DEVELOPMENTS IN CLINICAL REHABILITATION

Prof Anthony B Ward
North Staffordshire Rehabilitation Centre, Haywood Hospital, Stoke on Trent, United Kingdom

Specialised medical rehabilitation has, like so many facets of daily life, moved at a pace over the last 20 years. Part of this has been borne by huge changes to the structure of the National Health Service and Social Services Departments, but also by advances in our knowledge of what rehabilitation can offer and by the expectations of people with disabilities.

This presentation will look at some of the areas where further progress is realistically possible and will perhaps involve some wishful thinking and reverie. It will cover progress in professional philosophy and service provision as much as in technical advancement. The latter in health care rehabilitation reflects what has been happening in normal daily life where the prospect of locking a car door or changing channels on a TV by anything other than a remote control seems unreal today. I will also limit these developments to three major areas:

- The philosophy of rehabilitation – describing the classification of disablement, mapping and education;
- Measurement;
- New technologies.

MEDICAL REHABILITATION PHILOSOPHY

Rehabilitation Medicine works for its patients at a number of levels, depending on their abilities and their prognosis, and one of the most important recent developments is the World Health Organisation's International Classification of Disability, Functioning and Health[1]. Specialised rehabilitation tends to be provided for people in whom there is little prospect of a full recovery. They are going to be left with a loss of body function (e.g. pain, weakness), which will lead to restricted activity (e.g. loss of walking, grasping, communication, self-care, etc.) and thus a limitation to their participation as members of society. However, changes in societal attitudes now mean that people with disabilities should expect, as of right, to participate in their community as far as their personal functioning will allow.

We now know much more about how the body works and technologies, such as fMRI, have been very useful in linking underlying patterns of anatomical activity with task-specific functioning. In this way, recovery can be adapted to produce better outcomes in terms of patient activity. In addition, we have learnt more about our patients and good quality studies can help us predict who will do well and who will not in terms of improving function and discharge destination. In particular, studies in movement help us understand the process of normal and thus pathological motor functioning and this presentation will look at the changes to movement patterns following central nervous system injury.

MEASUREMENT

Measurement has become an area of increasing interest and new methodologies are subjected to scientific scrutiny, but how does one measure the impact of one of a number of multiple rehabilitation interventions for complex problems and disabilities, particularly when its investigation is not best shown by randomised controlled trial[2, 3]? The adoption of multi-variate analyses, such as Rasch analysis, is being tested and so far it, has stood up to the rigours of testing in many instances. In reality, health services expect to see results through traditional methodologies, which are perhaps better suited to pharmacological studies, and one of the tasks of academics in rehabilitation is to educate them on alternative methods, particularly, when longitudinal studies are the only alternative.

TECHNOLOGIES

We hear almost daily of new technological developments in medicine and clinical rehabilitation is no exception. Other speakers will also have looked at the use of myoelectric prosthetic limbs, communication devices, assistive technology and new developments in robotics, transportation and accommodation to make the environment SMART and improve possibilities for people living in the community. This presentation emphasises some of the studies that have been important in the development of assistive technology, communication aids, prosthetics and orthotics and transportation.

References:

1. World Health Organisation. International Classification of Functioning, Disability and Health: ICF: Geneva: WHO; 2001.

2. Tennant A. Principles and Practice of Measuring Outcome. In: Advances in Physical Medicine & Rehabilitation: Assessment in Physical Medicine and Rehabilitation, Eds. Barat M, Franchignoni F. Maugeri Foundation Books, Pavia, 2004: 35 (ISBN 88-7963-180-2).

3. Franchignoni F, Salaffi F. Generic and specific measures for outcome assessment in orthopaedic and rheumatological rehabilitation. In: Advances in Physical Medicine & Rehabilitation: Assessment in Physical Medicine and Rehabilitation, Eds. Barat M, Franchignoni F. Maugeri Foundation Books, Pavia, 2004: 58 (ISBN 88-7963-180-2).