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SARS-COV2 Pandemic Age Telerehabilitation Experience: Results and Satisfaction

Giorgio Mandalà MD[1*], Salvatore La Franca SA[2], Filippo Stabile LST[2], Giuseppina I. Caleca LST[2], Sofia Mandalà P[1], Pietro Cataldo MD[3]

[1]*UOC Medicina Riabilitativa, Ospedale Buccheri La Ferla Fatebenefratelli Palermo*
[2]*I.P.A.B. Riabilitazione"Casa del fanciullo", Carini, (Palermo, Sicilia, Italia)*
[3]*Department of Psychology, educational science and human movement, University of Palermo, Italy.*

[*]***Corresponding author:*** *Giorgio Mandalà, UOC Medicina Riabilitativa, Ospedale Buccheri La Ferla Fatebenefratelli Palermo.*

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Abstract

Background: Telerehabilitation is a method of taking charge already used with satisfactory results in several realities.[1,2] Many experiences have been made for clinical evaluation, motor rehabilitation, neuropsychological or speech therapy.[3,4,5]
Aim: In a pandemic age, we have undertaken remote rehabilitation, in order to continue treatments and assess the effectiveness.
Design: observational. Setting: The "House of the Child" rehabilitation in Carini Province of Palermo.
Population: is mainly characterized by children and adults with chronic, neurological high-impact disabilities.
Methods: In March 2020, all frontal rehabilitation activities were suspended due to the SARS-COV2 pandemic.[6] In agreement with the families, to guarantee the assistance and rehabilitative continuity of the patients, in April started telerehabilitation.
Results: The population studied showed good satisfaction with the treatment received, asking to be able to extend it over time.
Conclusion: This study highlights how it is possible to practice alternative forms of rehabilitation with satisfaction of patients and families.

Keywords: Telerehabilitation, satisfaction questionnaire, tools for remote rehabilitation. Sars-cov2.

Introduction

Introduction Telerehabilitation, or remote rehabilitation, has already had several trials in the treatment of stroke in adults1, D.S.A.2 in the treatment of adult3 and pediatric dysphagic patients4. Remote care represents a system for enhancing the self-management of chronic diseases5. In this difficult and delicate period, due to the SARS-COV2 [6,7] virus, we had to reinvent ourselves in order not to leave our clients alone and to maintain the therapeutic relationship with them. The reorganization of face-to-face rehabilitation activities in remote mode simultaneously ensures maximum continuity and support for patients and families, making it possible to cancel the risk of spreading the virus in users, family members and operators. In a first phase, the center envisaged the activation of a platform, to deliver rehabilitation treatments remotely and at the same time, it reformulated the rehabilitation offer for each patient, according to the different clinical pictures [8,9]. The medical-psychological team created a therapeutic pact with the family, which summarizes the objectives and way of working and carried out monitoring meetings to verify the correct use of the tool and to discuss or address any critical issues. The essential elements at the basis of the clinical evaluation were the personalization of the intervention and the possibility of monitoring quality and frequency. The therapeutic interventions were aimed at supporting the relational, sensory, motor and cognitive development of the patients. The implementation of the remote rehabilitation objectives presupposed careful periodic clinical reflection, carried out in a virtual space aimed at moments dedicated to remote monitoring and meetings with the family, with the online supervision of the medical-psychological team, connected audio-video. The choice and activation must consider the profile of the patient's functioning and the availability of minimal family and technological resources. For each patient, the individual treatment was redefined, in continuity with that carried out previously, but remodulated in the objectives and actions, in the light of the situation, in a participatory way with the caregivers [10,11]. The social workers then carried out telephone interviews with the assisted families, noting their experiences, their needs and the resources, including technological ones, necessary for access to the interactive platform we intended to use. Listening played an important role in this phase because it made it possible to give a voice to the caregivers, who gave useful indications for personalizing the intervention plan [12,13].

Description

Description of the case IT and technological tools: The Center has activated a videoconferencing platform in corporate mode, Gsuite, a suite of software and productivity tools for cloud computing and collaboration, offered by subscription from Google. Within this platform, operators have been entered and enabled, each with their own credentials, for use; using the ad hoc domain @ipabcasadelfanciullo.com. To connect with families, the meet.google platform was used, known as Google Hangouts, which allows up to 10 users to join conversations via computers or portable devices. Participants can share their screens and view or collaborate on content. This allows therapists to share specially created materials on the patient's screen. The platform is equipped with simple and intuitive graphical interfaces, in order to facilitate access for users. The platform is accessible from Windows, Mac, Android and IOS, and any other mobile device owned by users. Through this

platform, all the safety standards imposed by regulations, privacy and IT security are guaranteed. The platform also guarantees the export of a daily report of all authorized operators, from which it will be possible to deduce the activities that the same operator has performed through the system, with the relative duration. The social workers explained the methods of access and their functioning to the caregivers. We have sensitized and encouraged families, investing them with an important role because in order for this service to work, it needed to be built for them but above all with them, to guarantee the ad hoc personalization of the rehabilitation intervention. it was the task of the social workers to bring to the knowledge of the patient, in a clear way, the information necessary to allow a weighted choice and to acquire formal adherence through informed consent. Selection and sharing of material among the members of the team: Taking charge, through a tele-rehabilitation method, presupposes the distinction between different operational moments, to underline the effectiveness of the intervention. The management of the therapies has included the preparation of digital material for each single treatment and, above all for patients with attention difficulties, a continuous and constant effort during the session, to keep the child's attention high behind a screen, in a family context that is not as rigid as the therapeutic setting, with a great possibility that escape or task avoidance behaviors are engaged. The constant and shared commitment of the team for the management of the material and the understanding of the functioning of the platform was and is a strong point for the realization of the work, with the proposal of creative and innovative activities, the realization of the activities within the domestic spaces using every day and easily available objects. Launch of tele-rehabilitation therapies. On April 20, 2020, the tele-rehabilitation activity began. The duration of the sessions (equal to 60 minutes) and the number of weekly sessions scheduled in the clinic for each individual patient were respected, 3,4,5,6 times a week with the various operators (psychologist, physiotherapist, speech therapist, neuropsychomotor specialist). We were aware of the limits of a screen that could deprive of charge certain experiences which, in order to be integrated on a sensorial level, are nourished by sharing and searching for the other. We have tried to adapt to a new way, which is what technology offers, activities that are based on body contact, on the dimension of emotion, relationship and playful interaction. The synchronous method of remote treatment has allowed us to enter our patients' homes "live", to get to know their family dynamics more deeply and to reduce, albeit involuntarily, the "imposed" parent-therapist social distance, transforming itself, in working together for the common good of the child with his fragility, acute during the quarantine. From a strictly therapeutic point of view, the profuse commitment of both parents and therapists has allowed us to observe situations that, in a "normal" context, would not have been possible to observe and to identify new therapeutic objectives. Furthermore, the elimination of travel times and stress related to travel has allowed families to access the tele-rehabilitation session in the best psycho-physical conditions.

During the sessions, the medical-psychological team intervened to verify the profitable conduct of the session and the achievement of the objectives and for the resolution of critical issues. After this experience, we expect a different relationship with the parents, both on the part of the therapist, who will probably become more attentive to the family situation, and on the part of the parents, who will become much more cooperative and available in treatment, mindful of a period in which they too had to change and adapt to a child's scale. This leads us to reflect on how this "forced" mode of interaction today can become a "resource" of the social system tomorrow.

Discussion

Discussion Meetings with parents and relations with the family. This new work experience in smart-working has allowed us to evaluate the positive aspects of tele-rehabilitation. These restrictions have led us to redefine and broaden the goals of the therapy itself, enjoying the active participation of caregivers. Furthermore, it has allowed us to observe the user in a family context, and therefore to be able to transmit the therapeutic methods and strategies in ecological and daily methods and strategies. Rehabilitation stops being knowledge of the therapist to become knowledge of the family that takes charge and gets involved for the well-being of the minor. Tele-rehabilitation, if physically distances you, humanly brings you closer to the family, creating greater tolerance towards everyone's difficulties. Seeing how parents, in a difficult and emergency situation like this, got involved by participating in their child's activities, reinventing themselves too and trying to follow therapeutic advice, was an important goal achieved this month. We have seen children become much more autonomous in managing the task, increasing their daily attention to the activities and feedback that often arrived delayed due to connection problems. We have seen them motivated and happy to "see" their therapist through a tool that, in most cases, has been their only reinforcement for a long time. Questionnaire administration in order to guide the choices regarding the organization of the reopening phase, questionnaires were administered to the patients and/or their family members. After a period of tele-rehabilitation, we thought it was necessary to survey the level of satisfaction of the patient/parent with regard to the way in which rehabilitation is used and all the activities carried out remotely, in order to understand how to possibly improve. A satisfaction questionnaire was used to collect information in a standardized way to build a data matrix, on which to perform statistical analysis. The questionnaire, from the point of view of the simplicity with which it was drafted, is composed of 10 multiple choice questions based mainly on the degree of satisfaction, and an open-ended question in relation to the suggestions that can be offered. On 30 April, 120 questionnaires were administered to patients placed on an outpatient basis. As of May 4, 92 patients had responded. An examination of the data revealed that 25% of patients (23 out of 92 patients) are willing to return to the Centre on the reopening date, in relation to the development of Phase 2 and the indications of the National and Regional Authorities. The remaining 69 patients expressed a preference to continue with the telerehabilitation activity, at least until the resolution of the health emergency. As of 20.05.2020, we have collected 98 out of 120 questionnaires, for us it was a success of collaboration, closeness and presence. From the revised data, it emerges that 54.08% are very satisfied and 23.48% are quite satisfied with the possibility of communicating with the various professional figures in tele-rehabilitation. Furthermore, they are very satisfied with the professionals, compared to competence for 79.60%, kindness 82.66%, availability 79.60%. To the question "in view of the reopening of the centre, if you could choose what you would prefer"? 76.53% of users would like to continue the path of tele-rehabilitation. In particular, some users or their

family members have expressed the fear that a resumption of frontal rehabilitation activity, at a time when the R0 contagion index is not yet equal to 0, could favour their contact with SARS COV 2 and, thus, allow SARS-COV2 infection. To this end, they have formulated a request to be able to make use of tele-rehabilitation until the danger of contagion can be declared definitively overcome or in any case until they feel adequately reassured by the epidemiological data disseminated by official information channels.

Our Tele-rehabilitation satisfaction questionnaire

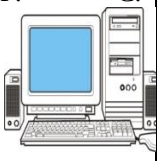
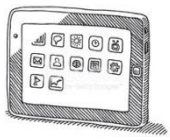
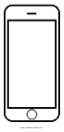
1) In general, are you satisfied with the service offered by the operators.

	Very satisfied		Quite satisfied		Satisfied		Not Satisfied	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**
	63	**64,28%**	**24**	**24,50%**	**11**	**11,22%**	**0**	**0**

2) Are you satisfied with the possibility of communicating with the various professional figures in telerehabilitation?.

	Very satisfied		Quite satisfied		Satisfied		Not Satisfied		No response	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	%
	53	**54,08%**	**23**	**23,48%**	**22**	**22,44%**	**0**	**0**	**0**	**0**

3) What tools do you use for telerehabilitation?

	P. C. 		Tablet 		Smartphone 		Laptop 		AL the instruments		Tablet and laptop		Smartphone and P.C.	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
	5	**5,10**	**17**	**17,34**	**57**	**58,18**	**16**	**16,32**	**1**	**1,02**	**1**	**1,02**	**1**	**1,02**

4) Are you satisfied with the professionals, with respect to:

	Very satisfied		Quite satisfied		Satisfied		Not Satisfied		No response	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Competenza	78	79,60%	12	12,24%	6	6,12%			2	2,04%
Gentilezza	81	82,66%	11	11,22%	5	5,10%			1	1,02%
Disponibilità	78	79,60%	13	13,26%	4	4,08%			3	3,06%

5) Which family members were involved in telerehabilitation?

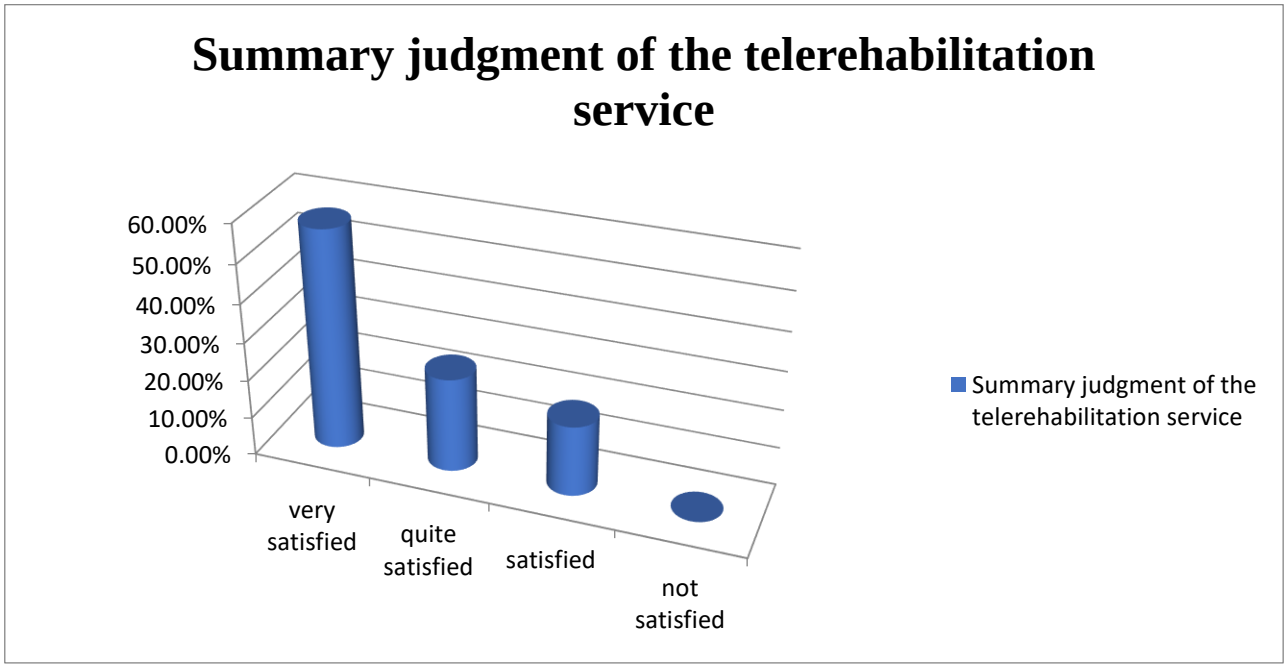
Mother		Father		Brother		Other		Mother and brother		Mother father and brother		Mother and father		Mother and others		No response	
n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
71	72,46	10	10,20	1	1,02	5	5,10	3	3.06	3	3,06	3	3,06	1	1,02	1	1,02

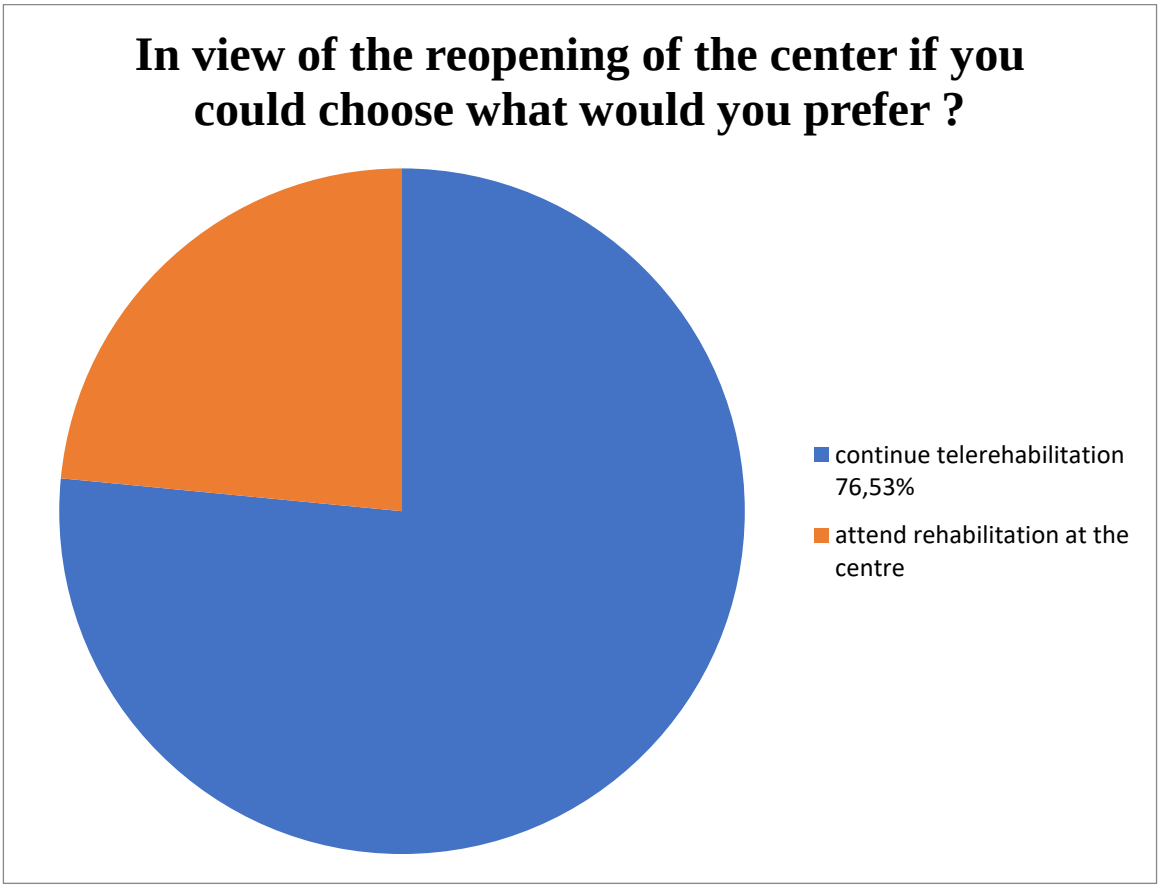
6) Being involved in this telerehabilitation was an experience.

	Engaging		Significant		Normal		Unpleasant		Engaging And Significant	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
	37	37,75%	48	48,99%	10	10,20%	1	1,02%	2	2,04%

7) Summary judgment of the telerehabilitation service.

	Very satisfied		Quite satisfied		Satisfied		Not Satisfied	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**
	56	57,14%	24	24,50%	18	18,36%	0	0



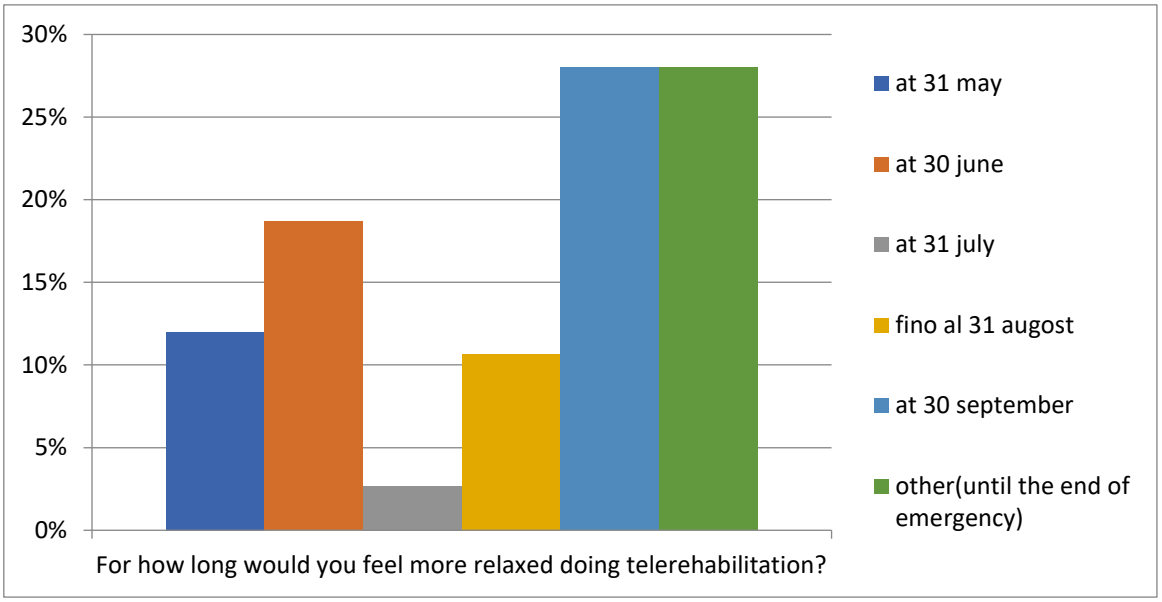


8) in view of the reopening of the centre, if you could choose what would you prefer?

Attend rehabilitation at the center		**Continue with telerehabilitation**	
n	**%**	**n**	**%**
23	23,47%	**75**	76,53%

9) For how long would you feel more relaxed doing telerehabilitation?

31 may		**30 June**		**31 July**		**31 August**		**30 September**		**End of emergency**	
n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
9	12%	**14**	18,68%	2	2,66%	**8**	10,66	**21**	28%	**21**	28%



10) Do you wish to be contacted for the solution of any problems?

Yes		Not		No response	
n	**%**	**n**	**%**	**n**	**%**
76	77,56%	17	17,34%	5	5,10%

If yes by whome ?

Doctor		Social Assistant		Psychologist		All members		S.A. and P.		Doctor and S.A.	
n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
10	13,15%	48	63,15%	12	15,78%	3	3,94%	2	2,65%	1	1,33%

11) What suggestions can you offer to improve the telerehabilitation service?
1 Artistic Cooking Workshops with Groups of Children;
1 Don't Leave Absence If There Are No Means to Do Therapy;
1 Joint Telerehabilitation Fkt E Logo
1 Provide Material
1 The Best for Our Children;
1 Change Platform
1Attract Baby's Attention with Drawing
1do More Therapy.
1 Have Greater Flexibility in Your Schedules

No response		Nobody, that's fine			
n	**%**	**n**	**%**	**n**	**%**
67	68,36%	22	22,44%		

11) Who filled out the questionnaire?

Mother		Father		Others		Mother and Father	
n	**%**	**N**	**%**	**n**	**%**	**n**	**%**
77	78,58%	12	12,24%	4	4.08%	5	5,10%

For patients undergoing home-based rehabilitation care due to serious or complex conditions, it was more difficult to complete the questionnaire, due to difficulties related to the type of computer support and the difficulty of printing the questionnaire. An observational survey was therefore conducted with a questionnaire relating to the tele-rehabilitation tools used, and the satisfaction of remote care and it was possible to administer it by telephone to patients or their caregivers, with the following results: Telephone survey of the tele-rehabilitation home service carried out on 04.30.2020. Total patients assisted up to 02/29/2020 = 33 - Total patients in Tele-rehabilitation 18/33 1) which IT tool do you use for Tele-rehabilitation? Total patients using the Meet platform 8/18 Total patients using Wathsapp platform 7/18 Total patients using Meet + Wathsapp platform 2/18 Total patients with Messenger 1/18 2) Are you satisfied with the rehabilitation management and how long would you like it to last? Total patients for resumption of traditional home therapy immediately 28/33 Total patients in tele-rehabilitation due to resumption of traditional home therapy after May 15th 2/18 Total patients in tele-rehabilitation due to resumption of traditional home therapy after 31 May 2/18 Total patients in telerehabilitation for permanent telerehabilitation maintenance 1/18 4. Conclusions The advantages of frontal rehabilitation are indubitable and sanction the therapeutic relationship with the patient. even more in the treatment of motor or neuropsychomotor rehabilitation. However, some advantages of telerehabilitation are evident which, in addition to preventing infections in times of pandemic, favors a different interaction with the patient and his family, leading to a greater involvement of the latter or of the caregivers, and also avoids transfers from home to the center outpatient services, often very demanding and difficult for users and their careers. The possibility of taking charge even remotely is, however, recommended by the note protocol no. 17381 of 08.05.2020 of the Sicilian Regional Councilor for Health which expressly provides that "Activities towards patients and their families and network activities can hopefully be remodulated using remote methods (telephone, videoconference, teleconference, etc.), sharing a new PRI/PAI with the user and the family as already indicated for outpatient activities and paying particular attention to guaranteeing an appropriate frequency of contact and level of therapeutic intensity". The rationale for the recommendation is deemed to be acceptable and it is hoped that remote or mixed methods of taking charge with frontal sessions and tele-rehabilitation together can be ratified.

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