

# MODELS OF SICKNESS AND DISABILITY

APPLIED TO COMMON HEALTH PROBLEMS

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# Summary

The aim of this publication is to improve the understanding of sickness and disability associated with common health problems – the mild/moderate mental health, musculoskeletal and cardiorespiratory symptoms that now account for about two-thirds of long-term sickness absence, incapacity benefits and ill-health retirement. Conceptual ‘models’ crystallize thinking, improve understanding and facilitate the development of new interventions. This publication reviews the medical model, various social models and the role of personal and psychological factors. This leads logically to a biopsychosocial model that recognizes that biological, psychological *and* social factors, and the interactions between them, influence the course and outcome of any illness. Thus, symptoms do not necessarily mean incapacity for work, and common health problems are not a matter for healthcare alone. People with common health problems retain free will and bear personal responsibility for their actions: they must answer to whether their ‘health condition is such that it would be unreasonable to expect them to seek or be available for work’. Employers bear a responsibility too: namely, to accommodate common health problems and take a proactive approach to sickness and disability. Social policy should encourage and support the best long-term solutions for claimants and society as a whole. The biopsychosocial model improves understanding of obstacles to recovery and return to work, and leads to interventions to overcome them. This has major implications for healthcare, workplace management and social policy. The starting point is for all stakeholders to share a more realistic, more balanced and more human model of sickness and disability.

**Key words:** common health problems, human illness, sickness, disability, incapacity for work, medical model, social model, biopsychosocial model, healthcare, rehabilitation, workplace, social security, social policy.

# Models of sickness and disability

Long-term sickness is a major problem in all industrialized countries. Paradoxically, despite improvements in healthcare and most objective measures of health (Wanless 2003, Lopez et al 2006), people's sense of general health and well-being has not improved since the 1950s (Barsky 1988, Layard 2005). Indeed, we sometimes seem less able to cope with health problems and suffer more chronic disability than ever before. In the UK, the number of people on incapacity benefits<sup>1</sup> increased from about 700 000 in 1979 to 2.6 million in 1995. Since then, it has plateaued, but has remained stubbornly high (contrary to some sensational headlines, incapacity benefits are not now escalating out of control – at least up to the current economic recession). An increasing proportion of this figure is now related to 'common health problems' – mild/moderate musculoskeletal and mental health conditions that consist mainly of symptoms rather than objective disease (Waddell & Aylward 2005). Ill-health in people of working age is now estimated to cost the UK £100 billion per annum (Black 2008).

Addressing these trends depends on better understanding of sickness and disability (Aylward & Locascio 1995). 'Models'<sup>2</sup> – which may be explicit or implicit – crystallize ideas and help to clarify thinking and communication with others, but they also channel and constrain our thinking. For example, if you think that back pain is a sign of disease, you may seek medical investigation and treatment. If you think that it was caused by your work, you may stay off until it is better. But if you think that it is just your body's reaction to starting the sports season, you will deal with it very differently. So models matter: they determine not only how we think about our health, but also what we do about it and hence its ultimate outcome. The more subjective the condition, the more that this applies (Main et al 2008).

This publication considers the strengths and limitations of the traditional 'medical model' and alternative social models, and the role of personal and psychological factors. This leads logically to a biopsychosocial model of human illness that takes account of the person, their health problem *and* their social context. The biopsychosocial model has profound implications for healthcare and workplace management and for social policy.

## Health problems, sickness and disability

The logical basis and *sine qua non* of illness is that the individual has a health problem. Unfortunately, words such as 'ill', 'sick' and 'disabled' are often used as if they were

1 Initially Invalidation Benefit, replaced by Incapacity Benefit from April 1995, then Employment Support Allowance from October 2008. Claimants and their characteristics remain broadly the same.

2 Scientific models are 'simplified representations or descriptions of the structure of a complex system, which seek to explain phenomena based on theory and mechanisms, and are designed to facilitate testing and predictions' (McLaren 1998, Llewellyn & Hogan 2000). Models provide a practical means of moving from theory to reality. The caveat is that models are not 'real' and should not be adopted uncritically: they are simply a tool that is useful only so long as it aids understanding, research and management.

interchangeable, which has caused great confusion. Rational thinking depends on clear definitions and understanding of fundamental concepts (Twaddle & Nordenfeldt 1994, Boyd 2000, Hofmann 2002). The various concepts of ill-health are summarized in Box 1.

#### Box 1

##### Ill-health

**Disease** is objective, medically diagnosed, pathology

**Impairment** is significant, demonstrable, deviation or loss of body structure or function

**Symptoms** are bothersome bodily or mental sensations

**Illness** is the subjective feeling of being unwell

**Disability** is limitation of activities and restriction of participation

**Sickness** is a social status accorded to the ill person by society

**Incapacity** is inability to work because of sickness or disability

**Symptoms** are subjective bodily or mental sensations that reach awareness and are 'bothersome' or 'of concern to that person', for example aches and pains, feeling tired or anxious. Many symptoms are normal, part of life and related to activities of daily living. Some represent the clinical presentation of disease. Most relevant to the present analysis are those that fall outside the range of what is usually accepted as 'normal' but are not associated with identifiable disease (Ursin 1997, Deyo et al 1998).

**Illness** or **ill-health** is when a health condition impacts on well-being or quality of life – more simply, it is the subjective feeling of being unwell. There is considerable philosophical debate about health and ill-health and the boundary between them, but it is usually operationalized in terms of (the absence of) symptoms and the presence of morbidity (WHO 1948, 2004, Danna & Griffin 1999, Alonso 2004). Central to all definitions is that illness is an internal, personal experience.

**Sickness** or, more precisely, the **sick role** is a social status accorded to the ill person by society, and carrying specific rights and responsibilities, i.e. sickness is an external, social phenomenon involving interactions between the individual and other people or society (Parsons 1951, Mechanic 1968). Sickness is essentially construed as a temporary, short-term status.

**Disability** is limitation of activities and/or restriction of participation in life situations<sup>3</sup> in a person with a health condition or impairment (Boyd 2000, WHO 2001, AMA 2007). Disability is often assumed to be permanent, but in reality is often dynamic and fluctuates over time (Burchardt 2000, Howard 2003).

**Incapacity for work** is reduced capacity, functioning and performance in work in a person who is sick or disabled (and it is difficult to distinguish capacity and performance). In principle, UK incapacity benefits<sup>4</sup> are awarded to 'people whose medical

<sup>3</sup> According to the *International Classification of Functioning, Disability and Health* (WHO 2001), *activity* is the execution of a task or action by an individual, *participation* is involvement in a life situation, *activity limitations* are difficulties that an individual may have in executing activities and *participation restrictions* are problems that an individual may experience in involvement in life situations.

<sup>4</sup> Incapacity Benefit (IB) was replaced by Employment and Support Allowance (ESA) from October 2008. Most of the data in this publication are about IB, but ESA claimants and findings are likely to remain broadly comparable. Other disability benefits include Disability Living Allowance (DLA), Income Support with disability premium and Industrial Injuries Disablement Benefit (IIDB).



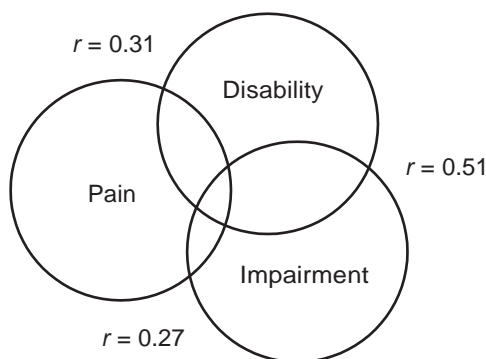
condition is such that it would be unreasonable to expect them to seek or be available for work' (Waddell & Aylward 2005). Financial compensation and support has always been directed primarily to incapacity, which reflects society's valuation of the importance of work (Waddell et al 2002).

These subjective dimensions of ill-health should be distinguished from objective measures: disease and impairment.

**Disease** is a disorder of structure or function of the human organism that deviates from the biological norm. It includes biochemical, physiological or anatomical abnormalities, which can result from congenital, traumatic, infective, inflammatory, degenerative or other pathological processes. The key features of disease are that it may be evaluated more objectively, at an organic level, in the individual, and as a matter of medical diagnosis (WHO 1980, Boyd 2000). Disease may or may not lead to impairment, and does not necessarily cause symptoms, illness, disability or incapacity.

**Impairment** is significant deviation or loss of body structure or function (i.e. impairment can be anatomical or physiological) in a person with a health condition or disease (WHO 1980, 2001, AMA 2007). The key feature is that impairment is a matter of objective evidence: 'detectable ... by direct observation or by inference from observation' (WHO 2001). The US Social Security Administration operationalizes this as 'demonstrable by medically acceptable, clinical and laboratory diagnostic techniques' (SSA 2001).<sup>5</sup> Note that impairment is not the same as the underlying disease, but is the manifestation(s) of the disease.<sup>6</sup>

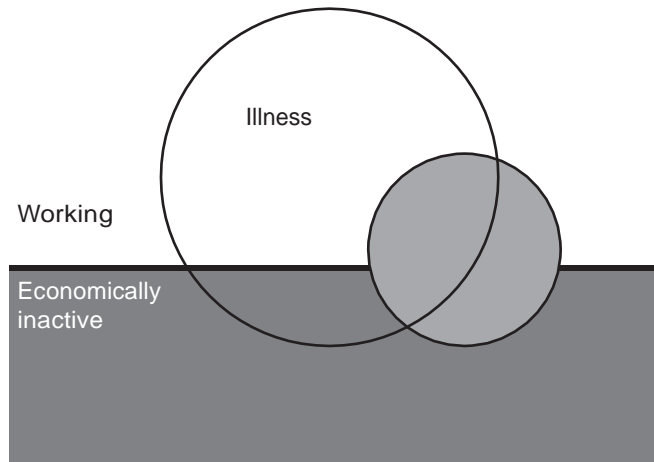
Although these different elements of illness are clearly related, the strength of the relationship is much weaker than is often assumed (Figures 1 and 2).



**Figure 1** The limited clinical correlation between symptoms, disability and impairment. The amount of overlap reflects the variance in common, which is a measure of the strength of association between these different clinical elements.  $r$  = correlation coefficient,  $r^2$  = variance in common, so a correlation coefficient of 0.50 means about 25% variance in common and 0.30 means about 10%. Note that this does not prove anything about cause and effect. Based on data from Waddell (1987).

5 This is based on a traditional orthopaedic approach to musculoskeletal disorders and disability evaluation, which has always stressed tissue damage and structural impairment.

6 Because of their nature, there is difficulty applying the concept of impairment to mental health problems. Mendelson (2004) suggested that *mental impairment* should refer specifically and solely to abnormalities of mental function that can be demonstrated, assessed, evaluated and measured by an objective observer on mental state examination: e.g. cognitive function, thought disorder, impaired judgement, disturbed mood and behaviour (Epstein et al 1998). It is particularly important to distinguish such observed impairments from individuals' subjective descriptions of their symptoms and limitations.



**Figure 2** The population distribution of illness, disability, and (in)capacity for work.

These concepts are fundamental to defining entitlement and assessment of (in)capacity (Aylward & Sawney 1999). Medical ‘diagnosis’ alone provides little information about (in)capacity for work (Aylward & Locascio 1995). Impairment is a medical definition – it provides the most objective measure of a health condition, but does not give much information about the experience of the individual. Sickness and disability are social definitions, which focus on the individual’s experience and functioning, and not just the health condition. ‘Disability’ is not synonymous with incapacity: about half of all ‘disabled’ people are working, including 25% of those who say that their limitations are severe (OECD 2003). Conversely, more than half those on ‘incapacity’ benefits do not fit the traditional stereotype of ‘disabled persons’ and are better described as ‘chronic sick’ or prematurely retired. Indeed, the main problem today is ‘long-term sickness’ in people over the age of 50 years (Waddell & Aylward 2005). Most important, symptoms do not necessarily mean illness or incapacity for work. Symptoms, disability and incapacity for work must therefore be distinguished – conceptually, in assessment, and as the basis for sick certification and social benefits.

Many incapacity benefit recipients are not completely incapacitated but still retain (some) capacity for (some) work, although this does not mean that they are all malingerers or scroungers. All the evidence is that malingering (i.e. feigning an injury or illness that does not exist) is extremely rare and recorded benefit fraud is less than 1% (ONS 2001, Kitchen 2003), even if some degree of exaggeration may be much more common (Halligan et al 2003). Most benefit claimants have a genuine health condition, and many genuinely believe that they cannot or should not work. These beliefs are often reinforced by medical advice (Anema et al 2002, Sawney 2002), by employers who will not permit return to work until symptoms are ‘cured’ (James et al 2002) and by the benefits system (Fordyce 1995, Waddell & Aylward 2005). So virtually all claimants say that illness or disability affects their ability to work, and about three-quarters say that it is the main reason they are not working or seeking work. However, less than a quarter say that they could not do any work at all. Ninety percent of new incapacity benefit

claimants initially expect to return to work in due course, and one-third to one-half of all recipients still want to work. Note that all of these figures are based on what people say, subject to all the qualifications of self-report.

## Common health problems

Workers' compensation and social security systems were originally designed for people with severe medical conditions and permanent impairment (e.g. blindness, amputation or neurological disease – 'the halt and the maimed'), and these are still the stereotypes used in welfare debates. However, such conditions now account for less than a quarter of long-term sickness, and their prevalence has been stable for many years (Waddell & Aylward 2005).

About two-thirds of long-term sickness absence, incapacity benefits and ill-health retirement are now due to less severe health conditions, the most common of which are mild/moderate mental health, musculoskeletal and cardiorespiratory conditions (Table 1). These have been described as *common health problems* (Waddell & Burton 2004).

	<b>General practitioner sick certification<sup>a</sup></b>	<b>Long-term sickness absence<sup>b</sup></b>	<b>Incapacity benefits<sup>c</sup></b>	<b>Ill-health retirement<sup>d</sup></b>
Mental health conditions	40%	Leading cause in non-manual workers	44% <sup>e</sup>	20–50% <sup>f</sup>
Musculoskeletal conditions	23%	Leading cause in manual workers	18%	15–50% <sup>f</sup>
Cardiorespiratory conditions	10%	—	8	About 10–15%

<sup>a</sup> Shiels et al (2004).  
<sup>b</sup> CBI/AXA (2007), CIPD (2007), HSE unpublished data.  
<sup>c</sup> DWP administrative data, February 2008.  
<sup>d</sup> Collected literature.  
<sup>e</sup> If claimants with a secondary mental health diagnosis are included, this rises to more than 50%.  
<sup>f</sup> Major variation in different occupations and organizations.

Common health problems may be 'less severe' in a medical sense, but that is not to suggest that they are 'minor' or less important to those who experience them. Indeed, they now cause more suffering and disability than 'severe medical conditions'. These symptoms are very real, justify healthcare and may cause temporary restrictions. Nevertheless, they are 'common health problems' in that they are similar in nature and sometimes even in degree to the bodily and mental symptoms experienced at times by most adults of working age (Table 2).

**Table 2**

Prevalence of common health problems in UK adults, from the Cardiff Health Experiences Survey (Buck et al 2009)

	Male	Female
<b>Open questions about health (without pre-labelling and using non-medicalized terminology)</b>		
Musculoskeletal problems	11.7%	14.0%
Mental health problems	4.8%	8.7%
Other problems	9.4%	15.2%
<b>Inventory of common 'symptoms'</b>		
Musculoskeletal	24.6%	34.0%
Mental health	18.1%	28.8%
Other	26.0%	42.7%

On specific questioning, 66.4% reported at least one (usually mild or moderate) symptom. In open response, 28% people reported 'problem(s)', but these were usually more severe.

When patients do seek healthcare for such symptoms, diagnosis is often non-specific – that is, the symptoms are not assignable to a particular cause, condition or category (ODE 2005). Such diagnoses are often 'nominal', existing in name only, not real or actual (ODE 2005): they are simply labels, but the illusion of understanding can be misleading and cause iatrogenic harm.

These conditions are 'characterized more by symptoms and distress than by consistently demonstrable tissue abnormality' (Barsky & Borus 1999), so have been described as 'subjective health complaints' (Ursin 1997) or 'symptom-defined illness' (White 2005). They have also been described as 'medically unexplained symptoms'<sup>7</sup> to emphasize the limited evidence of objective disease or impairment (Page & Wessely 2003) – although they do actually have good clinical explanations, but in terms of bodily or mental function and physiological disturbance rather than disease or permanent impairment.

Given the high prevalence and lack of specific diagnoses, it is not surprising that comorbidity<sup>8</sup> is common (RCP 2003, White 2005). Between 60% and 90% of people with frequent back pain have other musculoskeletal pains. More than 50% of people coming onto incapacity benefits have more than one long-term health problem. The most frequent secondary conditions are common mental health problems.

Halderson et al (1996) surveyed the perceptions of doctors and the general public in Norway and found that both have conceptual difficulties about disease/illness/sick certification in such conditions. Using sample cases, they found that doctors' decisions about sick certification for these conditions had low reproducibility. In the survey, doctors and the general public were reluctant to accept psychological and social problems as the

7 Although this term is usually used for more severe problems such as chronic fatigue syndrome.

8 Literally 'additional morbidity' – the presence of one or more health conditions in addition to the primary disorder.

basis for sick certification. Yet, in practice, patients regularly seek and doctors regularly issue sick certificates for subjective health complaints. Family doctors and patients in the UK are well aware of these dilemmas and conflicting roles in the medical consultation (Chew & May 1997, Cohen 2008).

Nevertheless, common health problems are insufficient *in themselves* to explain long-term incapacity (Waddell & Burton 2004):

- There is usually little objective evidence of disease or permanent impairment.
- There is high prevalence in the general (working) population.
- Most acute episodes settle quickly – at least sufficiently to permit a return to most normal activities, even if with some persistent or recurrent symptoms.
- Most people with these conditions remain at work, and most of those who do take sickness absence return to work quickly.
- Overall, only about 1% of episodes of sickness absence associated with common health problems go on to long-term incapacity.

These people have what *should* be manageable health problems. Provided they are given proper advice and support, recovery is normally to be expected and *long-term incapacity is not inevitable*.

The dichotomy between ‘severe medical conditions’ and ‘common health problems’ is clearly an oversimplification. Rather, this is a spectrum with a variable balance of symptoms, illness and incapacity, where there is difficulty in drawing a sharp boundary or defining severity. Nevertheless, there is a qualitative difference as well as a difference in degree between the two ends of the spectrum, for example between schizophrenia and a subjective complaint of ‘stress’. There is a conceptual distinction between subjective symptoms and objective disease, which is fundamental to healthcare and social support. Common health problems are very different from the severe medical conditions and permanent impairments for which sickness and disability benefits were originally designed.

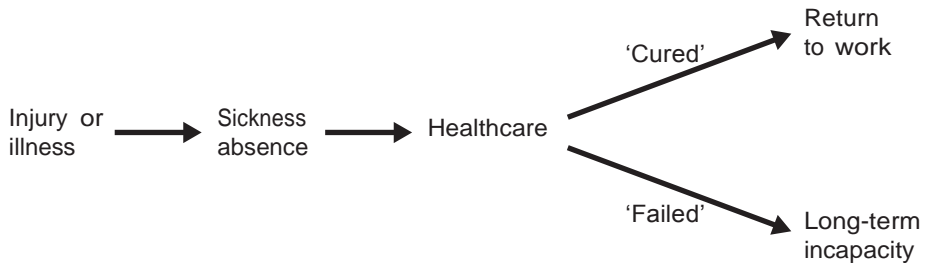
## The medical model

The medical model is so implicit in modern medicine that it is often taken for granted. It may be summarized as a mechanistic view of the body, in which illness is simply a fault in the machine that should be fixed (which is obviously an over-simplification, but does contain a large kernel of truth):

- Recognize patterns of symptoms and signs      – history and examination
- Infer underlying pathology                              – diagnosis
- Apply therapy to that pathology                      – treatment
- Expect the patient to recover                              – cure

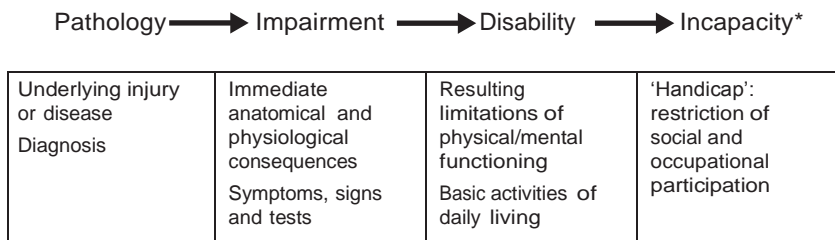
This approach was originally, and is still primarily, a *medical treatment model*. Because of its focus on biological pathology and its treatment (Virchow 1858), it is also described as a *disease model* or *biomedical model*. Significantly, medical treatment is often regarded as more or less synonymous with healthcare – it is worth pondering the distinction and relationship between them. This approach has led to dramatic medical advances. More specifically, it has worked well where it is possible to identify biological pathology for which there is effective treatment – for example severe medical conditions or acute physical injuries (Schultz et al 2000).

More generally, however, the medical model often leads to the assumption that *all* symptoms mean injury or disease, and that healthcare to ‘cure’ the symptoms is the (only) route to return to work (Figure 3).



**Figure 3** Medical model: the assumed relationship between health condition, healthcare and (in)capacity.

Because of its predominance over several generations, the medical model provides the framework for how most people, including health professionals and policy makers, think about disability. The International Classification of Impairments, Disabilities and Handicaps (ICIDH) definitions of impairment and disability reflected this approach (WHO 1980) and assumed a direct causal relationship (Figure 4).



\* The original WHO (1980) term was ‘handicap’, which was defined as ‘a disadvantage for a given individual, resulting from an impairment or a disability, that limits or prevents the fulfillment of a role that is normal (depending on age, sex, and social and cultural factors) for that individual’. The current *International Classification of Functioning, Disability and Health* (WHO 2001) no longer uses the term ‘handicap’ and has replaced it with ‘participation’.

**Figure 4** The medical model of disability: assumed causal relationships.

The medical model underpinned modern workers’ compensation and social security systems (Box 2). Entitlement to financial compensation and social support was based on objective (physical) injury or disease. Sickness benefits would be provided while the recipient was undergoing medical treatment. Once treatment was complete, longer-term support would depend on the severity of permanent impairment, after allowance for rehabilitation and individual adaptation. Notably, however, neither workers’ compensation nor social security in the UK fully embraced rehabilitation in these systems.

**Box 2**

The original Prussian paradigm of workers' compensation, based upon the medical model<sup>a</sup>

Clinical and administrative decision	Criteria
Determine the cause of the health condition	Injury? Disease? Work-related?
Determine if it has reached a permanent state	Can anything more be done to treat or rehabilitate? <sup>b</sup> (Now if likely to last more than 1 year)
Determine present (partial) disability	Objective evidence of impairment? (Now applies more in USA than in EU)
Provide financial support/compensation	Mainly based on incapacity for work

<sup>a</sup> Adapted from Hadler (1997).  
<sup>b</sup> The original Prussian paradigm emphasized rehabilitation, but UK workers' compensation and social security never did (Waddell et al 2002).

Although social security for sickness and disability has evolved greatly in the past 150 years, the fundamental concept of *medical incapacity* still lay behind UK incapacity benefit (Figure 5).

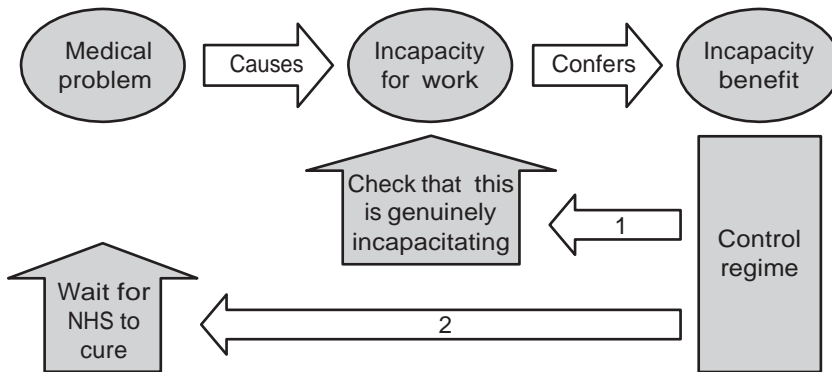
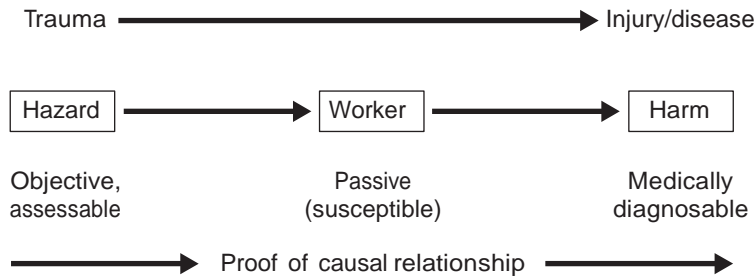


Figure 5 Implicit model behind incapacity benefits.

Since the time of the Industrial Revolution, the medical model also underpinned the approach to health and safety at work. The traditional occupational health paradigm viewed work as a potential hazard with the risk of occupational injury or disease. The primary purpose of 'Health and Safety' is to identify, assess and control hazards and risks, and so prevent injury and disease (Figure 6). But this paradigm has also had a broader impact on how workers, employers and policy makers think about work and health, and about the cause and management of common health problems.



**Figure 6** The traditional occupational health paradigm.

The medical model has a much broader social impact. At the start of the 21st century, the medical model remains deeply entrenched in the way that most people think about symptoms, disability and healthcare. Common health problems are seen as ‘medical’ problems that are a matter for healthcare, often caused by ‘injury’ (whether isolated trauma or cumulative strain) and often ‘work-related’, and the patient will be incapacitated for work until healthcare provides the ‘cure’. Symptoms imply incapacity, and sickness absence is necessary and justified until full recovery (the complete relief of symptoms).

#### *Limitations of the medical model for common health problems*

The success of the medical model for many serious diseases should not obscure its limitations in dealing with functional somatic syndromes, illness without discernible disease and common health problems (Wade & Halligan 2004). It remains the best approach to the *treatment* of disease and acute physical injury – again remembering the distinction between *treatment* on the one hand and *healthcare* and clinical *management* on the other – but if the patient fails to recover as expected, it becomes progressively less appropriate, less effective and even counterproductive for chronic conditions (Schultz et al 2000). Proponents of the medical model argue that its achievements justify expectations that all illness will eventually succumb to biomedical advances,<sup>9</sup> while critics argue that such unbounded faith in ‘science’ degrades the more human side of healthcare (Engel 1980): both probably overstate their case.

The medical model was originally developed for physical disease and has always been less comfortable with mental illness. Although biological (e.g. genetic and biochemical) factors play an important role in mental illness, a ‘disease model’ that ignores psychological and socio-cultural factors is inadequate for mental illness (Kiesler 1999).

The crippling weakness of the medical model is that it does not include the patient or their unique human attributes and subjective experience (Engel 1980, Peters 1996). The patient’s reports of illness are reduced to a set of symptoms and signs of disease. More specifically, critics argue that the medical model is simplistic, incorrectly assumes that all illness has a single cause (disease) and that treating the disease will restore health, and fails to take account of the personal and social dimensions of sickness and disability (Wade & Halligan 2004). It is dualist (following the Cartesian separation of mind and body, and focusing on the soma), reductionist (assuming that complex

<sup>9</sup> Historical examples of cholera or peptic ulcer, originally attributed to various psychosocial ‘causes’ and subsequently shown to be physical pathologies, are not relevant to the present discussion. These were always objective diseases, even if the aetiology was unknown.



biological phenomena can ultimately be reduced to simple physicochemical terms) and deterministic (disease and therefore illness are outside individual control). Because of the emphasis on biology, psychosocial dimensions are regarded as unimportant or secondary. The medical model determines a particular kind of doctor–patient relationship (described as ‘doctor-centred consultation’) and places health professionals in a position of authority (Mead & Bower 2000). At least in the 1970s, when this criticism came to a head, doctors were seen to be in danger of becoming cold technicians rather than caring healers (Borrell-Carrio et al 2004).

The medical model remains valid for the investigation and treatment of severe medical conditions – although, even here, psychosocial factors influence response to biological treatment (e.g. the placebo response) and management must be tempered with due allowance for the individual patient and their circumstances (which immediately introduces a biopsychological approach to management). The problem is that focusing on disease and its *treatment* often leads to neglect of the person and *management* of the health problem. In principle, this need not be so, but busy professional training and practice impose these constraints.

The medical model has more specific limitations for common health problems (Hadler 1995, Waddell et al 2002, Wade & Halligan 2004).<sup>10</sup> Conceptually:

- The medical model has limited validity for symptoms in the absence of identifiable disease.
- It often assumes that common health problems are work-related, whereas in reality the causation of common health problems is usually multifactorial: work is only one and often not the most important factor (Carter & Birrell 2000, Burton et al 2008, Lelliot et al 2008).
- It fails to allow for personal/psychological and social/occupational factors and interactions.

In practice:

- Diagnosis provides limited information about disability or (in)capacity.
- The medical model implies that healthcare is the (only) solution, so workers/patients and employers passively await a ‘cure’, whereas in reality this is untrue.
- Medical ‘treatment’ for common health problems has limited success: symptoms are often persistent or recurrent and clinical interventions have limited long-term effectiveness (Croft 2000, Lelliot et al 2008).
- The traditional occupational health approach has greatly reduced occupational injuries and diseases – to the extent that the UK has one of the lowest rates of workplace deaths and major injuries in the EU (HSE 2008) – but has been much less successful for the prevention or occupational management of common health problems (HSE 2005b, Lunt et al 2007).
- The medical model cannot explain trends in long-term sickness absence. Despite medical advances and improvements in objective measures of health, more people with common health problems are moving onto incapacity benefits, they stay on longer and outflow has fallen (Waddell et al 2002).

<sup>10</sup> The present analysis is focused on common health problems and does not fully cover the other concerns of disabled groups about the medical model, such as assumptions about ‘normality’, labelling, lack of personal and family perspectives on disability, discrimination, and human rights.

## The social model of disability

Over the past few decades, there has been increasing recognition of the needs and rights of disabled people (United Nations 1975), which has improved their social situation, even if they still face considerable occupational and economic disadvantage (Strategy Unit 2005).

In the 1960s, evidence emerged of the close links between disability, social exclusion and poverty. As part of the fight for disabled rights, disability groups in the UK rejected the medical model and proposed an alternative 'social model of disability' (Finkelstein 1980, Oliver 1983). This argued that many of the restrictions suffered by disabled people do not lie in the individual's impairment but are imposed by the way society is organized for able-bodied living: for example physical barriers such as lack of wheelchair access and, equally important, social attitudes. Society fails to make due allowance and arrangements that would enable disabled people to fulfil the ability and potential they do have. The result is a complex form of institutional discrimination. Box 3 contrasts the medical and social models of disability, together with the economic model (see below).

<b>Box 3</b>		
A comparison of the medical, social and economic models of disability <sup>a</sup>		
<b>Medical model</b>	<b>Social model</b>	<b>Economic model</b>
Disabled people are disadvantaged directly by their individual impairments	Disabled people are disadvantaged by society's failure to accommodate everyone's abilities	Social security trends reflect economic forces and (dis)incentives more than actual disability
Disabled people are pitied as the victims of personal tragedy (accident or disease)	Disabled people are oppressed by current social and economic institutions	Benefit recipients are advantaged by the social security system, at a high cost to society and the taxpayer
Disability is best overcome through medical treatment and rehabilitation	Disadvantage is best overcome by society adapting itself to everyone's abilities	Current social security trends are best overcome by adjusting the incentives and control mechanisms of the social security system
Both of these models imply that the disabled person is the passive victim and bears little or no responsibility for his or her incapacity or rehabilitation		Social security trends are a matter of economic forces and individual choice. This raises the question of potential exaggeration and malingering

<sup>a</sup> Developed from Rowlingson & Berthoud (1996).

The social model represents the perspective of disabled people. Whatever its lack of 'scientific' evidence, it is based on the personal experience and views of disabled people (Peters 1996), and has considerable social and political acceptance and reality. It may best be described as a *social exclusion model* or, with more obvious political overtones, a *social oppression model*. The medical model focused on impairment and the 'cure' was

healthcare: power lay with medicine. The social model shifts the focus from the individual to society and the empowerment of disabled people. This has been described as 'a shift from disablement to enablement' (Masala & Petretto 2008). Management of disability now requires social restructuring and is the collective responsibility of society at large: disability becomes a political rather than a medical issue. Disabled people are now bracketed with other minority groups in the context of human rights and equal opportunities.

The social model is widely accepted as the conceptual basis for social inclusion and antidiscrimination policies, although legislative definitions of 'disabled people' tend to revert to a medical model (Donoghue 2003). Crucially to the present analysis, however, the social model still recognizes impairment as the necessary substrate on which barriers and discrimination act.

### *Limitations of the social model of disability*

Perhaps naturally in view of its origins, the social model of disability:

- applies best to people with severe medical conditions and permanent physical or mental impairment – and these are the examples used in the welfare debate, even by proponents of the social model
- downplays understanding of the individual's health condition, and takes symptoms and disability at face value
- generally ignores personal/psychological influences on illness, sickness and disability – although the empowerment model does recognize the importance of personal responsibility (Finkelstein 1996, Duckworth 2001)
- fails to consider interactions between the person, health and social context

### *The social model applied to sickness<sup>11</sup>*

The social model is generally used in the context of 'disability', but may be applicable to sickness, particularly with mental health problems. Common mental health problems often involve problems with social relationships, at work and elsewhere. Social relationships, by definition, involve two (or more) parties. Consideration of individual behaviour must therefore be balanced against the behaviour of others.

Despite recent change in attitudes, mental illness still carries considerable stigma and sufferers face prejudice and social discrimination (Lelliot et al 2008). This is particularly evident in the workplace, where behaviour is governed by strict rules of conduct. Mental illness is associated with longer duration of sickness absence, lower return-to-work rates and more long-term incapacity (Waddell et al 2003, Lelliot et al 2008). Social factors not only help to 'cause' mental illness and sickness, but also act as major barriers to staying in, returning to or moving into work. This may be described as a *social discrimination model*.

Thus, it is not enough to enable the individual to manage their health condition and problems with social relationships. For them to do so successfully, there must also be change in the way other people react – particularly in the context of work. The social model approach requires change in the work environment – in the attitudes and behaviour of employers, line managers and other workers. Individuals may be empowered to adapt the work environment to meet their needs – other people require education too.

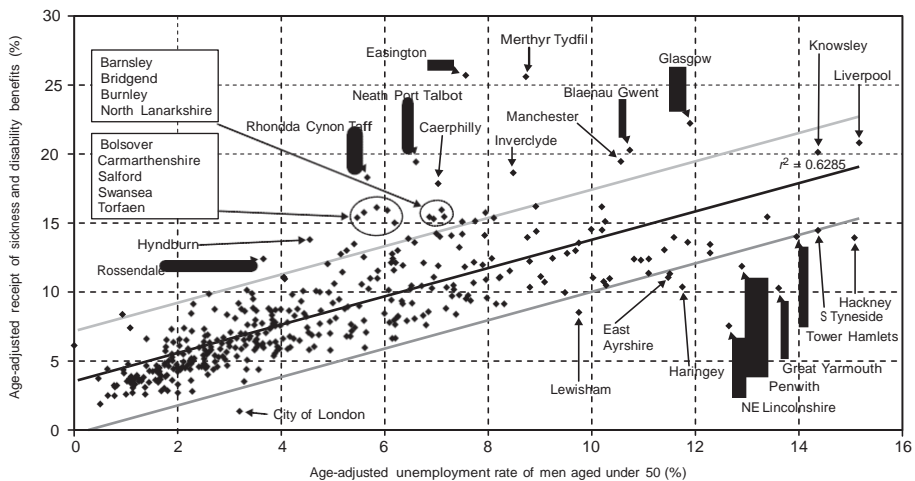
<sup>11</sup> This subsection is based largely on ideas from Bob Grove, with thanks.

*The social model applied to long-term incapacity*

The most powerful determinants of (ill) health are social gradients (Marmot 2004) – see Table 3 – and the linked problem of regional deprivation (HMT 2003, McLean et al 2005, Ritchie et al 2005, Oxford Economics 2007, Aylward & Phillips 2008). There is a 10-fold variation in incapacity rates between the best and worst local authority areas, with the highest rates in the formerly highly industrialized areas of Wales, northern England and central Scotland (Figure 7). The death rates in Merthyr Tydfil are almost 50% higher than in Ceredigion (Welsh Assembly Government 2005). Life expectancy at birth for males in Merthyr Tydfil is the lowest in Wales at 73.3 years, compared with 78.5 years in Ceredigion – a difference of over 5 years. Among females in Merthyr Tydfil, the life expectancy at birth is 78.1 years, contrasting with 81.9 years in Ceredigion (National Assembly for Wales 2004).

	<b>Professional</b>	<b>Unskilled</b>
<b>Limiting long-term illness</b>	7%	14%
<b>Mental distress<sup>b</sup></b>	18%	37%
<b>Life expectancy</b>	79 years	70 years

<sup>a</sup> Taken from UK National Statistics (available at: [www.statistics.gov.uk](http://www.statistics.gov.uk)).  
<sup>b</sup> Scottish data based on GHQ12 score of four or more, which is generally taken to be a possible indicator of psychological disorder (Malam et al 2004).



**Figure 7** Local variation in unemployment and incapacity rates: correlation between labour market tightness and receipt of sickness and disability benefits, May 2000, men (DWP administrative data).

Incapacity benefits cover diverse groups of people, with different kinds of problems, in very different circumstances. Nevertheless, many benefit recipients face multiple disadvantages and barriers to (return to) work (Waddell & Aylward 2005):<sup>12</sup>

- Many have more than one health problem: secondary mental health problems become increasingly common over time out of work.
- Age: half are aged >50 years with poorer employment prospects.
- Poor employment history: one-fifth are long-term out of work before starting IB.
- Low skills: 40% have no qualifications and 15% have basic skills problems.
- More than half have personal circumstances and commitments that make work more difficult, for example childcare responsibilities or caring for someone with an illness or disability.
- The longer anyone is out of work, the more distant they become from the labour market (Waddell et al 2003, Howard 2003): 75% of current recipients have been on benefits more than 2 years.
- Local labour market: there may be high local unemployment rates and low job availability (HMT 2003).
- Despite improvement in recent years, employer discrimination is still a major barrier, especially for people with mental health conditions (Social Exclusion Unit 2004, Lelliot et al 2008).
- Uncertainty is a key issue<sup>13</sup> – about whether they will be fit to continue working regularly if they have recurrent health problems, about the risk of losing benefits or getting back on to benefits if the need arises, and about the financial consequences of coming off benefits. This is partly due to lack of information and understanding of the benefits system (Gardiner 1997, Corden & Sainsbury 2001).
- The benefit regime 'labels' people as incapable of work, becomes a barrier to work and reinforces other barriers (Howard 2003, Waddell & Aylward 2005).
- There exists a low-skills trap (Finegold and Soskice 1988, Rees and Stroud 2004), which results in a substantial proportion of the socially excluded population effectively excluding themselves from the labour market. People receiving relatively high rates of state benefits who have no or few qualifications cannot command a high enough wage to make work pay – even with the existing range of in-work benefit incentives (RJ Cornwall 2006 personal communication).

Ninety-five percent of IB recipients face at least one barrier to (return to) work and 60% face three or more, in addition to their health condition. Even if the health condition itself is not totally incapacitating, it is seriously confounded by these other disadvantages. Moreover, disadvantages are additive: employment rates for disabled men range from 65% (if they have no other disadvantage) to 5% (with five disadvantages) (Berthoud 2003). Once someone is on incapacity benefits for more than 1–2 years, they are more likely to stay on benefits until they die or retire than to return to work. This is a *social disadvantage model*.

12 Again, the available data are on IB claimants, but these findings are likely to be comparable for its replacement, the ESA.

13 Primarily for the individual, but also for health professionals and prospective employers.

## Other social models

The social model described above is only one of a number of social models, the most important of which for the present discussion are the economic model and the cultural model.

### *The economic model*

Financial benefits unquestionably affect illness behaviour. The hypothetical 'economic man' pursues his self-interest (maximizing wealth and minimizing labour) by rational choices based on the balance of incentives and risks. Normally, work is fundamental to the family's socioeconomic situation, but, in sickness or disability sick pay, social security and workers' compensation, benefits become equally important. Proponents of the economic model cite three main lines of evidence.

First, the rising trend in incapacity benefits from the 1970s to the 1990s coincided with generally more generous benefits. The basic rate of UK incapacity benefits appears very low, but most recipients actually receive a range of additional benefits and supplements. By 2000, analysis on the Policy Simulation Model showed that, compared with the minimum national wage, IB recipients had a median wage replacement ratio of 70–90% (DWP unpublished data). However, that average figure hid considerable variation. The 1996/97 Disability Follow-up to the Family Resources Study (Grundy et al 1999) found that the average gross weekly household income ranged from £146 for a disabled adult living alone (29% of the disabled) to £395 for a disabled adult living with a partner and children (32% of the disabled). At that time, average gross male weekly earnings were £436, but many IB recipients are unskilled and have much lower earning capacity. Dorsett et al (1999) followed people leaving IB and found two sharply divergent outcomes. One-third left voluntarily; 68% of these returned to some form of work, whereupon their income rose 37%. However, of those who were disallowed benefits, most did not return to work, and their income fell about 20%. Against that, many social changes during this period contributed to IB trends, of which the financial level of benefits was only one (Waddell & Aylward 2005).

Second, there is a close link between local unemployment rates and claims for incapacity benefits (Figure 7)<sup>14</sup> and it is implied that if jobs are unavailable, claimants 'chose' to be sick. Against that, Figure 7 really illustrates the impact of regional deprivation, which includes unemployment, social disadvantage, poverty, and poor physical and mental health<sup>15</sup>. These factors are certainly linked, but that does not prove cause and effect.

Third, there is extensive evidence that the financial levels of benefits influence the number and duration of claims (Waddell et al 2002). Yet this effect is weaker than is often assumed. The best available evidence suggests that a 10% increase in workers' compensation benefits produces a 1–11% increase in the number of claims and a 2–11% increase in the average duration of claims (Loeser et al 1995). However, workers' compensation patients are not comparable to non-compensation patients, but usually have heavier physical jobs, are generally younger, male, less educated and of lower social

14 The regression coefficient  $r^2 = 0.63$  suggests that more than half the variance in claims for incapacity benefits reflects the local unemployment rate.

15 See the subsection above on 'The social model applied to long-term incapacity'.

class, and include more immigrants (Leavitt 1992). These differences may have more direct and greater impact on (return to) work than the level of financial compensation.

Clinically, the economic model<sup>16</sup> raises issues of exaggeration and malingering (Schultz et al 2000, Halligan et al 2003, Waddell 2004). This has led to a plethora of assessment techniques aimed at the detection of suboptimal effort, inconsistencies and deception, although there is continued debate about their validity and reliability.

Focus on the financial level of benefits may obscure other important characteristics of the benefit system. Waddell & Norlund (2000) compared social security trends in Sweden with other European countries and concluded that:

- The financial level of benefits has a relatively small effect on the number of claims and the duration on benefits.
- The structure of the social security or compensation system and the availability and ease or difficulty of getting social benefits or compensation (i.e. the control mechanisms: eligibility criteria, the definition and assessment of incapacity, and the claims, adjudication and appeals procedures) have a greater impact on the number of claims, the number and duration of benefits paid, and benefit trends.

Leonosio (1996) reviewed empirical studies in the USA, and reached a similar conclusion about social security pensions and the timing of retirement.

Taking the economic argument to its logical conclusion, the ultimate economic sanction is to stop (part of) benefits if conditions are not met. However, there is limited and conflicting evidence that sanctions have much direct effect on behaviour or outcomes (Deacon 1997, Stanley et al 2004). Even the main American advocate of conditionality concluded that 'heavy-handed use of benefit sanctions can be counter-productive' (Mead 1997).

The fundamental limitation of the economic model is that human behaviour is not entirely self-interested, utilitarian or rational (Bane & Ellwood 1994, Piachaud 1997). People often value other personal, family and social goals higher than economic self-interest<sup>17</sup> (Leonard et al 1999). They often lack adequate information and must make decisions in the face of uncertainty. So choices are influenced by 'psychological discounting': immediate gains count for more than future gains (even if the latter would be greater), potential losses have more impact than comparable gains, and 'peak' experiences have disproportionate impact compared with regular experience. Tastes and preferences (to use economic terms) are inconsistent, vary over time and reflect cultural pressures and social acceptability. Thus, choices are often irrational and include what economists might regard as 'mistakes'. Even more fundamentally, the economic model fails to recognize that some of the main drivers of sickness and disability are not financial but health-related and psychological.

So, economic (dis)incentives do influence human behaviour, the benefit system should facilitate and encourage the best long-term options for claimants and society as a whole, and control mechanisms are important. But the evidence shows that the impact of economic incentives is less than that of other factors (Loeser et al 1995, Gardiner 1997, Waddell & Norlund 2000, Halpern et al 2004).

Despite these limitations, many policy makers, politicians and their economic advisers adhere to a surprisingly simplistic economic model. Theirs is a black-and-

16 In the workers' compensation literature, this is sometimes described as an *insurance model* (Schultz et al 2000).

17 See the comment on altruism in the subsection below on 'Free will and personal responsibility'.

white view of the world and human behaviour that considers social security trends to be predominantly a matter of economics. They talk of (lack of) motivation to work, 'benefit cultures' and (dis)incentives, so their answer is all about changing incentives, tightening the rules, 'conditionality' and sanctions.<sup>18</sup> There are overtones of social and moral judgement, and of 'them and us'. Whatever may be said for public consumption, behind closed doors the economic model dominates policy thinking to an extent that is difficult to appreciate without seeing it.

### *The cultural model*

Aristotle (in the *Nicomachean Ethics*) in the 4th century BC recognized that 'man is a social animal' and that all human life takes place in a social context. Halliday (1937) pointed out that this is as true of illness as of any other human behaviour: sickness and disability are ultimately social phenomena, whatever their biological basis.

'Culture' is the collective social rules, attitudes, beliefs and acceptable behaviours that characterize a particular social group over time. More technically, it is that complex whole that includes knowledge, beliefs, morals, law, custom and any other practices and habits acquired by the individual as a member of society, which affects his or her entire thinking, behaviour and lifestyle (Fabrega and Tuma 1976). Culture may vary in different societies, in different subcultures of a society, and in any society over time. For example, there are marked differences in pain experience, expression and behaviour in different cultural and ethnic groups. The 'welfare culture' is the set of ideas, values and basic principles that surround the benefits system and underpin welfare policy, the institutions of the welfare state, and the thinking, feelings and consequent behaviour of the various stakeholders in a given society (developed from Chamberlayne et al 1999, Pfau-Effinger 2005).

Trends in incapacity and disability benefits form part of much wider and systematic shifts in employment patterns (Berthoud 1998). This is generally considered to be largely for non-health reasons: industrial restructuring; labour market characteristics (particularly local unemployment rates, marginal employability and disadvantage in the labour market); tightening of the regime for unemployment benefits combined with a weak gateway to incapacity benefit; more women working and eligible for benefits; the rising age of recipients and more recipients with multiple disadvantages and health-related characteristics associated with longer duration; and higher benefit levels and disincentives to work – particularly for men aged over 50 years (Waddell & Aylward 2005). The resulting social upheaval can have profound effects on attitudes to work and benefit dependency, with psychosocial scarring and loss in 'social capital' that persists across generations (Aylward & Phillips 2008)

At the same time, there has been a major shift in the range and severity of health conditions that are considered work-limiting (Aylward & Locascio 1995, Berthoud 1998), which is reflected in sick certification practice and social acceptability. Long-term sickness absence, social security benefits and early retirement on health grounds are now taken as a 'right', provided they are 'within the rules'. Thus, sickness and disability occur in a much broader context of the culture that surrounds work and health, symptoms and illness, healthcare, sickness and disability, social security and (early) retirement. Ultimately, these are probably social and cultural trends, rather than any change in human biology or psychology (Barsky 1988, Croft 2000).

<sup>18</sup> See any standard economic textbook on taxation for descriptions of these terms, but see also Leonard et al (1999) for an analysis of the complexities and limitations of the concept of 'motivation'.



The fundamental limitation of the cultural model is difficulty defining and measuring the relevant 'culture'.

## Personal and psychological factors

None of these models explain how individuals behave so differently with similar health problems, healthcare, social or work contexts. They fail to allow adequately for personal and psychological factors.

Relevant personal characteristics include gender, age and genetic inheritance; family background and status; education, training and skills; occupation and work history; and previous medical history. There may be little that can be done to modify these, at least in the short term, which reinforces the importance of development in early life.

Mental capital and mental well-being are critical to the healthy functioning of individuals, families, communities and society (Foresight 2008). Mental capital encompasses an individual's cognitive and emotional resources. Mental well-being is a dynamic state, in which the individual is able to develop his or her potential, build strong and positive relationships with others, contribute productively to society, and cope with adversity (resilience). Mental capital and mental well-being are intimately linked: measures to address one will often affect the other.

Psychologists study how people think and feel about their health condition, and how that affects their illness behaviour (Mechanic 1968). There is extensive clinical evidence that psychological factors influence the course and outcome of human illness (Linton 2002, Gatchel & Turk 2002, White 2005, Halligan & Aylward 2006, Gatchel et al 2007, Main et al 2008): see Box 4. They are particularly important in chronic sickness and (in)capacity. They influence when common bodily or mental symptoms become 'a health problem' (Mechanic 1968), sickness absence (Alexanderson & Norlund 2004), recovery (Mondloch et al 2001), rehabilitation (BSRM 2000), return to work (Krause et al 2001) and long-term incapacity (Waddell & Aylward 2005). They affect all illness, including severe medical conditions, but are particularly important in common health problems: the more non-specific and subjective the health condition, the more important the role of personal and psychological factors (Wormgoor et al 2006). As an oversimplification, capacity may be limited by a health condition, but performance is limited by how the person thinks and feels about that health condition (Nordenfeldt 2003).

### Box 4

#### Psychological factors that influence sickness and disability

The personal, subjective experience of illness and disability may diverge from objective measures

Assumptions, perceptions and expectations (by the individual, family, health professionals and employers, which may interact and reinforce each other)

Attitudes and beliefs, emotions, mood, values, goals, expectations, psychological distress and coping strategies

Motivation and effort

Uncertainty, anxiety and fear-avoidance

Depression

The relative importance of these factors may vary in different individuals and settings, and over time

Some of the most important psychological factors that influence sickness absence and return to work (in common health problems) appear to be perceptions of health and its relationship to work (Box 5). The focus is usually on the attitudes and beliefs of the individual, but similar perceptions of health professionals or employers are also important, interacting with and reinforcing each other.

**Box 5**

Attitudes and beliefs about work and health

**Individual perceptions**

Physical and mental demands of work

Low job satisfaction

Lack of social support at work (co-workers and employer)

Attribution of health condition to work

Beliefs that work is harmful and that return to work will do further damage or be unsafe

Low expectations about return to work

**Organizational policy, process and practice**

Inappropriate medical information and advice about work; sick certification practice

Lack of occupational health support

Belief by employers that symptoms must be 'cured' before they can 'risk' permitting return to work, for fear of re-injury and liability

Lack of suitable policies or practice for sickness absence, return to work, modified work, etc.

Loss of contact and lack of communication between worker, employer and health professionals

Healthcare, rehabilitation and welfare policy must allow for personal and psychological factors – for the richness of human behaviour, human failings and idiosyncrasies, and the complexity of changing behaviour (Halpern et al 2004).

*Free will and personal responsibility*

Some personal characteristics and psychological processes are deeply ingrained or beyond the control of the individual, but conscious choice, motivation and effort still play a central role in sickness and disability (Leonard et al 1999, Halligan et al 2003, Aylward 2003).

Human beings are driven by both self-interest and altruism,<sup>19</sup> but self-interest is generally dominant. There is nothing morally wrong with self-interest, and it should not be misinterpreted as selfishness or greed. Whatever the philosophical debate about the extent of free will,<sup>20</sup> the law takes a pragmatic approach to 'intent' (Gordon 2000) – acting intentionally, actions with a particular intent or purpose. Individual liberty, free will and personal responsibility for one's actions are taken to be the norm unless there is strong evidence to the contrary. People act consciously, aware of what they are doing and of the likely consequences (i.e. not accidentally or in ignorance).

19 Altruism is disinterested and selfless concern for the well-being of others (ODE 2005).

20 There is philosophical debate about the extent of free will and individual responsibility for our actions (individualism) versus the extent to which we are under the influence of biological, psychological and social forces (determinism): see Dennett (2003).

Sick and disabled people may face considerable constraints on their behaviour. In practice, choice may be constrained by biological or psychological limitations, by genuine (even if mistaken) perceptions and beliefs, and by social or occupational factors beyond the control of the individual, lack of autonomy and self-esteem. Sick and disabled people face considerable social barriers and disadvantages. But, for all the qualifications, most sick and disabled people bear personal responsibility for their actions. Very few have a severe mental illness or disorder that absolves them from responsibility. For most people with common health problems, decisions about being (un)fit for work, taking sickness absence or claiming benefits are conscious and rational decisions, free choices with full awareness and intent, for which they must take responsibility. Accepting that they have a genuine health problem, most claimants are nevertheless answerable to 'whether it would be unreasonable to expect [me] to seek or be available for work'. The principle of 'reasonableness' is sufficiently broad to allow for the nature and severity of the health condition and for social circumstances. The corollary is that any judgements must be made with understanding and compassion.

The benefit system must then take account of moral hazard.<sup>21</sup> The structures and (dis)incentives of the benefit system influence claimant behaviour, and the present structure sometimes creates 'welfare dependency'. Ideally, social security structures should work with rather than against human nature, work with self-interest, and encourage rather than discourage desired social behaviour. Healthcare and social security should encourage and support people to help themselves, to move from dependency to fulfilling their potential (Field 1996, 1997).

### The biopsychosocial model<sup>22</sup>

Each of the above models reflects a particular perspective on sickness and disability: all have some validity, but each gives only a partial view of human illness. A complete model should include all of these perspectives. The biopsychosocial model recognizes that biological, psychological *and* social factors, and the interactions between them, can influence the course and outcome of any illness. Human beings *are* biopsychosocial – an integrated whole of body and mind in a social being – so a comprehensive model of human illness must be biopsychosocial.

The *International Classification of Functioning, Disability and Health (ICF)* (WHO 2001) tried to reconcile the medical and social models of disability and to balance the individual and social perspectives, even if it did not fully satisfy either side (Masala & Petretto 2008). It shifted the focus from the medical 'cause' and the process of disablement to the universal human experience of 'functioning' associated with (ill) health. It moved away from the assumption of linear causality (Figure 3), and acknowledged that an individual's functioning depends on complex interactions between their health condition and their particular situation, including environmental and personal factors. However, it is still very much a model of disability rather than sickness, and applies best

21 Moral hazard is an economic term meaning lack of incentive to guard against risk where one is protected from the consequences, for example by insurance (ODE 2005). In insurance markets, moral hazard occurs when the behaviour of the insured changes in a way that raises costs for the insurer: (a) by more 'risky' (e.g. unhealthy) behaviour or (b) by increasing the frequency and/or duration of claims when benefits are available. The term is sometimes, incorrectly, taken to imply immoral behaviour or fraud.

22 The term 'biopsychosocial' is a catchy shorthand that expresses the key features of the model. The disadvantage is that it is 'professional', technical and clumsy, but no one has yet produced a simple yet adequate alternative.

to people with impairments. It fails to consider adequately the personal/psychological dimension or the interactions between the three dimensions. It is primarily a taxonomy rather than a clinical or conceptual model.

The idea that medicine should treat ‘the whole person’ has been around since the time of Hippocrates. Historical philosophies of health fall into three main types (Glouberman et al 2000, Glouberman 2001): those that focus on the individual as an organism, those that stress the environment (both physical and social) and those that emphasize the interaction between the organism and the environment. The first, mechanistic, view considers health as a function of the human body, but its dominance is relatively recent. From the time of Aristotle, the main determinants of health and sickness were considered to be lifestyle, healthy behaviour and the social and physical environment, rather than biological status or healthcare. A public health perspective suggests that this is still true today (Marmot 2004).

Engel (1977, 1980) introduced the term ‘biopsychosocial’ and argued the need for a biopsychosocial model. He shifted the focus from disease to illness, stressing that psychosocial factors influence the course of any illness and that healthcare must take account of the subjective experience of illness as well as objective biomedical data. He argued for better integration of mind and body, included the social context of illness, and laid out the three-dimensional framework of the model (without going into detail). This is a dynamic systems approach rather than the linear causality and factor-analytical approach of the medical model. All three dimensions and the interactions between them should be amenable to scientific study, using appropriate methods for each (again leaving this to others). However, this remained very much a model for healthcare.

### *The contemporary biopsychosocial model*

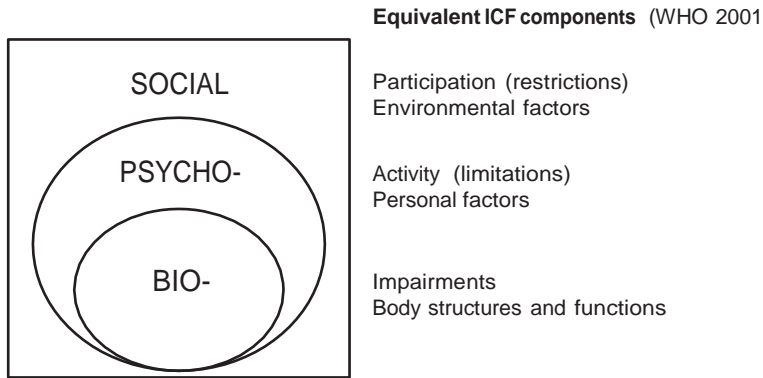
The biopsychosocial model can be defined as a model of human illness (rather than disease) that includes biological, psychological and social dimensions, and the interactions between them:

- **Biological:** illness originates from a health problem and always has a biological substrate in body or brain<sup>23</sup> (whether or not a specific disease).
- **Psychological:** illness is by definition subjective and always has a personal/psychological dimension.
- **Social:** sickness and disability are social phenomenon, and illness is ultimately expressed in a social context.

Put simply, the biopsychosocial model is an interactive and individual-centred approach<sup>24</sup> that considers the person, their health problem *and* their social/occupational context (Figure 8).

23 This is equally true of mental illness: subjective experience emerges from and is entirely dependent on brain functioning. Conversely, mind is more than just the result of neurophysiological processes. Causality is bidirectional: mind affecting brain processes, and brain processes affecting mental events (Kendler 2005).

24 In healthcare, and in particular general practice, this is described as the ‘patient-centred approach’, which emphasizes the patient’s unique experience and understanding of the illness and patient-centred outcomes (Mead & Bower 2000). This leads to a more egalitarian patient–doctor relationship that stresses the interpersonal aspects of care and shared responsibility for management. It often includes intervention at the social and occupational level, for example to address barriers to return to work, but the *primary* focus is on the individual’s predicament, identifying and addressing the needs of the individual.



**Figure 8** The biopsychosocial model of human illness.

The biopsychosocial model combines and balances the medical and social models, and introduces the personal/psychological dimension (Box 6). It recognizes that some action must be at an individual level to deal with that person’s health problem, but some must also be at a social level (as in the social model) to benefit all sick and disabled people.

**Box 6**  
A comparison of the medical, biopsychosocial and social models<sup>a</sup>

Medical model	Biopsychosocial model	Social model
Sickness and disability are direct consequences of impairment	Sickness and disability originate from a health problem, but are also influenced by psychological and social factors, and the interactions between them	Disabled people are disadvantaged by society's failure to accommodate everyone's abilities
Sick and disabled people are pitied as the victims of personal tragedy	Sick and disabled people suffer social disadvantage and exclusion, and society should make provision to accommodate them	Disabled people are oppressed by current social and economic institutions
Sickness and disability are best overcome through healthcare (and, if necessary, rehabilitation)	Sickness and disability are best overcome by an appropriate combination of healthcare, rehabilitation, personal effort and social/work adjustments	Disadvantage is best overcome by society removing social barriers
<b>Assumptions about work</b> Sick and disabled people cannot work	More could work if individual, psychosocial and system barriers were removed	Sick and disabled people are excluded from work.

<sup>a</sup> Partly developed from Howard (2003).

The bio-psycho-social may be regarded as ‘dimensions’, integrated elements or perspectives on the whole entity of illness, which cannot be isolated from each other. Any health problem occurs within a unique person, who is in a particular social context: these may be regarded as increasing levels or hierarchies of complexity that build up from biological to social to produce the whole (Engel 1977, 1980, Peters 1996).

Illness has many of the characteristics of a *complex system*, which cannot be reduced to the sum of its parts: dynamic interactions produce new properties, characteristics and effects. Indeed, it has been argued that *interactions* between the individual and their social context and between health and social well-being are the major contributors to (ill) health (Kiesler 1999, Cacioppo et al 2000, Glouberman 2001, Gilbert 2002, Buck et al 2006). It should be noted that interactions are two-way: sickness and disability are not only influenced by their social context; people can and do modify, select and even create their social environment (Llewellyn & Hogan 2000). Howard (2003) went so far as to call this an *interactionist model*, which is dynamic and emphasizes processes. So, an apparently simple intervention on one dimension does not necessarily have a direct and predictable effect. Rather, any intervention may influence the complex interactions in unforeseen ways with indirect and sometimes perverse effects. Multiple interventions at several levels may be required. This is characteristic of many health and social policy interventions.

Another important implication is that sickness and disability are not static, but dynamic processes that evolve over time. The factors that influence the process of disablement and recovery, and their relative importance, vary over time. Self-perceptions fluctuate, and individuals move between being disabled or not, and between working and varying degrees of (in)capacity (Burchardt 2000). Duration of sickness absence is fundamental to this process (Waddell & Burton 2004): see Box 7.

#### Box 7

Stages of sickness, using low back pain as an example<sup>a</sup>

<b>Acute</b> 0–4 weeks (a health problem with social implications)	Natural history is benign and self-limiting Prognosis is good, with or without healthcare 90% of acute attacks settle within 6 weeks, at least sufficiently to allow a return to work, even if many people still have some persistent or recurrent symptoms Minimize healthcare, avoid medicalization and avoid iatrogenic disability Avoid 'labelling' and creating a 'culture' of disability and incapacity
<b>Subacute</b> 4–12 weeks	Most people have returned to work, even if they still have some residual pain Those still off work now have a significant risk of going on to chronic pain and incapacity Active interventions to control pain <i>and</i> improve activity levels are effective and cost-effective There is a window of opportunity for 'timely' healthcare, rehabilitation and administrative interventions
<b>Chronic</b> >12 weeks (a disability problem with an underlying health problem)	10% of patients account for 80% of healthcare use and 90% of social costs Non-specific symptoms have now led to chronic incapacity There is a major impact on every aspect of their lives, their families and their work Prognosis is poor and the likelihood of return to work diminishes with time Medical treatment and rehabilitation are more difficult and the success rate is lower Many people at this stage lose their jobs and attachment to the labour force. Vocational rehabilitation becomes more difficult

<sup>a</sup> Adapted from Frank et al (1996) and Krause & Ragland (1994).

Each stage involves a different set of expectations, behaviours and social interactions. Social, employment and economic status changes – at some points quite dramatically. The outcome of any intervention may differ in different stages, so the timing of healthcare, rehabilitation and social interventions is critical. The practical implication is that early intervention is generally simpler, more effective and cost-effective.

Since Engel (1977) first proposed the framework, the biopsychosocial model has undergone extensive testing, and is now supported by strong empirical evidence. The focus of the present publication is on common health problems and on sickness and disability, where:

- Humans are embodied beings: all symptoms have some biological substrate in body or brain (Gilbert 2002).
- By definition, illness is subjective and therefore has a psychological dimension, while sickness and disability are social phenomena (Peters 1996).
- Conversely, psychosocial factors modify biological and neurophysiological processes (Cacioppo et al 2000, Gatchel et al 2007, Novack et al 2007, Finestone et al 2008) and illness behaviour (Mechanic 1968).
- Psychophysiological and psychosocial factors play a major role in the development of chronic sickness and disability (Gatchel et al 2007, Main et al 2008).
- There is often comorbidity between chronic physical health problems and anxiety or depressive disorders (RCP 2003, Lelliot et al 2008).
- Biopsychosocial factors act as obstacles to recovery and return to work (Burton & Main 2000, Howard 2003).
- Effective occupational health and vocational rehabilitation requires a biopsychosocial approach, with a combination of healthcare that includes a focus on return to work *and* proactive workplace management (HSE 2005b, Lunt et al 2007, Waddell et al 2008).

### *Caveats to the biopsychosocial model<sup>25</sup>*

The biopsychosocial model is *not* an aetiological model of disease, and arguments about whether the cause of a particular disease is biological *or* psychosocial obscure the main issue<sup>26</sup> (Kiesler 1999, White 2005). First, it is a process rather than a causal model. Second, it is a model of illness, not of disease. Third, most illness (and most disease) is multicausal. Finally, whatever the ‘original cause’, biopsychosocial factors can influence the development, course and consequences of illness – and that is true of any health problem, including a specific disease or injury. The biopsychosocial model is a systems model of human health and illness or, more specifically, of the process(es) that promote health or lead to sickness and disability.

In practice, the biopsychosocial model does not imply that psychosocial factors necessarily caused the underlying health problem (although, in a minority of situations, it can occur by psychosomatic mechanisms) or that symptoms are ‘all in the patient’s head’. Overemphasis on psychosocial factors must not lead to neglect of the underlying

<sup>25</sup> Many of the issues in this subsection were developed from Borkan et al (2002), White (2005) and Weiner (2008), which provide more detailed discussion and references.

<sup>26</sup> White (2005) gives the classic examples of this debate: in previous times, cholera was attributed to ‘moral’ factors and more recently peptic ulcer was attributed to psychosocial stress (before the discovery of the bacterium *Helicobacter pylori*). Both examples are of specific diseases and of doubtful relevance to common health problems.

health problem and its appropriate diagnosis and treatment – although it is reasonable to ask whether correcting any pathology and impairment does restore function and lead to a return to work. In practice, psychosocial issues seem easier to address if the health problem is dealt with first. Nor is it a differential diagnosis between *either* a ‘biological’<sup>27</sup> health problem *or* psychosocial issues. Virtually all sick or disabled people have a ‘genuine’ health problem, and most also have some psychosocial issues. Inability to diagnose pathology does not mean that the problem is psychosocial, any more than the identification of psychosocial factors excludes a genuine health problem. Assuming that the problem is ‘psychosocial’ may lead to missing treatable biology, while failure to recognize psychosocial issues can lead to delayed recovery. Furthermore, psychosocial factors are not a ‘diagnosis’ in themselves. They simply demonstrate the need for more thorough assessment of how an individual is affected by and dealing with their health problem. So assessment and treatment must *start with* the health problem, and only then consider psychosocial issues. Similarly, there needs to be continuing research into better understanding of the biological basis and effective treatments for common health problems, *as well as* better psychosocial assessment and interventions.

The biopsychosocial model has sometimes overemphasized a particular set of ‘clinical psychology’ factors (e.g. cognition, mood and coping) at the expense of other, less measurable aspects of the personal and subjective experience of illness (e.g. individual ‘personality’, perceptions, expectations and uncertainty). There has also been a relative neglect of ‘social’ and occupational factors, interactions and outcomes.

The biopsychosocial model has sometimes been taken to imply that patients are the powerless victims of psychosocial forces beyond their control. Despite acknowledging mental events, its emphasis on physiological and psychological mechanisms remains deterministic. This fails to allow for free will, conscious choice and personal responsibility, and the possibility of exaggeration, abuse or fraud (Aylward 2003). Conversely, it is important to avoid observer bias. Assessment of psychosocial factors should be a matter of dispassionate observation, in a New Testament spirit of compassion, not Old Testament judgement.

Although the biopsychosocial model has gained wide acceptance in academic circles, it has failed to supplant the deep-rooted dominance of the medical model in Western healthcare (Kiesler 1999, Pilgrim 2002, Alonso 2004). Lip service may be paid to the biopsychosocial model, but practice easily reverts to a biomedical approach. There is still an attractive simplicity to a mechanistic approach. Moreover, the medical model fits the scientific method of objective observation, has been highly successful in treating ‘real’ disease and underpins continuing medical advances. It is reinforced by professional training, the organization of healthcare and its usefulness in daily practice. All of these aspects make it difficult to reject the medical model. In contrast, the biopsychosocial model presents human illness as the outcome of a complex set of biological, psychological and social factors and interactions, which can be difficult to define and control. Clinical practice must live with uncertainty and focus on the most important, manageable issues. A biopsychosocial approach places greater demands on health professionals, for which many feel untrained and uncomfortable. It also demands a more egalitarian patient–doctor relationship (Borrell-Carrio et al 2004). Patients want to be ‘cured’, but at the same time expect more ‘human’ healthcare. However, that is not an

27 ‘Biological’ has been put in quotation marks here to include mental health problems.



impossible goal: it is a major part of modern GP training (Mead & Bower 2000, Lewin et al 2001, Cohen 2008).

The major limitation of the biopsychosocial approach has been the lack of simple clinical tools to assess psychosocial issues and simple, practical interventions to address them (Kendall et al 1997, Borkan et al 2002, Kendall & Burton 2009). After more than 30 years, and despite agreement on the importance of psychosocial factors, there is relatively little empirical evidence for effective biopsychosocial interventions at an individual level. The challenge is to develop simple, practical, biopsychosocial messages for routine practice, and the evidence base for their effectiveness.<sup>28</sup>

Paradoxically, the biopsychosocial model, just like the medical model, may lead to medicalization or at least 'professionalization' (Weiner 2008). Biopsychosocial problems are sometimes implied to be so complex that they can *only* be managed by (multidisciplinary teams of) health professionals. Yet most patients with common health problems can be managed satisfactorily in primary care by following a few basic principles. Only more difficult issues need referral to other professionals and only the most complex require a multidisciplinary team.

Ultimately, however, the biopsychosocial model does not reject or replace the medical model, but supplements and extends it. It broadens the approach to illness 'to include the psychosocial, without sacrificing the enormous strengths of the biomedical approach' (Engel 1997). The goal is simply to treat the person as well as their health condition: to strike the right balance between providing the most effective care and achieving the best social and occupational outcomes. Above all, patients need to be reassured that the biopsychosocial approach is an extension of standard healthcare and makes no assumptions about original causes (White 2005).

28 This is discussed further below in the sections on 'Healthcare for common health problems' (with regard to the management of low back pain) and 'Work and health' and the subsection 'Support into work' (with regard to the *Pathways to Work* programme).

# The biopsychosocial model applied to common health problems

The biopsychosocial model provides both a philosophy of clinical management and a set of practical clinical tools (Schultz et al 2000, Borrell-Carrio et al 2004). Philosophically, it provides better understanding of illness, sickness and disability. At a practical level, it provides a framework for better clinical assessment, management and rehabilitation. It shifts the focus from the aetiology of the health condition to its management and from clinical to patient and social outcomes. It has major implications about the management of common health problems – for the individual (Box 8), for healthcare (Box 9), for the workplace (Box 10) and for social policy (Box 11).

## Box 8

Implications of the biopsychosocial model for the management of common health problems: for the individual<sup>a</sup>

Contrary to popular belief, work is usually not the sole or even the main cause of most common health problems

Usually, there is no serious underlying disease or lasting damage: recovery is normally to be expected

Symptoms do not necessarily mean that you need time off work

Most people get common health problems at some time, but most manage to remain at work or return to work quite quickly

Healthcare may help to relieve or control your symptoms, but you must share responsibility for the continued management of your health problem

Rehabilitation depends on your own motivation and effort

You do not need to wait until you are completely symptom-free before returning to work

Returning to work can often help your recovery

The longer you are off work, the harder it will be to get back

<sup>a</sup>For more detailed information and advice, see HSE (2004b) and Anon (2007a).

## Box 9

Implications of the biopsychosocial model for the management of common health problems: for healthcare<sup>a</sup>

Advice about work is an important part of clinical management

Most common health problems are idiopathic or multifactorial in nature; work is only one and usually not the most important factor. Avoid unfounded attribution of symptoms to work

Most patients with common health problems should be advised and supported to remain at work or return to work as early as possible

*Continued*

**Box 9 continued**

Advice to stay off work and sick certification are major therapeutic interventions with potentially serious consequences if the patient slides into long-term incapacity  
The longer anyone is off work, the greater are the obstacles to return to work and the greater is the risk of long-term incapacity  
Return to work is usually therapeutic and an essential *part* of rehabilitation  
Planning and supporting return to work, in partnership with patients, are an important part of clinical management  
(Return to) work should be one of the key outcome measures of clinical management  
First, do no harm: avoid iatrogenic disability

<sup>a</sup>For more detailed information and advice, see FOM (2005) and Anon (2007b).

**Box 10**

Implications of the biopsychosocial model for the management of common health problems: for workplace management<sup>a</sup>

Work is generally good for health and well-being  
Two-thirds of long-term sickness absence is caused by 'common health problems', but much of that should be preventable.  
Common health problems cannot be left to healthcare alone. Employers also have a key role and must share responsibility for the return-to-work process  
It is important to maintain contact with workers during sickness absence  
Workers do not need to wait until they are 100% symptom-free to return to work  
Most common health problems can be accommodated at work, if necessary with appropriate adjustments and support  
Temporary modified duties are among the most effective methods of facilitating early return to work  
Return to work should be one of the key outcome measures of workplace management

<sup>a</sup>For more detailed information and advice, see HSE (2004a, 2005a), EEF (2004), Anon (2006) and Shift (2007).

**Box 11**

Implications of the biopsychosocial model for the management of common health problems: for social policy<sup>a</sup>

Healthcare should give much higher priority to working-age health and common health problems, because of their human, social and economic impact  
Social security benefits for sickness and disability should both (a) provide income support for people who are (temporarily) incapacitated for work and (b) encourage and support them to (return to) work whenever their health condition permits  
Common health problems should receive higher priority, because they now account for about two-thirds of long-term sickness absence and incapacity benefits and much of this should be preventable  
Trends of sickness and disability are social and cultural phenomena and not solely 'medical' problems  
Healthcare is important to relieve suffering and provide support, but healthcare alone will not reverse current trends in sickness absence and incapacity

*Continued*

**Box 11 continued**

Employers should be encouraged and supported to share responsibility for the management of health at work

Government cannot solve this problem alone – it is important to keep all stakeholders inside

There needs to be a fundamental shift in the culture that surrounds work and health, sickness and disability, and incapacity benefits

<sup>a</sup>For more detailed discussion, see Waddell and Aylward (2005), Waddell & Burton (2006), Black (2008) and Waddell et al (2008).

## Healthcare for common health problems

The ultimate goal of healthcare is to care for people who are ill and to relieve human suffering. The biopsychosocial model provides a framework and tools to put this into practice. Traditional healthcare for common health problems (based on the medical model) focuses primarily on relief of symptoms, and assumes that this will restore function. However, ‘symptomatic treatment’ alone does not always restore function or lead to a return to work. Modern clinical management of common health problems emphasizes restoring function as the best means of achieving lasting relief (Waddell & Burton 2004). In the biopsychosocial approach, relief of symptoms and restoration of function are closely intertwined, run concurrently and are interdependent.

Healthcare is generally viewed as (part of) the solution, but can sometimes become an obstacle, for example when unhelpful medical advice, inappropriate sick certification and waiting-list delays block more appropriate management and early return to work (Waddell & Burton 2004). It is important to avoid iatrogenic disability: ‘first, do no harm’.

All healthcare for common health problems should include an occupational focus (Black 2008, Waddell et al 2008). Too often, health professionals see work as the problem, rather than the goal or part of the solution, and usually this is wrong. Work is not just the goal and the outcome of successful healthcare: work is generally therapeutic and an essential *part* of rehabilitation.

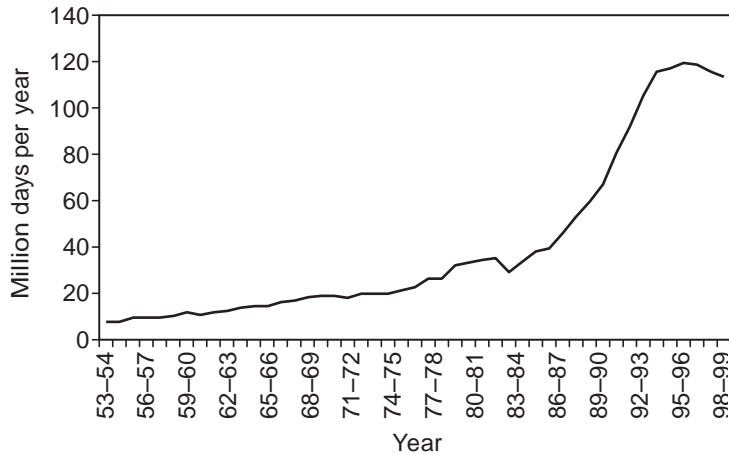
It follows that every health professional who treats common health problems in people of working age should be interested in, and accept some responsibility for, rehabilitation and occupational outcomes (Black 2008, Waddell et al 2008). This does not mean that every health professional must become a ‘rehabilitation specialist’: rather, it goes to the roots of what good clinical management is all about:

- relief of symptoms
- restoration of function
- patient-centred and work outcomes

There is extensive scientific evidence that the biopsychosocial model provides the best framework for the modern management of low back pain (Borkan et al 2002), upper limb disorders (Burton et al 2008), rehabilitation (Wade & de Jong 2000, Waddell & Burton 2004), modern pain management (Gatchel et al 2007, Main et al 2008) and chronic disease management (Neuumejer-Gromen et al 2004, Ofman et al 2004, Varekamp et al 2006).

One example will suffice: the biopsychosocial model has completely reversed the strategy of management for low back pain. Traditional medical treatment of low back ‘injury’ with

rest may actually have prescribed and reinforced disability (Waddell 1987). Now, strong scientific evidence and clinical guidelines (RCGP 1999, COST B13 Working Group 2004) show that best practice for back pain is to stay active and continue ordinary activities as normally as possible. UK occupational health guidelines applied the same principles to (early) return to work (Carter & Birrell 2000). This has led to a profound shift in public perceptions, the advice given by GPs and clinical management (Waddell et al 2007). The exponential rise in social security benefits for back conditions up to the mid-1990s has been reversed (Figure 9). Since 1995–96, there has been a dramatic 42% fall in new awards.<sup>29</sup>



**Figure 9** Days of UK incapacity benefits for back conditions (Waddell et al 2002).

#### Box 12

Health, work and well-being<sup>a</sup>

##### **Work is generally good for health:**

Work is an integral part of life, which is central to individual identity, social roles and social status, as well as meeting financial and psychosocial needs

For people with common health problems, there is strong evidence that work:

- promotes recovery and aids rehabilitation
- leads to better health outcomes
- minimizes the harmful physical, mental and social effects of long-term sickness absence
- improves quality of life and well-being
- reduces social exclusion and poverty

##### **Worklessness is bad for health:**

There is strong evidence that long periods out of work can cause or contribute to:

- a two- to threefold increased risk of poor general health
- a two- to threefold increased risk of mental health problems
- 20% excess mortality
- higher consultation, medication consumption and hospital admission rates

The longer anyone is off work, the lower are their chances of getting back to work

These health risks are greater than those of many 'killer diseases' or some of the most dangerous jobs in the construction industry or the North Sea

<sup>a</sup>Waddell & Burton (2006).

<sup>29</sup> There have also been major changes in the benefits system since the mid-1990s, and these benefit trends cannot be attributed solely to changed clinical management, although the biopsychosocial approach to back pain has undoubtedly contributed to the overall shift (Waddell et al 2002).

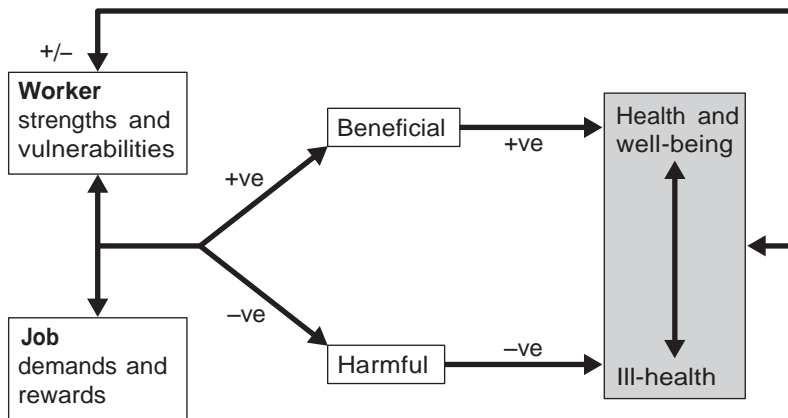
### Work and health<sup>30</sup>

Work and health are intimately related. Health is not just a necessary condition for work, and work a risk factor for health (as in the medical model). There are more complex and positive interactions between individual health and the work environment, consistent with the biopsychosocial model. There is extensive evidence that work is generally good for health, and that the beneficial effects of work generally outweigh the risks of work and the harmful effects of worklessness<sup>31</sup> (Box 12).

This reinforces the economic, social and moral arguments that work is the most effective way to improve the well-being of individuals, their families and their communities. However, the provisos are that:

- (a) Jobs are available and there is a realistic chance of obtaining work, preferably locally,<sup>32</sup> and allowing for age, gender and (lack of) qualifications.
- (b) These are 'good' jobs from the perspective of promoting health and well-being.<sup>33</sup>

This leads to a broader and more balanced view of the relationship between work and health (Figure 10). It also means that health and safety at work should be distinguished. Safety will always be important, but a healthy working life is much more: it is 'one that continuously provides the opportunity, ability, support and encouragement to work in ways and in an environment that allows workers to maintain and improve their health and well-being' (Scottish Executive 2004). That is a much broader and more positive concept (HSE 2005b, Lunt et al 2007).



**Figure 10** Interactions between work and health can produce positive as well as negative consequences. Reproduced with permission from Waddell & Burton (2006).

This has profound implications for advice about work and sick certification (see Box 9 and the section above on 'Healthcare and common health problems'). Sick certification

30 Much of this section is based on Waddell & Burton (2006), which provides detailed evidence, tables and references.

31 With the major proviso that work is 'good' – which introduces a whole other agenda.

32 It is all very well to advise people to 'get on their bike', but that fails to allow for non-economic (i.e. personal, family and social) values – see the criticisms in the subsection above on 'The economic model'.

33 This opens an important research and policy area that is too large to cover here, but in which there is currently great interest.

is a powerful therapeutic intervention, with potentially serious consequences if applied inappropriately, including in particular the slide into long-term incapacity (Anema et al 2002, Sawney 2002). Following intensive professional education efforts,<sup>34</sup> family doctors' awareness of the evidence underpinning the health benefits of work increased from 36% in May 2007 to 54% in May 2008, and 85% felt that evidence was quite or very relevant to their practice.<sup>35</sup>

### *Workplace management of common health problems*

There is a strong business case for the effective management of health at work: quite simply, 'good health is good business'<sup>36</sup> (Hanson et al 2006, Shaw et al 2008, Black 2008, PricewaterhouseCoopers 2008, Burton et al 2008).

Given the nature of common health problems, they cannot just be left to healthcare: they are equally matters of occupational management (Franché et al 2005, HSE 2005b, Lunt et al 2007, Hill et al 2007, Waddell et al 2008). This shifts the perspective from traditional 'treatment' (i.e. healthcare) to a more holistic approach to workers' health. Accepting that common health problems are an inevitable part of (working) life, good workplace management is about preventing persistent and disabling consequences, which may include several overlapping strategies (Linton 2002, Shaw et al 2002):

- positive health at work strategies
- early detection and treatment of mild to moderate symptoms
- accommodation of temporary functional limitations from persistent or recurrent symptoms
- interventions to minimize sickness absence and promote (early) return to (sustained) work

This requires employers, unions and insurers to re-think workplace management of common health problems. The workplace, like healthcare, should address all of the health, personal and occupational dimensions of health at work, identify obstacles to (return to) work and provide support to overcome them. Employers have a general 'duty of care' to their employees, and line managers play a key role in delivering this. Sickness absence management, assisting return to work and promoting rehabilitation may not be legal obligations, but they are matters of good practice, good occupational management and good business sense (HSE 2004a, EEF 2004, Buck et al 2008).

### **Vocational rehabilitation**

The biopsychosocial model and the *International Classification of Functioning, Disability and Health* (WHO 2001) are now widely accepted as the best framework for disablement (AMA 2007) and rehabilitation (Wade & de Jong 2000, Schultz et al 2000, Wade & Halligan 2004, HSE 2005b, Lunt et al 2007).

34 See the DWP health and work pages for healthcare professionals, which are available at: [www.dwp.gov.uk/healthcare-professional](http://www.dwp.gov.uk/healthcare-professional).

35 In a survey commissioned by the DWP and available (to UK-registered doctors and medical students) at: [www.doctors.net.uk](http://www.doctors.net.uk).

36 Health and Safety Executive 'Good Health is Good Business' campaign 1995–2000 (HSE 2000).

### Concepts of rehabilitation<sup>37</sup>

Vocational rehabilitation is *whatever helps someone with a health condition or disability to stay in, return to or move into work* (TUC 2000). It is an idea and an approach, as much as an intervention or a service. Vocational rehabilitation is not a matter of health-care alone: employers also have a key role. All the evidence (Waddell et al 2008) is that effective vocational rehabilitation interventions (beyond about 6 weeks) comprise:

- healthcare that includes a specific focus on work
- workplaces that are accommodating and take a proactive approach to sickness  
*and*
- taking account of the attitudes and beliefs (of all the players) and the culture that surrounds health and work

The crux of the matter is striking the right balance between healthcare and the focus on work, and all working together. That *is* a biopsychosocial approach.

The traditional approach to rehabilitation is a secondary intervention after medical treatment is complete but the patient is left with permanent impairment (Figure 4). It accepts that impairment is irremediable, and attempts to overcome, adapt or compensate for it by developing to the maximum extent the patient's (residual) physical, mental and social functioning. Where appropriate, patients may be helped to return to (modified) work. That approach remains valid for some severe medical conditions (Wade & de Jong 2000).

However, common health problems involve little or no permanent impairment, so their rehabilitation must follow a different logic. The starting point is that recovery is generally to be expected, even if with some persisting or recurrent symptoms. Given the right opportunities, support and encouragement, most people with these conditions do have (some) remaining capacity for (some) work. This reverses the question: it is no longer 'What makes some people develop long-term incapacity?', but rather 'Why do some people with common health problems not recover as expected?' Biopsychosocial factors aggravate and perpetuate sickness and disability; crucially, these factors can continue to act as obstacles to recovery and return to work. The logic of rehabilitation then shifts from dealing with residual impairment to *addressing the biopsychosocial obstacles that delay or prevent expected recovery and return to work* (Burton & Main 2000, Howard 2003): see Box 13. This is the social model approach applied to biological and psychological as well as social obstacles. The same principles underpin job retention, return to work and reintegration, and are equally applicable to the general management of sickness and disability whatever their causes.

### The evidence for vocational rehabilitation<sup>38</sup>

There is now a strong evidence base for many aspects of vocational rehabilitation (Waddell et al 2008). There is a good business case for vocational rehabilitation, and more evidence on cost-benefits than for many health and social policy areas (Black 2008, Waddell et al 2008).

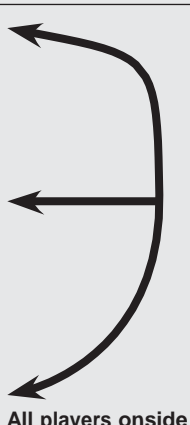
Common health problems should get high priority, because they account for about two-thirds of long-term sickness absence, and much of this should be preventable.

37 This subsection is largely based on Waddell & Burton (2006), which provides further references.

38 This subsection is based on Waddell et al (2008), which provides extensive tables of evidence and references.



**Box 13**  
Biopsychosocial obstacles to return to work, with corresponding rehabilitation interventions<sup>a</sup>

Dimensions of disability	Obstacles to (return to) work	Corresponding rehabilitation intervention	Interactions/ communication
<b>Bio-</b>	Health condition (+ healthcare) Capacity + activity level versus job demands	Effective and timely healthcare Increasing activity levels and restoring function Modified work	
<b>Psycho-</b>	Personal/psychological factors Psychosocial aspects of work	Shift perceptions, attitudes and beliefs Change behaviour	
<b>Social</b>	Organizational + system obstacles Attitudes to health and disability Culture	Involvement of employer critical Social support Organizational policy, process and attitudes Changing social attitudes	

<sup>a</sup> Reproduced with permission from Waddell & Burton (2004).

Return to work should be one of the key outcome measures of healthcare and workplace management.

The concept of early intervention is central to vocational rehabilitation, because the longer anyone is off work, the greater are the obstacles to return to work and the more difficult vocational rehabilitation becomes. It is simpler, more effective and cost-effective to prevent people with common health problems going on to long-term sickness absence. A 'stepped-care approach' allocates finite resources most appropriately and efficiently to meet individual needs (von Korff 1999, von Korff & Moore 2001, Freud 2007). This starts with simple, low-intensity, low-cost interventions that will be adequate for most sick or injured workers, and provides progressively more intensive and structured interventions for those who need additional help to return to work.

Given that vocational rehabilitation is about *helping people with health problems stay at, return to and remain in work*, the question is how to make sure that everyone of working age receives the help they need, when they need it. Logically, this should start from the needs of people with health problems (at various stages), build on the evidence about effective interventions and finally consider potential resources and the practicalities of how these interventions might be delivered. From a policy perspective, there are three broad types of clients, who are differentiated mainly by duration out of work, and who have correspondingly different needs:

1. In the first 6 weeks or so, 90% of people with common health problems can be helped to remain at or return to work by following a few basic principles of healthcare and workplace management. This can be done with existing or minimal

additional resources, and is low-cost or cost-neutral. The challenge is to encourage and support health professionals and employers to implement these principles in practice.

2. Between 5% and 10% of people with common health problems are still off work after about 6 weeks and need additional help to return to work. The evidence shows that if patients have not returned to work by about 6 weeks then continued symptomatic treatment alone has little impact on work outcomes. There is strong scientific evidence (particularly for musculoskeletal disorders) on effective interventions, but the challenge is to develop system(s) to deliver these interventions on a national scale. From a clinical perspective, this will require (a) timely identification of those in need, (b) assigned responsibility for management, (c) individual needs assessment, (d) signposting to appropriate help and (e) coordination of management and interventions. From a systems perspective, it will require (a) a universal gateway, (b) a case management *approach*, (c) quality-assurance evidence-based *vocational rehabilitation* interventions and (d) work outcomes. This will require pilot studies of service delivery models (Black 2008, Waddell et al 2008), which will require investment, but the likely benefits outweigh the costs and the enormous costs of doing nothing.
3. People who are more than about 6 months out of work and on benefits need an intervention that can address the substantial personal and social barriers they face, including help with re-employment (see the discussion of the *Pathways to Work* programme in the subsection below on 'Support into work').

### Common mental health problems<sup>39</sup>

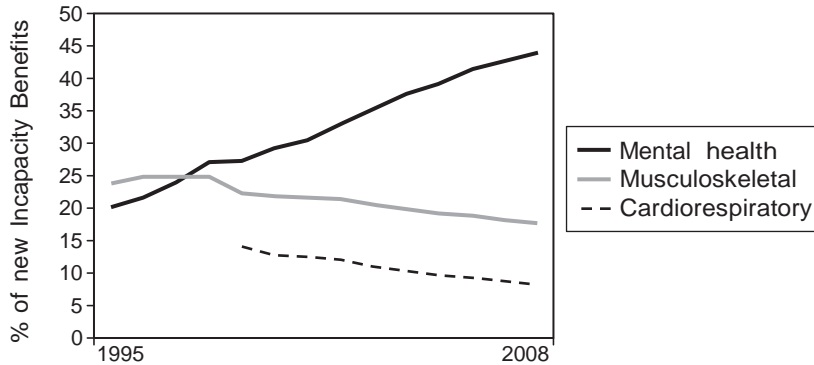
The ancient Greeks recognized that mental states are influenced by many interacting processes, such as bodily functions, personality dispositions and life events. Despite some debate (McLaren 1998, Pilgrim 2002), there is general agreement that the biopsychosocial model is most appropriate for mental illness (Kiesler 1999, Pilgrim 2002, Kendler 2005, White 2005). Mental health problems *are* biopsychosocial disorders: biological (genetic, neurophysiological and biochemical), psychological (personality, cognition, emotions and mood) and social (interpersonal, family, occupational, cultural and life events) factors predispose to, precipitate, and affect the course and outcome<sup>40</sup> of mental illness.

Mental health problems now account for more than 40% of long-term sickness absence, incapacity for work and ill-health retirement (Table 1 and Figure 11). If current trends continue, within a few years they will be the majority. Severe mental illness such as schizophrenia only accounts for about 1–2% and its prevalence is unchanged. The problem is mild/moderate conditions such as anxiety-related disorders, depressive disorders and 'stress'. The cost of mental illness in the UK is estimated to be as high as £40–48 billion per annum, the greater part of which is due to sickness absence and long-term incapacity (Lelliot et al 2008, McCrone et al 2008).

By definition, common mental health problems are very prevalent. At any one time (Lelliot et al 2008):

39 Thanks are due to Bob Grove and Peter White for suggestions on this section.

40 And all of these may be positive or negative: risk factors or protective.



**Figure 11** The changing proportion of Incapacity Benefit (replaced by Employment and Support Allowance from October 2008) claimants by diagnosis (note the discontinuity in the datasets between 1998 and 1999). The data are from National Statistics ([www.dsdni.gov.uk/incapacity\\_benefit](http://www.dsdni.gov.uk/incapacity_benefit)).

- about one-third of the working-age population have mental symptoms such as sleep problems or worries
- one-sixth (half of the above third) would meet the diagnostic criteria for a mental illness such as depression<sup>41</sup>
- but only about 6% of the working-age population actually seek healthcare

Care is required in interpreting these statistics. Most people get mental symptoms at times, to the extent that these may be regarded as a ‘normal’ part of life: many of these people do not regard themselves as ‘ill’ but get on with their lives and continue working.<sup>42</sup> Many factors – largely non-medical, but rather psychological and social – influence when people come to regard symptoms as a ‘health problem’, seek healthcare or take sickness absence (Mechanic 1968). Thus, any interpretation about ‘unmet need’ for healthcare must be made with caution and balanced against the question of medicalization.<sup>43</sup>

Against this background, it is necessary to define mental illness. The most common mental illnesses are anxiety, depression or a combination of the two. There are standard diagnostic criteria for anxiety disorders and depressive disorders: the World Health Organization’s *International Classification of Diseases* (ICD-10) and the American Psychiatric Association’s *Diagnostic and Statistical Manual* (DSM-IVR) (WHO 1990, APA 2000). There are also evidence-based guidelines for their clinical management (NICE 2004, 2007). Overall, community surveys suggest that there has been little change in the prevalence of mental illness,<sup>44</sup> with no good evidence of any significant increase

41 This figure is based on the ONS population survey, using the Clinical Interview Schedule (CIS-R), which covers 14 areas of neurotic symptoms (Singleton et al 2001). However, leading questions generally give a higher prevalence than people would decide (a) were ‘symptoms’, (b) mean that they are ‘ill’ and (c) mean that they require healthcare (Table 2).

42 This may raise the question of ‘presenteeism’: reduced productivity due to a health problem despite remaining at work. However, there are uncertainties about the concept, underlying assumptions of 100% ‘normality’, its measurement and the available evidence (Schultz & Edington 2007).

43 Medicalization is the process by which events or conditions of everyday life come to be defined and treated as health problems and a matter for medical diagnosis and treatment. This labelling is typically associated with changed perceptions, expectations and management of the condition. The danger is that it leads to iatrogenic disability.

44 At least up to 2000. More current data are awaited (Lelliot et al 2008).

sufficient to explain current trends in sickness and disability (Wessely 2004, Kessler et al 2005, Seymour & Grove 2005).

Over the past decade or so, there has been an exponential increase in 'stress', with associated sickness absence and legal claims. However, despite common assumption, there is little scientific agreement on the conceptual basis of 'stress', its diagnostic criteria, the assessment of any (in)capacity for work or its causal relationship with work (Cox et al 2006, Rick et al 2001, 2002, Spurgeon 2007). For these reasons, 'stress' is not included in the current diagnostic classifications of mental illness (DSM-IV and ICD-10), nor is it accepted by the Industrial Injuries Advisory Council as a Prescribed Disease (IIAC 2004, Spurgeon 2007). Nevertheless, the diagnosis of 'stress' and the assumption that it is work-related have a major impact on clinical and workplace management.

Assessment of mental health problems is based largely on self-report of subjective symptoms, with all the conscious or psychological influences thereon. Diagnosis depends on (a) confirmation by an external observer (e.g. the GP), which is again subjective and further depends on the observer's conscious or unconscious bias, and/or (b) comparison with some kind of established pattern (e.g. DSM-IV or ICD-10). Thus, certification of mental illness and (in)capacity for work unavoidably raises issues of validity and reliability, with difficulties for any social security control mechanisms.

Clinical management of mental health problems focuses almost entirely on clinical outcomes, with the implicit assumption that symptomatic improvement will lead to return to work. However, a recent review of vocational rehabilitation (Waddell et al 2008) found that:<sup>45</sup>

- \*\*\* There is strong evidence that various medical and psychological treatments for anxiety and depression can improve symptoms, clinical outcomes and quality of life.
- \* There is limited evidence that symptomatic treatments for depression (medication and/or psychotherapy and including CBT<sup>46</sup>) in themselves improve work outcomes.
- <sup>0</sup> There is no evidence that symptomatic treatments for anxiety disorders improve work outcomes.

Similarly:

- \*\* There is moderate evidence that stress management interventions improve subjective outcomes such as mental well-being, complaints and perceived quality of work.
- \* For workers with diagnosed mental health problems, there is limited and conflicting evidence that stress management interventions improve sickness absence rates or return to work.

Overall, healthcare for common mental health problems improves clinical outcomes, but there is a lack of evidence that it improves work outcomes. Deteriorating trends (Figure 10) suggest that this is not just a lack of evidence but also a lack of effective interventions for work outcomes. There is therefore an urgent need to improve vocational rehabilitation interventions for common mental health problems. Promising

<sup>45</sup> The strength of the scientific evidence is rated as follows: \*\*\* strong; \*\* moderate; \* weak (limited or conflicting); <sup>0</sup> no scientific evidence.

<sup>46</sup> Cognitive behavioural therapy – which is only specified separately because of recent interest (e.g. Layard 2006).

approaches include healthcare that incorporates a focus on return to work, workplaces that are accommodating and non-discriminating, and early intervention to support workers to stay in work and so prevent long-term incapacity (Waddell et al 2008).

The present 'epidemic' of mental health problems might be compared to back pain in the 1980s (Waddell 1987):

- Sickness absence and long-term incapacity have increased exponentially, despite the lack of any good evidence of a significant increase in the prevalence of mental illness.
- There is a lack of distinction between non-specific mental symptoms and diagnosable mental illness.
- There is a focus on clinical rather than work outcomes, and a lack of evidence that healthcare improves work outcomes.
- There is a debate about the need to provide more healthcare versus concerns about medicalization.
- There are powerful professional vested interests involved.

This does not necessarily imply that management of these conditions should be the same as that of back pain (e.g. the shift from rest to staying active), but it may nevertheless be instructive to consider how some of these issues have been resolved in back pain.

There are strong social and ethical reasons to improve healthcare for common mental health problems (Layard 2006), but the evidence shows that this in itself is unlikely to improve the associated epidemic of sickness absence, long-term incapacity and social security benefits. Previous experience with back pain suggests that it could even be counterproductive. Addressing that social problem is likely to require a more fundamental reconsideration of our approach. Based on the biopsychosocial model and previous experience of back pain, possible principles might include the following:

- Distinguish mental illness (anxiety, depression, etc.) from personal problems (e.g. unhappiness and fatigue) and work problems (e.g. pressure and dissatisfaction)
- Healthcare is likely to be most appropriate and effective for mental illness. How far can/should healthcare address personal and work problems?
- Consider the risks of medicalizing personal and work problems.
- Create accommodating, non-discriminatory, non-stigmatizing work environments
- There is an urgent need to develop effective vocational rehabilitation interventions for common mental health problems.
- Include a strong focus on work outcomes.
- Emphasize the importance of work as treatment and to reduce further problems.
- Emphasize the negative impact on worklessness on mental health.

These suggestions are offered simply as a starting point for debate, and for research and development.

## Social support

Support for the sick and disabled is one of the hallmarks of a civilized society, and there is wide public support that they should receive adequate social security benefits (OECD 2003).<sup>47</sup>

<sup>47</sup> Even if there are concerns about the costs and the need to direct support to those who 'really' need it, and acceptance of the need for reform (Stafford 1998, Williams et al 1999, OECD 2003).

### *Rights and responsibilities*

Welfare is based upon an implicit social contract, and there is also strong public support for the need to balance rights and responsibilities (White 2000, Einerhand & Nekkers 2004). Although commonly applied to other areas such as unemployment, this principle is equally relevant to sickness and disability. 'Full and equal citizenship requires disabled individuals ultimately to carry the same responsibilities (and rights) as others ... accepting that these rights and responsibilities may need to be modified to suit their circumstances and balanced by support to enable them to be met' (Howard 2004).

The sick role embodies society's attempt to control sickness, and to support and encourage return to 'well' behaviour. The original description of the sick role (Parsons 1951)<sup>48</sup> applied best to acute physical illness:

#### *Rights:*

- The patient is absolved from responsibility for illness (i.e. they are the subject of injury or disease beyond their control).
- They are exempt from normal social role responsibilities.
- They are entitled to special attention and support.

#### *This is conditional upon:*

- The patient accepting that to be sick is undesirable, and that it would be a good thing to get well as expeditiously as possible.
- The patient accepting an obligation to seek healthcare and to cooperate in the process of getting well.

That analysis was firmly rooted in a medical model, focused on healthcare as the main exit route from the sick role (Figure 4), and placed responsibility in the hands of health professionals (Mead & Bower 2000). Crucially, it was often taken to justify sickness absence until cure was achieved. However, this approach is inappropriate and can be positively harmful for many common health problems, many of which are persistent or recurrent and do not have a medical 'cure', and where patients must share responsibility for continued management. The traditional sick role can then become a trap, in which patients remain passively in the sick role awaiting 'cure', even when there is no biological reason for permanent incapacity. The sick role then needs to be modified for common health problems (Box 14).

This leads to the principle of 'conditionality' (Deacon 1994): entitlement to certain, publicly provided, welfare benefits should be dependent on the recipient meeting certain social responsibilities or patterns of behaviour. In summary, the argument runs as follows:

- Many benefit recipients with less severe health conditions do not have any absolute physical or mental barrier to work. Personal and psychological factors are central to incapacity associated with common health problems. The individual has personal responsibility for his or her actions.
- The sick role involves a balance between social rights and individual responsibilities. Sickness and disability benefits are given on condition that the recipient meets these responsibilities. The central obligation is to cooperate with healthcare and

<sup>48</sup> This was a theoretical societal analysis.

**Box 14**

The sick role with common health problems

**Rights**

Absolved from responsibility for the health condition (i.e. no fault or discrimination)

Access to healthcare for help to relieve/control symptoms

Modify normal social duties and responsibilities to a degree appropriate to the nature and severity of the illness (which leads to issues of assessment and legitimization)

Entitlement to (temporary) sickness absence and income support (if justified).

**Obligations**

Share responsibility for management of the health condition and rehabilitation

Recognize that symptoms and feeling unwell do not necessarily mean incapacity for work

Recognize that the sick role is temporary, in the expectation of recovery

Be motivated and cooperate with rehabilitation

Return to work when reasonably possible (even if there are still some symptoms).

rehabilitation and to (return to) work when reasonably able to, even if with some persistent or recurrent symptoms.

- Most important, however, there must be safeguards to make sure that any conditions and obligations do not further disadvantage those individuals who are already the most disadvantaged (Howard 2004).
- Fairness demands that rights and responsibilities work both ways. The onus is on society to provide the necessary opportunities and support *before* imposing obligations on sick and disabled people. Employers also have responsibilities.

There is a logical and moral argument for conditionality. There is limited evidence on its effectiveness (Waddell & Aylward 2005), although it may have more subtle and indirect effects on changing attitudes and behaviours. So the question is how to use conditionality and sanctions sensitively to deliver the correct messages and influence behaviour to the desired ends (Halpern et al 2004).

There is an important caveat. Discussion of rights and responsibilities and conditionality may be most effective for those closest to the labour market, but it must be acknowledged that some benefit recipients are 'hard to help'. This approach may fail the most disadvantaged and marginalized members of society. Society – and the benefits system – must make due allowance and provide additional help for 'the deprived, the disadvantaged and the excluded' (Hadler 1996).

**Support into work**

Social security has two broad policy goals (OECD 2003):

- **Social protection:** to provide adequate income support for people whose capacity for work is limited by sickness or disability (benefit transfer programmes – passive policies).

- **Social integration:** to provide realistic opportunities and support for sick and disabled people who are able to work, to enable sick and disabled people to participate as fully as possible in society (employment and integration measures – active policies).

Social protection and social integration policies complement each other, but there is some inevitable tension between them (Reno et al 1997). To achieve political consensus and gain the essential cooperation of all key stakeholders, these two approaches should be integrated, so that financial support is balanced with more active support into work. Historically, sickness and disability benefits in the UK were entirely passive, providing financial support and leaving it to the NHS to provide a ‘cure’. Too often, long-term ‘incapacity’ wrote recipients off, created negative expectations and welfare dependency, and trapped people on benefits until retirement age (Waddell & Aylward 2005). All the evidence is that active policies to improve support into work are more effective (OECD 2003). Since the late 1990s, there has been a radical shift in UK (DWP) policy from the passive provision of financial benefits to more active support into work, tailored to suit individual needs and designed to help overcome the health-related, personal and social barriers to work (HM Government 1998, DWP 2002).

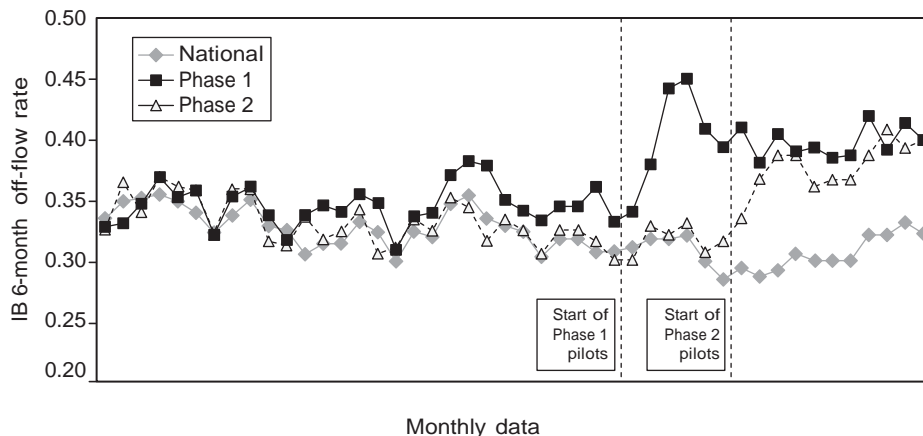
*Pathways to Work* is one of the best examples of such a biopsychosocial approach.<sup>49</sup> *Pathways* is an integrated package of support in which the NHS and Jobcentre Plus work closely together to help incapacity benefit recipients to manage their health problems and get back to work. It combines a balanced package of rights and responsibilities, and targets a number of the health-related, personal and occupational barriers to return to work. It consists of the following components:

- A mandatory work-focused interview with a DWP Personal Adviser, whose role, training and commitment are regarded as central to delivery.
- A Choices package of work-focused support provided by the DWP, particularly for those closer to work.
- Innovative, NHS Condition Management Programmes, particularly for those further from work, over age 40 and with mental health problems. The Condition Management Programmes are *not* simply ‘treatment’, but a new and innovative NHS service designed to help people manage their own health problems.
- Return-to-Work Credits (financial incentives).

*Pathways* is one of the largest and most successful social security pilot studies in the world for clients with health problems. It has a much higher take-up rate and has generated much more enthusiasm than any previous social security intervention with this client group. There is good evidence that *Pathways* increases the return-to-work rate of new claimants by 7–9% (Figure 12) with a cost–benefit ratio of 1.5–3.2 (depending on whether the benefits are calculated for the Exchequer or for society as a whole). An exploration of the context, mechanisms and outcomes of the initial seven Condition Management pilots using mixed-methods research concluded that completion of the programmes by participants was associated with significant improvements in anxiety,

49 See Waddell et al (2008) for a summary and [www.dwp.gov.uk/asd/asd5](http://www.dwp.gov.uk/asd/asd5) for more detailed analysis and reports of *Pathways*.





**Figure 12** The impact of the *Pathways to Work* pilots on off-flow from Incapacity Benefit (IB) (DWP Administration data).

depression and confidence. This was not dependent on age or gender and was unrelated to changes in the underlying health condition (Ford and Plowright, 2009). Moreover, there was a 20% return to work by the end of Condition Management Programmes, with two-thirds reporting being in work, work-ready or moving towards work. Continued research and development is required to optimize *Pathways* for claimants with mental health problems and for long-term benefit recipients (although the most recent report shows some better results in these claimant groups). These results stand in marked contrast to the long history of failed international efforts to address the problem of long-term incapacity (Waddell et al 2002).

### *The welfare debate*

Each side in the welfare debate (and these are very much *sides*) has its vested interests, its own political agenda, and a model of disability to suit. Too often, these models are simplistic and either ignore or discount any issues that do not suit that side's point of view, creating barriers to any meeting of minds. Disability lobbies use the social model, so their answer is for society to make greater allowance and provision for disabled people. Health professionals adhere to a medical model, with unbounded faith in the value of treatment and rehabilitation, so their answer is more healthcare. Policy makers have difficulty escaping from an economic model, so their answer is to adjust the incentives and control mechanisms of the social security system. There is deep suspicion (with some justification) that disability lobbies (with the best of intentions) are simply trying to get as much money as possible for as many people as possible, that health professionals (however altruistically) are simply pursuing their vested interests to get as many resources as possible and that policy makers (in the interest of the nation and the taxpayer) are simply trying to save as much money as possible. These goals run counter to each other and to the common goal of actually helping sick and disabled people. Clearly, no side can 'win' the argument on these terms. There is no simple answer – or social security systems around the world would have found it long ago.

This publication has argued that a more comprehensive biopsychosocial model is essential for full understanding of the relationship between common health problems, sickness and disability, and incapacity for work. This cannot be resolved by healthcare alone. Equally, adjusting the (dis)incentives and controls of the social security system is unlikely to return many benefit recipients to work, but may simply shift them to a different part of the benefits system, with further distress and social disadvantage. It is not a question of *either* incentives, carrots and sticks *or* more sympathetic understanding and support for human frailty and failing. Radical policy solutions to the problem must address *both* the incentives and control mechanisms of the social security system *and* provide the resources and support required to overcome the individual, psychosocial and system obstacles to return to work.

It is therefore right and proper to address the (dis)incentives and control mechanisms of disability and incapacity benefits. And it is entirely moral to balance the needs of sick and disabled people with those of society and the taxpayer, and rights with responsibilities. But it would be a cold and sterile society that could not see beyond the cash book. Social security and welfare are a fundamental part of civilized society, expressing more human values and caring, with wide public support. The role of healthcare is to support and enable sick and disabled people to fulfil their potential and lead productive lives – although health professionals must recognize that this may require more innovative approaches, and policy makers rightly demand evidence that these approaches are effective at getting people back to work. And society and employers must stop discrimination and make reasonable adaptations to meet the needs of sick and disabled people. Together, these approaches are complementary and offer the best chance of actually addressing the problem.

## Changing the culture

The number of people with common health problems who go on to long-term incapacity is a tragedy – for society, for the economy, but most of all for them and their families. This analysis shows that these are social as much as medical problems, which *can only be* understood and addressed by a biopsychosocial approach. The biopsychosocial model is an essential tool for that endeavour. But more is required.

We have the knowledge to reduce sickness absence and long-term incapacity associated with common health problems by 30–50%, and in principle by even more (Waddell & Burton 2004). The scientific evidence shows what is possible, although the challenge of implementing it in practice should not be underestimated. This is a major public health issue that can only be resolved by fundamental changes in how we perceive and manage common health problems – in healthcare, in the workplace and in society. Ultimately, it depends on shifting the culture that surrounds work and health, common health problems, sickness, and disability (Halpern et al 2004, Pfau-Effinger 2005): see Box 15.

**Box 15**

A fundamental shift in thinking about work and health

**Current thinking**

Symptoms mean injury or disease and mean incapacity for work  
 Work is a 'risk' and (potentially) harmful to health  
 Common health problems often lead to long-term incapacity

**Change to**

Symptoms do not necessarily mean disability  
 Common health problems should be manageable  
 Work is generally healthy, therapeutic and the best form of rehabilitation  
 Most common health problems can be accommodated at work  
 Recognize the risk of long-term worklessness

*Therefore*

Cure depends on healthcare  
 'Protect' worker/patient from work:  
 • Advice to stay off work until 'recovered'  
 • Sick certification  
 • Risk assessment

*Therefore*

Advice and support to remain in work or return to work as soon as health condition permits (even if there are still some symptoms)  
*and*  
 Safe, healthy, accommodating work  
 This requires all stakeholders onside

This may appear idealistic, but the radical shifts that have already occurred in the management of back pain and in family doctor's awareness of the evidence that work is generally good for health show that it is possible and suggest some basic principles (Box 16).

**Box 16**

Changing the culture

Attractive, simple idea(s): 'sticky messages'  
 Scientific evidence base  
 Champions/professional and community opinion leaders  
 Multiple public and professional educational approaches  
 Timing: readiness to change and sustained reinforcement over time

## Conclusion

Whether we realize it or not, whether we use the term or not, we all take a biopsychosocial approach to sickness and disability, even if we (over)emphasize one or other element. Healthcare will always help to control symptoms and relieve suffering, but the management of common health problems is not a matter for healthcare alone. Employers have responsibilities too, to accommodate common health problems and take a proactive approach to sickness and disability. And individuals with common health problems retain free will and bear personal responsibility for their actions: they must answer the question whether their 'health condition is such that it would be unreasonable to expect them to seek or be available for work'. Social policy should encourage and support all these stakeholders to adopt the best long-term solutions for themselves and for society as a whole.

At the time of writing, the UK is entering a major economic recession, which may change everything. This should not be an excuse to delay addressing sickness and disability, but an additional reason to invest now. Society is still paying for failure to deal with these issues in the economic downturns of the 1970s and 1980s. The current situation makes it even more important to address them now in order to prepare for eventual economic recovery and to avoid another disastrous long-term legacy.

Much sickness and disability due to common health problems should be preventable. Better management is an immense challenge, but one that is crucially important to everyone of working age, their families and society. It can be achieved, but only by a fundamental change in our approach and by all stakeholders working together towards common goals. The biopsychosocial model provides the framework and the tools for that endeavour.



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