

ARTICLE ONLINE FIRST

This provisional PDF corresponds to the article as it appeared upon acceptance.

A copyedited and fully formatted version will be made available soon.

The final version may contain major or minor changes.

Impact of COVID-19 outbreak on rehabilitation services and Physical and Rehabilitation Medicine (PRM) physicians' activities in Italy. An official document of the Italian PRM Society (SIMFER).

Paolo BOLDRINI, Andrea BERNETTI, Pietro FIORE

European Journal of Physical and Rehabilitation Medicine 2020 Mar 16

DOI: 10.23736/S1973-9087.20.06256-5

Article type: Special Article

© 2020 EDIZIONI MINERVA MEDICA

Article first published online: March 16, 2020

Manuscript accepted: March 16, 2020

Manuscript received: March 16, 2020

Subscription: Information about subscribing to Minerva Medica journals is online at:

<http://www.minervamedica.it/en/how-to-order-journals.php>

Reprints and permissions: For information about reprints and permissions send an email to:

journals.dept@minervamedica.it - journals2.dept@minervamedica.it - journals6.dept@minervamedica.it

Impact of COVID-19 outbreak on rehabilitation services and Physical and Rehabilitation Medicine (PRM) physicians' activities in Italy

An official document of the Italian PRM Society (SIMFER).

Authors

Paolo Boldrini (1), Andrea Bernetti (2), Pietro Fiore (3), SIMFER Executive Committee and SIMFER Committee for international affairs

Contributors

"SIMFER Executive Committee" includes: Stefano Bargellesi (4), Andrea Bernetti (2), Paolo Boldrini (1), Donatella Bonaiuti (5), Rodolfo Brianti (6), Salvatore Calvaruso (7), Giovanni Antonio Checchia (8), Massimo Costa (9), Pietro Fiore (3), Silvia Galeri (10), Bruna Lombardi (11), Alfredo Zambuto (12)

"SIMFER Committee for international affairs" includes: Paolo Boldrini (1), Paolo Capodaglio (13), Maria Gabriella Ceravolo (14), Giorgio Ferriero (15), Calogero Foti (16), Franco Franchignoni (17), Silvia Galeri (10), Francesca Gimigliano (18), Alessandro Giustini (19), Carlotte Kiekens (20), Stefano Negrini (21), Germano Pestelli (22), Mauro Zampolini (23)

Institutes

1. Past-President, Italian Society of Physical and Rehabilitation Medicine (SIMFER), Italy – General Secretary of the European Society of Physical and Rehabilitation Medicine (ESPRM).
2. Department of Anatomy, Histology, Forensic Medicine and Orthopedics, Sapienza University, Rome, Italy. Italian Society of Physical and Rehabilitation Medicine (SIMFER), Rome, Italy.
3. Full Professor, Physical and Rehabilitation Medicine, University of Foggia, Italy - Head PRM and Spinal Cord Unit Policlinico di Bari- President Italian Society of Physical and Rehabilitation Medicine (SIMFER)-
4. Head of PRM Unit, Brain Injury and Spinal Cord Unit, Regional Hospital of Treviso, Rehabilitation Department, Local Health Unit "Marca Trevigiana", Treviso Italy
5. Istituto Geriatrico Piero Redaelli, Milano, Italy
6. Rehabilitation Medicine Service, Rehabilitation Geriatrics Department of the NHS-University Hospital of Parma, Italy
7. Physical Rehabilitation Medicine Physician, National Secretary of the Italian Union of Physicians of Physical and Rehabilitation Medicine, Italy
8. Chief of Rehabilitation Department, Local Health Unit "Euganea", Veneto Region, Italy
9. Director, PRM Unit, Azienda Ospedaliera "Cardarelli" Napoli, Italy
10. Chief of Rehabilitation Department, Spalenza Centre. IRCCS Don Gnocchi Foundation, Milano, Italy
11. Chief of Physical Medicine and Rehabilitation Department, Local Health Unit Central Tuscany Florence Italy
12. Chief of Rehabilitation and Intermediate care Department Local Health Unit Agrigento, Italy
13. Director, Rehabilitation Unit, Physiotherapy and Research laboratory in Biomechanics and Rehabilitation "S.Giuseppe" Hospital, Istituto Auxologico Italiano, Piancavallo, Verbania, Italy
14. President of the UEMS PRM Board - PRM Professor Department of Experimental and Clinical Medicine "Politecnica delle Marche" University - Director of Neurorehabilitation Clinic Azienda Ospedali Riuniti di Ancona, Italy
15. Unit of Physical Medicine and Rehabilitation, Istituti Clinici Scientifici Maugeri IRCCS, Lissone, Monza-Brianza, Italy
16. Chair, Physical and Rehabilitation Medicine – Department of Clinical Sciences and Translational Medicine – Tor Vergata University, Rome, Italy
17. Unit of Physical Medicine and Rehabilitation, Istituti Clinici Scientifici Maugeri IRCCS, Lissone, Monza-Brianza, Italy
18. Department of Mental and Physical Health and Preventive Medicine, University of Campania "Luigi Vanvitelli", Naples, Italy
19. Scientific Director, Rehabilitation Hospital "S.Pancrazio" Arco di Trento, Italy
20. Spinal Unit, Montecatone Rehabilitation Institute, Imola (Bologna), Italy
21. Department of Biomedical, Surgical and Dental Sciences, University "La Statale", Milan, Italy IRCCS Istituto Ortopedico Galeazzi, Milan, Italy
22. Physiatrist, member of the ISPRM Disaster Rehabilitation Committee
23. Director, Department of Rehabilitation, Usl Umbria 2, Foligno, Italy- President of UEMS-PRM

INTRODUCTION

Since the onset of the COVID-19 outbreak in Europe, Italy has been among the first affected countries, and the number of reported cases is still the highest in the continent.

Since the beginning, the epidemic has had a huge impact in the acute sector of the healthcare system (especially the emergency departments, Intensive Care Units - ICUs, laboratory and imaging services), and these services have been experiencing increasing pressure (1,2).

As the epidemic progresses, almost all the healthcare sectors will be involved, including the area of post-acute care and rehabilitation.

Two main factors are now characterizing the consequences of the epidemic in rehabilitation services and all physical and rehabilitation medicine (PRM) activities:

- The increasing pressure from the acute care services to transfer patients to inpatient rehabilitation units, so as to facilitate new admissions of COVID-19 cases, as well as to ensure the care of patients affected by other medical conditions whose admission cannot be postponed.
- The increasing difficulties in providing rehabilitation care in the outpatient and home-based settings, because of the restrictions imposed by the national and local authorities in the movement of people to prevent the spreading of the infection. This situation is expected to have a significant negative impact in the short term, mainly for those patients at higher risk of deterioration of their functional abilities and already suffering from important limitations in participation.

Such factors are rapidly re-shaping the entire organization of rehabilitation services; despite of this, rehabilitation professionals are trying to do their best to provide adequate care for their patients, who are particularly vulnerable because of their health conditions and functional limitations.

The rapid evolution of the epidemiological scenario has been leading to a number of recommendations, provisions and rules issued by the national, regional and local authorities. There are some differences in the existing prevention measures among regions and/or local health districts, only partially due to real differences in the organization of services. Moreover, the provisions address general aspects of the prevention or management of the infection, and are not tailored to the specific needs of rehabilitation activities.

For these reasons, the Italian Society of Physical and Rehabilitation Medicine (SIMFER) has decided to produce a short document with the aim of providing recommendations fully compliant with the national and regional provisions, but specifically focused upon the rehabilitation sector, to support the physical and rehabilitation medicine physicians, other medical specialists, other health professionals, and policy makers in taking decisions in such an unusual and largely unknown circumstance.

The document presented here was issued on March, 13th by the SIMFER Executive Committee.

Ongoing revisions of the document are planned, according to the evolution of the epidemiological picture.

SIMFER hopes that this document can be useful for colleagues in dealing with a similar situation.

REFERENCES

1 Grasselli G, Pesenti A, Cecconi M. Critical Care Utilization for the COVID-19 Outbreak in Lombardy, Italy: Early Experience and Forecast During an Emergency Response. *JAMA*. 2020 Mar 13. [Epub ahead of print] doi: 10.1001/jama.2020.4031.

2 Remuzzi A, Remuzzi G. COVID-19 and Italy: what next? *Lancet*. 2020, March 12. [Epub ahead of print] do: 10.1016/S0140-6736(20)30627-9



COVID-19 OUTBREAK, REHABILITATION SERVICES AND ACTIVITY OF PRM SPECIALISTS IN ITALY

The current epidemic of COVID-19 is putting a strain upon the Italian Health Care System, despite the huge effort of all the professionals. It's having a profound impact on rehabilitation services, and on the activity of the PRM specialists.

The Italian Society of Physical and Rehabilitation Medicine (SIMFER) believes that every effort should be made to keep adequate levels of activities in this sector in such difficult circumstances, not only to **ensure appropriate interventions** to the persons in need of rehabilitation, but also to **support all the other areas of healthcare** by facilitating the continuity of care.

This document summarizes the recommendations of SIMFER, issued with the aim of **providing adequate care** as well as **protecting patients and professionals**, and taking into account that the top priority is to **limit the spread of the infection**.

Such priority requires **setting priorities in rehabilitation activities**, to ensure the delivery of interventions in situations in which they cannot be deferred, and to allow access to services whenever possible in other cases, although in limited and modified ways.

The recommendations have to be followed in **full compliance of the rules and provisions** issued by the institutional bodies at National, Regional and Local level, and they will be periodically revised and updated in light of any new provision.

GENERAL CRITERIA OF PRIORITY IN THE DIFFERENT SETTINGS

- **ACUTE CARE:** ensure all the adequate activities and interventions to prevent the major disabling complications of the acute conditions and comorbidities, to support the achievement of clinical stability and to plan the following clinical pathway. Such goals have to be pursued taking into account the continuous organizational changes of this area, as a consequence of the rapid evolution of the epidemic.
- **INPATIENT REHABILITATION SETTINGS:** ensure the adequate delivery of interventions and development of individual rehabilitation plans for the patients directly admitted from the acute care wards, including patients recovering from COVID-19 with disabling sequelae. Increase the admission capacity of rehabilitation facilities, to support early discharge from the acute care units, and facilitate the early subsequent safe discharge to outpatient and home and community rehabilitation services whenever possible. For patients admitted to rehabilitation inpatient units from home or other community facilities, in cases where such pathways have not been fully suspended by the local authorities, every single condition should be evaluated, carefully taking into account the balance between benefits and harms, postponing the admission and seeking for other alternative options of care whenever possible.
- **OUTPATIENT AND HOME BASED REHABILITATION SERVICES:** ensure the care for persons with recent sequelae of pathologies of different origin, where interventions are needed to minimize functional deficits which, if left untreated, could lead to long term or

permanent disability and/or to further deterioration. For chronic disabling conditions, with or without exacerbations, in persons who did not suffer from a recent acute event, consider preliminarily alternative options of care (remote consultation, telerehabilitation...) so to postpone the treatments while maintaining the therapeutic relationship. Exceptions to such behavior are chronic conditions at risk of rapid deterioration of functional level if left untreated (e.g. neurodegenerative diseases, severe conditions in childhood...)

PROTECTION OF PATIENTS AND PROFESSIONALS

Some specific aspects of the rehabilitation activities can lead to difficulties in harmonizing the therapeutic needs with the required measures to protect professionals and prevent the spread of the infection. They should be taken into account in all the different settings:

- Frequent need of a **prolonged and/or close interaction** between patients and professionals;
- Frequent occurrence of **difficulties in the communication** with the patient (because of cognitive difficulties, disorders of consciousness, childhood patients...)
- Possible need of **involving family members or other persons** in the delivery of care

The general behavioral guidelines to properly address these aspects should be based on a series of coordinated clinical, organizational, technical and informational measures:

- Early and **preventive identification of the symptomatic cases**, possibly with remote assessments (e.g. preventive information and questionnaires to patients/caregivers, phone triage or preadmission triage or preliminary interview, designated protected areas for pre-admission evaluation...)
- **Social distancing measures** in compliance to rules and recommendations issued by the authorities (organization of spaces according to distancing needs, restrictions and modifications of policy rules for access to services...)
- Use of **Personal Protective Equipment (PPE)** according to the guidelines of authorities
- Adoption of **alternative modalities for the delivery of care** whenever possible (remote consultation, telerehabilitation, educational and training material available in remote mode...)

SIMFER urges the competent authorities (such as the directions of the public and private healthcare services, and the local, regional and national health authorities) to support the implementation of the above-mentioned measures and to make available adequate technical resources. Otherwise, if reasonable levels of protection would not be achievable despite the efforts of the professionals, and the risk of spread of infection would become evident, services would have to stop even the high-priority interventions.

ACTIVATION OF A FREE-OF-CHARGE REMOTE SUPPORT SERVICE BY SIMFER

Considering the restrictions to the access to rehabilitation services as a consequence of the COVID-19 epidemic, SIMFER is activating a remote support service of “tele-rehabilitation medicine”, with the aim of providing information and advice to persons with disabling conditions of different origin, family members and caregivers. The service is free-of-charge and is delivered by a pool of PRM doctors from all the different areas of the country.

The person in need of support can contact SIMFER through a dedicated e-mail address: telemedicinariabilitativa@simfer.it.

Approved and issued by the SIMFER Executive Committee on March, 13th, 2020

