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SPECIAL ARTICLE

The new hospital discharge form for inpatient rehabilitation in Italy: a step forward to promote the role of rehabilitation in the healthcare system

Paolo BOLDRINI [1] *, Giovanna BERETTA [2, 3], Pietro FIORE [4, 5], Carlo DAMIANI [6, 7], Lorenzo AGOSTINI [5], Ernesto ANDREOLI [5, 8], Stefano BARGELLESI [5, 9], Andrea BERNETTI [5, 10], Alessandro de SIRE [5, 11], Silvia GALERI [5, 12], Giovanni IOLASCON [5, 13], Giulia L. MAURO [5, 14], Lia RUSCA [5, 15], Giovanni A. CHECCHIA [16, 17], Bruna LOMBARDI [17, 18], Antimo MORETTI [13, 17], Massimo COSTA [19, 20]

[1]Communication and Information Committee, Italian Society of Physical and Rehabilitation Medicine (SIMFER), Rome, Italy; [2]Department of Rehabilitation Medicine and Neurorehabilitation, ASST Ospedale Metropolitano Niguarda, Milan, Italy; [3]President of the Italian Society of Physical and Rehabilitation Medicine (SIMFER), Rome, Italy; [4]Unit of Neuromotor Rehabilitation, Istituti Clinici Maugeri IRCSS, Bari, Italy; [5]Executive Committee, Italian Society of Physical and Rehabilitation Medicine (SIMFER), Rome, Italy; [6]Department of Neuromotor Rehabilitation, IRCSS San Raffaele, Rome, Italy; [7]General Secretary, Italian Society of Physical and Rehabilitation Medicine (SIMFER), Rome, Italy; [8]Unit of Physical Medicine and Rehabilitation, A.O.U. IRCCS Policlinico S.Orsola-Malpighi, Bologna, Italy; [9]Department of Rehabilitation Medicine, ASL "Serenissima", Venice, Italy; [10]Department of Experimental Medicine, University of Salento, Lecce, Italy; [11]Department of Medical and Surgical Sciences, Magna Grecia University, Catanzaro, Italy; [12]Struttura Complessa Riabilitazione Specialistica, ASST Papa Giovanni XXIII, Bergamo, Italy; [13]Department of Medical and Surgical Specialties and Dentistry, Luigi Vanvitelli University of Campania, Naples, Italy; [14]Department of Precision Medicine in the Medical and Surgical Areas, University of Palermo, Palermo, Italy; [15]Department of Rehabilitation Medicine ASL Biella, Biella, Italy; [16]Department of Rehabilitation Medicine, ASL "Euganea", Padua, Italy; [17]College of Arbitrators, Italian Society of Physical and Rehabilitation Medicine (SIMFER), Rome, Italy; [18]Department of Physical Medicine and Rehabilitation, Azienda USL Toscana Centro, Prato, Italy; [19]Specialized Rehabilitation Unit, General Hospital "A. Cardarelli", Naples, Italy; [20]General Secretary, Italian Union of PRM specialists (SIMMFiR), Naples, Italy

*Corresponding author: Paolo Boldrini, Via Po 22, 00198 Rome, Italy. E-mail: paolobold@gmail.com

ABSTRACT

BACKGROUND: In Italy, longstanding limitations in the existing reporting system of the inpatient rehabilitation activities have been reported. The Hospital Discharge form (HDF) primarily uses ICD codes that inadequately capture the functional status and rehabilitation needs of patients, impacting equity of care and service evaluation. Therefore, the Italian Ministry of Health (IMH) launched an initiative aimed at developing a new reporting system to be specifically adopted in the inpatient rehabilitation setting.
METHODS: A working group (WG), lead by representatives of IMH, was established in 2019. It included members of scientific societies and professional associations in rehabilitation, administrators, policy makers, and other experts. Representatives of the Associations of Patients and Families were also consulted. The WG submitted the new version of the HDF to the political decision makers in early 2020. It includes detailed data on patients' functional levels before and after rehabilitation, and the complexity of clinical conditions. In using the ICD codes, priority is given to functional diagnoses.
RESULTS: In 2023, after a period of interruption due to the COVID-19 pandemic, a Ministry of Health Decree sanctioned the adoption of the new reporting system nationwide after a one-year trial period, starting on January 2024.

CONCLUSIONS: The new HDF is expected to improve data collection, reduce local and regional disparities, allow better comparison of the performances of the structures, and ultimately enhance the quality and outcomes of rehabilitation care across the country. The Italian Society of Physical and Rehabilitation Medicine (SIMFER) gave an important contribution in the development of the system.

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KEY WORDS: Inpatients; Functional status; Italy.

Rehabilitation in Italy's Healthcare System

Italy's health-care system is a public national health service (Servizio Sanitario Nazionale, SSN). It was created in 1978, and it provides universal coverage, largely free of charge. The main source of financing is national and regional taxes. The Ministry of Health is ultimately responsible for the administration of the health service, but much of the control has been given to the local health authorities, known as ASL (Azienda Sanitaria Locale). The role of the regional authorities in ensuring the basic healthcare services (Livelli Essenziali di Assistenza, LEA) to be provided to all citizens was increased following a reform in 2001. The 1998 Guidelines for Rehabilitation[1] and the 2011 Plan of Rehabilitation,[2] issued by the Ministry of Health, established general rules for the organization and delivery of services, concerning inpatient, outpatient, and home- and community-based rehabilitation. To date, implementation still differs from Region to Region.

While acute care inpatient units are reimbursed by the SSN according to a national diagnosis-related group (DRG)-like system, the reimbursement of the inpatient rehabilitation services is based on a per-diem payment system, with different charges according to the level of intensity of treatment and the etiology of the disabling condition (Neurological, Musculo-skeletal, and so on).

In 2022, the post-acute inpatient sector in Italy (which includes inpatient rehabilitation services) accounted for about 6% of total hospital admissions (328.317 in 2022) and 21.5% of days of hospitalization (8.349.771 in 2022).[3]

Reporting systems for inpatient rehabilitation in Italy

To date, the clinical reports sent by the public and private-owned inpatient rehabilitation units to the Regional and National Health Authorities to get the reimbursement for hospital stay (the so-called "Scheda di Dimissione Ospedaliera" (SDO), whose meaning is "Hospital Discharge Form", HDF) are strictly based on the ICD coding system. It is focused on the etiological and pathological dimensions of the disease, and it was primarily developed to describe the activities of the acute care units. In the vast majority of cases, the HDFs do not register any information on the type of impairment and the severity of the functional consequences of the disease or include very limited and inconsistent data on these aspects.

These characteristics imply important limitations for the rehabilitation sector.

For example, persons affected by stroke, with significant differences in their severity at onset and disabling sequelae, might be described with the same ICD codes at discharge from rehabilitation. This has a negative impact on the equity of access to care, on the identification of rehabilitation needs, on the proper evaluation of outcomes, on the comparison of service performances, and – finally – on the funding of the services and recognition of their value.

These critical aspects have been highlighted for a long time by clinicians, administrators, and other stakeholders in the area of rehabilitation.

In last years, the Ministry of Health issued a proposal on the re-definition of the criteria of access to the inpatient rehabilitation services.

The Italian Society of Physical Medicine and Rehabilitation (SIMFER) was among the organizations consulted on draft proposal. This gave the opportunity to underline that updating the HDF was an essential pre-requisite for a proper definition of the appropriateness of admissions and evaluation of care.

Development of a new reporting system for inpatient rehabilitation

A working group was established in 2019 by the Ministry of Health. Its task was to develop a new version of the HDF, to be specifically adopted in the inpatient rehabilitation settings. It was intended to be used – among other objectives – as a source of information in assessing the proper utilization of the services.

Representatives of Scientific Societies and Professional Associations in rehabilitation, administrators, policy makers, and a pool of experts designated by the Ministry (many of them were members of the SIMFER) were invited to participate. Representatives of the Associations of Patients and Families were also consulted to get their opinion on specific aspects.

After about six months, the new version of the HDF was submitted to the senior executives of the Ministry and the political decision makers.

The main innovative aspects are:

• the inclusion of a set of data on patients' functional level before the onset of the recent pathology (*e.g.* moderate disability because of COPD preexisting to recent hip fracture), on admission and at discharge from the rehabilitation unit, and on clinical and rehabilitation complexity, by means of standardized scales (such as the Rehabilitation Complexity Scale,[4] the Barthel Index [Italian Translation and Validation],[5] and others). Additional scales are included for specific conditions (*e.g.* Levels of Cognitive Functioning[6] for persons with Severe Brain Injury, Spinal Cord Independence Measure[7] for persons with Spinal Cord Injury);

• priority given to the diagnoses related to functional limitations (*e.g.* hemiplegia, aphasia) over "etiological" diagnoses (*e.g.* occlusion of cerebral artery) in the attribution of the ICD codes;

• inclusion of additional ICD codes related to conditions that may negatively interfere with the rehabilitation interventions, or require additional resources (*e.g.* tracheostomy, severe malnutrition, delirium). Such conditions have been selected according to the findings of a large regional study[8] that weighted their impact on the rehabilitation process. Interestingly, social unfavorable conditions (*e.g.* living alone, economic difficulties) are included among these complicating conditions;

• priority given to procedures specifically related to rehabilitation included in the ICD classification, followed by those which are more time-consuming and /or costly, and/or requiring complex technological equipment.

A detailed assessment of the potential impact and technical feasibility of the new version of the HDF was carried out. To gather information on the needs for technological updating an audit of the IT resources at a National and Regional level was performed.

The COVID19 pandemic slowed down the procedures for the final approval of the new instrument. In 2023, a Ministry of Health Decree sanctioned its adoption after a one-year trial period. Training initiatives for the clinicians and administrators were organized at a national and regional level; manuals and video-tutorials on the new coding and reporting system were uploaded to the website of the Ministry.[9]

The trial period of the new HDF began nationwide on January 1st, 2024.

Expected consequences of the adoption of the new HDF

The new reporting and coding system is expected to have a relevant impact on the sector of hospital-based rehabilitation in Italy. The systematic collection of data on the patient's functional status and complexity, with consistent methodology and validated tools throughout the whole country, will improve the evaluation and the comparison of the performances of services, and will increase their transparency, equity, and accountability. From a public health perspective, it will also represent an important source of epidemiological data for the improvement of services.

Another important potential effect could be a reduction in the persisting relevant regional differences in the organization and delivery of rehabilitation interventions.

Besides these practical aspects, the cultural value of this innovation cannot be neglected.

The development of a specific information flow that includes the dimension of functioning is a novelty in the Italian scenario and represents a step forward in highlighting its recognized crucial role in healthcare.[10]

An important limitation of the new reporting system is the lack of any explicit reference to the ICF-WHO classification,[11] considered the worldwide reference model for the description of the functional consequences of health conditions.

The introduction of an ICF-based HDF was proposed, but, for now, it was decided not to proceed with this option, as it would have delayed the adoption of the new system and would have required a costly and sustained effort for the training of the professionals and the updating of technical equipment.

Despite these limitations, it can be considered that the new system represents a step forward in reinforcing the role of rehabilitation in the healthcare system, in line with recent WHO indications.[12]

SIMFER is aware of the need to fully support clinicians and technicians in the knowledge and application of the new coding tools. For this reason, it is involved in many training initiatives throughout the country, in collaboration with the Ministry of Health and the Regions or organized on its own.

All the professionals involved in the implementation of the new system should welcome it as an opportunity to describe more accurately and reliably the needs of the persons served, the interventions delivered and the results of care, thereby promoting the improvement of the quality and accountability of services.

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Conflicts of interest
The authors certify that there is no conflict of interest with any financial organization regarding the material discussed in the manuscript.

Authors' contributions
Paolo Boldrini gave substantial contribution to the conception of the manuscript. All authors have participated in revising the manuscript. All authors read and approved the final version of the manuscript.

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