Section I

Improving physical health

1

Meeting the physical health needs of people with mental disorders and disabilities

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All forms of mental disorder and intellectual disability carry increased risks of physical illness and premature mortality. This chapter provides information on common physical health risks, ways to improve physical health and the development of physical health services. An outline is given of the role of the psychiatrist as a doctor in psychiatric practice. The information in this chapter can be used as a guide. The authors have recommended sources of further information.

Health and well-being

In 1948, the World Health Organization (WHO) defined health in its constitution as 'A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity'.[1] This definition has been criticised for being a better definition of happiness than of health. An alternative definition states 'Health is a condition of well-being free of disease or infirmity and is a basic and universal human right'.[2] This definition permits health to be measured, for example using mortality, morbidity and quality-of-life measures. Nevertheless, the WHO definition highlights the need to attend to mental and social aspects of health, which continue to affect so many people worldwide.

Ill health is a universal experience – everyone experiences acute or chronic physical or mental ill health during his or her lifetime. Ill health is caused by an array of often interacting intrinsic and extrinsic factors. In 2004, the two greatest causes of disability worldwide were estimated to be infections of the lower respiratory tract and diarrhoeal diseases.[3] These groups of conditions are caused by infective agents, which can be tackled by public health measures such as clean drinking water, sanitation, soap and anti-infective agents, for example disinfectants, and antiviral and antibiotic medications. However, the presence of infective agents alone is often not enough to cause ill health. Other factors unrelated to the eradication of pathogens can affect health, in particular nutrition, housing, education and climate, as well as law and order in society.

Ill health prevents people from contributing economically and socially to society, and thus perpetuates poverty and hinders economic development.[3] Increasingly in higher-income countries, governments have recognised the social and economic importance of health, especially the benefits from reducing modifiable health risk factors and chronic, non-communicable diseases. The WHO has global strategic plans to address four chronic diseases (cardiovascular diseases, cancer, chronic respiratory diseases and diabetes mellitus), which are responsible for causing 60% of all deaths worldwide; notably, 80% of these deaths occur in low- and middle-income countries.[4] These four diseases are mostly preventable – by eliminating tobacco use, unhealthy diet, physical inactivity and the harmful use of alcohol.[5]

Table 1.1 All causes of death in England and Wales in males and females aged 28 days and over, in 2008, by ICD-10 category

Cause of death	Total number of deaths	% of all deaths	ICD-10 code[6]
Circulatory system disorder	168 238	33	I00–I99
Neoplasm	141 143	28	C00–D48
Respiratory system disorder	71 751	14	J00–J99
Digestive system disorder	25 997	5	K00–K99
Mental and behavioural disorders	18 438	4	F00–F99
Disease of nervous system	17 521	3	G00–G99
Endocrine and metabolic disease	7 426	1	E00–E99

Source: Office for National Statistics, 2009.[5]

In England and Wales, causes of death in the general population are published by the Office for National Statistics. In 2008, the three commonest causes of death were cardiovascular diseases, neoplasms and respiratory diseases (Table 1.1).[5]

Public health guidance by the UK National Institute for Health and Clinical Excellence (NICE)[7] states that the risk of an adult dying prematurely is increased mainly by the following risk factors:

- a low income (or membership of a low-income family)
- being a recipient of state benefits
- being a member of some minority ethnic groups
- having mental health problems
- having intellectual disabilities
- living in public or social housing
- living in an institution (including convicted prisoners)
- being homeless.

This guidance recommends reducing premature deaths from cardiovascular diseases and other smoking-related diseases by finding those who are most at risk and delivering strategies known to improve health according to other NICE guidelines, for example on the use of statins[8] and on smoking cessation[9] (see also Chapter 6).

Primary care trusts and local authorities can identify areas of social deprivation in England using the Index of Multiple Deprivation 2007 system, which combines economic, social and housing factors to provide a single deprivation score.[10] Similar systems are specific to other parts of the UK.

Table 1.2 Standardised mortality ratios (SMRs) for selected mental disorders derived from a meta-analysis

Mental disorder	SMR: all deaths	SMR: unnatural deaths	Notes
All forms of mental disorder	150	–	
Schizophrenia	157	434	
Bipolar disorder	202	918	
Depression	133–135	551/720 (M/F)	
Panic disorder	206	429	
Eating disorders	538	1269	Self-starvation caused 65% of deaths
Alcohol misuse/dependence	197	442	
Substance misuse	453	1503	69% of deaths unnatural
Personality disorders	184	371	52% of deaths unnatural
Organic mental disorders	326	324	4% of deaths unnatural
Mental retardation	633	103	Deaths from natural causes: SMR = 783

Source: Harris & Barraclough, 1998.[12]

Physical health of people with mental disorders and disabilities

Premature death and ill health

People suffering from mental health problems have an increased risk of poor physical health and of dying earlier than people in the general population (Table 1.2).[11–13] Standardised mortality ratios (SMRs) vary according to the type of mental disorder. Eating disorders and addictions carry the highest risks. Deaths from unnatural causes (essentially accidents, suicide and homicide) were found to be high for schizophrenia and major depression and deaths from natural causes were increased for people with organic mental disorders.

People with intellectual disabilities are 58 times more likely to die before the age of 50 than the rest of the population (see Chapter 26) and to have more unmet health needs than people in the general population.[14] Even after adjustments are made for social deprivation, death rates remain higher in people with mental health problems than in the general population.[14]

Poor health in people with mental problems is due to a combination of factors, including increased rates of tobacco smoking,[15] increased use of alcohol and illicit drugs,[16] decreased levels of physical activity and increased rates of obesity.[11] Specific processes by which mental ill health could affect the body include reduced heart-rate variability and changes in platelet aggregation.[17] These processes would predict excess mortality only from certain causes, as found by some researchers,[18] but not all,[19] so this question remains open.

In people with schizophrenia, there are more deaths from injuries, accidents, suicides and homicides than in the general population (Table 1.3).[20,21] The risk of death from homicide is increased 6 times, for suicide 12–13 times, and from accidents the risk of death is increased 3–5 times. In a Scottish study, 70% of men and 86% of women with schizophrenia were found to be overweight or obese.[22] About 70% of people with schizophrenia smoke tobacco.[23] Men and women with schizophrenia have a 90% increased risk of developing bowel cancer and women with schizophrenia have a 42% increased risk of developing breast cancer.[13] Rates of coronary heart disease, diabetes, stroke and respiratory disease are higher than in the general population and death rates in a 5-year period are higher.[13]

Addiction to alcohol and substance misuse increase the risk of acquiring infections with blood-borne viruses (e.g. human immunodeficiency viruses) due to increased rates of unprotected sex and intravenous drug misuse.[24] People with mental disorders are also less likely to take medication for communicable diseases, for example for the treatment of tuberculosis. Other associations of poor health and schizophrenia are listed in Box 1.1.

Healthcare

Healthcare professionals have been found to search less thoroughly for physical problems in people with mental disorders, and symptoms may be wrongly attributed to the mental disorder or are ignored, so-called 'diagnostic overshadowing', further increasing the health divide.[25]

Psychotropic medications, especially newer antipsychotic medications, have physical side-effects including weight gain, obesity and abnormalities in lipid metabolism, and some medications are associated with increased rates of type 2 diabetes, hypertension and cardiovascular events.[26] The risk of sudden death increases with each additional antipsychotic medication

Table 1.3 Rates of disease and earlier death in people with schizophrenia, with age-adjusted rates

Physical health diagnosis	Rates in people with schizophrenia	Rates in general population
Coronary heart disease	31% (22%)	18% (8%)
Diabetes	41% (19%)	30% (9%)
Cerebrovascular accident	21% (28%)	11% (12%)
Respiratory disease/COPD	23% (28%)	17% (15%)

Figures in parentheses are age-adjusted death rates within 5 years of the physical health diagnosis.
COPD: chronic obstructive pulmonary disease.

Source: Hippisley-Cox et al, 2006.[13]

Box 1.1 Examples of health risks in people with mental disorders and disabilities

- Risk behaviours, such as sexual behaviour, addiction
- Less likely to be registered with a general practitioner and dentist
- Low attendance rates for health screening
- Late presentation or non-presentation with significant symptoms
- Difficulty keeping appointments with healthcare providers
- Diagnostic overshadowing (mental disorder given priority over physical health)
- Side-effects of psychotropic medications
- Direct effects of specific mental illnesses on the body

taken: the relative risk of taking more than one antipsychotic medication is 2.50 (95% CI 1.46 to 4.30) per increment of one psychotropic medication.[27]

Prescribers should monitor the psychiatric and physical effects of psychotropic medication, avoid potential drug interactions and check for pre-existing conditions such as pregnancy and diabetes, as well as whether the patient is taking other medications. Further information for prescribers about psychotropic medication, including doses, side-effects and drug interactions, is available in the *Maudsley Prescribing Guidelines*.[28]

Health improvement

Government, regulation and commissioning

In the UK, government health policies focus mainly on health promotion, disease prevention and delivery of effective healthcare, which should meet certain standards and achieve consistent quality. In England and Wales, the 2004 White Paper *Choosing Health* outlined ways to reduce health inequalities between sociodemographic groups by motivating, supporting and providing opportunities for people to lead healthier lives by improving their diet, physical activity and mental health, and by reducing other modifiable health risks.[29] The Chief Medical Officer has recommended that people of all ages should increase their physical activity, and also noted the beneficial effects of exercise on mental health.[29] Change4Life is a movement supported by the UK Department of Health designed to improve the health of families by promoting changes to diet and exercise.[30]

Health policies for the general population should apply to people with mental disorders and intellectual disabilities. In 2011 a cross-governmental strategy was introduced, 'No health without mental health', which applies to people of all ages; key aims include improving the mental health of more people, improving the physical health of people with mental health problems, reducing their risk of premature mortality, reducing avoidable harm, stigma and discrimination, as well as improving the mental health of people with physical health problems.[31]

In England, the Care Quality Commission (CQC)[32] regulates health services and adult social care, in both the National Health Service (NHS) and the private sector, as well as in ambulance and blood transfusion services. The CQC sets standards for care, registers health facilities and regulates health providers. Health providers must meet essential quality standards to maintain their registration.[32] The CQC has legal powers to remove registration and implement financial penalties or fines if CQC standards are unmet, and of note, these powers apply to mental health settings.

In 2006, a commissioning framework integrated various initiatives into a single plan for primary care trusts (PCTs) to improve the physical health of people with mental health problems by identifying physical health needs and then developing and commissioning health services such as annual health checks for people with mental health problems (backed up by a case register), specifically targeted smoking cessation services[33] and organised exercise programmes.

Guidance on health conditions

In Scotland, the Scottish Intercollegiate Guidelines Network (SIGN; www.sign.ac.uk) publishes guidance on the treatment of several physical health conditions. In England and Wales, the National Institute for Health and Clinical Excellence (NICE) produces independent, national guidance on promoting good health, and on preventing and treating ill health, which is based on best available research evidence and value for money (Box 1.2). Guidance from NICE is available for a range of clinical conditions and public health topics. In addition, NICE technology appraisals make recommendations on

Box 1.2 The nature of guidelines from the National Institute for Health and Clinical Excellence and the Scottish Intercollegiate Guidelines Network

Both sets of guidelines:

- provide expert opinion, algorithms and protocols for healthcare
- set standards for physical healthcare, based on research evidence
- improve adherence to evidence-based standards of healthcare.

the use of new and existing medicines and treatments, within the NHS in England and Wales. In 2009, NICE issued its first guidance on the treatment of depression in people with chronic physical health problems.[34]

In other branches of medicine, checklists, algorithms and guidelines are widely used to ensure patients receive evidence-based care or care based on standards agreed by a consensus of experts. Nevertheless, clinical judgement must also be used to ensure the needs of individual patients are met, otherwise the clinician's role may become limited to the transcription of data or to following instructions.

Numerical approaches have produced superior outcomes to judgement in many differing spheres of human activity,[35] so it is timely to focus on using research evidence to inform clinical decisions and view this as the formalised and disciplined use of the best evidence, rather than as a debate between formulaic and judgement-based care.

As medical practice continually changes, psychiatrists should undertake continuous professional development (CPD) on relevant physical health topics to meet the needs of their patients.

Patient care: standards

Standards of physical healthcare

In 2009, the Royal College of Psychiatrists published physical health standards for psychiatric services for adults, children and young people, for those with intellectual disabilities, and for forensic psychiatric settings. These standards can be used for policies, service development and audit of physical health services.[14]

Guidelines from both the National Institute for Health and Clinical Excellence (NICE) and the Scottish Intercollegiate Guidelines Network (SIGN) are applicable to people with mental disorders and intellectual disabilities.

Everyone with a mental disorder or intellectual disability should have access to the same standard of physical healthcare as others in the general population. Patients should be empowered to manage their own health and to register with a general practitioner (GP) (Chapter 3). Patients should be offered an annual health review (Chapter 9). They may benefit from the initiatives arising in primary care through the Quality Outcome Framework[36] (QOF) incentive and reward scheme (Chapter 3), which has indicators for clinical and organisational practice and nationally agreed standards for the delivery of healthcare. Steps should be taken to reduce the barriers to access to secondary care services through facilitating appointments, improving communication and reducing the stigma associated with mental health problems.

Quality of services

High-quality services should deliver care consistently to high standards and without significant variation or waste. In 2008, the Darzi report, *High Quality Care For All*, stated the areas where quality improvements should be undertaken in the NHS, and priorities for commissioning services, to meet needs of patients; the report mainly focused on aims and standards.[37]

Another approach to improving quality is the adoption of cross-organisational management techniques such as the Lean and Six Sigma system, which reduces variation and waste in processes, to achieve consistent delivery such that there are only a few 'failures' per million opportunities (to fail), thus improving reliability and efficiency. Topics or processes for improvement are chosen, then are defined, measured and analysed, before changes are implemented, together with monitoring and control systems. In the Lean and Six Sigma system, staff of varying levels of expertise can use a range of management tools to improve quality. The Lean and Six Sigma was devised at the US electronics firm Motorola in the 1980s but has found wide application elsewhere, including within healthcare systems and the NHS.

Box 1.3 Tips that can help patients access physical healthcare

- Offer support/information about registering with a GP and dentist
- Request longer or shorter appointments, if needed, with GP
- Suggest using telephone consultations with GP, when appropriate
- Plan regular physical health checks
- For hospital appointments, arrange for 'reminder' text messages to be sent
- Suggest patients keep a list of useful contact telephone numbers

Governance

Clinicians should contribute to the management of clinical services. In the NHS, management and control systems are often based on central and local standards or targets, for example key performance indicators (KPIs) and targets for payment by results (PBR). Systems that are widely used to monitor and improve services include clinical audit, committees, complaints systems, policies and procedures, and internal reviews – such as apply after sudden untoward incidents (SUIs) – and shared learning from incidents which nearly, or actually, led to serious harm.

Systems are required to track progress and to measure achievements. An example of a monitoring system is the 'balanced scorecard', on which a topic is recorded. Then, alongside this topic, the percentage rates of performance or achievement of targets or standards are recorded in colour to mark compliance. Within a red, amber, green (RAG) system of flagging, red means non-compliance, amber shows partial compliance and green indicates full compliance.

If certain actions are agreed, action plans can be used to monitor and facilitate progress. Columns are used to list the desired action, next to a list of those responsible for the action, and the stage of compliance is marked in RAG colours in the final column, enabling everyone to see at a glance the progress of the plan.

Responsibilities of mental health professionals

Mental health professionals and psychiatrists should offer assistance to patients to maintain and improve their physical health (Box 1.3). It is crucial to address factors that may directly or indirectly affect a patient's physical health such as their income (including state benefits), employment, social contact and living conditions (heating, hot water, electricity, food, personal hygiene and clothing). Some useful resources for patients are listed in Box 1.4.

Roles and responsibilities of psychiatrists

As doctors, psychiatrists must follow guidance from the General Medical Council (GMC) contained in *Good Medical Practice*[38] and other GMC guidance on topics such as confidentiality[39] and patient consent, both for clinical activity and for research.[40]

The Royal College of Psychiatrists has set specific standards for psychiatrists on their role in physical healthcare:[41]

- Psychiatrists must be competent to undertake a physical examination and to arrange investigations.
- Psychiatrists must ensure that they understand the therapeutic and adverse effects of prescribed

Table 1.4 Useful websites for physical health information for psychiatric patients

NHS Choices	www.nhs.uk
NHS Direct	www.nhsdirect.nhs.uk
MIND	www.mind.org.uk
Patient.co.uk	www.patient.co.uk
Rethink	www.rethink.org
The Princess Royal Trust for Carers	www.carers.org

medication, and that they report suspected adverse drug reactions.

- Psychiatrists should communicate with general practitioners (with patient consent) and must ensure they include relevant information about physical health in their referrals.

Legal issues relating to psychiatric practice are addressed in Chapter 11.

The NHS and the voluntary sector provide a wealth of information on physical health topics for patients and carers. Mental health professionals should inform patients where to access health information. Some examples are given in Table 1.4.

Box 1.4 Information for mental health professionals

Oxford Handbook Series (Oxford University Press):

- Longmore M, Wilkinson I, Davidson E, *et al*. *Oxford Handbook of Clinical Medicine*, 8th edition, 2010
- Simon C, Everitt H, Kendrick T. *Oxford Handbook of General Practice*, 3rd edition, 2010
- Wyatt JP, Illingworth RN, Graham CA, Hogg K. *Oxford Handbook of Accident and Emergency Medicine*, 4th edition, 2012

Kumar P, Clark ML (eds) *Clinical Medicine*, 8th edition. Saunders, 2012

Houghton AR, Gray D. *Chamberlain's Symptoms and Signs in Clinical Medicine: An Introduction to Medical Diagnosis*. Hodder Arnold, 2010

Joint Formulary Committee. *British National Formulary*. British Medical Association and Royal Pharmaceutical Society (http://bnf.org/bnf/index.htm)

GP notebook (www.gpnotebook.co.uk/homepage.cfm)

Norfolk and Suffolk NHS Foundation Trust: Choice and Medication website provides information leaflets on psychotropic medications (www.choiceandmedication.org/nsft/pages/printableleaflets/)

Improving Physical and Mental Health, resources for health professionals (www.rcpsych.ac.uk/mentalhealthinfo/improvingphysicalandmh.aspx)

Psychiatrists and mental health professionals must take care of their own health, should register with a GP and avoid treating themselves, their family or friends.

Developing physical health services

The health needs of patients vary with demographic and social characteristics and disease prevalence. Needs assessments should therefore be undertaken before a physical health service is developed (Box 1.5).

Box 1.5 Checklist for development of services

Preliminary information

- Population size and demographics
- Socioeconomic status
- Physical comorbidities (e.g. rates of diabetes, asthma, epilepsy, obesity)
- Mental conditions (e.g. diagnostic categories, comorbidities with addictions)
- Length of stay in in-patient or institutional setting
- Current physical health services and efficacy
- Views of patients and carers, and other stakeholders
- Evidence-base for new service
- Policies and procedures which exist or which are needed

Key steps

- Develop the service concept, its importance/relevance
- Obtain support from key decision-makers
- Obtain support from colleagues, senior and local management
- Undertake an options appraisal of benefits, disadvantages and alternatives
- Address barriers to change
- Estimate costs and funding options
- Recruitment or secondment of staff
- Evaluation of the service

Service development

New projects, especially larger ones, require leadership, management and often funding. Support from management is essential, whether in the community or in in-patient settings. The recruitment process is often the most time-consuming part of organising a new service, so it is best to obtain guidance from experienced colleagues, and from staff in finance and human resources departments. For significant changes, it is advisable to use a comprehensive communications strategy.[42]

From day one, clinical services need effective clinical and managerial supervision. Staff will need adequate working facilities, resources and supervision. Staff who are poorly trained or poorly supervised tend to be less productive and to have higher sickness rates.

Box 1.6 Checklist for a comprehensive in-patient physical healthcare service

Employees

- General practitioner, nurse, administrator, infection control staff, and staff trained to deliver screening or monitoring such as ECG (electrocardiography)

Service-level agreements

- Dietetics, physiotherapy, podiatry, haematology, biochemistry, radiology, anaesthesiology, audiology, optometry and dentistry

Management

- Contracts, monitoring/audit, service development, links with other hospitals, clinical governance

Secondary care

- Referral pathways, contracts for services (e.g. neurology, cardiology, eating disorders services, old age, drugs and alcohol services)

Standards

- Care pathways and delivery of care should be based on acceptable standards (e.g. guidance from the National Institute for Health and Clinical Excellence). Services should be monitored/audited to ensure agreed standards are met

Communication

- Safe and effective systems of communication are needed between clinical teams and primary care services

Primary care services for in-patient settings

In many in-patient psychiatric services, psychiatrists provide physical healthcare. They should ensure that every patient has a physical health check on admission. Weekly GP sessions can be helpful to provide physical healthcare and to support psychiatrists with physical healthcare provision, but this is not always possible. During brief hospital admissions, patients may continue to visit their GP for physical healthcare. However, long-stay patients require comprehensive physical health services delivered in the psychiatric setting (Box 1.6).[43]

Making changes in health

When confronted by an event or a transition, individuals and organisations can reach a 'tipping point' and make sudden changes. Normally, changes are more gradual or step-wise, passing through different stages of change: pre-contemplation, contemplation, preparation, maintenance and relapse.[44] By assessing the stage of change, clinicians can gauge how likely it will be that a person or group will engage with an intervention. For individuals to change, they have to believe it is possible to change, to want the change or outcome proposed, and to believe the change is achievable by them. The criteria in this 'expectancy theory' are entirely based on beliefs (Box 1.7).[45]

Box 1.7 Key components of the expectancy theory

- *Expectancy*: strength of a person's belief that their efforts will lead to success (i.e. the task can be done within available resources)
- *Valence*: level of satisfaction expected from the outcome (i.e. the extent to which the person values the anticipated outcome)
- *Instrumentality*: the belief that the level of performance can be directly linked to the amount of effort (i.e. hard work brings more chance of success)

Source: Vroom, 1990.[45]

Motivational factors are different for each person. Financial rewards are not always the most effective motivators. Internal motivators may include the desire to achieve personal goals, to be recognised as successful, to overcome fear and gain control over unwanted feelings or behaviour. Examples of external motivators that are used in mental health settings for patients are the opportunity to gain more freedom and to win praise, certificates and prizes for achievements.

Motivational interviewing can be used to help patients to make changes. Role models are also useful to promote changes in behaviour, for example to encourage patients to take exercise. Attitudes and expectations of staff and patients can be changed by training and education. Staff who are regarded as capable and competent are more likely to be trusted by patients. If staff have a positive attitude towards maintaining health and well-being, this can help to provide the necessary leadership to achieve improvements in healthcare services.

Public health guidance from NICE provides information on the most appropriate generic and specific interventions to support changes in attitude and behaviour change at population and community levels.[46]

Research

Research is essential for creating an evidence base for relating to the improvement of the physical health of psychiatric patients. Clinicians and academics should work together to prioritise research topics and where feasible to conduct randomised controlled trials and service evaluations.

Research projects do not have to be large to make a difference. However, it is important to design them properly, to complete the data analysis and to avoid the temptation to allow findings from a study to gather dust in a drawer, or to rest forgotten in a computer file. Audit and other types of service evaluation should not be ignored.

Learning points

- According to the WHO, the four main diseases that are preventable are cardiovascular disease, stroke, cancer and type 2 diabetes mellitus.
- In the UK, the major causes of death are diseases of the circulatory system, neoplasms and diseases of the respiratory system.
- Eating disorders and alcohol misuse carry the highest risks of premature mortality.
- People with schizophrenia have a higher risk of developing bowel cancer and women with schizophrenia have a higher risk of developing breast cancer.
- Addiction to alcohol and substances increases the likelihood of acquiring infection with blood-borne viruses.
- Addiction to alcohol and substances reduces compliance with treatment for tuberculosis.
- Health professionals search less thoroughly for physical health conditions in people with mental disorders and intellectual disabilities (so-called 'diagnostic overshadowing').
- Risk of sudden death increases incrementally with each additional antipsychotic medication prescribed.
- Guidelines from NICE and SIGN should apply to people with mental disorders and intellectual disabilities as much as the rest of the community.
- Standards for physical health services are available from the Royal College of Psychiatrists.
- Management systems should be used to monitor and improve physical health services, such as the Lean Six Sigma system, balanced score cards and action plans.

Summary

There is much to be done to improve the physical health of patients with mental health problems and intellectual disabilities, to reduce the inequalities of health and to improve inclusion of patients in mainstream health services. The following chapters are designed to inform clinicians about physical health topics and the physical health conditions relating to the psychiatric specialties.

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