



Let's move together to
diagnose earlier, treat
more effectively and end
Parkinson's Disease

WORLD BRAIN DAY 2020



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THE ICSM OFFER OF TELEREHABILITATION FOR PARKINSON'S DISEASE: CLINIC AND RESEARCH Giorgio Maggioni

Neurorehabilitation Unit
*Istituti Clinici Scientifici **Maugeri***
Veruno - Italy



ICSM offer of telerehabilitation in PD:
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.

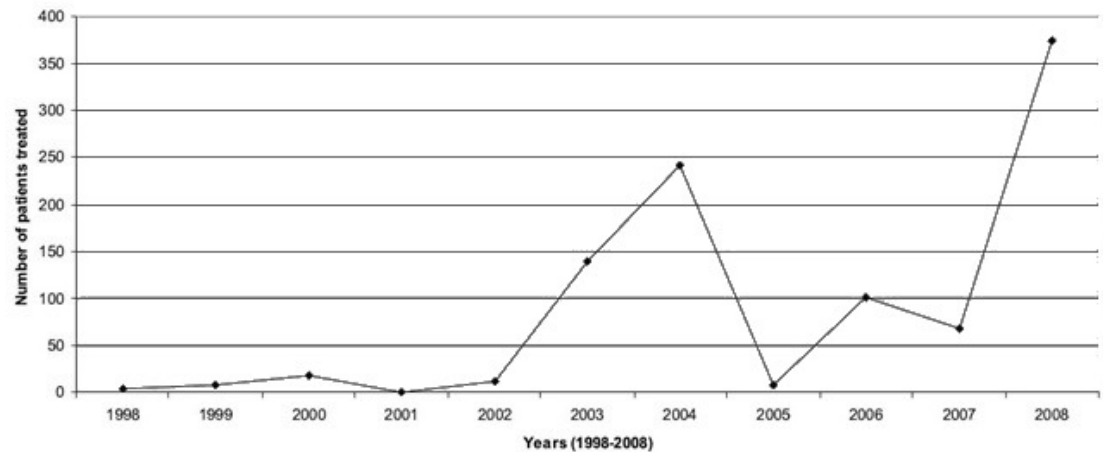
WHO: “The delivery of health care services, where distance is a critical factor, *by all health care professionals*

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



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Our territory

Novara = 105.000 inhabitants

Upper side= 155.186 inhabitants

South side= 90.486 inhabitants



Mappa dei Distretti dell' ASL NO



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



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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



A.S.L. NO
Azienda Sanitaria Locale
di Novara

ASL 13: 800 pazienti

età



- Severe dysability
- Severe family / care-giver burden.
- Important HCS impact, direct and indirect costs



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VAMP CENTER – OUR FIRST APPROACH

PD:

- Key motor symptoms
- Postural instability
- Progressive motor disability (gait, postures, stance, falls...)
- Autonomic dysfunctions
- Cognitive and behavioural impairments
- Mood diseases
- Swallowing
- Speech
- ...



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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.



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VAMP CENTER – OUR FIRST APPROACH

ICSM VERUNO:

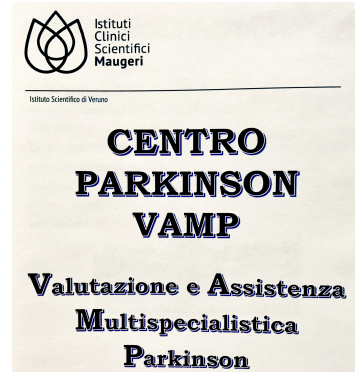
- Neurologist
- P&R Ph
- Radiologist
- Nutritionist
- Physiotherapist
- Speech therapist
- Occupational therapist
- Psychologist
- Nurse
- Social Operator

ASL 13:

- GP
- Geriatrician
- Psychiatrist
- Neurosurgeon
- Orthopedic
- Urologist

Other:

- Cardiologist
- Pneumologist
- Nuclear medicine
- Sleep medicine ...



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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



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VAMP CENTER – OUR data

Year	Enrolled
2016	22
2017	89
2018	24
	135

Year	Contacts	Services	N
2016	80	Neurologist	336
2017	1147	Psychologist	186
2018	584	Psych. Assessment	114
2019	5	CG Support	90
	1816	Relax	8
		Nutritionist	538
		Acupuncture	38
		Baropodo-metric test	57
		Motor assessment	134
		Rehab	265
		Cardiologist	19
		VO2	29
		Speech therapist	2
			1816



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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



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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

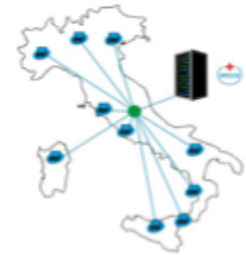
IRCCS S. Raffaele La Pisana

IRCCS Istituto Neurologico Casimiro Mondino

IRCCS Humanitas

IRCCS S. Raffaele

... ..



Several studies
ONGOING:
REPORT



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REPORT

- Clinical trial
- *Randomized, multicentric, single blind*
- *Use of INTEGRATED VR (EG) and TeleRehabilitation in PD*



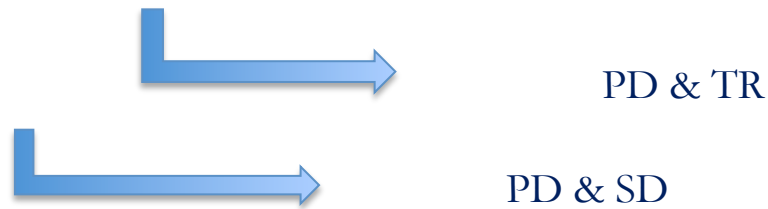
Efficacy of home telerehabilitation in a VR setting in PD: a RCT

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:



LIMITED RESULTS!



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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

One preliminary, but observation and practice are encouraging both on QoL and feasibility



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**ICS Maugeri, IRCCS,
Neurorehabilitation Unit, Veruno**



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