THE ICSM OFFER OF TELEREHABILITATION FOR PARKINSON’S DISEASE:

CLINIC AND RESEARCH

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Telemedicine, since 1970, means “healing at a distance” … a 2007 study found 104 peer-reviewed definitions of TM.

**WHO:** “The delivery of health care services, where distance is a critical factor, by all health care professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of health care providers, all in the interests of advancing the health of individuals and their communities”

**Key points in TH/M:**

1. provide clinical support
2. overcome geographical barriers
3. use of different types of ICT
4. improve health outcome

**ICSM offer of telerehabilitation in PD:**

Clinic and research
Our territory

**Novara** = 105.000 inhabitants

**Upper side** = 155.186 inhabitants

**South side** = 90.486 inhabitants

- almost 230.000 patients
- males Vs females (60% vs 40%)
- 5% yo < 50
- 70% yo > 65
Our territory

PD: chronic progressive neurodegenerative disease with a complex clinical and social impact

P = almost 200 cases / 100,000 inhabitants (0.2-0.3% general population; 4.9% inpatients)

I = 5 to 21 new cases/100,000 inhabitants/year

- Severe disability
- Severe family / care-giver burden.
- Important HCS impact, direct and indirect costs
VAMP CENTER – OUR FIRST APPROACH

**PD:**

- Key motor symptoms
- Postural instability
- Progressive motor dysability (gait, postures, stance, falls...)
- Autonomic dysfunctions
- Cognitive and behavioural impairments
- Mood diseases
- Swallowing
- Speech
- ...
VAMP CENTER – OUR FIRST APPROACH

Model: proactive medicine: “meet the person”.

VAMP Center (Valutazione e Assistenza Multispecialistica Parkinson)

GP / All Hospitals and Services / Associations of Patients

therapeutic - rehabilitation - assistance care path:

- ASL NO.
VAMP CENTER – OUR FIRST APPROACH

**ICSM VERUNO:**
- Neurologist
- P&R Ph
- Radiologist
- Nutritionist
- Physiotherapist
- Speech therapist
- Occupational therapist
- Psychologist
- Nurse
- Social Operator

**ASL 13:**
- GP
- Geriatrician
- Psychiatrist
- Neurosurgeon
- Orthopedic
- Urologist

**Other:**
- Cardiologist
- Pneumologist
- Nuclear medicine
- Sleep medicine ...

**ICSM offer of telerehabilitation in PD: clinic and research**
VAMP CENTER – AIMS

- Network accessibility and coverage
- Timing of care
- Continuity of care
- Appropriateness
- Intervention efficacy
- Best care supply
- Active involvement of patients and CG
- Educational needs
- Chronic Outcome assessment
- Promote patient self-care and efficacy
## VAMP CENTER – OUR data

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From Telemonitoring to TM - Veruno

Supplementary service integrated with specialist ambulatories

Part of CAO

Features and aims:

- optimize ambulatory access
- reduce waiting list
- reduce hospital stay
- guarantee continuity of care.

- Telemonitoring
- Teleconsult/support
RESEARCH - TeleRehabilitation

Development and Implementation of an Italian Network of Teleneurorehabilitation: neuroscience network

Head
IRCCS Centro Neurolesi - Messina

Participants
IRCCS San Camillo di Venezia
IRCCS F. Don Carlo Gnocchi
IRCCS ICS Maugeri
IRCCS S. Raffaele La Pisana
IRCCS Istituto Neurologico Casimiro Mondino
IRCCS Humanitas
IRCCS S. Raffaele
...

Several studies ONGOING:
REPORT
• Clinical trial
• Randomized, multicentric, single blind
• Use of INTEGRATED VR (EG) and TeleRehabilitation in PD

Efficacy of home telerehabilitation in a VR setting in PD: a RCT
RESEARCH

- **TR** is a valuable means of care delivery via: VR - EG - IR,….

- But existing studies have VARIOUS issues, with little evidence

  We are now participant to an integrated **TR RCT** to enhance home programs

  We currently are conducting 2 reviews on parallel topics:

  PD & TR
  PD & SD

  **LIMITED RESULTS!**
CONCLUSIONS

TeleMedicine and Telerehabilitation in PD help to:

• increase treatment compliance
• increase adherence
• increase motivation
• increase longterm protocol
• Potentially increase of frequency and intensity if needed of rehabilitation protocols
• help in actual pandemic

Oe preliminary, but observation and practice are encouraging both on QoL and feasibility
ICS Maugeri, IRCCS,
Neurorehabilitation Unit, Veruno

ICSM offer of telerehabilitation in PD:
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