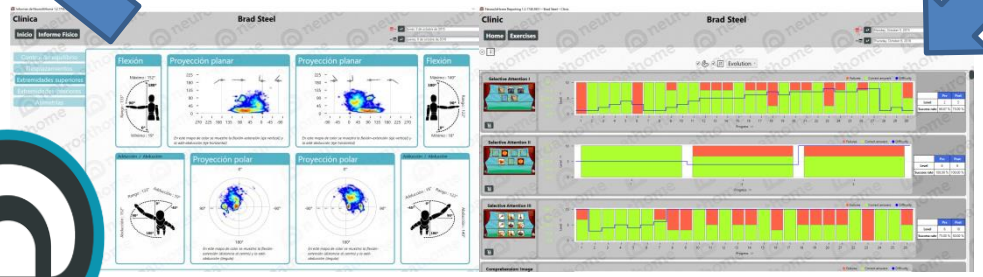
4- analyzes reports

Healthcare Professional

1- prescribes therapy

2- delivers therapy

3- generates reports



rehametrics

designed by clinicians for clinicians

physical and cognitive rehabilitation regardless of location

100 fully-personalizable exercises

gamification for increased engagement and adherence

easy to use exercises

physical therapy

cognitive therapy

more than 50 physical exercises available

Balance

- Static Balance
- Dynamic Balance
- Unipodal Balance
- Unipodal Balance w/ step

Upper Extremity Range of Motion

- Shoulder Flexo-extension
- Shoulder Adduction-Abduction
- Elbow Flexo-extension

Lower Extremity Range of Motion

- Hip Flexo-extension
- Hip Adduction-Abduction
- Knee Flexo-extension

Displacements

- Lateral Displacements
- Static Gait
- Seated-Standing Transfer

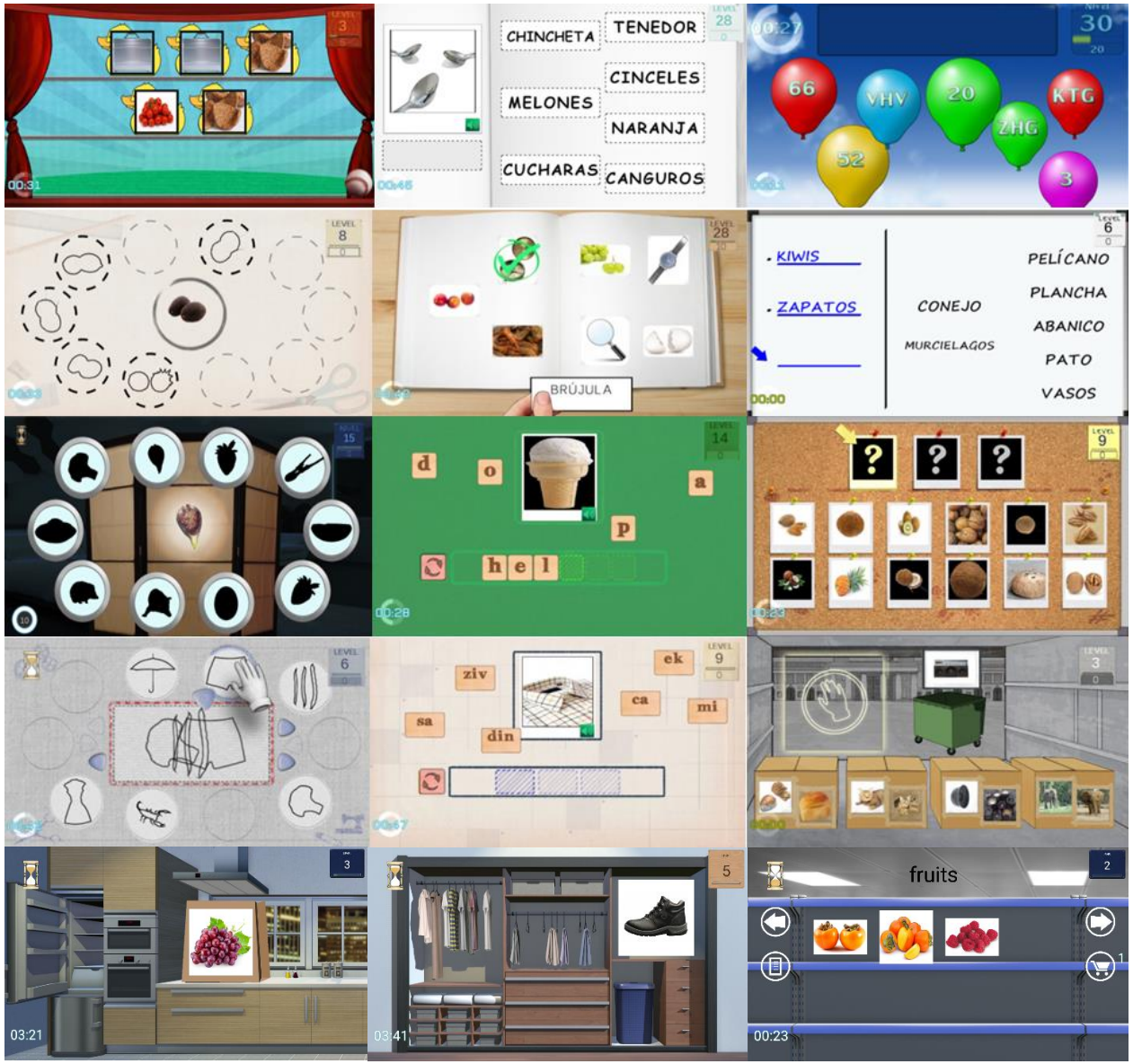
Coordination

- Alternating Coordination
- Simultaneous Coordination
- Coordinated Shoulder Range of Motion
- Lower Extremity Coordination
- Upper Extremity Coordination
- Bimanual Coordination

Body Control

- Head Control
- Trunk Control
- Body Control

more than 50 cognitive exercises available



Attention

- Selective Atenttion
- Sustained Attention

Working Memory

- Visual Working Memory
- Verbal Working Memory
- Auditive Working Memory

Perception

- Simple Perception
- Complex Perception
- Simultagnosia

Language

- Comprehension
- Expression

Executive Functions

- Categorization
- Short-Term Memory
- Cognitive Flexibility
- Perceptive Integration
- 2D Spatial Orientation
- Progressive Sequencing
- Inverse Sequencing
- Calculation

Daily Life Activities

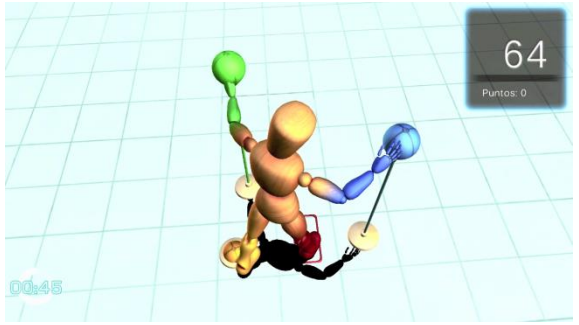
- Store your Food
- Order your Closet
- Find the Missing Ingredients
- Shopping
- Pay for your Shopping
- Check your Change

design treatment plans in 3-steps

COGNITIVE EXERCISES	
Attention	6
Memory	10
Language	7
Perception	9
Executive Functions	14
Daily Life Activities	12
TOTAL	58

PHYSICAL EXERCISES	
Balance	11
Coordination	10
Gait Initiation	5
Range of Motion	15
Body Control	11
Transfers	3
TOTAL	55

1- select exercise mix



2- personalize exercises

Duration

Rest Time

Distractors

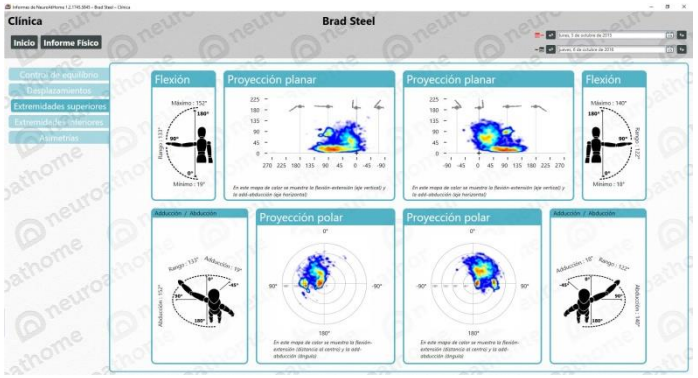
Time Pressure

Difficulty

Others...

3- schedule weekly sessions

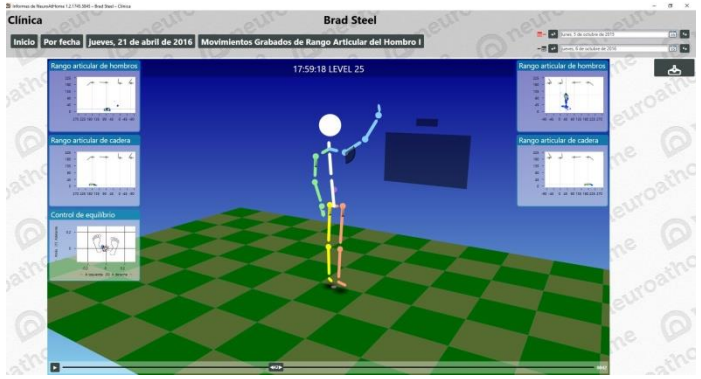
measuring rehabilitation across care settings



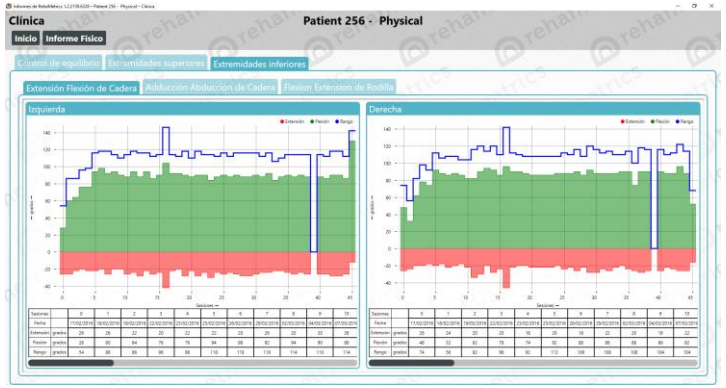
biomechanical report

cognitive report

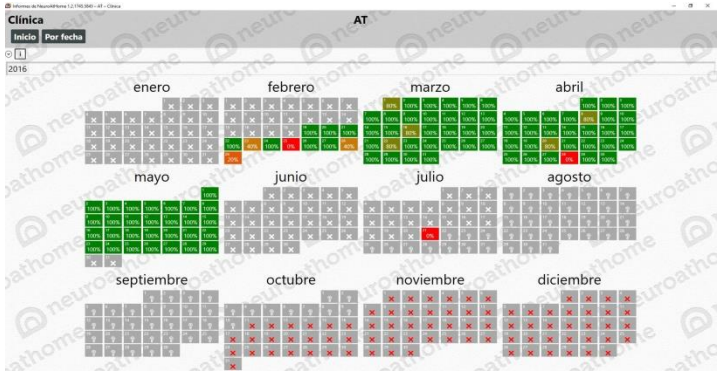
progress analysis



recorded session viewer



physical evolution analysis



calendar view

complete control during the session

pause / continue / stop the exercise

increase / decrease the difficulty

increase / decrease session time

enables clinicians to manage exercises without interrupting sessions

use already available tablets and mobile phones

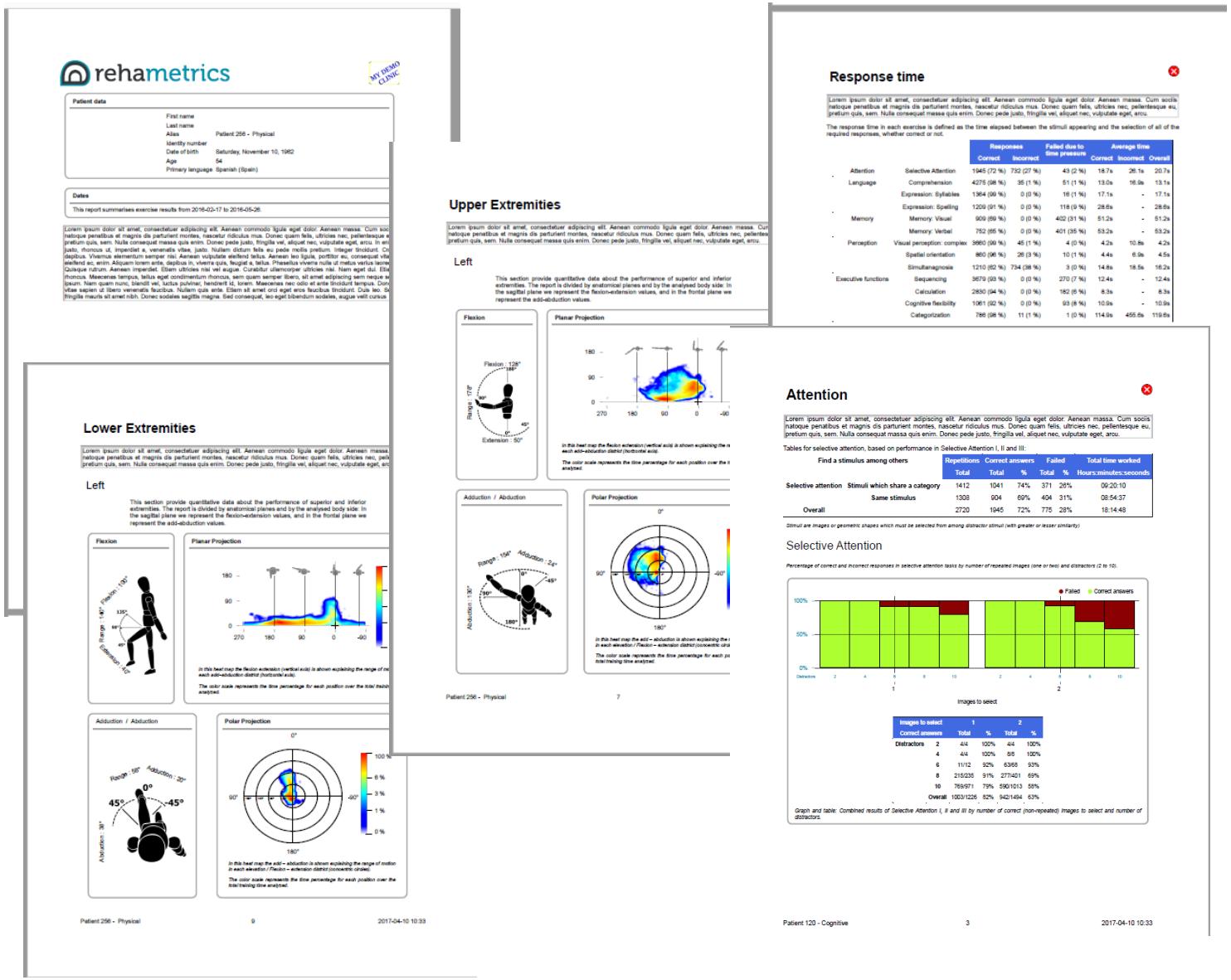
Windows

ANDROID

rehametrics is available in Android and Windows:

- together, they represent nearly 80% of all mobile phones and tablets currently in the market
- direct download from Google Play
- enables automatic updates
- prescribe cognitive rehabilitation sessions directly to the patient from the hospital
- use the patient's mobile phone or tablet: **there is no need to acquire new devices**

export reports to include in the patient´s EHR



generate progress reports

By using data collected during completed sessions

personalize reports

add your logo or a digital signature, delete pages and write in freestyle text boxes

recalculate report data

change the dates to obtain new reports for the selected dates

ready to print

export to PDF

multi-language support

Healthcare Professional

Multi-User Station

Session 1

Session 2

Session 3

Currently Supported Languages

English

Spanish

Italian

Russian

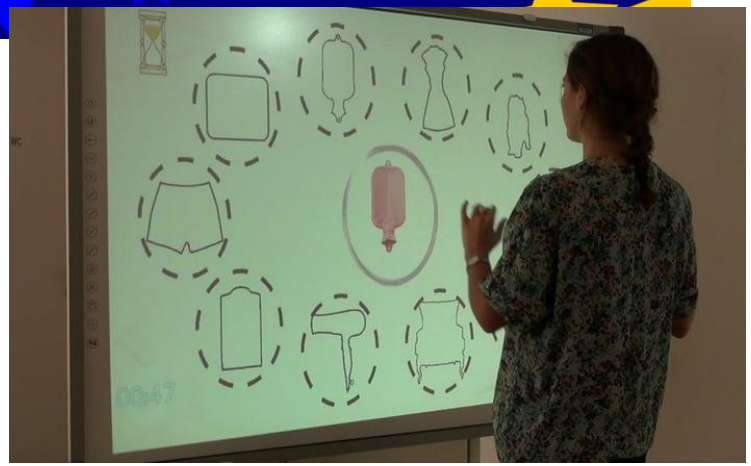
Portuguese

German

Polish

point-based patient ranking

1	**PGVG001**	**16390**
2	ACGG001	15460
3	TTTTTT002	15320
4	RRREEEE01	14780
5	QAZQAZ02	12870
6	1234567	11560
7	POLKMN	10230
8	RRELSL	9870
9	ADFASDF30	8540
10	ADFAFADF34	6780



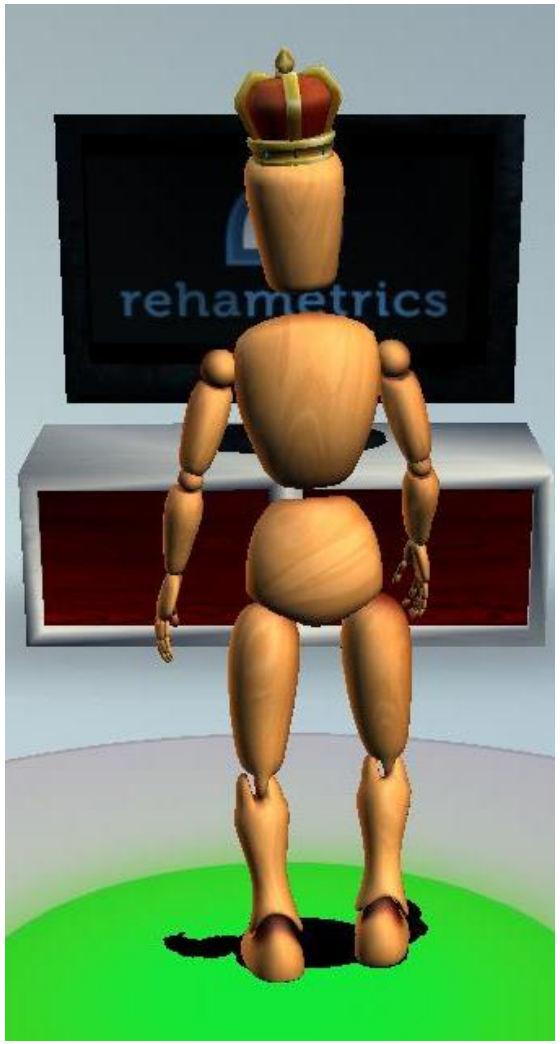
more motivation for everyone

rehametrics will use the number of correct movements/answers and the percentage of sessions completed by the patient during the last 5 days to generate a point-based ranking for each online clinic.

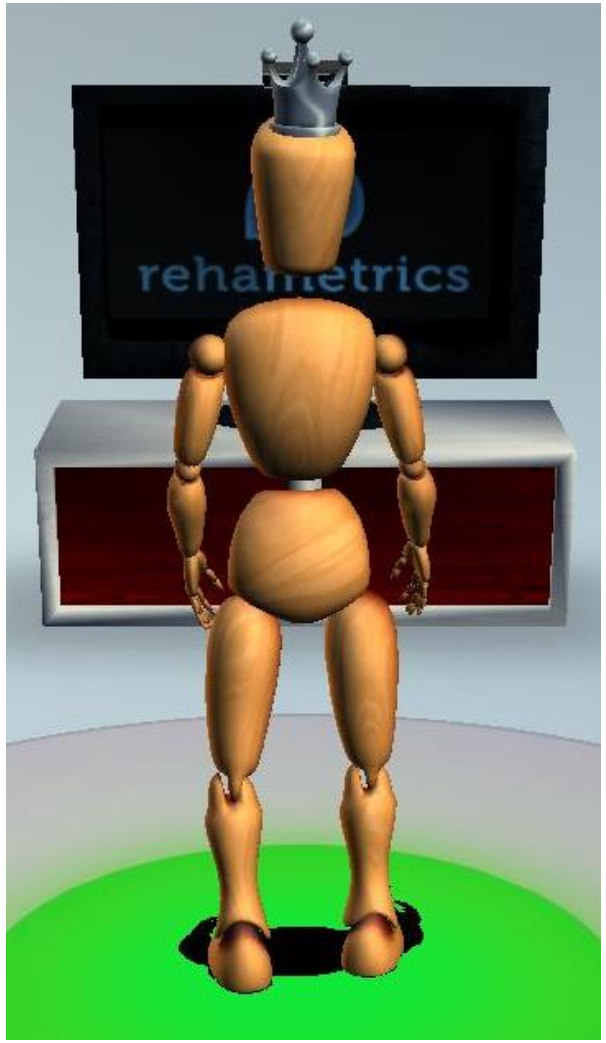
the patient ranking system:

- lists the top 10 patients for each online clinic based on their points
- will update every day

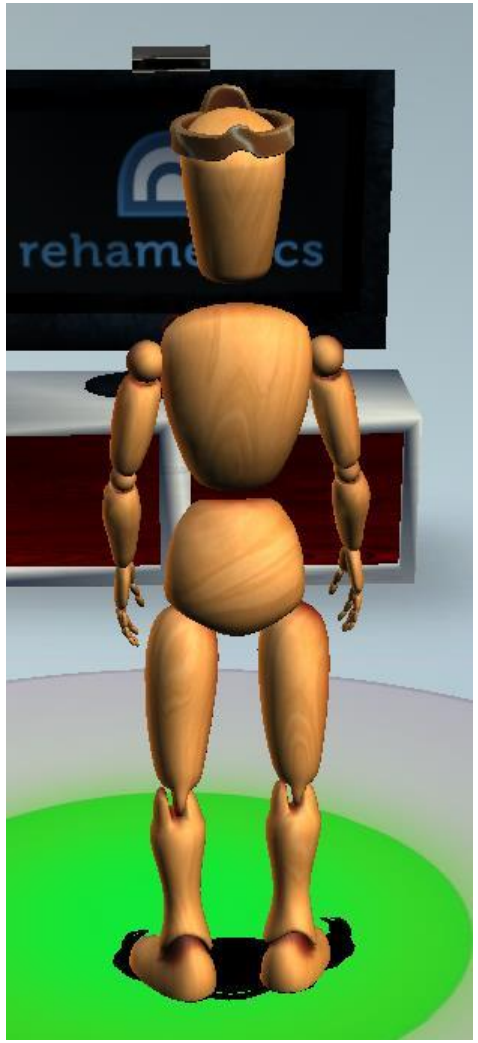
new game achievements



1st place



2nd place



3rd place

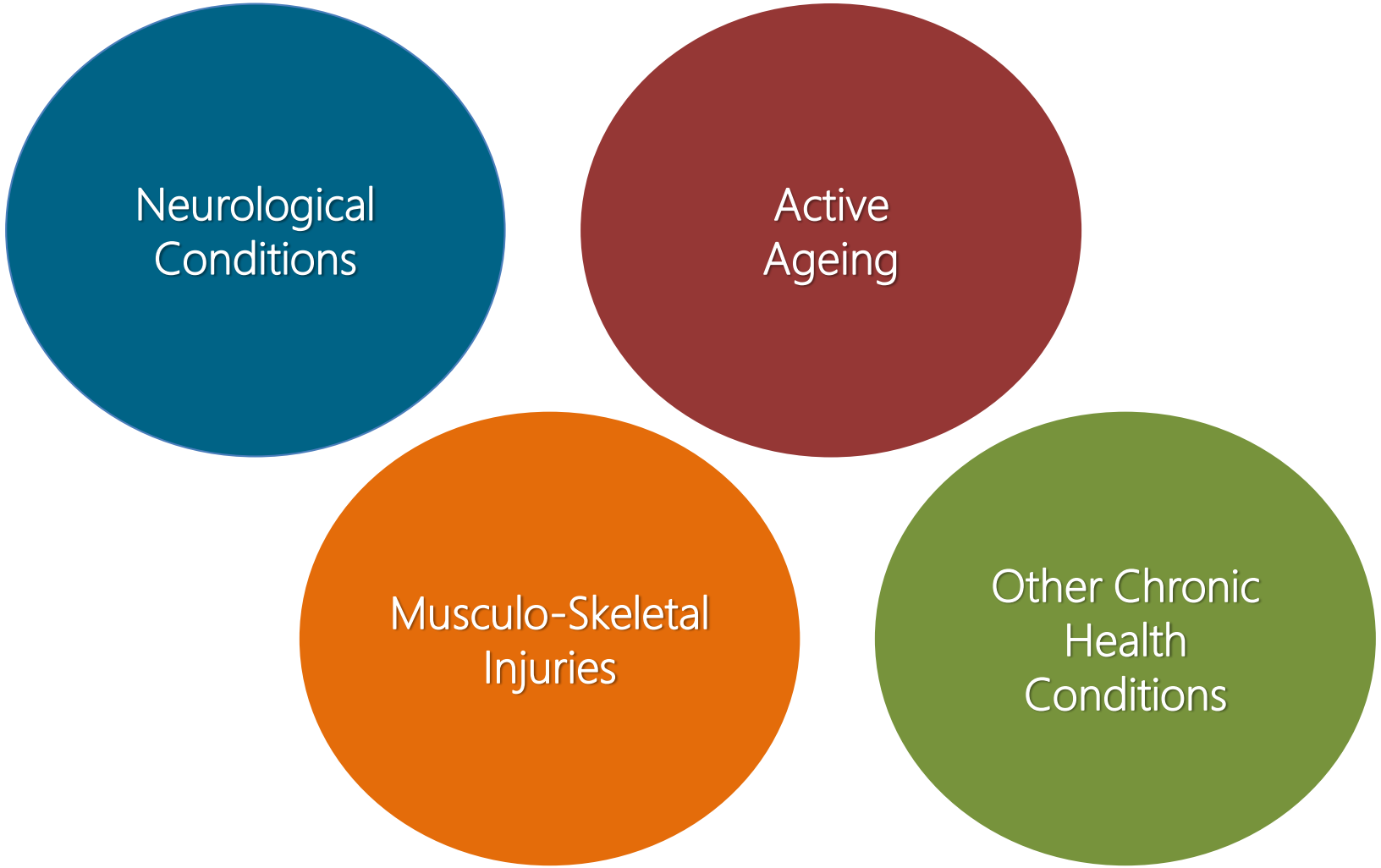
more motivation for everyone

patients that get the first three spots in the patient ranking will see how their avatar changes to reflect what they have achieved

crowns will appear on the avatar in all exercises using it

patients will maintain the crown as long as they remain in the top three spots in the ranking

who can benefit from rehametrics?



rehabilitation across care settings

Treatment Stations

multi-user licenses

multiple users from the same station

mostly used in *clinical settings*

unlimited number of patients and sessions per station

Physical Multi-User Station

Cognitive Multi-User Station

Professional Station

personal licenses

single user from the same station

mostly used in *home settings*

unlimited number of sessions per station

Physical Personal Station

Cognitive Personal Station

option 1: increasing productivity in clinical settings

Physical
Multi-User Station

Healthcare
Professional

Professional
Station

Azure
Cloud
Server

Cognitive
Multi-User Station

Hospital

Main Characteristics

- Cloud-based data storage
- Internet connection required
- Data sharing between stations
- Remote prescription and report generation
- Weekly session scheduling
- A *completely offline version* is also available

option 2: managing treatments in remote clinical settings

Main Characteristics

- Cloud-based data storage
- Internet connection required
- Data sharing between stations
- Remote prescription and report generation
- Weekly session scheduling

Physical
Multi-User Station

Healthcare
Professional

Professional
Station

Azure
Cloud
Server

Assistant

Cognitive
Multi-User Station

Hospital

Remote Center

option 3: managing treatments in home settings

Main Characteristics

- Cloud-based data storage
- Internet connection required
- Data sharing between stations
- Remote prescription and report generation
- Weekly session scheduling

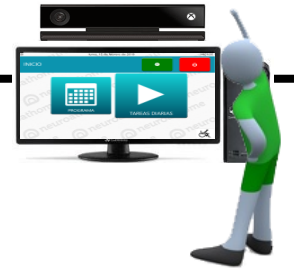
Healthcare Professional

Professional Station

Hospital

Azure Cloud Server

Physical Personal Station



Home

Cognitive Personal Station

Home

rehametrics has been clinically validated

Scientific Journals

Lu, Penades, Blasco, Chirivella, Gagliardo. ***Evaluation of Kinect2 based balance measurement.*** Neurocomputing, Volume 208, October 2016 (290-298).

Blasco, Chirivella, Gagliardo, Ferreiro, Izquierdo, Penadés, Taylor. ***Comparison between traditional physiotherapy and the combination of traditional treatment with virtual reality.*** Brain Injury, 2016; 30 (5-6): 481-817

Blasco, J. Chirivella, Gagliardo, C. Chirivella, Penadés, Taylor. ***Comparison between traditional neuropsychology treatment and the combination of traditional treatment with virtual reality.*** Brain Injury, 2016; 30 (5-6): 481-817

Blasco, J. Chirivella, Gagliardo, C. Chirivella, Penadés, Taylor. ***Quantitative electroencephalography (qEEG), virtual reality (VR) and transcranial random noise stimulation (tRNS) in a case of cognitive impairment related to Parkinson's disease.*** Brain Injury, 2016; 30 (5-6): 481-817

Gagliardo, Ferreiro, Izquierdo, Penadés, Chirivella, Mas. ***NeuroAtHome: A software platform of clinical videogames specifically designed for the motor rehabilitation of stroke patients.*** Brain Injury, 2014; 28 (5-6): 517-878

Chirivella, del Barco, Blasco, Penadés, Gagliardo, Mas. ***NeuroAtHome: A software platform of clinical videogames specifically designed for the cognitive rehabilitation of stroke patients.*** Brain Injury, 2014; 28 (5-6): 517-878

Izquierdo, del Barco, Ferreiro, Blasco, Gagliardo, Penadés, Chirivella. ***Use of a home-based telerehabilitation platform for motor and cognitive treatment of a patient with progressive spinocerebellar ataxia type 7 (SCA-7): a case report.*** Brain Injury, 2014; 28 (5-6): 517-878

Larson, Feigon, Dvorkin, Gagliardo. ***Virtual reality and cognitive rehabilitation: A review of current outcome research.*** NeuroRehabilitation 2014 (06/2014).

Scientific Congresses

Olmo, Enguer, Blasco. ***Effect of the NeuroAtHome platform versus traditional treatment in neuromuscular conditions***. LXVIII Conference of the Spanish Neurological Society.

Blasco, J. Chirivella, C. Chirivella, Manso, Gagliardo, Penadés, Taylor. Simposium: ***Using virtual reality and gamification in daily clinical rehabilitation practice.***. I Iberoamerican Congress on Neuropsychology.

Blasco, J. Chirivella, C. Chirivella, Manso, Gagliardo, Penadés, Taylor. ***Using virtual reality in cognitive rehabilitation after stroke***. I Iberoamerican Congress on Neuropsychology.

Blasco, J. Chirivella, C. Chirivella, Manso, Gagliardo, Penadés, Taylor. ***Using virtual reality in memory and self-care for individuals with a toxic-metabolic syndrome***. I Iberoamerican Congress on Neuropsychology.

Blasco, J. Chirivella, C. Chirivella, Manso, Gagliardo, Penadés, Taylor. ***Gamificaition and motivation in attentional and functional rehabilitation after a traumatic brain injury***. I Iberoamerican Congress on Neuropsychology.

Blasco, J. Chirivella, C. Chirivella, Manso, Gagliardo, Penadés, Taylor. ***Virtual reality program for the treatment of mild cognitive impairments assessed with a qEEG***. I Iberoamerican Congress on Neuropsychology.

Blasco, Mas, Chirivella, Gagliardo, Penadés, Izquierdo, Ferreiro, Sanchis, Morera. ***Virtual reality in upper extremity rehabilitation after stroke.*** LXVII Conference of the Spanish Neurological Society.

Blasco, Mas, Sanchis, Morera, Gagliardo, Penadés, Chirivella, del Barco, Chirivella. ***Outcome comparison between a treatment based on traditional cognitive therapy and a treatment combining traditional cognitive therapy with natural interfaces for the rehabilitation of patients with an acquired brain injury.*** LXVI Conference of the Spanish Neurological Society.

Blasco, Sanchis, Mas, Morera, Gagliardo, Penadés, Chirivella, Ferreiro, Izquierdo. ***Outcome comparison between a treatment based on traditional physical therapy and a treatment combining traditional physical therapy with natural interfaces for the rehabilitation of patients with an acquired brain injury.*** LXVI Conference of the Spanish Neurological Society.

Castilla, Gómez, López, Berra. ***Efficacy of a virtual rehabilitation treatment in unstable geriatric patients with mild cognitive impairments.*** LXVI Conference of the Spanish Neurorehabilitation Society.

some of our current customers

measuring the benefits

increase clinician productivity

30% more physical and cognitive therapy sessions with same resources

On average, patients discharged 3 days earlier

improve outcomes and treatment efficiency

Achieved better outcomes in physical and cognitive functions than traditional therapy according to several studies.

increase access to rehabilitation and enable new services

85% of home sessions completed

Average treatment duration at home: 8 months

Thank you

rehametrics

Microsoft Health
Innovation Awards 2015
WINNER

CE

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