

Perspectives for PRM Development : An Italian Point of View

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The challenges we must meet:

We all realise the great changes that have taken place in our perception of health, the conditions necessary for subjective wellbeing and for what we define as “quality of life”. Disorders, symptoms and phenomena that perhaps in the past were supported and considered inevitable are now no longer accepted and demands are rightly made for all treatments that can eliminate or alleviate such problems. This is causing an ever more rapid expansion in the duties and aims of Medicine, as the frontiers of the needs and requests of citizens enlarge. There is a parallel expansion in overall requests for services and performances, which are not limited only to the field of healthcare, but extend more generally to social policies. Of course, all this must be proportional to the real existence and potential of treatments, based on scientific evidence and not only on hopes and illusions.

Rehabilitation is the sector of Medicine that, more than any other, is in the centre of this transformation: demand is growing and there is a parallel growth in the scientific potential to modify disabilities that previously could not be treated with success.

The starting point of all rehabilitation activities and associated professional and organisational responsibilities is the right of the individual, in the face of whatever participation limitation and/or disability that alters even only transiently his autonomy, self-sufficiency

and self-determination to receive a diagnostic evaluation, a prognosis and, if possible, a treatment suitable for the problem related to his overall bio-psycho-social situation; these must be understandable and controllable by everyone. Social participation is a term that very well represents the person’s fulfilment of this set of activities and rights.

The individual’s right is inextricably bound to the duty of society to guarantee every person all the instruments suitable for maintaining, for as long as possible and at as high a level as possible, personal autonomy in participation in social tasks. It is also society’s duty to optimise and at the same time verify the appropriate use of the many available rehabilitative instruments with respect to parameters of efficacy, efficiency and sustainability. It is equally obvious and important that all the problems of the economic sustainability of services, in proportion to the evidence of their efficacy and suitability, must be approached with complete clarity of information. Such information, first of all for the choices in the general context of the population and in parallel for individual cases, is an essential element for building active and conscious involvement in the process of rehabilitation of the person, and of the community as far as is necessary.

We know that demands for health, treatments, restoration of autonomy and personal self-sufficiency are burgeoning and are being made by an ever broader group of people who, for numerous and extremely varied reasons, have found their state of well-being compromised. Research and clinical knowledge in our discipline offer ever greater possibilities of meeting these demands, with intrinsic, retraining and compensatory treatment methodologies and with therapeutic procedures that incorporate musculoskeletal, kinesiological, neuropsychological, motivational, and occupational resources and potentials, etc.

Everyone knows how it is important that each health system can have the necessary comprehensive management organisation for the instruments and

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Cite as:

Alessandro Giustini. Perspectives for PRM Development: An Italian
Point of View. *IJPMR* June 2014; Vol 25 (2): 34-43.

Received on 15/05/2014, Accepted on 20/06/2014

resources used, in relation to their expected aims and achieved goals; it is equally important, given the rapid changes in demographic and socio-economic situations, that every welfare system can have instruments to make the necessary connection between these interventions and the related healthcare aspects.

After the UN Convention, more recently World Report on Disability - WRD was launched in New York by WHO – UN: it displays what has come to be known as the integrative model of functioning and disability as expressed in the International Classification of Functioning, Disability and Health (ICF) and underlines all the evidences in rehabilitation, in social, health, educational, work and cultural fields in any community and country.

WRD strongly acknowledges the genuine role of PRM and its contribution to enhancing a person's functioning and participation in life. Challenges lie in the delivery of rehabilitation services in underserved parts of the world, ranging from the provision of timely, cost efficient and effective treatment, and the involvement of people with disability, family and care-givers in the decision making process.

WRD assembles the best available scientific information on disability : the definition of a National Plan to apply all these points is suggested as the most important point for every Country.

THE ITALIAN POINT OF VIEW TO FACE THE PROBLEM: THE REHABILITATION PLAN 2011

In this framework, the purpose of the rehabilitation intervention is “to regain health”, no longer seeing the disabled person and his limitations in participation as a “patient”, but as a “person with rights” (Madrid Conference of 2002, European Year of the Disabled). The purpose of the rehabilitation intervention is therefore to define the “person” and then realise all of the health intervention necessary to provide him with assistance, with a view to actual empowerment, the condition of the highest possible level of functional efficiency and participation, in relation to the person's will and the context.

So we think that is necessary a sort of “integrated itinerary of assistance” for the overall reference that makes the health and non-health components of the rehabilitation intervention synergetic. In this ambit, the Individual Rehabilitation Plan (IRP) is the specific, synthetic and organic instrument for all of this, which is unique for each person, defined by the specialist

rehabilitation physician, in common with the other professional figures involved. Full information and aware and active participation in the choices and intervention on the part of the person who is at the centre of the process, his family and life context, are always essential elements.

The intervention determined by the IRP, centred on the various selected problems, requires systematic evaluation of performance and definition of the objectives and process indicators, in order to verify achievement of the expected results. Applying parameters of the impairment, limitation in activity, restrictions in social participation listed in ICF, the IRP defines the prognosis, expectations and priorities of the patient and his family; this is shared with the patient, when possible, with the family and care-givers, defining the characteristics of congruity and appropriateness of the various forms of intervention, as well as the conclusion in healthcare acceptance, in relation to the results achieved.

The Italian Plan defines 3 fundamental “cornerstones” to be able to manage such an holistic approach, and such a needed holistic service :

1. Degree of necessity of the person to be rehabilitated

In order to correctly define the level of need of the person to be rehabilitated, three dimensions can be identified, which permit placement of the person, when opportunely combined, independently of the main pathology that created the disability (whether cardiological, respiratory, neurological, metabolical, oncological, etc), in the most appropriate settings in relation to the phase of the itinerary of care, with the use of resources.

- 1.1 *Clinical complexity*: Assessment and stratification of high clinical risk. Clinical complexity is correlated to the set of diagnostic, welfare and organisational complexities and the different therapeutical interventions, proportionately graduated by complexity and for the consumption of resources.
- 1.2 *Disability*: Loss of functional capabilities within the ambit of physical, motor, cognitive and behavioural activities, which in the most current bio-psychic-social concept, have an impact on environmental factors, reducing the level of participation of the individual in daily life activities and relations.
- 1.3 *Multimorbidity*: A set of pathologies and conditions classified according to scales and graduated points. These comorbidities may be a mere list for a more

accurate prognostic stratification or active cofactors that influence the clinic, treatment and prognosis.

This all becomes more complex if the patient affected by multimorbidities is also affected by fragility due to advanced age. This concept must be held in high consideration in the specific and specialist approach to dedicate to the elderly person. The very knowledge of the concept of fragility in rehabilitation of geriatric patients must be the basis of the rehabilitation plan, because the fragile elderly person is affected by multimorbidity, subject to complex pharmaceutical treatments, frequently clinically unstable, sometimes incontinent, with nutritional problems, often affected by cognitive degradation or dementia, sarcopenia, osteoporosis, an increased risk of falls, etc. These specific clinical situations substantially increase the serious risk of loss or worsening of the patient's level of independence, especially in extremely long-lived persons. This picture considerably reduces the ability of the patient to fully adhere to rehabilitation programmes. The loss and worsening of autonomy are also related to social problems that reduce the support of the family network, further compromising the effectiveness of the rehabilitative intervention, especially where solitude and the loss of social integration are strongly present.

2. Different Health Conditions of Subjects

Nevertheless we must start rehabilitation as soon as possible, in the acute phase too, very often the chronic nature of health problems and time since their development can determine a deterioration of the organ function (and other problems) and increase the level of disability, through the alteration of the physiological function and frequent worsening. The consequent vicious cycle determines the worsening of the symptoms, reduced working ability, tolerance to effort, worsening of inactivity and disability, reduced social involvement and depression.

An additional characterisation of the level of need for rehabilitation must also be based on the characteristics of presentation and evolution of the pathology, which may be characterised by:

- Frequent worsening, hospitalisation (high risk person);
- persistence of a high level of clinical assistential complexity with a high level of absorption of resources and a requirement for a personalised and multidisciplinary approach (highly complex person);
- chronic disability outlook associated with a bad

lifestyle (use of tobacco, inactivity, hypercholesterolemia, overweight) where the intervention is concentrated above all on monitoring the evolution and on a process of education and modification of the subject's habits, in order to prevent the insurgency and advancement of the chronic pathology (person with chronic or serious pathology or serious factors of risk).

3. Rehabilitation : network interventions in the continuum

As a matter of fact only a real, coordinated and complete network can cover all these problems offering the right solution in the right moment and condition, applying the right resources, defining the right goals in relation to the different steps and times, guiding and involving the person and his/her family in the right run to reach the possible health.

In our Italian point of view to realise a real network the main tools are:

a) *Clinical governance*

Integrated clinical governance is a global approach to the management of health services, which makes the individual's need central. To do the right thing, at the right time, in the right place, is the synthesis of the concept of technical quality. To this end, methodologies and instruments are used, such as the guidelines and assistance profiles based on tests to determine effectiveness, the management of clinical risks, informative systems built up starting from the integrated (digital) clinical records, the valorisation of personnel and the relative training, regulatory and multi-professional integration, the systematic evaluation of performance of the process (output) in order to introduce appropriate innovations and ensure the involvement of all parties, the volunteer associations and the community.

The correct use of resources requires a clear and precise definition of the criteria for access to the rehabilitation, in order to offset cultural and organisational delays, through greater appropriateness. It is deemed necessary:

- For the procedure for acceptance to be activated for all persons who have a true necessity (criteria for "access" and "coverage of the network");
- for intervention to be performed in a suitable timeframe with respect to the type of need and in respect of intervention times, as a function of the biological phases of recovery and the socio-environmental needs (criterion of "timeliness");
- for there to be a guarantee of coherent succession

and integration of the various types of intervention and settings, depending on the phases of the morbidity, the clinical condition of the subject, family and environmental situations (criterion of “continuity”);

- for priority to be given to the all-inclusive acceptance of the disabled person and to ensure that mere single-specialist functional organ re-education services alone are not distributed (criterion of “appropriateness”);
- for every intervention to be performed on the basis of a rehabilitation programme, which must be developed by the professional involved and which must achieve specific, well defined and measurable objectives, included in the individual rehabilitation plan (criteria of “all-inclusive acceptance” and “measurability of effectiveness of intervention”);
- for intervention of recognised and shared validity be provided, with causal purposes that are more than symptomatic (criteria of “effectiveness” and “evidence based medicine”);
- to facilitate the patient’s and his family’s active and aware participation in the itinerary of care, which should be pursued, if necessary, with action to educate, support, train and inform, throughout the entire period of acceptance for rehabilitation (criterion of “active involvement of the user”);
- to favour an educational approach for the patient, in order to provide him with cognitive and operational instruments for proper self-management of his problems, with a view to dismissal from the medical facility (“suitable physical activity” and the criterion of “active involvement of the user”);
- for an independent, impartial and objective system of evaluation of the effectiveness and efficiency of the individual acceptance to be developed (criteria of “evaluation of effectiveness” and “evaluation of efficiency”).

Continuous training, the collection of data on the process and results, auditing and the adoption and continuous verification of shared procedures are the instruments for constant verification of the health services provided.

Communication, including external and internal communication, must be made a central element in actions for improvement. Transparency in the use of information is a signal of dependability, foreseeing the regular production and distribution of information in a systematic manner, relative to quality, safety, the activity and experience.

Furthermore it is necessary to guarantee the following within the ambit of health rehabilitation service: participation in programmes of primary prevention of illnesses that involve the risk of disability and in programmes of health education for the population;

- participation in the processes of diagnosis and care of illnesses that have a risk of creating disabilities, in order to contain the insurgence of secondary and tertiary damage, which can be prevalent in determining the degree of residual disability;
- prescription, selection and training in the use of prostheses, orthotics and aid for personal autonomy and the relative testing of the supplies provided, within the ambit of the official price list, and verification of the effectiveness and efficiency of the supply service;
- the offer of technical assistance for services to ensure professional qualification and requalification and for the social service for social and professional reintegration of persons with disabilities and the correlated problems;
- equipment designed to provide health rehabilitation intervention, which constitutes an actual, privileged interface between health intervention and the achievement of results, especially for more serious disabilities that are secondary to neurological damage.

b) *IRP - Individual Rehabilitation Plan*

Hospitalised disabled persons in the acute phase must be immediately provided with an integrated proposal for their individual rehabilitation plan, with the various therapeutical settings of the network of rehabilitation. This principle takes concrete form in the concept of “acceptance of the user” and in the distribution of intervention according to defined rehabilitation programmes, within the ambit of a specific individual rehabilitation plan (IRP), applying the concept of prescriptive and distributive appropriateness.

The decision-making process of the PRM physician (Director of the patient’s clinic) in determining the individual rehabilitation plan, must take into account the functional prognosis and the margin of modification of the disability outlook, the patient’s degree of clinical stability and his possible participation in the programme.

Physician responsible of the IRP guarantees a constant flow of information to the patient, family, caregivers and the family doctor, who are all involved in the IRP activity,

even through the involvement of professionals on the team. IRP contains and indicates:

- Areas of specific intervention, objectives, the professionals involved, the settings, the methodologies and methods of rehabilitation and the timing for realisation and verification of the intervention making up the rehabilitation plan are defined in the plan itself, which specifies:
- the manner of acceptance by a specific structure or professional, in respect of the criteria of accreditation;
- short and mid-term objectives to be achieved and timing to verify and close;
- procedures and timing for distribution of the individual services envisioned;
- appropriate measurement of expected results for evaluation of the intervention.

c) *The Rehabilitation Department:*

In consideration of the complexity of the itineraries of rehabilitative assistance and their necessary and coherent articulation within the ambit of diversified types of hospital, extra-hospital, territorial, health and social settings, it appears indispensable to have a departmental organisation of rehabilitation activities.

The department provides the guarantee of realisation of an appropriate itinerary of rehabilitation care for all persons who require it and is the actual hub of clinical governance; instruments must be provided to the Department of Rehabilitation to permit the achievement of objectives of clinical and organisational quality, in respect of the available resources; additionally, instruments must be conferred to manage safety, quality, the personnel training policy, audits, etc. To this end, the department guarantees strong organisational integration with accredited private facilities present in the territory, according to the principles of efficiency and appropriateness.

The priority commitment of department is to guarantee continuity between in-patients, and out-patients and home cares in any health conditions.

Rehabilitation department is the only tool to verify and offer to all disabled people in a specific area (in Italy about half a million of inhabitants) appropriateness and sustainability for any rehabilitation personal itineraries for treatments.

The rehabilitation itinerary entails the relative diagnosis; therefore in the definition of the rehabilitation settings,

it is deemed necessary to take the following elements into consideration:

- Definition of the type of pathology that determined the disabling damage and the classification according to the ICF categories;
- the level of acuteness or chronic nature of the disability, distinguished on the basis of the temporal parameter – namely, the interval of time since the insurgence of the acute state of the disabling illness;
- the level of complexity of the patient accepted;
- the number and type of programmes appropriated for the type of disabilities present, with particular reference to the problems of the population during the age of development, guaranteeing the necessary continuity in this sector in passing to the adult age;
- the instruments of evaluation and therapeutic instruments appropriated for every programme in relation to the recovery from the disability, with particular reference to cognitive and neuro-psychological problems as well;
- the instrument of measurement/final evaluation of the objective(s) envisioned by the programme(s) of the individual rehabilitation plan.

d) *Definition of levels and places for care*

The proven effectiveness of the timeliness and rapidity of the rehabilitation intervention, documented by the evidence of literature in terms of recovery and prevention of further damages, requires the rehabilitation itinerary and the definition of the relative rehabilitation plan to be started up contextually with hospitalisation in the acute phase. The rehabilitation procedure is a criterion of appropriateness and must be valorised as an integral and unforgeable part of the price of the episode of hospitalisation in the acute phase.

1) *Intensive rehabilitation*

Rehabilitation in hospitalisation and care facilities, hospitals and accredited extra-hospital facilities, is characterised by rehabilitative health intervention designed to recover from important and complex disabilities, which can be modified and which require a high level of commitment in assistance, referable to nursing articulated over a period of 24 hours. These situations require contiguous management with the specialisations, instrumental and technological conferrals of the acute phase : so is possible to start very soon the rehabilitative interventions also for person in serious and critical condition, having a specialist multidisciplinary medical consultancy. The

objective of this intervention is further clinical stabilisation, with re-establishment of an independent condition and/or manageability in an extra-hospital environment. This Unit can be based in General Hospital or not, but maintaining all these conditions and characters.

Upon achievement of a condition of clinical stability that does not require medical presence 24 hours per day, or when high complexity diagnostic requirements cease to exist, it is opportune to resort to intensive extra-hospital rehabilitation. Management of the phase of dismissal and continuity in the departmental itinerary of rehabilitation require integration with the network of territorial services and close collaboration with the general practitioner. The treatment must be at least 3 hours per day, distributed by the psychiatrist, rehabilitation health professionals and nursing personnel. Social worker and psychologist, where necessary, support the rehabilitation intervention and contribute to the definition and realisation of the plan for dismissal and reintegration within a congruous time frame.

All of the activities must be documented and recorded in the clinical rehabilitation records, which are an integral part of the Individual Rehabilitation Plan (IRP).

2) Highly specialised intensive rehabilitation

Highly specialised intensive rehabilitation activities require special commitment of qualifications, means, equipment and personnel, and are distributed within the ambit of the national territory as a network of services in the specific fields identified by the national health programme. These centres carry out also the following functions:

- The preparation of operational protocols for the acquisition of epidemiological data relative to the invalidating illnesses on the provincial and regional level;
- the promotion of clinical research and controlled experiences to favour new techniques of rehabilitation;
- professional training, specialisation and refreshment of operators;
- the offer of technical consultancy for the construction and experimentation of aids, prostheses and orthotics.

The highly specialised intensive rehabilitation guarantees, by more than 3 hours of rehabilitative interventions per day, dedicated itineraries :

- For person affected by SCI through dedicated structures for the acute phase and structures for the management of complications in the stabilised phase;
- for persons affected by acquired serious cerebral lesions and serious encephalic traumas; for persons affected by serious disabilities in the age of development;
- for persons with acquired neuropsychological disturbances;
- for persons suffering and strongly disabled for serious acute or cronical cardiological or respiratory pathologies.

3) Extensive rehabilitation

The activity of extensive rehabilitation is distributed within the ambit of hospital and extra-hospital environments, in a continuous or diurnal cycle residential regimen. It is characterised by health rehabilitation intervention:

- For patients who are not self-sufficient, with potential for functional recovery, who cannot benefit or sustain intensive rehabilitation treatment, requiring hospitalisation, because they are clinically unstable. Disabling conditions involving several organs in highly complex persons, as previously described, with complex clinical-assistential situations of complexity due to the comorbidity of concomitant pathologies that interact with the rehabilitation prognosis, also find an appropriate setting in this phase. These situations require contiguous management with the specialisations, instrumental and technological conferrals of the acute phase. The objective of the intervention is further clinical stabilisation, with re-establishment of an independent condition and/or manageability in an extra-hospital environment.

Normally the hospitalisation in Italian organisation must not be extended beyond 60 days The rehabilitation intervention must be at least one hour per day.

e) *Activities in the community*

The rehabilitation network (and as explained department) finds natural continuity on the community level : the only context where it is possible to verify the actual outcome in terms of activity and participation. This ambit is therefore the privileged place for contextual intervention on the environmental components and on personal factors (ICF) even if these aspects must be yet evaluated and faced into the individual rehabilitation plan during the previous phases of cares.

In fact, for the real completion of the individual rehabilitation plan, it is necessary to continue in the community the rehabilitation intervention in order to achieve integration and social inclusion.

Intensive or extensive rehabilitation interventions may therefore be functional to achieve of the goal for the IRP, especially for specialist activities to integrate or reintegrate the patient in a working environment, scholastic integration, realising an independent life in the community.

Five can be the main key-points to build this part of the network:

1) Discharge from hospital

Coherently with the principle of “acceptance” and the need to guarantee a single integrated rehabilitation itinerary in the various therapeutic settings of the rehabilitation network to the disabled person with acute symptoms who has been hospitalised, the phases of passage between the various rehabilitation settings and, in particular, protected dismissal and “critical dismissals”, as well as the necessary continuity in rehabilitation intervention at the home or in assistance facilities (in connection with the general practitioners and paediatricians of free choice, as well as the territorial services), must be cared for and monitored within the ambit of the department, with suitable instruments of evaluation of the appropriateness.

2) Out-patients services

Within the ambit of the organisation of out patients/ ambulatory level, it is necessary to differentiate between two distinct types of users, defined on the basis of differentiated needs and levels of rehabilitation intervention, independently of the age segment of the population the subject belongs to:

- “Complex” case: users affected by important impairments and/or disabilities, often multiple in nature, with possible permanent results, a high degree of ADL disability requiring a multi-professional team (at least 3 types of professionals for rehabilitation, including the rehabilitation specialist physician) which performs an all-inclusive acceptance over the long term, through an individual rehabilitation plan that envisions multiple therapy programmes.

These rehabilitation activities, detailed in the IRP, are distributed in the form of complex ambulatory packages within rehabilitative departmental structures (day

Services or dedicated out-patients centres), with an overall duration of treatments of at least 90 minutes.

- “Non-complex case”: users affected by impairments and/or disabilities of any origin, which, on the basis of an IRP, require a single therapeutical programme for rehabilitation, distributed either directly by the rehabilitation specialist physician or through the IRP by a single type of rehabilitation professional; these users must be accepted for reduced periods of time; the duration of the access must be at least 30-45 minutes.

Access in both cases is granted to the ambulatory rehabilitation itineraries through an examination by a PRM physician, at the request of the general practitioner, who indicates the clinical problem(s) to be evaluated.

3) Home

Restoring the person to his own life environment is the most important objective of the rehabilitation itinerary, which all of the intervention programmed in the individual rehabilitation plan must tend to achieve.

The home treatment may, in this sense, constitute the continuation of the treatment realised in the previous phases, within the ambit of the IRP, representing the area of maximum collaboration with the general practitioner and paediatrician.

Such treatment can be distributed when envisioned by the IRP to cope with a rehabilitation need if the patient cannot gain access to ambulatory services.

The home environment is the privileged venue for intervention within the competence of the occupational therapist, for environmental adaptation and training for the use of aids and rehabilitation technologies.

4) Social Service and Health Facilities

For social service and health facilities older people can perform rehabilitation treatments in the community ambit as indicated by previous points (out-patients and home) in the department organisation and networking.

5) Physical exercise and disability

The National Italian Prevention Plan (2010) valorised the role of physical activity in promoting not only the well being of healthy people, but also its fundamental action in contrasting the chronic phase of the disability, thus representing a logical and physiological continuance of the rehabilitation.

In fact, the rehabilitation process, with its therapeutical intervention, plays an indispensable and irreplaceable

role as long as the patient is subject to possible active change in his level of functional efficiency; beyond this limit, however, it is necessary to consider the implementation of an appropriate lifestyle for the disabled person, analogously to what takes place for persons with chronic disturbances.

In chronic illnesses, a sedentary lifestyle becomes the minimum common problem that determines and accelerates the process of disability.

APA (Appropriate Physical Activity) plays various roles: reconditioning following rehabilitation, combating hypomobility, favouring socialisation, promoting a more correct lifestyle (prevention); it therefore appears to be a valid aid capable not only of interrupting this vicious circle, but also of creating a virtuous one.

APA is not rehabilitation activity, but maintenance and prevention, whose purpose is to facilitate the acquisition of lifestyles that are useful in maintaining the best possible level of autonomy and the quality of life.

APA, performed regularly, is capable of producing improvements in walking, resistance to physical effort, reducing difficulties in performing the activities of daily life necessary to guarantee autonomy in the home and out of the home; additionally, it favours and provides incentives for socialisation, improving the tone of humour, motivations, social and family relations.

Finally, the value of APA should not be forgotten in terms of education and training, through the active involvement of the subject in his own health plan and plan to gain independence, thanks to the promotion of regular activity and a more appropriate lifestyle.

The venues where APA is performed may be municipal gyms, protected facilities, associations, fitness centres, open spaces (cycling routes, life itineraries, etc), but which are not health facilities, in any case. The involvement of social services and volunteer associations, etc, is fundamental in structuring itineraries and in seeking dedicated venues.

Operators who direct these activities are not necessarily health professionals. It is indispensable for all of these operators to possess appropriate specific training on themes related to motor disability.

f) *Research in and for rehabilitation*

For many years, rehabilitative medicine suffered the consequences of the absence of scientifically valid and validated itineraries and instruments, making an empirical approach its *modus operandi* in assistance and

research. In the age of medicine based on evidence, this approach has created in the past a deep cultural and scientific divide between rehabilitation and other specialisations, which has begun to be eliminated only in recent years.

Research in rehabilitation has made great progress, availing itself of the methodological contributions of evidence-based medicine. Traditionally, the main scientific interest has been to study the physiopathological alterations and the recover of functions; more recently, a growing number of trials have been conducted, in a perspective of evaluating the effectiveness of rehabilitation in disabilities due to various pathologies. Meta-analyses are already available for some conditions, of controlled trials, from which important indications have been derived for the development of research, with the use of new technologies in rehabilitation, such as robotics, for example, virtual reality and tele-rehabilitation.

Research in rehabilitation, as WRD too well underlines, presents strong peculiarities that differentiate it from other disciplines; the outcome rehabilitation, for example, is difficult to measure using the traditional tools, as much as it tends to evaluate behaviour and not a single biological parameter. The team working methodology, the networking in different places and times, the multifactorial and often multipathology condition of person must be rightly evaluated in research design and in evaluations of results.

In this sense, research in rehabilitative medicine does not focus only on the organ damage, but on the reduction of the disability, which is obtained both through direct intervention on the function or structure, as well as through suitable strategies to reduce the limitations and restrictions in participation, obtained even and above all by addressing interaction between the person and his context, placing the person at the centre of action.

Hopefully, an interdisciplinary research activity with the objective of contributing to the following aspects will be implemented and promoted:

- Defining instruments of measurement according to the “International Classification of Functioning of the WHO”, which are essential in the construction of specific indicators for rehabilitation;
- identifying valid protocols of inclusion and reintroduction of the patient in his family and social environment;
- identifying strategies and methodologies of

evaluation of the adaptation and inclusion/reintroduction in the work or scholastic environment;

- developing new organisational models for the integration of the various resources (internal and external to the public and private health system), in order to guarantee efficiency within the system;
- identifying and validating criteria of appropriateness of the rehabilitation itineraries and indicators of effectiveness and efficiency of the process.

The facilities (universities, public or private hospitals and research centres) designated for rehabilitation research must possess competence and working methodologies capable of developing a level of in depth analysis, as well as clinical capabilities, also of integration with the overall network of care.

In evidence-based medicine research requires suitable facilities, including the facilities of the National Health Service, which, in addition to its assistance duties, also performs duties of clinical research; it also requires dedicated subjects, who know how to unite overall rehabilitation capabilities with the specific capabilities of research. It is also indispensable for everything to be connected with places of care in terms of “demand”, in order to orient research and translate the activities into clinical advantages to transfer, in a timely manner, to daily caregiving activities.

Moreover, given the fact that rehabilitation intervention aims to involve the entire person in his globality, the evaluation of indicators of the outcome is particularly difficult. This situation is further aggravated by the complexity of every individual case, which makes it problematic to apply methodologies of research that are normally used in other disciplines; this has given rise to the possible use of the “case by case, or single-case” methodology, providing the scientific method used.

It has therefore become essential to enhance “research capabilities” in rehabilitation, understood as the process of individual and institutional development leading to a higher level of knowledge and greater ability in conducting profitable research.

For example in these years in Italy (not only obviously) the field of “Telerehabilitation” is positively discussed to be one of the most important future tool to support the development of rehabilitation global intervention in this perspective of “individual, continuous and suitable” care, and in the same time sustainable in a financial

point of view too, with the potential benefits combining different interventions and different settings, reducing the cost of therapy connected up to home if necessary.

It is very important for research, and to improve evidence, to expand this kind of distance-rehabilitation in which accessibility, autonomous involvement, facility are merged to financial sustainability. This kind of new management can be easily connected with new technologies, robotic, virtual reality to enrich treatments and interventions, and seems to be a very decisive instrument for the solution as :

- Empowerment for learning, training and autonomous activity in functional recovery;
- overcoming of breaking up in recover between hospital discharge and home;
- monitoring of quality and contents of treatments, guaranteeing patients and families not only during the stay in hospital.

This kind of new approach could be very important immediately in many big fields: for example stroke or brain injury rehabilitation, or chronic musculoskeletal problems, pain, movement disorders, cognitive problems and many others.

Conclusions:

Our national experiences in the last 50 years in rehabilitation, together international indications in scientific evidences, together international documents also regarding disabled people rights reach a similar fundamental point : clearly many challenges, ethical, political, scientific, technical and economic can be positively overcome realising a real PRM network to diffuse rehabilitation interventions, to guide all activities, to govern every decision and programme, to be able to make a global and unified evaluation on results .

Toward the goal of providing a continuum of care in a multiplayer (medical, social, community, public services and accredited private ones) environment the only way is to coordinate and involve every other “agencies” in the community, needed to be active part for the positive rehabilitation global care for the person. A continuum delivered in the community mixing as necessary medical interventions together other activities towards participation and health.

This conclusion seems to be surely necessary for the future of rehabilitation, and for assuring rights for disabled people as necessary, but surely it is very complex and heavy to build and to maintain.

Must be a network (a large multiprofessional and multi-seat department involving immediately after acute problems including hospitals, rehabilitation centres and facilities, nursing homes and other residences, but in the same times many social activities and services, interventions in schools, every work-places, means of transport and mobility, many different associations of volunteers, of disabled people and families) ready to work into every aspect of the community, directly in relation to stakeholders and policy makers, ready to suggest programmes, to guide them and to be responsible on efficacy of results and of funds received.

Actually aiming to support and to develop these possibilities, we must try for example :

- To modify the education for PRM doctors (and for other professionals as necessary) to cover new responsibilities and tasks in the future networking together community and every other stakeholders, agencies and public/private subjects (methodologies, tools, quality measures, languages and contents, economical aspects).

- To implement researches in this perspective, modifying when necessary actual rehabilitation guidelines and protocols, creating some new protocols to apply to this continuous networking process .
- To implement researches in the field of new technical aids and new technologies able to support this evolution of rehabilitation.

Only by this way we can apply the lines of ICF and of all the international documents regarding rights of people; but in the same way we can strongly enrich our responsibilities and competences in scientific and professional fields.

In Italy we hope that our National Plan for Rehabilitation can be a positive step in this way, creating a sort of global and comprehensive network to “gain health” and in the same time a positive support for the international exchange of experiences and suggestions to reach all together a better level for our activities all over the World.

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