Work, disability and rehabilitation: making the best job of it

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ABSTRACT – The relationship between a person's health and their work was recognised as central to the good practice of medicine by Charles Turner Thackrah (1795–1833) in his seminal work, *The effects of arts, trades and professions on health and longevity* (1823). The connection is largely forgotten in current clinical practice; the UK has a high level of dependence on benefits mainly in those with non-severe disabilities. Recognition of the value of preventing this by access to early, usually multidisciplinary, rehabilitation and prevocational rehabilitation via a general practitioner and in hospital practice is needed as a priority. This requires that all NHS staff adopt a biopsychosocial approach to illness and are taught about the workplace needs of patients and the value of early rehabilitation. Communications within the NHS and with other agencies have to be improved by the development of better pathways with dedicated staff time for this activity. The creation of the Director of Health and Work position and the refocusing of occupational medicine present an unrivalled opportunity to improve our practice.

KEY WORDS: biopsychosocial model, disability, occupational medicine, vocational rehabilitation, worklessness

Rarely can one individual achieve major significant change. Charles Turner Thackrah, however, was such a person. With a handful of others, he founded one of the first provincial medical schools, located in Leeds, in 1831. He was a superb teacher, a clear-headed researcher, a founder member of the local theosophical society, and he laid the foundations of occupational medicine in the UK. His knowledge of his patients in their (often terrible) workplaces surpasses ours today.[1] It is this recognition of the patient as a worker which needs to return to the centre of our practice and strategy in the modern NHS. Its marginalisation has brought profound problems and Theodore Roosevelt's 1903 Labour Day address statement still remains true, 'Far and away the best prize that life offers is the chance to work hard at work worth doing'. Social changes were as great in Thackrah's time as today, with the dislocation of rural workers into urban areas and no legislation to tame the capitalism which was seen as the duty of mill owners. One in eight of the population was a pauper; poverty, disability and worklessness were closely intertwined. Up to the first world war, although enfranchisement was advancing for selected parts of the population, the worker had few rights.

Lessons from the world wars

A million and a half British servicemen were wounded in the first world war. Robert Jones, an orthopaedic surgeon, was charged with responding to this by the provision of essentially orthopaedic rehabilitation facilities. The Ministry of Pensions established government instructional factories to retrain the large number of disabled ex-servicemen. Osler stated, 'There is no question of greater national importance than how to make these men again effective citizens, capable of earning their own living'. These training centres persisted for many years, became skill centres and have now disappeared.

This 'war socialism' was quickly lost in the succeeding boom and slump. Simultaneously, rehabilitation also disappeared. The Fracture Committee of the British Medical Association in 1935 and an interdepartmental committee of the Ministry of Health and the Home Office in 1939 both noted the loss of intensive rehabilitation and the subsequent loss of ability to get people back to work speedily. Their effect was limited, and in 1940 when the second world war had been raging for a year no rehabilitation was available in the UK. The government, however, ordered a rapid response. By the end of 1943, rehabilitation was made available to service patients and was firmly established to all by 1945. Rehabilitation was then defined as, 'The restoration of a sick or injured person to his previous state of health and physical efficiency'. It was further stated that:

> *To achieve this as rapidly and completely as possible necessitates consideration not only of the patient's specific disability but also of his general condition. It involves a continuous restorative process beginning early, at the moment when the patient is fit to take an active interest in his progress, continuing through the ambulant stage and ending with a course of strengthening and hardening to the requirements of his original or new occupation.*[2]

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Rehabilitation could certainly deliver, and the successful UK response and victory in the second world war is acknowledged as greatly dependent on it. The early services rehabilitation units, such as Headley Court, Surrey, were dynamic places. Patients participated in graded classes lasting five to six hours each day. Ninety-five per cent of servicemen were rehabilitated back to work, even if not to their previous role. Service rehabilitation continues to this day with similar regimes and similar success. Unsurprisingly the cost of it was questioned by those holding the budget in the 1970s as two fighter pilots per annum had to return to their jobs to justify the costs.[3] It did much more than that.

Transfer of services to the NHS

After 1945, those who ran rehabilitation services in the armed forces transferred their skills to the new NHS. Thus Frank Cooksey established domestic rehabilitation at King's College Hospital, and Phillip Nichols started a completely new venture at Mary Marlborough Lodge, Oxford, where he gave some control for the first time ever to those with the most severe disability who previously often lived out their lives in institutions and were certainly not seen in public.

Rehabilitation services became available across the UK. The programmes were intense and those participating came to realise within a few weeks that their activity levels were higher, they could return to work, and would again earn a wage. There were at least 25 such rehabilitation centres, rarely adjacent to teaching hospitals. Only one, Garston Manor, Watford, had an industrial rehabilitation centre sited alongside it as Piercy had recommended in 1956. This experiment was successful: it allowed graduated entry into the industrial environment or, where this had been too early, allowed the person to receive the required medical or therapy input. The experiment was never repeated.

William Beveridge (British economist and social reformer) recognised the value of rehabilitation. When the NHS was founded only 5% of the population was over retirement age and the institution was geared to the return of the worker to work. Rehabilitation was intrinsic to the new service. Many reports (of Tomlinson, Piercy, Tunbridge, Mair) said the same, that rehabilitation and its philosophy have to be incorporated into clinical practice and into undergraduate teaching, being based on a sound and funded academic base. These reports have been almost entirely ignored.

Modern rehabilitation practice

Rehabilitation contributes much to modern medical practice and there is a substantial evidence base for its effectiveness.[4] It has the capacity to considerably improve the independence, quality of life and participation of those who are newly disabled. Diminution of dependency and costs are often achieved following just a few weeks of intensive inpatient rehabilitation. For example, the time taken to rehabilitate a 37-year-old man following a stroke was only seven weeks in the Leeds neurological rehabilitation unit, the potential weekly bill for care at home being reduced from £1,232 to £168.[5] The total cost of his rehabilitation would have been recouped by the system (albeit mainly a different part of the system) in 12 weeks (R Beden, personal communication, 2006).

In progressive disability or chronic disease, progression of disability can be slowed by rehabilitation.[6] Now most people with multiple sclerosis (MS), even those with severe MS, live in their own homes. They receive packages of care and can benefit from intermittent rehabilitation to preserve essential abilities such as transferring.[7] In the 1960s they remained until death in long-stay geriatric wards.

The technology of rehabilitation has improved greatly. Assistive technology (eg functional electrical stimulation communication systems) has much to offer, being increasingly combined with orthotic or prosthetic prescriptions. Walking training equipment allows an increasing percentage of body weight to be put through the legs and may allow earlier return to a normal walking pattern.

Intensity of therapy, however, remains low in the UK, less than that available in the second world war and for two decades after it less than in many rehabilitation services in other parts of western Europe. The link between intensity of therapy and outcome of rehabilitation, including length of stay has been known for a considerable time.[8] Yet the value of delivering more than two to three hours per day is rarely understood by commissioners.

For best practice it is agreed that medical rehabilitation should not be a bolt-on service after medical and surgical interventions and vocational rehabilitation (VR) should also be integral to NHS practice.

Vocational rehabilitation is defined as, 'A process whereby those disadvantaged by illness or disability can be enabled to access, maintain or return to employment or other useful occupation'.[9] The process has several components including assessment, a variety of interventions at the level of the person and disability, work modification, work hardening, return to work strategies, and amelioration of difficulties in the journey to work and the work environment. It has been shown to be cost effective (two to five times but some say to a much higher level). In a recent study of people with MS attending a neurological rehabilitation outpatient department the average cost of VR was £900 (D Playford, personal communication). One outpatient studied moved from a salary of £50,000 to £100,000 in a matter of weeks.

Severely disabled persons can also be trained and helped to return to work. Tyerman records that 28% of those who have sustained severe traumatic brain injury and received VR returned to paid occupation.[9] The saving to the public and personal purses is substantial. Yet in the NHS, rehabilitation, whether medical or vocational, seems to be increasingly marginalised in hospital. As trusts struggle with large debts such medium-term planning is abandoned.

It has been argued that VR should take place in the community yet many primary care trusts are also in financial difficulty and established domiciliary therapy rarely addresses vocational needs. Some politicians seem to view the provision of rehabilitation after injury as a non-core NHS activity believing

(although many are uninsured) that it will be provided by insurance companies. The connection with the cost of not working is not made. Many with non-traumatic conditions such as stroke have unnecessarily low rates of return to work and poor access to vocational services.

Worklessness and health

Worklessness has profound health implications.[10] In young men out of work for more than six months the risk of suicide is 40-times that of their contemporaries and the risk of ill health exceeds that from smoking 10 packets a day. In the EU, 42.2% of disabled people are employed compared with 64.5% of non-disabled persons. In the UK the numbers on incapacity benefit (IB) reached 2.7 million in 2002, yet 3 million people with disability are working. Perhaps those not working have extremely severe disability?[10] The reality is otherwise. The main diagnoses of those on IB are mental illness (but not severe psychotic illness, rather, depression and anxiety) in 42% and musculoskeletal problems in 21%. Only 10% have complex neurological impairments (and there are many reports of effective VR even here).

Factors contributing to worklessness in disease and disability

Many medical factors can have a bearing on employment.[11,12] The nature of the condition is important, especially when chronic, fluctuant or progressive. In, for example, inflammatory arthritis, morning stiffness may require that the person rises at 5 am for work at 9 am. The employer needs to understand the worker's condition but often does not.[13]

Non-medical factors may relate to the person's attributes such as their level of education and skills or to external factors such as the general level of employment in the region, geography and beliefs general to society. A particularly powerful set of beliefs commonly encountered include: those who are disabled should not work; those who are ill should not work; and the person not at work because of illness (or surgery) should not return to work until 100% cured.

The NHS may be part of the problem

Disability organisations have found the NHS unhelpful in terms of retention of, or return to, work.[13] Access, both physical and to services, was poor, attitudes were seen as unhelpful, and staff were seen as ignorant of the workplace with a lack of urgency and inflexibility. The processes of referral, appointment, investigations and therapy were so slow that jobs were lost. Job retention, however, is extremely important. There is only a six-month window of opportunity between not attending work due to illness and progressing to being permanently in receipt of IB. It is essential that all health workers appreciate this tight time frame for addressing their patients' needs.

Major problems of communication exist between individuals in different parts of the NHS. They also exist between the NHS and other agencies. O'Connor *et al* found no contact between the local job centre seeing their patients with complex MS and clinicians yet disability employment advisors do not have the medical knowledge to deal effectively alone with the impact of specific cognitive deficits, fatigue and visual disturbances on work.[14]

The rehabilitation centres of the 1970s have largely disappeared with a consequent loss of expertise to the NHS and to its teaching of staff. Occupational medicine is now rarely taught at undergraduate level and students know little of their patients' workplaces.

The World Health Organization model of disease and disability is rarely applied in hospital practice. The student usually learns that pathology results in disease, with signs and symptoms. Yet the International Classification of Functioning, Disability and Health define the consequences more comprehensively in terms of impairment, loss of function and loss of roles (participation). The related biopsychosocial model is rarely used. The consequences are visible throughout the NHS with a lack of engagement with the person as a worker. This has to change, not least because it badly serves NHS staff themselves rarely giving them good return to work programmes with consequent high costs for sickness and early retirement costs.[15] Some idea of how we might change can be derived from the recent practice and policies of the Department of Work and Pensions (DWP).

The DWP has been extremely active over the past five years in removing many disincentives to returning to work after being on benefits and, has produced a strategy for progress which is reducing the numbers going onto IB (which few previously left, except by death or retirement, if they received this for more than a year). The Pathways to Work scheme is producing good results. It includes health programmes focused on return to work and, increasingly, on job retention.[16] In contrast, the NHS has made few responses. It is beginning to recognise the problem at the most senior level of the Department of Health stating that, 'Trends of long-term capacity associated with common health problems represent a massive failure of health care. There is clearly a need for a fundamental re-think'.[17] If we accept that there is a problem for the NHS to address, then there are things that might be done which mirror the identified problems. Solutions might include:

- The recognition that rehabilitation and early VR are part of funded health service practice both in hospital and the community would facilitate job retention and early return to work.[18] For those with complex new disabilities 'ambulant rehabilitation' must be available early at sufficient intensity to get the patient back to work.
- Poor processes and fragmented pathways have to be guarded against; communication has to be improved within the health service. All specialties and general practice need defined paths of interaction with occupational health physicians, rehabilitation physicians and therapists. Job plans should reflect this. Certification of a patient as sick presents an important opportunity for rapid rehabilitation to prevent job loss.

- Rehabilitation services must be capable of delivering care in a timely, accessible and suitably intense manner. Their financial value to the state, not just to the health service, has to be acknowledged.
- All staff in the NHS should have knowledge of the workplace and be aware of their patients' work. Teaching of rehabilitation and occupational medicine will need to play a greater part in the training of all medical undergraduates, other disciplines and at postgraduate level for general practitioners. Enhanced training in the health issues of their clients is needed for disability assessment advisors. It is essential that interchange of information about a patient with a complex chronic disease or disability occurs between them and the treating health professional. We have to be prepared to teach those in the DWP and possibly in the workplace.
- Medical thinking needs to embrace the biopsychosocial model much more: all areas of medicine should use this approach.

Concluding remarks

A sense of urgency is essential; an opportunity exists. Occupational medicine recognises that there is a shift in the focus of its activities:

> *The move away from the control of serious specific diseases in well-defined dangerous trades to the management of non-life threatening conditions that occur widely, and which may also have causes outside work, has led to a progressive shift in emphasis during the twentieth century.*[19]

Thackrah was the founder of occupational medicine and of a great medical school. His enormous abilities in teaching and research, his clear thinking and his perception of his patients as workers should inspire us to repair the fragmentation of this great service.

References

1 Meiklejohn A. *Charles Turner Thackrah, the effects of arts, trades and professions on health and longevity, with an introductory essay on his life, work and times.* Edinburgh and London: E and S Livingstone, 1957.
2 Crew FAE. *Medical history of the second world war, army medical services. Administration.* London: HMSO, 1953.
3 Wynn PK. Modern concepts of rehabilitation in the three services. *Proc Roy Soc Med* 1974;67:485–8.
4 Turner-Stokes L. The effectiveness of rehabilitation: a critical review of the evidence. Introduction. *Clin Rehabil* 1999;13:3–6.
5 Turner-Stokes L, Nyein K, Halliwell D. The Northwick Park Care Needs Assessment (NPCNA): a directly costable outcome measure in rehabilitation. *Clin Rehabil* 1999;13:253–67.
6 Freeman JA, Langdon DW, Hobart JC, Thompson AJ. The impact of inpatient rehabilitation on progressive multiple sclerosis. *Ann Neurol* 1997;42:236–44.
7 O'Connor RJ, Best M, Chamberlain MA. The community rehabilitation unit in Leeds: a resource for people with long-term conditions. *Int J Ther Rehabil* 2006;13:118–26.
8 Slade A, Tennant A, Chamberlain MA. A randomised controlled trial to determine the effect of intensity of therapy upon length of stay in a neurological rehabilitation setting. *J Rehabil Med* 2002;34:260–6.
9 British Society of Rehabilitation Medicine, Royal College of Physicians, Jobcentre Plus, Tyerman A. *Vocational assessment and rehabilitation after acquired brain injury; interagency guidelines.* London: BSRM, RCP, 2004.
10 Waddell G, Aylward M. *The scientific and conceptual basis of incapacity benefits.* London: Stationery Office and Cardiff University, 2005.
11 Marnetoft SU, Selander J. Multidisciplinary vocational rehabilitation focusing on work training and case management for unemployed sick-listed people. *Int J Rehabil Res* 2000;23:271–9.
12 Frank AO, Thurgood J. Vocational rehabilitation in the UK: opportunities for health-care professionals. *Int J Ther Rehabil* 2006;13:126–34.
13 Sirvastava CA. Factors determining job retention and return to work for disabled employees: a questionnaire study of opinions of disabled people's organisations in the UK. *J Rehabil Med* 2004;36:1–6.
14 O'Connor RJ, Cano SJ, Ramió i Torrentà L, Thompson AJ, Playford ED. Factors influencing work retention for people with multiple sclerosis: cross-sectional studies using qualitative and quantitative methods. *J Neurol* 2005;252:892–6.
15 Pattani S, Constantinovici N, Williams S. Who retires early from the NHS because of ill health and what does it cost? A national cross sectional study. *BMJ* 2001;322:208–9.
16 Waddell G, Burton A. *Concepts of rehabilitation for the management of common health problems.* London: Stationery Office, 2004.
17 Department of Health. *Choosing health: making healthier choices easier.* London: DH, 2004.
18 Frank AO, Chamberlain MA. Rehabilitation: an integral part of clinical practice. *Occup Med (Lond)* 2006;56:289–91.
19 Baxter P, Adams P, Tar-Ching A, Cockcroft A, Harrington J (eds). *Hunter's diseases of occupations*, 9th edn. London: Arnold, 2000.

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