

# History of rehabilitation medicine as a medical specialty in the Netherlands

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From “Physical Medicine” and “Rehabilitation” to “Physical and Rehabilitation Medicine”

As you will know, the Netherlands, Holland, is a very small country. A lot of water and about 34,000 square kilometers habitable, more or less dry, land.

And in that country live nearly 15 million people. That means about 435 persons per square kilometer.

A small part of Europe but through all centuries actively trying to take part in all what happens in the world. And, preferentially, to take a leading role.

That counts also in relation to the development of rehabilitation medicine in Europe and in the world.

In the Netherlands rehabilitation medicine is registered as a medical specialty since 1955. Like in many other countries, at the end of World War II and in the first years afterwards rather suddenly physical medicine and rehabilitation became an important part of medical cure and care and got much attention from military, governmental and medical authorities.

The amount of during the war often very severely wounded people, military and civilian, who needed specialized cure and care and, next to that, the immense need of valid or as valid as possible workers to help to rebuild the disastrously destroyed infrastructure and economy of the country led the military and civilian authorities to the founding of specialized institutions, the rehabilitation centers.

Long before that, in fact since the end of the nineteenth century, physical therapy had been practiced by several physicians as a medical specialty in specialized institutions. This group of physicians called themselves “physical therapy physicians”.

Already in 1903 a Physical Therapy Association was founded in Holland and in 1937 the Society of Physical Therapy Physicians. This was in fact the fore-runner of the Netherlands Society of Rehabilitation and Physical Medicine, which was founded in 1955.

Physical therapy made use of several physical agents – mechanical, thermal, electrical – as a naturally remedy of mainly chronic rheumatic and neurological diseases.

Physical therapy did not get much esteem from the average physician in these days. Partly because the use of physical agents was abused by some charlatans and the physical therapy physicians were put on the same level with them.

From about 1930 on physical therapy developed to physical medicine. Physical means were not only used for therapy but also diagnostic. But, generally spoken, it was still seen by a lot of practitioners as a doubtful form of therapy to be used only for chronic and incurable diseases. Out of the group of physical therapy physicians came the first rheumatologists and some of the first physiatrists in Holland.

If we may call the development from physical therapy to physical medicine the first stage in the development of our specialty, then let us call the second stage that period during and after World War II when the

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term "rehabilitation" turns up and physical medicine develops into "physical medicine and rehabilitation".

As said before, during and after the war there were so many very severely wounded and handicapped people and an immense need of workers. So, on partly humanitarian partly economic grounds this situation asked for (I quote) "the co-ordinated and combined use of medical, social, vocational and educational measures to bring the handicapped individual to the highest possible level of functional ability and independence on the for him or her most suitable place" (unquote).

In Holland the first rehabilitation center was founded by the military authorities. The Military Rehabilitation Center was started in the last stage of the war, in 1944, in the already by the Allies liberated south of Holland. Few years later the first civilian rehabilitation center was founded, gradually followed by others all over the country.

Often these centers were situated in the former sanatoria for treatment of tuberculosis which became superfluous after in the Fifties tuberculosis was dispelled as the widespread disease which it had been during the first years after the war.

The rehabilitation centers were all organized according to the American and British model such as being used for example in the Stoke Mandeville Hospital in England in these days.

At the same time firstly in a few and gradually in more general hospitals the department of physical therapy became a department of physical medicine and rehabilitation, the first ones usually managed by one of the former physical therapy physicians who began to call themselves "physician for physical medicine and rehabilitation".

One could say that this stage, the first twenty to twenty-five years after the war, was a period of trial and error. Of course the rehabilitative approach was not entirely new, but rather dependent on the individual view of the attendant. The process needed to be professionalized and an organization had to be built to combine and co-ordinate the different ways of approach and therapy which the patient had to suffer.

All people involved in the process had to work as a team. More specifically, as an interdisciplinary team. And that is in my opinion a team of which the members are willing to influence out of own knowledge and skill the actions and thinking of the team members of the other disciplines and, still more important, are willing to be influenced by them.

Another thing that had to be learned was that the rehabilitation medical approach starts with a diagnosis, just like any other medical approach. Even if the existing impairments and disabilities seem to be very clear and also what has to be done for therapy, no one has to make a rehabilitation diagnosis first and base your plan of treatment on that diagnosis.

Gradually, sustained by what was developed in the field of PM&R in mainly the USA, the UK and the Scandinavian countries, grew a methodical rehabilitation medical approach in Holland.

It was the recently deceased professor Beerend D. Bandma, who taught rehabilitation medicine at

the University of Rotterdam, who described a systematic problem-solving rehabilitation medical approach. This diagnostic approach is based on searching methodically for existing or imminent impairments and disabilities in five fields of attention: the physical state, the cognitive and psychic state, activities of daily living, the social state and communicative ability.

The physical impairments may concern *e.g.* mobility, muscular strength, sensibility, co-ordination, control of posture and movement, circulatory and respiratory function, bladder function, rectal function, sexual function, impairments linked to pain.

Impairments related to the cognitive and psychic state may concern *e.g.* awareness, intelligence, memory, and impairments related to the communicative ability may concern speech, language, hearing, sight.

Disabilities in the field of the activities of daily living, may relate to *e.g.* eating and drinking, standing up and sitting down, walking, moving around in one's own surroundings, bathroom functions, and so on.

Disabilities in the field of social aptitudes concern *e.g.* functioning at home, in professional life, family, creative activities.

Disabilities in the field of psychic aptitudes (the slide says "physic" but it has to be "psychic") may concern awareness, understanding, temperament, situational behaviour, and in the field of communicative aptitudes speaking, understanding, auditive and visual perception, reading, writing, and so on.

A methodical examination in these five fields of attention leads, combined with the diagnosis of the illness which caused the impairments and disabilities, to the rehabilitation diagnosis. The rehabilitation diagnosis is basic for the plan of treatment on short and on long term.

Bangma described this "Method of Rehabilitation" for the first time in 1975 and later on he has refined and complemented it.

A synopsis of this method has been published in the White Book on Physical and Rehabilitation Medicine which was edited in 1989 by the European Academy of Rehabilitation Medicine, the European Federation of PM&R and the PM&R Section of the European Union of Medical Specialists.

In 1978 the "Method" was accepted by the Netherlands Society of Physical Medicine and the Rehabilitation as the base of rehabilitation medical practice in Holland.

The diagnosis achieved by this methodical approach appears to be largely of prognostic value. And that is what a rehabilitation medical diagnosis ought to be.

It has to figure out what for the patient the social consequences will be of the existing or imminent impairments and disabilities, taking into account what can be achieved by adequate measures to diminish, cure or prevent these impairments and disabilities.

One may say that the description of the "Method" by Bangma and the acceptance by his colleagues of the "Methods" as the base of their medical practice have been the onset of the third stage in the development of the specialty in our country, the stage of the past twenty to twenty-five years.

In these years prevention became more and more the ultimate goal of the rehabilitation medical approach: prevention of longlasting and permanent disability.

Of course disability can not be prevented totally and under all circumstances but it must be evident that a prognostic oriented rehabilitation diagnosis made in an early phase of the disease, affection or trauma gives the best chances. The diagnosis has to be made by a skilled physiatrist who is able, based upon his or her experience with the later consequences of a variety of often too late or inadequately treated impairments and disabilities, to diagnose correctly not only the existing impairments and the disabilities but especially which ones may be expected and what can be done to prevent or diminish them as much as possible.

Next to this skill and experience the attitude of the physician is of major importance. Most practitioners are focused on curing the disease or ailment and less on the later consequences. The physiatrist is, one could say by nature, focused on possible consequences of the disease if it can not be cured completely.

The best chances for an as-early-as possible contact with all patients with existing or imminent possibly longlasting or permanent impairments which can lead to disabilities lie in Holland on doubt in the general hospital. If the psychiatrist is fully integrated in the hospital and accepted as an equal by the other medical specialists there can be made rules and procedures to facilitate these contacts.

So in the past twenty years a major policy of the workers in the field of rehabilitation medicine has been to make rehabilitation medicine an accepted discipline in every general hospital. Preferably as one of the indoor specialties or else as a consultancy.

Nowadays in nearly all general hospitals rehabilitation medicine is practised one way or another.

That does not mean that it is already fully accepted and properly made use of by all other practitioners but recognition is still growing.

More knowledge among general practitioners and other medical specialist about the possibilities which rehabilitation medicine has to offer to prevent or diminish disabilities and handicaps may enable the psysiatrist to see the patient who needs his intervention in an early stage. For in Holland, like in many other countries, these patients ought to be referred by other practitioners.

This knowledge would be more widespread among these practitioners if PM&R would be a compulsory part of the curriculum of every medical school. For already many years the Netherlands Society of PM&R has made it a major point of its policy to achieve that. But until now only four of the eight universities in Holland with a medical school have a regular chair of PM&R and even there PM&R forms a small and not oblitagory part of the curriculum.

In the past few years however, impelled and sustained by the Dutch government, an ambitious and promising program for scientific research on physical and rehabilitation medicine has been worked out. This program intends to assess existing research programs and new initiatives and to give directions concerning co-ordination of the programs and co-operation between the involved persons and institutes. The program will be financially supported by the government and by the Association of Rehabilitation Centers in Holland.

In this way the quality of scientific rehabilitation medical research has to be improved and as a result of that the scientific impact and vaule of our specialty.

Ladies and gentlemen I have tried to give you a helicopter view on how in our small watery country our medical specialty developed in this century from physical therapy and, later on, physical medicine to the physical and rehabilitation medicine that it comprises now.

The basic philosophy on which it is based now is: if rehabilitation may be called the continuous and overall process which begins with the stage of medical treatment and aims at the social integration of the disabled at all levels, rehabilitation medicine nowadays aims to prevent or reduce to an unavoidable minimum the functional, physical, social and economic consequences of invalidating disease or accident, from the onset of the disease, affection or trauma to the re-integration of the patients into the for her or him normal lifestyle.

To achieve that, it focuses on the as early as possible discernment of longlasting or permanent disabilities, making a prognosis of the functional, physical, social and economic consequences of these disabilities and taking in due time all the measures needed to prevent or minimise these consequences.

It needs an interdisciplinary co-operation between professionals skilled in rehabilitation and demands a high level of knowledge, skill, experience and self-control not at the least of the medical specialist.

Interdisciplinary is meant as willing to influence out ot own knowledge and skill the actions and thinking of the team members of other disciplines and, most important, willing to be influenced by them.

We are now in the stage of strengthening the scientific base and value of our specialty in order to improve its impact among the other disciplines and with that the practical value for the people who need our intervention.

I hope that I have given you an impression of what we did and what we are doing in the field of rehabilitation medicine in Holland and I would like it very much to may welcome you in my country on occasion of the First World Congress of the International Society of Physical and Rehabilitation Medicine (ISPRM), the merger of the International Rehabilitation Medicine Association IRMA and the International Federation of Physical Medicine and Rehabilitation, that will be held in Amsterdam in July 2001. If you are interested I can give you all information, even translated in Portuguese.