13 Severe Mental Illness

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1 Summary

Defining 'severe mental illness' (SMI)

The term 'severe mental illness' (SMI) brings together two complex concepts. The first is defined in terms of five groups of disorders from the *International Classification of Diseases* (*ICD*):

- schizophrenic and delusional disorders
- mood (affective) disorders, including depressive, manic and bipolar forms
- neuroses, including phobic, panic and obsessive–compulsive disorders
- behavioural disorders, including eating, sleep and stress disorders
- personality disorders of eight different kinds.

Five other groups of *ICD* mental disorders, not in SMI, can be comorbid. They are:

- F0, dementias
- F1, drug misuse
- F7/8, learning disability and developmental problems, e.g. autism
- F9, disorders starting in childhood.

Each of these, plus forensic issues and primary mental health care, has a separate chapter in the health care needs assessment series.

The second component of SMI places the *ICD* symptoms and disorders within the context of a judgement of behaviour, course and potential vulnerability. For example:

- active self-injury, food refusal, suicidal behaviour
- threatening or injurious behaviours, drug abuse, severe personality disorder
- embarrassing, overactive or bizarre behaviours
- long-term 'negative' symptoms, such as slowness, self-neglect, social withdrawal
- physical disability, learning disabilities, social disadvantage.

Although the concept of SMI is fuzzy, it has gained substantial official and professional acceptance because it is relevant to the reality of the case-mix decisions that have to be made, in particular those that involve crossing the invisible boundaries between primary and secondary services. The decisions usually turn on a judgement as to whether a patient's needs can or cannot be fully met by treatment within the practice. There is as yet little research focused on making such judgements reliable.

Incidence and prevalence of mental illness (F2–F6)

A large-scale national study of prevalence carried out in 1993–94 provided an epidemiological snapshot of symptoms that are below the threshold for diagnosing a disorder according to *ICD* criteria. The four most prevalent single items were fatigue (the commonest, at 27% of the sample), sleep problems, irritability and worry. Two-thirds of the sample had scores on very few or none of these symptoms.

The one-week prevalence for an 'official' *ICD* diagnosis of one or more above threshold neurotic disorder was 6.9% for men and 9.6% for women (8.3% overall). All except panic and alcohol dependence were more common in women than men. Higher rates overall were associated with divorce, lone parents, living alone, unemployment, other economic inactivity and domicile in urban areas. The numbers in non-white ethnic groups were small, but other studies have found higher rates than for whites.

The prevalence of 'psychoses' (including schizophrenic, manic, bipolar and severe depressive disorders) is much lower. There is some suggestion that the incidence and prevalence of schizophrenia are falling, but the evidence is not substantial. A steady prevalence of about 4–5 per 1000 is assumed for present purposes. The risk factors are similar to those for neurosis (*see* above), with the addition of geographical drift towards more deprived and isolated areas. Comorbidity and excess mortality (e.g. physical illness, self-harm, suicide and other premature death) are common.

Services available and their costs

Two themes underlie consideration of services now available compared with those likely to be required in future. The first is a gradual acceptance of the high prevalence of milder forms of mental symptomatology reflected in self-referral to primary care. The consequent need for assessment and care within the practice, and for a decision as to when to call in specialist advice or help, raises issues for primary care trusts (PCTs). Current NHS plans require that they should commission services, foster collaboration between practices, link with the local community and social services, consider problems arising from uneven quality of care, promote good practice and encourage public participation in decisions. The use of guidelines in primary care has not yet achieved common standards for diagnosis and management, which are the key factors in deciding issues of referral.

The relative severities of mental health problems presented at primary, secondary and forensic service levels present an insight into questions of cost. Districts with the highest morbidity have about twice the prevalence of minor 'disorders' in primary care compared with those with the lowest morbidity. At the secondary level, where clinically more severe mental disorders are concentrated, the calculated range is about 2.5:1 (actual range up to 5:1). For the forensic sector the range is over 20:1.

The second theme concerns the extent to which the development of more effective treatments and changes (if any) in public attitudes compensate for the loss of the former system of large mental hospitals by substantially improving upon it.

Plans for secondary care

A Government document, *Modernising Mental Health Services* (December 1998), provided a list of coming reforms and promised an extra budget of £700 million over the years 1999–2003. The document said that care in the community had failed 'because it left some people vulnerable, others a threat to themselves and a nuisance to others, with a small minority a danger to the public'. Other observations concerned the burden placed on families, underfunding, variable standards, low morale, failure to use the potential of the new medications, problems with the Mental Health Act and inability to provide continuity of care.

Broader issues involved poor co-ordination between services, mismatches between health and local authorities, problems of staff recruitment and shortages of several other kinds. User, carer and professional groups agreed.

In the event, the Modernisation Fund allocation for mental health services for 1999–2000 was an extra £19 million for 24-hour staffed units, outreach and expensive atypical drugs, with £21 million biddable for more secure beds, risk management and family intervention. Two out of 100 health authorities received more than £1 million extra, while 53 received less than £50 000. A single acute bed costs £50–70 000 per anum.

Delivering secondary care

The Care Programme Approach (CPA) and supervision register policies in England (now amalgamated) have been intended to ensure priority for patients with SMI needing to receive specialist help. The basic features include assessment of need for health and social care, to be met by a written care plan periodically updated and a key worker responsible for its implementation. Patients and carers should be closely involved. About 1% of the total population of England were subject to the CPA at any one time, of whom about 1% were included in local supervision registers. Community teamworking can be efficient: hospital time can be somewhat reduced (with some saving of cost) and patients prefer it. But symptom severity and social functioning change little and carers carry more of the burden. A survey of all English NHS trusts found the main administrative elements in place but little harmonisation and very variable involvement by users and carers. Quality of care was not assessed.

Key changes in this system are intended to integrate CPA with care management in all areas, under a new name 'care co-ordination'. There would be a standard and an enhanced level, the latter for very vulnerable users, including prisoners. All parties should be able to request a review at any time and annual audits would be introduced to ensure quality.

Acute wards

Acute admission to hospital is still required, not only in the big cities. The latest in a succession of studies of 12 inner London trusts, including ten of the most deprived areas in the country, found in mid-January 1999 half the patients detained under the Mental Health Act, over a third resident for more than 3 months, 64 recent incidents of first-degree violence and a bed occupancy of 121% (counting patients displaced in order to house yet more urgent cases).

Longer-stay wards

Some patients still accumulate in hospital accommodation for periods from 6 months to 3 years (the 'new long-stay'). Data on 905 such patients from 59 UK services, aged 18–64 at admission, gave an overall point prevalence of 6.1 per 100 000 population. A third of the English patients were unsuitably placed on acute wards, although assessors thought that half of them would have been better placed in a community-based residential home if such had been available. Insufficient sheltered housing is a block to discharge from new long-stay wards, which in turn creates a log jam in the acute wards. There are virtually no adequately large and technically robust comparative studies of daytime activities for patients in these wards.

A comparison of districts

There have been few comparisons of district services. One, commissioned by the Clinical Standards Advisory Group, assessed 11 NHS districts against a protocol of 156 questions based on current 'best practice'. Visiting teams found widely varying achievement of the standards. Four districts approached an overall profile of 'good', five approached 'average' and two were 'poor'. There was no provision for follow-up to discuss findings with district personnel and agree changes as necessary, or for reassessment a year or so later to complete the audit cycle.

Effectiveness of treatments and services

Several of the new medications for schizophrenia (e.g. risperidone and olanzapine) have raised expectations, although recent systematic reviews suggest that it is too soon to make a solid judgement on efficacy, side-effects or longer-term progress. The cash price is high, but success would bring it down. Much the same is true of other disorders within the spectrum of SMI, such as severe depression, where two types of medication – serotonin reuptake inhibitors and tricyclic antidepressants – are in competition. The latter are, for the moment, cheaper. The proliferation of 'new' medications, often minor variants of drugs already in use and often poorly researched, poses a problem that the National Institute for Clinical Excellence (NICE) will investigate. A clear success is skilled cognitive behavioural therapy, alone or together with medication.

Quantified models of care

Two studies of residential services provided for people with SMI provide useful information about current numbers and costs. One project surveyed a range of districts in England and Wales (including London) in 1995; the other examined services in the inner (poorer) and outer (richer) boroughs of London in the same year. Data for inner and outer London illustrate the expected substantial differences in service use and needs. More general indices suggest that other large cities are similar to outer London in many respects, although with better resources, while 'all other districts' across the country have the fewest problems.

- England and Wales: 147 per 100 000, of which 20% are in hospital.
- London: 153 per 100 000 (outer 120, inner 185), of which 30% are in hospital.
- Weekly cost in London, 1995: £5.2 million per 100 000.

The proportions of patients in hospital vs. other residential facilities differed as expected according to the respective epidemiology.

Peak numbers in the large hospitals: where are the successor patients now?

At their peak in 1954, the large psychiatric hospitals housed 345 people per 100 000 population. There is no evidence that disorders requiring substantial support have decreased in prevalence or severity since then. The two 1995 studies (*see* above) suggest numbers of current residents that amount to about half the complement at the former peak, represented today by a wide range of residential facilities, including acute wards, hostels, group homes in variety and other forms of housing with a degree of shelter. Most residents also need day care and occupation, preferably off the ward if in hospital, and off the premises if in other settings. This raises a question about the other half of the 1954 complement. It is likely that some, perhaps a quarter or more of the original total, would be regarded as better placed in other specialist accommodation, e.g. for dementia, physical illnesses or learning disability. The rest, also a quarter, would need at least some form of supervision, day care and/or sheltered activity within the psychiatric and social services.

Estimating need for residential care

Judgement is inevitably required when putting together figures from the studies summarised so far, in order to give an overall estimate of the number of residential places needed, as opposed to currently available. The specific types of residential care used in the two 1995 studies vary substantially from each other, although the overall numbers are very similar. They provide snapshots of usage, not of need. Both are very close to the independent estimate given in the first edition of this chapter. The tentative solution provided here is based on these figures, plus an item for extra housing at the lower end of the England and Wales range (*see* Table 30).

The estimate for England is 175 (range 87–261) residential places per 100 000 on average, costing £93 731 a week or about £5 million (range £2.5–7.5 million) a year per 100 000 overall population at 1995 prices. These numbers are intended to be used with local health and demographic data and local authority welfare information, particularly taking into account the Mental Illness Needs Index (MINI) level for the area. The three-to-one ratio allows a fair degree of tolerance within which to adjust for local history, practice and epidemiology, although there will be districts with configurations beyond these limits. Clearly, all such estimates must come with a clear ‘health warning’.

Needs of users for occupation and subsidy: carers also have needs

In the absence of sound data (the literature is very scarce), the clinical assumption for computing day-care need is that half of those in formally supported residences (other than intensive and acute care wards) would also benefit from day care, mostly away from the housing. This criterion suggests that 68 per 100 000 would be candidates for realistic day care outside the setting. Some would already be attending such units. This still leaves the modern equivalent of the less severely disabled group in the 1950s hospitals (another 175/100 000). About half of these (87/100 000) are likely to need long-term non-residential help from mental health services. They should be listed on a community mental health or local authority team, with a care plan that includes meaningful day activities, paid sheltered work for those who can cope and subsidy for those whose income is insufficient. Altogether this brings to 155/100 000 the estimated numbers of people with SMI now in probable need of daytime facilities (*see* Table 31).

Finally, these calculations do not take into account the numbers of people attending psychiatric outpatient clinics, or those who went unrecognised in the primary services of the mid-1950s and in consequence were not referred or treated. It would be wise to bear in mind that all estimates are likely to be on the low side. However, even as they stand, the suggested numbers needing some form of day care and occupational help are almost certainly well above what is actually available in most districts.

Audit, outcome, information and research requirements

Government policy decisions involving primary, secondary and forensic systems have emphasised the dearth of studies intended to monitor how far specific plans for improvement are feasible and, if so, are put into practice. Standards (some of which have already been tested, with others adumbrated and many others still to be created) will be used routinely to monitor progress. From a clinical point of view five areas in particular need to be covered:

- clinicians’ performance with patients
- assessment and delivery of standards of care
- organisation and management of care
- training and supervision of staff
- population needs assessment, resource allocation and joint planning.

Some of the measuring techniques needed, such as a minimum data set with continually updated information on patients' progress and service use, including a brief clinical appraisal contributed by clinicians (HoNOS), are already under realistic test. A Department of Health (DoH) working party has proposed a set of outcome indicators. Care standards for purchaser and provider have been laid down and tested.

The CPA provides an opportunity for core training and supervision in such methods. The NHS Information Authority is intended to deliver seamless care for patients and shared information between trusts, PCTs and social services. Methods of appraising and comparing the performance of trusts have been tried out with some success. A further development that would greatly advance the relevance and accuracy of such comparisons would be to feed back information to each participating trust, so that each could decide on a knowledge-based plan to improve specified areas of practice in anticipation of a subsequent further appraisal, thus continuing and enriching the audit cycle.

In the same spirit, it is important to provide good, easily accessible communication between primary, secondary and social care services. Without such knowledge, clinical governance and evidence-based practice cannot be achieved. The Commission for Health Improvement (CHI) reviews the work of trusts and PCTs, including their implementation of the Mental Health Framework. This has required the creation of much tougher and more specific target standards, and really rigorous standards of appraisal.

Even more basic is the aim of NICE to identify new treatments and other measurable methods of care likely to impact on the health and welfare of patients, consider their clinical and cost-effectiveness, and accept or reject them. More generally, it appraises evidence on health technologies, co-ordinates guideline development, promotes clinical audit and undertakes confidential enquiries. An objective for NICE, therefore, is to apply high and comparable standards of inspection to trials of treatments, including sampling, design and methodology, standardised disclosure of side-effects and drop-outs, and detailed evidence for claims of sizeable improvement over other methods of care. The extra costs of atypical drugs that have proved useful so far (though not yet with a long-term record) are already nearly enough to account for much of the £700 million over three years announced in *Modernising Mental Health Services*.[1,2] Enquiries into the efficacy of treatment for mental illnesses have formed a welcome part of the first NICE studies. Together with CHI, which has also looked at mental health services, there is the potential to provide truly knowledge-based health recommendations with a fair chance of their being carried into action.

2 Statement of the problem: severe mental illness (SMI)

The approach

Severe mental illness is an amalgam of two key concepts. The first is derived from five disorders described in chapter F (mental illness) of the tenth revision of the *International Classification of Diseases* (*ICD-10*),[3] named as follows:

- F2, schizophrenic and delusional disorders
- F3, mood (affective) disorders, including severe depressive, manic and bipolar forms, and a range of severe, moderate and mild depressive disorders
- F4, neuroses, including phobic, panic and obsessive–compulsive disorders
- F5, behavioural disorders, including eating, sleep and stress disorders
- F6, personality disorders of eight different kinds.

Various other chapters of the *Health Care Needs Assessment* series deal with the remaining five *ICD*-F groups:

- F0, dementias
- F1, drug misuse
- F7, learning disability
- F8, psychological development
- F9, children and adolescents.

Two other chapters are highly relevant, namely 'forensic issues' and 'primary mental health care'. *ICD-10* F disorders are defined in terms of patterns of symptoms for general use, and also in more specific detail for research purposes. Severity is assessed at the time of diagnosis and appraised throughout the course of the disorder.

The other key concept is 'severe mental illness' (SMI), which places the current *ICD* diagnosis within the context of a much wider range of problems, including severity, persistence and potential vulnerability. For example:

- active self-injury, food refusal, possibility of suicide
- threatening or injurious behaviours towards others
- embarrassing, overactive or bizarre behaviours
- active delusions, depression, phobias, obsessions
- long-term 'negative' symptoms, such as slowness, self-neglect, social withdrawal
- substance misuse
- physical disabilities
- learning disabilities
- social disadvantage and disablement
- likelihood of relapse.

Thus the concept of SMI is basically descriptive.[4–6] It has gained substantial official and professional acceptance because it is relevant to the reality of 'case-mix' decisions, particularly those that involve crossing the boundaries between primary and secondary services, which involve a judgement as to whether a patient's problems require treatment outside the practice.

Components of SMI

The chief factors taken into account when assessing whether a patient's problems are severe enough to warrant the designation of SMI are the type and intensity of symptoms and signs of disorder, the degree of comorbidity and the severity of social disablement.

Diagnosis and clinical severity

The clinical severity of the disorders under review can be measured by:

- the intensity of subjective experiences, such as hallucinations, depression, elated mood, obsessions, anxiety, worry, etc. Intensity involves involuntary intrusion of such experiences into more general mental and social functioning, thus affecting motivation, behaviour and social interaction as well
- the manifestation of signs in behaviour, such as talking aloud to 'voices', acting on delusions, self-harm, over- or under-eating, bizarre or aggressive behaviour, incoherence or poverty of speech, poor self-care, occupational problems, slowness or overactivity
- the course and outcome.

In addition, any of the five main *ICD* diagnostic groups considered in this chapter can present with any degree of symptomatic or social severity. For present purposes it is assumed that SMI includes all the mental health problems in scope that require specialist skills and/or interventions that are not available in primary care.

Comorbidity

The diagnostic and clinical issues discussed above are further broadened by the fact that any of the disorders specified may overlap with one or more of the others. Symptoms that are least prevalent in the populations studied tend to be most severe, and also tend to be associated with many less severe but more common symptoms. Thus symptoms of schizophrenia are frequently accompanied by symptoms of mania, depression, anxiety, etc., as well. Higher-level symptoms are also associated with higher social disability scores. Moreover, severe schizophrenic and affective disorders are themselves stressful. It is not surprising, for example, if people who experience terrifying hallucinations have symptoms of depression, panic and anxiety as well, and may even show the typical symptoms of post-traumatic stress disorder (PTSD).

Social disablement

This clinical complexity is further complicated by interaction between symptoms and any social problems the patient might have. The disadvantages that ensue from a background of deprivation, few social or working skills, and lack of social support can be hugely augmented when a mental disorder is added. The stigma that attaches to some varieties of mental illness further exacerbates the difficulties. Self-esteem, and motivation to find a solution, which may already be low, can be lost altogether. The interactions between clinical and social problems tend to make the allocation of specific causation more difficult. Overall social disablement is thus associated with an amalgam of causal factors and it is this pattern, severity and duration that principally determine needs for care and services.

Key issues and themes raised in Sections 4 to 9

Section 4

Key problems raised in this section involve the high community prevalence of neurosis, in terms both of individual ‘symptoms’ such as fatigue and sleeplessness, and of disorders such as *ICD-10* depression and anxiety. Is there any evidence that the incidence or prevalence of severe psychiatric disorders is increasing?

Section 5

Can boundaries between primary, secondary and forensic care be specified? What is the structure of ‘care in the community’? What does the CPA mean and how will it change? What are the reasons for ‘staff burn-out’ and can it be prevented? Do users and carers get a look-in?

Section 6

What are the benefits and the disadvantages of the new treatments for mental illness? Are the new medications and the ‘talking therapies’ cost-effective? Can ‘community care’ be applied in emergency situations? What is known about the quality of care as appraised by users and carers?

Section 7

Do current and forecast provisions fully replace and improve on the former large psychiatric hospitals? What should a comprehensive secondary psychiatric and social service look like? How can total funding of mental illnesses be distributed equitably across primary, secondary and forensic services? Will the National Service Framework (NSF) work? In particular, will it provide for the social and occupational needs of users and carers, as well as their medical needs?

Sections 8 and 9

What are the implications of NICE, CHI, *Modernising Mental Health Services*, the minimum data set and other Government innovations, and the new research they will encourage, for audit and the improvement of services?

Overlap with other chapters in this series

The remit for this chapter is restricted to SMI, but the concept requires consideration of a broad range of issues that are dealt with in detail in other chapters. The most relevant of these include the following: F0, dementias; F2, drug and alcohol misuse; F7, learning disability; F8, developmental disorders; F9, disorders that originate in childhood and adolescence; mental health in primary care and mentally disordered offenders.

3 Sub-categories of SMI

Mental illness in *ICD-10* F

This chapter is concerned with the five major categories of *ICD-10* (F2–F6) that are likely to contain 'severe mental disorders'. All of the categories have subdivisions, making some 60 disorders in all, each with its own clinical provenance and each often interacting in various ways with one or more of the others. In spite of the complexity of the system, it does for the first time make it feasible to collect reasonably comparable diagnostic and symptomatic data for public health and clinical research purposes. The term 'disorder' is used throughout *ICD-10* F instead of 'disease' to emphasise that, while there are plenty of promising leads, none of the diagnostic groups has yet been definitively described in terms of underlying brain or other somatic dysfunctions or pathologies. The categories are simply the current standards for reference and comparison. At the rate that scientific knowledge is growing, they will be very different in the 11th and 12th editions of the *ICD*. The term 'symptom' is used in two distinct ways. One applies only to a dysfunction, usually rare (e.g. 'hallucination'), that is defined as part of a specific disorder. The other is applied to isolated subjective complaints, such as 'worrying' or 'panic', that appear in isolation or in groups that do not conform to World Health Organization (WHO) definitions of disorder.

Substantial progress has been made towards providing a system of collecting and classifying clinical information that can be used reliably by trained interviewers. The process started with the ninth revision of the *ICD* (*ICD-9*),[7] which gave lists of symptoms for each of the main diagnoses. The ninth edition of a standard clinical interviewing system (Present State Examination, PSE-9) was modified to provide ratings of *ICD-9* symptoms based on a glossary of differential definitions. The authors also provided an algorithm and software for making a standard *ICD-9* diagnosis.[8]

The subsequent tenth edition of the *ICD* has two forms. The 'Blue Book'[9] contains brief instructions for general use, while the 'Green Book'[10] provides detailed algorithms defining the most important categories. The PSE interview, glossary and software were modified to include standardised symptom profiles for *ICD-10* diagnoses and renamed 'schedules for clinical assessment in neuropsychiatry' (SCAN). The PSE-10.2 is its main component. *ICD-10* has not yet become fully incorporated into official systems and some statistics are still provided in terms of *ICD-9*. Further information about SCAN, its history and its current status is given later in this section.

The five diagnostic *ICD-10* F groups under consideration are briefly described below, together with some of the commoner sub-categories. A full list is given in Appendix I. A note about the course of each of the main disorders is also provided.

As emphasised in the previous section, each of the following *ICD* categories can occur in conjunction with any of the others. For example, affective and neurotic disorders are commonly comorbid with schizophrenia, as is drug and alcohol misuse.

F20–25, schizophrenia, schizotypal and delusional disorders

The term 'psychotic' is commonly used to describe the abnormal subjective experiences and accompanying behaviours listed below. Diagnosis depends largely on the patient's account of mental experiences, such as the first four in the list, which can be extremely severe in their initial impact. The three 'negative' items are very common in schizophrenia, but rarely sufficient for a diagnosis in themselves because they can occur in other disorders.

The key 'positive' symptoms of schizophrenia are:

- thoughts experienced as echoed, inserted, withdrawn or broadcast
- delusions of control, influence or passivity
- other delusions with bizarre and culturally inappropriate content
- hallucinatory voices, e.g. commenting on the subject's thoughts.

The key 'negative' symptoms of schizophrenia (overt organic disease absent) are:

- incoherence or poverty of speech
- catatonic behaviours
- apathy, slowness, lack of initiative, social withdrawal.

Recognised subgroups of schizophrenia include paranoid (20.0), hebephrenic (20.1) and catatonic (20.2) disorders. Separate groups include the following: F21, schizotypal; F22, persistent delusional; F23, acute and transient psychotic; F24, induced delusional (including 'folie a deux'); F25, schizoaffective disorders. Virtually any of the symptoms of F3 or F4 disorders can, and often do, accompany the diagnostic symptoms.

Course

After a first episode, about one quarter of patients make a good recovery within five years, two-thirds will have multiple episodes with a variable degree of disability between them, and 10–15% will develop severe continuous disability from negative symptoms.

F30–34, mood (affective) disorders

The affective disorders include the following: F30, manic episode; F31, bipolar affective disorder; F32, depressive episode; F33, recurrent depressive disorder; F34, persistent mood disorder, including cyclothymia and dysthymia.

The basic disturbance in all categories is a change in mood to depression or apathy (with anxiety very common) and/or to elation. The two moods can occur together or alternately, and overall activity is affected accordingly. At their most severe, depression, mania and the mixed 'bipolar' disorders are manifested in ideas (sometimes with delusional force, though usually with content congruent to mood) that may be expressed in self-harm or grandiosely dissocial behaviour. The term 'psychotic' is often used to describe the most severe phenomena, such as delusions, hallucinations, retardation, stupor, flight of ideas or loss of insight. 'Neurotic' (*see* F4, below) ideation and behaviour are common adjuncts. Severity is graded as mild, moderate or severe. A less severe hypomania is also recognised. The following lists illustrate the relationship between the two major kinds of mood disorder.

Common symptoms of depressive episode	**Common symptoms of mania**
Depressed mood	Elated mood
Loss of interest and enjoyment	Loss of social inhibitions
Reduced energy, activity, concentration	Overactivity, poor concentration
Low self-esteem, guilt, pessimism	Inflated self-esteem, grandiosity
Ideas or acts of self-harm or suicide	Inadvertent harm to self/others
Diminished sleep and appetite	Decreased need for sleep
Delusions, e.g. of sin, poverty, sickness	Grandiose, religious delusions
Mood-congruent hallucinations	Mood-congruent hallucinations
Severe psychomotor retardation or stupor	Flight of ideas, pressure of speech

Subgrouping is chiefly in terms of severity and pattern of recurrence. Nearly all episodes of depression that pass the threshold for diagnosis are mild to moderate in intensity. Cyclothymia (34.0) is a persistent instability of mood, involving numerous periods of depression and mild elation. Dysthymia (34.1) is a chronic depression of mood that does not meet the criteria for F32 or F33.

Course

The course of depression can vary from a brief episode (particularly if in response to stress that resolves rapidly) to a long and severe 'melancholia'. Bipolar disorders tend to be intermittent, but the pattern can recur over a lifetime.

F40–48, neurotic, stress-related and somatoform disorders

The term 'neurosis', like 'psychosis', is retained in *ICD-10* because of its common use rather than for its specific content. Phobias, general anxiety disorders and obsessive–compulsive disorder, together with mild to moderate depression (in *ICD-9* called 'neurotic depression'), are the commonest conditions presenting in general practice.

F40, phobic anxiety disorders

- Agoraphobia: fear of open spaces, crowds, trains, planes, leaving home, etc.
- Social phobias: fear of scrutiny by other people.
- Specific (isolated) phobias: fear of specific situations such as particular animals, heights, thunder, darkness, dentistry, etc.

F41, other anxiety disorders

- Panic attacks, rising rapidly to a climax and then gradually decreasing in severity.
- Generalised anxiety disorder.

F42, obsessive–compulsive disorder (OCD)

- Obsessional thoughts, ruminations and actions, despite conscious resistance.

F43–48, include stress, conversion, dissociative and somatoform disorders.

Course

Anxiety disorders tend to follow the pattern of any stress that provokes them, but can occur *sui generis* and be intermittent or long-lasting. Concomitant depression is common. OCD is also often long-lasting.

F50–55, behavioural syndromes associated with physiological disturbance

This sub-chapter covers the eating disorders anorexia and bulimia, sleep disorders (non-organic), sexual dysfunctions and disorders associated with the puerperium.

F50.0–50.8, anorexia nervosa and bulimia

- Over-valued dread of fatness, leading to body weight deliberately maintained at least 15% below normal, with consequent widespread endocrine disorder. Associated with overeating and attempts to mitigate this by extreme purging, vomiting, etc.

F51–53, sleep and sexual disorders.

Course

Prolonged anorexia leads to under-nutrition resulting in endocrine and metabolic changes, particularly with onset before puberty and in older women up to the menopause. Bulimia often, but not always, follows an earlier episode of anorexia.

F60–68, disorders of adult personality and behaviour

The grouping adopted by the WHO has the advantage of definitions that can be used in conjunction with a system of interviewing, the International Personality Disorder Examination,[11] to ensure a degree of comparability in the data collected and thus also in the categories derived from the *ICD-10* F rules. Eight personality types are listed in Appendix I.

Course

The abnormal behaviour pattern tends to appear in late childhood and then to persist. Several areas of functioning are involved. Problems are not limited to periods of mental illness.

Publications on the *ICD-10* F disorders

The WHO 'Blue Book' provides a prose paragraph and diagnostic guidelines for each major rubric. The more detailed 'Green Book' has specific algorithms (diagnostic criteria for research, DCR) for each disorder. The American Psychiatric Association (APA) has very similar, though not identical, lists of operational criteria, namely the *Diagnostic and Statistical Manual*, 4th revision (*DSM-IV*).[12]

A standardised interview and software for *ICD-10*, the most recent versions of the tenth edition of the Present State Examination (SCAN/PSE-10.2), based on a glossary of differential definitions of symptoms and signs, including all those in the five categories under review here, and CAPSE-2 software has been published by the WHO. Accounts of the PSE and SCAN developments are also available.[13,14] Updated information concerning SCAN and its components, including the PSE-10.2 interview manual, item group check list, clinical history schedule, glossary, training manual and software applications, is available on the WHO website for SCAN (www.who.ch\msa\scan). Alternatively, contact Dr TB Ustun, Division of Mental Health and Prevention of Substance Abuse, Room L3.19, WHO, CH-1211 Geneva 27, Switzerland.

Another system in common use is the *Diagnostic and Statistical Manual* of the American Psychiatric Association.[12] The three most recent editions are *DSM-III*, *DSM-IIIR* and *DSM-IV*. The Composite International Diagnostic Interview (CIDI)[15] is for use by non-clinical interviewers and tends to provide higher morbidity rates than SCAN.

4 Incidence and prevalence

Reliability and applicability of methods

The incidence and prevalence of the five major categories described in Section 3 provide the main basis for consideration in this chapter, but the epidemiology of sub-categories and individual symptoms also has to be considered. For example, affective disorders (F3) are divided for some purposes into 'psychotic' (manic, bipolar, severe depressive), 'other depressive', 'cyclothymic', 'dysthymic' and 'symptomatic'. F4 (neuroses) contains two particularly important subgroups, 'anxiety' and 'obsessional states', each with further divisions. Similarly, 'anorexia' (F50) and 'bulimia' (F52) can occur separately, together or in sequence. Multiplex concepts such as SMI, which are particularly useful when discussing important practical issues, such as the disposition and use of services, are for obvious reasons too fuzzy to be of much use when measuring rates of inception or prevalence of specific *ICD-10* disorders.

The prevalence of 'neurosis'

The National Psychiatric Morbidity Surveys (NPMS)[16,17] were intended to provide an estimate of the prevalence, in 1993–94, of psychiatric morbidity, disability and use of services among adults living in private households in the UK (excluding the Highlands and Islands) who were aged 16–64. A follow-up, Psychiatric Morbidity Among Adults Living in Private Households, was published in 2000.

The sample in 1993–94 consisted of 13 000 adults, of whom 10 108 were interviewed at home using a screening instrument, the CIS-R (Clinical Interview Schedule – Revised), designed for lay interviewers. This gave a prevalence profile for 14 individual neurotic symptoms, such as sleep problems, irritability and worry occurring during the previous week, each scored for severity. A score was also derived, with a cut-off at and beyond which algorithms could be applied to provide approximate rates for some *ICD-10* 'neurotic' diagnoses.

Of the 14 individual CIS-R items, all were commoner in women than men. In keeping with the hierarchy of severity discussed in Sections 2 and 3, the four most common symptoms were non-specific for diagnosis: fatigue (the most common at 270 per 1000), sleep problems, irritability and worry. Two-thirds had scores on few symptoms, while 16% of the sample were on or above the cut-off score for 'neurosis'.

The one-week prevalence of all disorders meeting *ICD-10* criteria was 6.9% for men and 9.6% for women (8.3% overall; *see* Table 1). All except panic disorder and alcohol dependence were more common in women than men. The *ICD* rates fall roughly within the scope of other recent surveys. The category of 'non-specific neurosis' added a further 5.4% for men, 9.9% for women and 7.7% overall, almost doubling the *ICD* rates.

Table 1: Prevalence per 1000 (95% CI) of psychiatric disorders, hierarchical (NPMS).

Diagnosis	Women	Men	All
One-week prevalence			
Non-specific neurotic disorder	99 (89–109)	54 (46–62)	77 (71–83)
General anxiety disorder	34 (28–40)	28 (24–32)	31 (27–35)
Depressive episode	25 (21–29)	17 (13–21)	21 (19–23)
All phobias	14 (10–18)	7 (5–9)	11 (9–13)
Obsessive–compulsive disorder	15 (11–19)	9 (5–13)	12 (10–14)
Panic disorder	9 (7–11)	8 (4–12)	8 (6–10)
Any neurotic disorder	195 (181–209)	123 (113–133)	160 (150–170)
One-year prevalence			
Functional psychosis	4 (2–6)	4 (2–6)	4 (2–6)
Alcohol dependence	21 (17–25)	75 (65–85)	47 (41–53)
Drug dependence	15 (11–19)	29 (23–35)	22 (18–26)

Tables 2 to 6 show the overall prevalence rates for *ICD* neuroses, by personal, socio-economic, ethnic and geographic variables. These generally confirm the picture found in earlier studies. In summary, after appropriate adjustment for confounders, there are higher rates in women, in the divorced, separated or widowed, in lone parents and those living alone, in the unemployed and economically inactive, and in those domiciled in urban areas. There were no differences between regions. Ethnicity was not a significant factor after age, class and family type were allowed for, but the numbers in the Asian/Oriental and Afro-Caribbean samples were very small. Rates of individual disorders per 1000 in the general adult population sampled are summarised in Table 6. Alcohol dependence was much more prevalent in men than in women (7.5% vs. 2.1%), as was drug dependence (2.9% vs. 1.5%).

Table 2: One-week prevalence of neurotic disorder by gender and age (NPMS).

	Sample size	Prevalence, cases per 1000 (95% CI)	Adjusted* odds ratios
Gender			
Male	4,859	123 (113–133)	1.00†
Female	4,933	195 (181–209)	1.72 (1.53–1.93)
Age (years)			
16–24	1,871	150 (132–168)	1.00†
25–39	496	166 (152–180)	1.07 (0.88–1.28)
40–54	2,878	170 (156–184)	1.09 (0.91–1.33)
55–64	1,547	137 (111–163)	0.67 (0.54–0.84)

* Adjusted for age or sex and social class and household size.

† Baseline.

Table 3: One-week prevalence of neurotic disorder by marital status and family type (NPMS).

	Sample size	Prevalence, cases per 1000 (95% CI)	Adjusted* odds ratios
Marital status			
Never married	2,357	157 (142–172)	1.00†
Married/cohabiting	6,484	147 (138–156)	0.89 (0.76–1.05)
Divorced/separated	692	261 (228–294)	1.77 (1.45–2.16)
Widowed	213	254 (202–306)	1.51 (1.10–2.07)
Family type			
Couple, no children	2,586	134 (118–150)	1.00†
Couple with children	3,925	155 (141–169)	1.01 (0.88–1.28)
Lone parent	562	281 (249–313)	1.74 (0.91–1.33)
One person	1,323	209 (189–229)	1.64 (1.39–1.93)
In parental home	1,397	124 (104–144)	0.71 (0.53–0.95)

* Adjusted for age, sex, social class, employment status, and urban/rural residence.
† Baseline.

Table 4: One-week prevalence of neurotic disorder by social class and employment status (NPMS).

	Sample size	Prevalence, cases per 1000 (95% CI)	Adjusted* odds ratios
Social class			
I	649	102 (78–126)	1.00†
II	2,554	145 (129–161)	1.33 (0.76–1.05)
III non-manual	1,484	182 (160–284)	1.41 (1.45–2.16)
III manual	2,778	158 (142–174)	1.46 (1.10–2.07)
IV	1,482	182 (158–206)	1.49 (1.11–2.00)
V	512	185 (149–221)	1.42 (1.00–2.01)
Employment			
Full-time	5,034	118 (106–130)	1.00†
Part-time	1,666	160 (140–180)	1.20 (1.01–1.44)
Unemployed	847	259 (225–293)	2.39 (1.98–2.89)
Economically inactive	2,238	212 (192–232)	1.87 (1.60–2.18)

* Adjusted for social class or employment status and age, sex, urban/rural residence and family type.
† Baseline.

Table 5: One-week prevalence of neurotic disorder by urban/rural residence and geographical area (NPMS).

	Sample size	Prevalence, cases per 1000 (95% CI)	Adjusted* odds ratios
Residence			
Rural	1,010	113 (83–143)	1.00†
Mixed	2,331	137 (123–151)	1.16 (0.91–1.48)
Urban	6,450	175 (163–187)	1.41 (1.14–1.76)
Geographical area			
Southern England	4,478	156 (144–168)	1.00†
Northern England	4,136	164 (152–176)	1.03 (0.92–1.17)
Wales	499	169 (133–205)	1.19 (0.92–1.56)
Scotland	678	153 (119–187)	1.05 (0.84–1.32)

* Adjusted for social class or employment status and age, sex, urban/rural residence and family type.
† Baseline.

Table 6: One-week prevalence of neurotic disorder by ethnic group (NPMS).

	Sample size	Prevalence, cases per 1000 (95% CI)	Adjusted* odds ratios
Ethnic group			
White	9,179	159 (149–169)	1.00†
Asian/Oriental	299	182 (118–246)	1.14 (0.79–1.65)
Afro-Caribbean	148	173 (119–227)	1.02 (0.68–1.52)

* Adjusted for age, sex, social class, urban/rural residence, family type and employment status.
† Baseline.

Other studies on depression and anxiety

Table 7 summarises data on rates of treated depression and anxiety known to general practitioners (Key Health Statistics from General Practice, Office for National Statistics, 1994). The rates (4% for males and 9.8% for females) are quite close to those in the NPMS studies.

By way of contrast, Table 8 provides estimates of prevalence in Australia. The criteria used for ‘serious mental disorder’ are equivalent to the US definition of SMI. ‘Chronic disorders’ are present throughout a one-year period and are associated with disability. ‘Mild’ and transient disorders are non-handicapping and/or remit without treatment within a year.

Bebbington *et al.*[18] measured the prevalence and need for services in a two-stage sample of the population of a deprived area in south-east London, comprising parts of Camberwell and East Lambeth. The overall weighted one-month prevalence of PSE-10 cases was 9.8%, and that for the year was 12.3% (*see* Table 9). The data support the observations of enhancement through comorbidity demonstrated in the NPMS. Although the NPMS rate for one-week prevalence was substantially higher at 16%, the rate omitting ‘non-specific neurosis’ is comparable at 8.3%.

Table 7: GP-treated depression and anxiety, and treated schizophrenia, per 1000 in 1994.

	Treated depression/anxiety			Treated schizophrenia	
	Male	**Female**		**Male**	**Female**
England and Wales	40.3	98.2		2.2	2.2
Highest regions					
North Western	50.1	121.0	Yorkshire	2.8	–
Northern	47.4	114.0	Northern	3.1	2.6
			North Western	2.9	–
Lowest regions					
Oxford	31.5	83.3	Oxford	1.2	–
NW Thames	28.7	69.8	SW Thames	2.0	1.0
			Wessex	2.0	–
			Trent	–	1.7

Table 8: One-year prevalence of mental disorders in Australia, by severity.

Disorder	**Serious mental disorder**	**Chronic mental disorder**	**Mild and transient disorder**	**Twelve-month total**
Schizophrenia	0.5	0	0	0.5
Any affective disorder	2.1	2.2	5.2	9.5
Any anxiety disorder	1.2	2.2	9.2	12.6
Any substance use	1.0	2.2	6.3	9.5
Total (%)	2.9	5.0	18.8	26.8

Table 9: Prevalence of *ICD-10* disorders (hierarchical) in a south-east London sample.

Diagnosis	**One month**			**One year**		
	n	**Weighted %**	**SE**	***n***	**Weighted %**	**SE**
Bipolar disorder	1	0.14	0.14	1	0.14	0.14
Severe depression	2	0.24	0.17	5	0.59	0.26
Moderate depression	5	0.74	0.34	8	1.32	0.50
Panic disorder	2	0.24	0.17	3	0.35	0.20
Mild depression	13	2.14	0.64	20	3.34	0.80
Agoraphobia	4	0.71	0.37	4	0.71	0.37
Social phobia	1	0.14	0.14	1	0.14	0.14
Specific phobia	7	1.40	0.56	6	1.27	0.55
General anxiety disorder	1	0.14	0.14	1	0.14	0.14
Depersonalisation	1	0.28	0.28	1	0.28	0.28
Sleep disorder	9	2.43	0.96	9	2.43	0.91
Alcohol dependency*	–			5	0.78	0.37
Drug dependency*	–			2	0.26	0.19
Anorexia*	–			2	0.33	0.24

*These can overlap with the other disorders: prevalence for the previous year only.

Course of depression

A substantial Danish case register study included all 20 350 hospital-first-admitted patients who were discharged with a diagnosis of primary affective disorder during 1971–93.[19] The authors found that the rate of recurrence increased with the number of previous episodes. Although the early course was different for the unipolar and bipolar forms, the rate of recurrence was similar later in the course. The authors conclude from their study of this unique database that 'the course of severe unipolar and bipolar disorder seems to be progressive despite the effect of treatment'.

Relationship to physical health and age

The literature on the physical health consequences of depression is discussed by Dinan,[20] who concludes that there is an increased risk of coronary artery disease and reduced bone density.

Scott Henderson and colleagues quote Cicero, who described the common view of old age. It is wretched because it withdraws us from active life, weakens the powers of the mind and body, robs one of sensual pleasures and is overshadowed by dread of approaching death. He went on to refute all four suggestions (De Senectute). The authors measured the prevalence of depression and anxiety in a cross-section of people aged 18–79 (n = 2725) and found that the risk of depression and, to some extent, of anxiety, decreased with age. Other studies have not been so thorough but tend to the same conclusion. The NPMS shows a lower odds ratio for neurotic disorders in those aged 55–64 than in the younger groups. Seneca himself came to a sticky end but he lived and died by his principles and perhaps there is some compatibility between second-century Rome and modern Canberra.

Epidemiology of particular F4, F5 and F6 disorders

F40, phobic anxiety disorders

ICD-10 distinguishes three main groups of phobias: agoraphobia, social phobia and specific (isolated) phobia. Most are commoner in women. Anxiety is evoked primarily by well-defined situations or objects that are not currently dangerous but are feared, avoided or endured only with great discomfort. The symptoms are autonomic, e.g. palpitations, chest pain, choking, dizziness, with secondary fears of going mad, losing control or dying. Comorbid depression is common.

In a probability sample of 8098 community respondents, the most prevalent of 19 specific phobic items were fear of animals among women and fear of heights among men.[21,22] However, most respondents had multiple fears. The number of fears powerfully predicted impairment, comorbidity, the course of illness and parental history, independently of sub-diagnosis.

A questionnaire survey of 2000 randomly selected adults in Sweden found 188 respondents (15.6% point prevalence) beyond the set cut-off point for social phobia (95% CI: 13.5–17.6). Prevalence rates ranged from 1.9% to 20.4% across the spectrum of severity and impairment. Public speaking was the most common social fear.[23]

F41, panic disorder and general anxiety disorder

In contrast to the phobic variety, anxiety in panic disorder is unpredictable. There is a characteristic course in which the symptoms (otherwise identical to those in the other anxiety disorders) rise to a climax and then fade over a few minutes. The symptoms often cause great distress and fear of dying. A strict diagnosis requires three or more such attacks within a period of three weeks. The lifetime prevalence of this acute form is about 3%, while a sporadic form that does not meet the strict criteria has a prevalence about twice as high. Women are twice as likely to suffer as men. A positive family history is found in about 45% and impairment of work and social activities is very common. Those with panic attacks have a high risk of comorbidity with major depression (overlap 37.2, OR 2.1) or bipolar disorder (25.6, OR 3.0). General anxiety disorder (F41.1) is a more diffuse concept, diagnosed on the basis of 6 months of prominent tension, worry and apprehension about matters of daily living, as well as symptoms of autonomic arousal.

Eight well-selected studies of the course of anxiety and depressive disorder followed up for 2 years or more were analysed by Emmanuel and colleagues in 1998.[24] Depression had a somewhat better outcome than anxiety, but both disorders singly had a much better outcome than either with comorbidity.

F42, obsessive–compulsive disorders

The *ICD-10* definition specifies that obsessions or compulsions must be described as originating in the mind and be repetitive, unpleasant, experienced as forced against conscious resistance, and distressing or disabling. A London survey of a sample of 800 people[25] gave a prevalence for checking and repeating of 12% for females and 6% for males. The equivalent figures for cleanliness rituals were 3% for females and none for males, and for obsessional ideas and ruminations, 0.3% for females and 1.6% for males. Overall, about 15% of women and 7% of men were diagnosed. A more detailed analysis suggested that about half of those identified had relatively minor symptoms. Many of the others had comorbid problems, such as depression, which had a greater priority for treatment. The NPMS study (*see* Table 1) found a prevalence of 15 and 9 per 1000 in women and men, respectively. A group of studies using a different instrument, the Diagnostic Interview Schedule (DIS), and definitions from *DSM-IV* found an overall 6-month prevalence between 0.7% and 2.1%. The lifetime prevalence was 3.1–1.9%, with generally higher rates in women. The age at onset was found in one study to be relatively young, starting at 10 years in some people, with an average of 19 years in both men and women.

F48.0, chronic fatigue syndrome

An account of the prevalence, epidemiology, aetiology, treatment and prognosis of chronic fatigue syndrome is provided by Reid and colleagues.[26] The prevalence is estimated as 0.2–2.6%, according to the criteria used. Socio-economic status and ethnicity do not affect rates. Female sex is the only risk factor (RR 1.3–1.7). Despite the burden of morbidity, there is no evidence of increased mortality.

F43, reaction to severe stress

ICD-10 provides for several categories of stress and adjustment disorders, of which post traumatic stress disorder (PTSD) (F43.1) is the most familiar. It requires an exceptionally threatening or catastrophic event or situation, followed by ‘flashbacks’ and avoidance of circumstances reminiscent of the stressor. It can co-occur with virtually any other disorder in *ICD-10* F. In the National Comorbidity Survey it was found that PTSD was associated with 50% of rape cases, 39% of combat-related events and 21% of women faced with criminal assault.[27] The probability of PTSD among those exposed to a trauma is approximately twice as high in females due to their greater risk following assaults.[28] A follow-up study of 469 men after extreme exposure to a bush fire found that neuroticism score and a past history of treatment were better predictors of post-traumatic morbidity than degree of exposure to the fire and its aftermath.

F5, eating disorders

A comprehensive review of the epidemiology of eating disorders has been provided by Hans Hoek.[29] The incidence was estimated at 8.1 per 100 000 per year for anorexia and 11.4 per 100 000 per year for bulimia.

A study screening the General Practice Research Database for GPs' detection of cases in 1993[30] produced rates of 4.2 and 12.2, respectively. A threefold increase in the recording of bulimia was found from 1988 to 1993, but it is difficult to disentangle increased incidence from increased recognition. Most patients (80% and 60%, respectively) were referred on to secondary care. Osteoporosis, infertility, psychiatric and behaviour disorders and major social disruption are complications. Eating disorders, once established, can be very severe, with outcomes including death from malnutrition, suicide or electrolyte imbalance.

A study of the onset of new eating disorders (*DSM-IV* criteria) in a large adolescent school cohort in Australia over a period of 3 years suggested that the prevalence of partial (two or more criteria) syndromes at the start of the study was 3.3% for females and 0.3% for males.[31] The rate of onset of new disorders per 1000 person-years of observation was 21.8 in females and 6.0 in males. Dieting at a severe level was 18 times, and at a moderate level five times, more likely to lead to an eating disorder than less severe dieting. Subjects initially in the highest category for psychiatric morbidity had an almost sevenfold increase in risk of developing an eating disorder. The authors conclude that dieting is the major contributor to risk. Controlling weight by exercise is less risky.

F6, severe personality disorders

Given the uncertainty of diagnosis, even when using WHO or *DSM* criteria, it is no surprise that substantial problems are encountered in assigning an *ICD-10* category for personality disorder. Co-morbidity is very common and associated problems, such as drug and alcohol misuse, self-harm, cognitive disorders, physical illness and social pressures, generally take precedence for purposes of treatment. Much of the literature focuses on F60.2, dissocial (in the USA, antisocial) personality disorder. A recent review of the epidemiology[32] suggested a prevalence of 2–3% in community surveys, rising to 60% among male prisoners. Coid[33] provides data on risk factors for personality disorders based on 260 people in maximum-security hospitals and prisons.

The incidence and prevalence of psychoses

Risk factors

The psychoses accounted for more than 27 million disability-adjusted life-years worldwide in 1990 and were among the 30 leading causes of disability. Twin studies show that genetic factors are probably important in all of these disorders but 'up to half of monozygotic twins do not develop them'.[34] Hultman and colleagues[35] studied prenatal and perinatal risk factors for schizophrenia, affective and reactive psychosis in a Sweden-wide cohort of all children born during 1973–79, by linking the Swedish birth register to the inpatient register. Schizophrenia was associated with multiparity (odds ratio, OR: 2.0), maternal bleeding during pregnancy (OR: 3.5) and birth in late winter (OR: 1.4). The associations with affective psychosis were uterine atony (OR: 2.1) and late winter birth (OR: 1.5). Reactive psychosis was associated only with multiparity (OR: 2.1). A higher risk for schizophrenia was also found in boys who were small for their gestational age at birth (OR: 3.2), who were number four or more in birth order (OR: 3.6) and/or whose mothers had bleeding during late pregnancy (OR: 4.0). Small size for gestational age in boys and bleeding during pregnancy could reflect placental insufficiency.

Premorbid characteristics associated with an increased incidence of schizophrenia include never having been married or had a partner, movement down the occupational scale, perinatal abnormalities, increased incidence in blood relatives, migration between countries, and internal movement to socially isolated city areas. Males have equal incidence but earlier onset. There is a higher risk among second-generation people from the Caribbean region, but no clear explanation for this. Odegard's hypothesis in 1932[36] that people at genetic risk are over-represented in migrant populations still stands.

Incidence and first-admission rates

Jablensky and colleagues[37] calculated a mean incidence from epidemiological studies of 0.11 per 1000 (range 0.07–0.17 per 1000) using a strict definition and 0.24 per 1000 (range 0.07–0.52 per 1000) for a wider one. Table 10 gives age-standardised first-admission rates for specified *ICD-9* disorders in Scotland in 1969 and 1988. Full data for the intervening years are provided by Geddes and colleagues.[38] There was a steady decline in the incidence of schizophrenia. Many theories have been put forward, notably that there is a 'seasonal etiological agent'. Procopio and Marriott[39] provide evidence, based on first diagnoses in England and Wales between April 1993 and March 1994, against this hypothesis. The disappearance of a non-seasonal factor might be responsible. A lower use of hospital beds, a change in diagnostic habits or simply a decline in morbidity are other possibilities. An incidence within a relatively restricted band (7–14 per 100 000) was observed in an international population study of schizophrenia, narrowly defined using standard techniques.

Scottish age-specific first-admission rates by gender for schizophrenia in 1993–94 show (as do most other calculations) that females have a lower incidence than males at age 15–24 (60 vs. 210 per 100 000). Both sexes peak at 25–34 (175 vs. 440 per 100 000), after which both decline. Male rates decline more rapidly; by age 55–64 they equal those of females (125 per 100 000), and by 85+ both sexes are about 50 per 100 000.

The first-admission rates for affective disorders (*ICD-9*, 296) are also shown in Table 10. They include bipolar disorders and psychotic and neurotic depression. Rates for mania are much lower than for the other disorders (only 3.1 and 4.0 per 100 000 for males and females, respectively, in 1988). The first-admission rate for depressive disorders not classified as affective psychoses was 21 per 100 000.

Table 10: Age-standardised first-admission rates per 100 000 in Scotland, 1969 and 1988.

***ICD-9* diagnosis**	**1969**	**1988**
Schizophrenia 295		
Male	14.7	8.4
Female	11.2	4.8
Affective psychoses 296		
Male	15.5	12.6
Female	34.0	22.9
Mania 296.1–3		
Male	2.4	3.1
Female	3.1	4.0
Neurosis 300.4		
Male	15.5	10.3
Female	25.5	18.9

Source: Geddes *et al.*[38]

Prevalence

The size of the prevalence rate for schizophrenia depends largely on the proportion of patients who develop the negative syndrome. Table 7 gives a ‘diagnosed’ rate for schizophrenia in general practice of 3.8 per 1000 for males and 3.4 per 1000 for females. The NPMS gave an estimate of 4 per 1000 for ‘psychosis’ in the two sexes combined. The Australian figure for schizophrenia (*see* Table 8) was 5 per 1000. The lifetime prevalence of both schizophrenia and bipolar disorder is about 1%.

Sociodemographic factors associated with higher rates of mental morbidity

The data obtained in the NPMS surveys provide recent confirmation of risk factors for mental illness that have been studied for half a century. Further confirmation is provided in Chapter 3 of the King’s Fund Report on Mental Health in London.[40] Inner London is particularly disadvantaged in comparison with inner-city environments elsewhere, and even more markedly compared with outer London and other urban areas. The key sociodemographic ingredients harmful to mental health listed above for schizophrenia are also risk factors for depression and suicide, and act to increase comorbidity more generally. The implications for need are considered in Section 5.

Commander and colleagues[41] provide a cross-section of the services in west Birmingham (*see* Table 11). The estimated prevalence (28.6%) is higher than the estimate given by the NPMS (16%, *see* Table 1), due partly to the multi-cultural nature of the area but also to the use of different instruments. Confirmation that poverty and unemployment increase the duration of episodes of common mental disorders (though not the likelihood of their onset) comes from a prospective cohort study of 7726 adults in the UK (OR: 1.86; 95% CI: 1.18–2.94). Initial financial strain was independently associated with both onset (OR: 1.57; CI: 1.19–2.07) and maintenance (OR: 1.86; CI: 1.36–2.53) after adjusting for standard of living.

Table 11: Pathways to care in west Birmingham.

Level	Method	Rates per 1,000	Ratio
6 Mental Health Act*	Case register	0.4	
			2.8
5 Inpatient care*	Case register	1.1	
			12.9
4 Psychiatric service use*	Case register	14.2	
			5.8
3 Primary care: conspicuous morbidity†	GP rating	82.8	
			2.2
2 Primary care: total morbidity†	GHQ-301	81.7	
			1.6
1 Community‡	GHQ-30	286.4	

* Specialist services survey.
† Primary care survey.
‡ General population survey.

There is a large literature on the incidence, prevalence and outcomes of mental illness in relation to ethnicity. High rates of schizophrenia in the UK’s African-Caribbean population are well documented but the allocation of cause between nature, nurture and unfavourable quality of life has not been resolved.

Deliberate self-harm, suicide and homicide

The *Health of the Nation* initiative highlighted priority problems and set targets for amelioration, e.g. a strategy for reducing suicide rates by the year 2000. Together with the target to improve mental health, these intentions were worthy but unattainable.[42] They have subsequently been modified within an 'evidence-based framework on mental health', to be audited by NICE (*see* Section 8). The *Report of the National Confidential Inquiry into Suicide and Homicide*[43] has 51 key findings on suicide and 27 on homicide, with a further 31 recommendations covering both kinds of problem.

Durkheim[44,45] first demonstrated the relative stability of suicide within particular communities, with high rates in males, the single or separated, Protestants rather than Catholics, urban rather than rural and socially isolated rather than integrated communities. A recent replication of parts of his work shows mortality from suicide increasing with social fragmentation score.

A meta-analysis of studies of suicide by Harris and Barraclough[46] provides an estimate of suicide risk and death from natural causes. Tables 12 and 13 summarise the results. Affective disorders have very high standardised mortality rates, followed by schizophrenia and personality disorders. Some increase occurs in all disorders under review.

Baxter and Appleby[47] used the Salford Register to identify 7921 deaths from suicide or undetermined cause during a follow-up period up to 18 years. The risk was more than tenfold higher, with rates of 11.4 for males and 13.7 for females. Risk was highest in young people, and in people with schizophrenia, affective and personality disorders, and substance dependence.

Table 12: Meta-analysis of suicide rates, by *DSM-III-R* diagnosis.

CD-9 equivalent	Number of studies	Observed	Expected	SMR (95% CI)
Schizophrenia	16	886	98.4	900 (842–962)
Bipolar disorder	4	12	1.0	1,173 (608–2,055)
Major depression	8	142	6.7	2,124 (1,789–2,504)
Dysthymia	3	1,405	117.7	1,194 (1,132–1,258)
Mood disorder NOS	6	192	9.7	1,984 (1,714–2,286)
Eating disorders	5	14	0.4	3,333 (1,822–5,593)

All comparisons significant at 5% level.

Table 13: Mortality from schizophrenia.

ICD-9 category	Male			Female		
	Observed	Expected	SMR (95% CI)	Observed	Expected	SMR (95% CI)
All natural causes	2,836	2,203	129 (124–134)	2,755	2,139	129 (124–134)
All unnatural causes	905	188	480 (450–513)	407	108	378 (342–417)
Suicide	607	162	979 (903–1,060)	200	25	802 (695–921)

All comparisons significant at 5% level.

Crawford and Wessely[48] collected data over a period of 18 months from 16 general practices in Southwark and from local A&E departments, during which 324 patients presented in 415 episodes. Only 15 presented (mostly with self-injury rather than overdose) to their GP. Appleby and colleagues[49] investigated the circumstances of a sample of 2370 people in England and Wales who had committed suicide after having been in contact with services during the previous year. 'Better suicide prevention is likely to need measures to improve the safety of mental health services as a whole rather than specific measures for people known to be at high risk'.[49]

Powell and colleagues,[50] using a case–control design, compared 112 people who committed suicide while inpatients with 112 randomly selected controls. Although several factors were identified that were strongly associated with suicide, their clinical utility is limited by low sensitivity and specificity, combined with the rarity of suicide, even in this high-risk group.

Kennedy and colleagues[51] used Coroners' statistics for homicide and suicide in the 32 London boroughs, and police-reported homicide and violence rates, in relation to population density, UPA (under-privileged area) score and the MINI. The variables were strongly inter-correlated. Rates were highest in boroughs with high population density and deprivation.

Taylor and Gunn[52] provide data from Home Office statistics for England and Wales from 1957 to 1995. There was little fluctuation in the numbers of people with a mental illness committing criminal homicide over the 38 years (mean 36 per year.) The authors conclude that the annual risk that any individual in the UK will be killed by someone with a mental illness (mostly someone close to the assailant, not a stranger) is very small.

Munro and Rumgay[53] analysed the findings of public enquiries into homicide by people with mental illness (1988–97). About a quarter were judged to have been predictable, 65% preventable and 60% had a long-term history of violence or relevant risk factors for violence. The authors conclude that improved risk assessment has only a limited role in reducing homicides. Better all-round mental health care would be more effective.

5 Services available and their costs

Introduction

Two major themes influence discussion of the quality of services currently available for the diagnosis and care of people with SMI. The first involves the balance of factors influencing thresholds at which recognition of a mental health problem occurs, e.g. in primary care, and whether referral for a specialist opinion or treatment is required (the concept of SMI). A separate chapter on primary care in this series is specifically relevant. The second theme concerns the extent to which the development of more effective interventions, community services and changes in public attitudes substantially improve on the services of the 1960s and 1970s. The two themes are clearly linked but the main emphasis here is placed on the secondary sector. A third, forensic tier is also relevant. Effectiveness is considered in Section 6.

Mental health needs in the primary, secondary and forensic sectors, by district

Approximately 11% of all health care resources are spent on mental health. Glover and colleagues[54] have studied the numbers at primary, secondary and forensic levels, in each case approximating a range of need across the English health authorities (now primary care trusts [PCTs]).

The magnitude of primary sector need was computed using data from the NPMS study (*see* Section 3) for caseness and the prevalence of depression (score of 2+), as a percentage of the population aged 15–64 in each health district. At the secondary level, population data were used to calculate likely need, using the York index and the Community Psychiatric Needs Index, together with the MINI (*see* Appendix II) and average daily numbers of occupied beds per 100 000 population. No modelled data were available for the forensic level and two sources of real data were used, namely occupied bed-days for medium and other secure units (1995–96), and special hospital use (1995), classified by health authority of residence of the patients.

Table 14 shows the overall maximum and minimum, and two percentile ratios (75th/25th and maximum/5th), for each of these indicators. Districts with the most morbidity had about twice as much mental illness in primary care compared with those with the least. At the secondary level, with more severe disorders, the predicted range between highest and lowest districts was about 2.5:1, although the actual data showed roughly double that. For forensic services the range was over 20-fold.

When the eight indices were calculated, the rank orders for individual health districts were reasonably consistent with each other, although some districts (notably Birmingham) had to be omitted because of boundary changes. Although the three broad types of care and the scales used to measure them were very different from each other, one 'clear conclusion is that forensic mental health care is much more tightly concentrated' than that estimated at general psychiatric and primary levels.[54] The concentration of forensic need, and the huge disparity when compared with the pattern of general mental health care 'is so great as to require a completely different type and scale of organisation'.[54] The authors calculate that the top 5% of districts are spending about 20% of their mental health resources (2–2.5% of the entire district budget) on forensic services. The median figure is 7.5% of mental health spend. The implications for apportioning an overall mental health budget are considered in Section 7.

Table 14: Indicators of need in forensic, secondary and primary sectors, 1995–96.

Type of care	Minimum	Maximum	Ratio 75th/25th percentile	Ratio maximum/ 5th percentile
Primary care				
CIS-R 12+ cases	10.8%	21.0%	1.3	1.9
Percentage population 15–64				
Depression scores	6.6%	13.6%	1.4	2.0
2+ cases 15–64				
Secondary psychiatric care				
Admission need index	24.2	67.4	1.4	2.5
Community need index	70.5	180.6	1.3	2.3
MINI predicted admission per 100,000	160.6	454.6	1.4	2.5
Average MI beds per 100,000 population	3.8	151.9	1.6	4.8
Mentally disordered offenders				
Special hospital residents per 100,000 population	0.0	14.8	2.0	23.1
Average secure beds per 100,000 population	0.3	20.1	2.2	26.9

Source: Glover *et al.*, unpublished data.

In a separate study, Glover[55] calculated the sums allocated to and the actual spend on hospital and community health services for mental illness and learning disability. Figures for spending in deprived inner-city authorities ranged from 17.7% to 19.3% of the total budget (mean 18.6%), while the actual allocation was 14.1–14.7% (mean 14.4%). In mixed-status areas, the figures were 12.1–17.7% (mean 15.4%) against an allocation of 12.1–13.0% (mean 12.5%). In high-status authorities, the equivalents were 9.0–18.0% (mean 12.8%) with an allocation range of 10.2–11.6% (mean 11.0%). A group of inner-city deprived areas outside London resembled the London pattern, with a spending range of 9.9–20.7% (mean 13.7%), and allocation range of 11.2–12.7% (mean 12.0%). The author suggests that if an identifiable group is spending substantially above its allocation, others must be spending below theirs. If so, the allocation formula, in spite of attempts to be as fair as possible, is failing to reflect significant elements in the national distribution of need. The DoH could present the results of the service elements explicitly, enabling a more informed public debate.

There is growing evidence that the relationship between social deprivation and need is curvilinear. At lower MINI scores (< 100) there is no clear relationship. At higher scores the relationship increases exponentially.

Primary care referral for specialist advice and/or care

A new system came into operation in April 1999 with the formation of primary care groups (PCGs) and unified cash-limited budgets. These groups, now replaced by primary care trusts (PCTs), commission services, foster collaboration between practices, link with the local community and social services, consider problems arising from uneven quality of care, promote good practice and encourage public participation in decisions. About 75% of the PCT budget is likely to be used for hospital and community services. It is too early to assess the impact on specialist services, but it is clear that opportunities will arise for both co-operation and conflict as the boundaries between the sectors become more blurred.[56]

Consensus has not yet been achieved on common thresholds or procedures in general practice for obtaining care from specialists such as community psychiatric nurses, psychologists and psychiatrists. The alternatives are to recruit specialists into the primary care team, refer to a specialist community mental health team (CMHT) or use the local outpatient department (OPD). There are further variants on each of these options.[57,58] National, regional and local data for monitoring rates of referral across the range of primary–secondary contacts and for assessing their cost-effectiveness are not yet available. Issues associated with the efficacy of guidelines to help recognition and adequate treatment of depression and other disorders by general practitioners are considered in Section 6.

The background of specialist hospital and community care for SMI

Official statistics

Peak bed occupancy in the large psychiatric hospitals was 345 per 100 000 in 1954, since when there has been a more or less continuous decline. There are somewhat similar trends in France, Italy, Spain and Sweden. By 1985, when the current system of data collection was under way, the average daily number of available beds (as distinct from bed occupancy) was down to 76 per 100 000, and in 1995–96 to 39 per 100 000.

DoH statistics provide a general sketch of residential and other service provision, but there is wide variation between districts in quality and completeness of data. A study of seven English districts in 1994 was used to compare comprehensive information about residential accommodation for people with mental illness. Altogether, 236 facilities with 1208 beds were found. DoH returns did not identify 130 (51%) of these. Official data were not detailed enough, nor sufficiently anchored in local provision, to allow an appraisal of how far need was met (Audini *et al.*, submitted).

Table 15 provides an overview of DoH data concerning changes in available residential services in England between 1991–92 and 1996–97. The number of hospital beds in secure units more or less doubled, while the number of beds in short- and long-stay units more or less halved. Beds in private nursing homes, staffed residential homes and small registered homes showed relatively small increases from a low base.

Table 15: Hospital beds, and places in residential and nursing homes, available for people with mental illness, between 1991–92 and 1996–97 (children and elderly not included), in England.

	Numbers					
	1991–92	**1992–93**	**1993–94**	**1994–95**	**1995–96**	**1996–97**
Average daily available NHS beds						
Secure units	880	930	1,030	1,080	1,370	1,580
Short stay	15,720	15,300	14,680	15,210	15,080	14,500
Long stay	12,430	11,000	8,870	7,830	6,730	5,410
	29,030	27,230	24,580	24,120	23,180	21,490
Places in staffed residential homes	11,540	12,300	12,740	12,960	13,370	14,930
Places in local authority unstaffed (group) homes		1,840	1,700	1,680	1,660	1,840
Beds in private nursing homes	3,710	4,550	4,750	4,860	5,300	6,590
Places in small registered residential homes (mostly private)	–	–	1,130	1,610	1,920	2,690

Figures for bed occupancy during the final 10 years of the preceding data collection system (the Mental Health Enquiry) provide an approximate baseline for comparison of changes in bed use. In 1977, the rates per 100 000 for patients in hospital for less than a year, for 1–5 years and for more than 5 years were 57, 40 and 79 per 100 000, respectively. In 1986, the equivalent rates were 55, 32 and 42 per 100 000. There was little change in short-term care; the rate remained close to the then DHSS-recommended figure of 50 per 100 000. The medium-term rate (the 'new long-stay') declined slowly. The long-stay rate was already on a sharp downward trend. The medium- plus long-term rate (74 per 100 000 in 1986) can roughly be compared with the rate for available 'long-stay' beds (43 per 100 000 in 1996–97) shown in Table 15.

Table 16 shows hospital and community occupied bed-days purchased from 1991–92 to 1996–97. Hospital bed-days decreased by 2.8 million from 14.6 million, and community bed-days increased by 1.4 million from 2.3 million. Table 17 (*see* overleaf) shows the numbers, starting from a low base, in specified non-residential community services during the period 1991–97.

Table 16: Hospital- and community-occupied bed-days purchased for people with mental illness in England.

	Millions					
	1991–92	**1992–93**	**1993–94**	**1994–95**	**1995–96**	**1996–97**
Hospital-occupied bed-days	4.6	13.9	12.6	12.4	12.1	11.8
Community-occupied bed-days	2.3	2.4	2.8	3.2	3.5	3.7

Table 17: Other NHS activity (mental illness) for the period 1991–92 to 1996–97 in England.

	Thousands						
	1990–91	**1991–92**	**1992–93**	**1993–94**	**1994–95**	**1995–96**	**1996–97**
Outpatient first attendance	–	218	238	245	257	271	285
Ward attenders	–	15	14	11	17	16	15
First contacts with services:							
Community psychology	169	175	191	202	221	227	–
Community nursing	370	372	406	475	493	532	–
First contact at day care	60	55	60	66	63	66	63
Places at day centres (nearest 1,000)	–	–	40	45	51	5	58

Variations in the use of specialist care (FCEs) across the UK

Finished consultant episodes (FCEs) for 1994–95 allow a more detailed all-England comparison between four groups of local authorities: inner London, outer London, other large cities and all other local authorities (*see* Table 18). The differences shown (for people aged 16–64) are substantial, by area and by sex. Inner London had 22% more FCEs than other large cities, 83% more than outer London, and 72% more than the rest of the country. FCEs for men in inner London were 94% above those for outer London, 33% above those for other large cities and 99% above all other local authorities. Equivalent figures for 1989–90 show a marked increase in the number of FCEs for men in all areas during the intervening 5 years (most obvious in inner London). There was no such increase for women. Indicators with a similar rank order include detention under the Mental Health Act, proportion of single, divorced or widowed people, and diagnosis of schizophrenia.

Table 18: FCEs per 100 000 in four groups of English local authorities.

Groups of local authorities	**Males**	**Females**	**Total**
Inner London	872	619	744
Other inner city	656	559	608
Rest of the country	439	426	433
Outer London	450	364	407

Source: London's Mental Health, p. 173.

The CPA and care co-ordination

The CPA has been the policy framework within which specialist mental health services in the UK are or should be provided.[59,60] The intention is that priority should be allocated according to need and those most at risk are identified through supervision registers. The effectiveness of the policy is considered in Section 6. Within this general framework the aims of 'case management', first developed in the USA, are generally agreed. They are to maintain contact, reduce hospital admissions and improve social functioning and quality of life. The method requires systematic assessment of client need, development of a care plan, specification and provision of the resources needed, monitoring of progress by an identified key worker or small team, and regular recording and updating of the procedure. Assertive community treatment (ACT) is a variant emphasising multi-disciplinary teams with low staff–client ratios (10–15) practising 'assertive outreach', medication compliance and 24-hour emergency cover. Effective functioning of such systems requires support at all levels of governance.

Responsibility for the CPA was given to NHS provider units in co-ordination with the social services.[61] Since then, there has been much discussion of the policy's value. An unopposed motion carried at the AGM of the Royal College of Psychiatrists in 1996 stated that the policy of care in the community was in a deep state of crisis. It was intended that patients and their relatives should be closely involved and that health and social services should harmonise procedures to ensure needs were met. Schneider and colleagues[62] surveyed all 83 relevant English NHS trusts in 1997–98, with a response rate of 79%. The main elements of the CPA were found to be in place but the survey did not include a quality criterion. Harmonisation was not widespread, and involvement by users and carers 'was far from universal'.

Later Government plans acknowledged that standards have been patchy. It was therefore proposed that the NHS input should be fully integrated with that of local social services, responsible for all service users, including those in residential settings such as prison, hospitals, hostels, group homes and supported housing. Two levels were recommended – standard and enhanced. At each review, the date of the next review must be set and recorded. Audit should focus on the quality of implementation, including risk assessment, care plans, treatment goals, inter-agency working, sensitivity to ethnic, gender and sexuality needs, and support for family and other carers. The new service is referred to as care co-ordination.

Liaison of psychiatry with general medical and surgical services

Four areas of general hospital care involve patient problems that require psychiatric consultation: prevention of suicide, comorbidity between physical and mental illness, care and rehabilitation (particularly of patients with somatoform disorders), and training. Services are patchy in the UK compared with Germany and the USA. They are often based in separate specialist trusts so that an extra budget is needed for referrals from general hospitals with no prior earmarked resources. A report from the Royal Colleges of Physicians and Psychiatrists recommended that, as a minimum, one psychiatrist (half- or full-time according to the size of hospital), working with a multi-disciplinary team of psychologist, nurses and social workers, should be available. A survey of 52 London hospitals found that a quarter of them had such resources and 14% had none at all. The current concentration of care funds on severely mentally ill people has resulted in relative neglect of psychiatric services for people with cancer, myocardial infarction, deliberate self-harm or chronic fatigue syndrome. Comorbidity and suicide risks in primary care are other areas that require liaison.[63,64]

Acute psychiatric care

The amount and quality of acute (often emergency) care depends to a substantial extent on the amount and quality of more routine services. This is illustrated by a succession of seven *Milmis Surveys* of acute wards in 12 inner-London trusts, including ten of the most deprived areas in the country.[65,66] The problems are evident to a lesser extent in outer-London boroughs and other large cities. On 14 January 1999 or during the previous week there were:

- 53% patients detained under the Mental Health Act

- 39% remaining for 3–12 months
- 64 incidents of first-degree violence
- 25 incidents resulting in minor physical injuries and 38 incidents of sexual harassment
- a true bed-occupancy (taking account of people who should be in the ward but whose place had been taken for yet more urgent cases) of 121%.

A report by the Mental Health Act Commission covering the period April 1997 to March 1999, while acknowledging that many facilities were more than adequate, described a significant number as not meeting basic standards. Threatening language and behaviour, and racial and sexual harassment were growing problems. Drug and alcohol use were common comorbid factors. The problems faced by clinical staff and managers are described by Williams and Cohen.[67] The results of a survey of 173 trusts confirmed high over-occupancy and problems with bed availability, particularly in southern England.[68]

Longer-term hospital care of patients with SMI

A national audit of patients newly accumulating beyond a limit of 3 months was conducted in 1992.[69,70] The concept assumed that most patients admitted for acute crises should be discharged within this time, given adequate follow-on care. Some patients would need longer hospital treatment, but would improve sufficiently during a stay of up to 3 years to be able then to cope with a lesser level of shelter. This 'new long-stay' group[71] should not be expected to live on acute wards. They also have different accommodation needs from those likely to need staffed residential care for longer or indefinite periods of time.

The national audit included 59 UK mental health services. Data were returned on 905 patients, aged 18–64 on admission, who had been in hospital for between 6 months and 3 years. Two particular subgroups were prominent. One was composed of younger patients (aged 18–34), predominantly single men with schizophrenia, 43% of whom had a history of dangerous behaviour or admission to a special hospital, and more than a third of whom had been formally detained. The second group was mostly composed of older women (55–64), married or widowed, with poor personal and social functioning. The average point-prevalence was 6.1 per 100 000 population. A third of the English patients were housed on acute wards, half of whom would have been better placed in a community-based residential setting if the option had been available.

A description of a well-functioning rehabilitation hostel in Gloucester, mainly for patients admitted from acute wards, is provided by Macpherson and Butler.[72]

Nursing and residential care homes and other supported housing

Since 1993, new residents in long-term care are assessed by local authorities for their ability to contribute towards the cost. There were about 5000 mentally ill people aged under 60 years, 6000 under 80 and 2000 over 80. These figures include dementia. The numbers discharged from mental hospitals under the former dowry system are decreasing, as are income-support claimants with reserved rights. Of residents in residential care or nursing homes, 1000 aged under 60 years, 2000 under 80 and 1000 over 80 had a mental illness. There is uncertainty as to future administration. Changes in housing benefit rules make it necessary to find other sources of cash for this kind of supported housing.[73] The TAPS (Team for the Assessment of Psychiatric Services) reprovision project (*see* Section 7) has similar problems.

Rehabilitation, day activities and shelter

There is no official register of day settings. In 1997, the Personal Social Services Research Unit conducted a postal survey of day-activity settings for adults in the South Thames NHS Region.[74] Of the 261 valid addresses contacted, 155 predominantly urban settings completed a postal questionnaire. About half employed social care staff on-site (65 nurses, 35 occupational staff and 19 other therapists). Only 11 had support from a psychiatrist or psychologist. Revenue costs per user session were between £0.88 and £68.26, around a low mean value of £11.65. Most settings opened only during working hours, with an average of 20 people per session. Regular users attended between two and six times weekly.

Estimates of the numbers attending day hospitals, day centres and work schemes, and their costs, were included in the London studies (Chisholm, personal communication). Table 19 includes costs per generic daytime community mental health team (CMHT) worker, and also out-of-hours time.

Table 19: Numbers and costs of non-residential NHS services.

Service component	Unit cost range £ pa 1995–96		Range of provision per 100,000 population	Total cost £000 pa 1995–96 per 100,000 population	
	Inner London	Outer London		Inner London	Outer London
CMHTs					
Daytime worker	38,010–43,575	35,024–40,151	2,537	950–1,612	875–1,485
Out of hours	20,000–40,000	20,000–40,000	–	20–40	20–40
Day hospital	11,539	10,586	50–100	577–1,154	529–1,059
Day centre	9,918	9,163	40–80	397–793	367–733
Work schemes	2,500–6,500*	2,500–6,500*	50–70	125–455	125–455

Source: Chisholm *et al.*, 1996.

*Net expenditure per place, based on seven schemes, including ITU, vocational rehabilitation and clubhouse settings.

A range of care settings, providing graded degrees of supervision and protection, is available in experimental or one-off examples, virtually all administered by social service departments or the voluntary and private sectors[75] (evidence of effectiveness not provided). Table 20 shows the results of an analysis of needs for care in the south-east London survey described in Section 4.[18] The overall weighted rate percentage of all potentially meetable needs for treatment in the month before interview was 10.8% (14.3% for the year). Of these, less than half had been met.

Table 20: Needs for care in the south-east London survey.

Need status	Past month		Past year		Total	
	*n**	(%)	*n**	(%)	*n**	(%)
Met need	19	(4.0)	10	(2.1)	29	(6.1)
Unmet need	41	(6.8)	8	(1.4)	49	(8.2)
No meetable need	9	(1.5)	4	(0.8)	13	(2.3)

*Unweighted numbers (weighted %).

Chapter 5 of a report on schizophrenia by the Clinical Standards Advisory Group,[76] while not based on a large sample, does clearly describe substantial agreement between users and carers on the problems they had experienced with services in the 11 districts surveyed. None of those interviewed seemed to know what the CPA was. There were long waiting lists for residential and rehabilitative care. Five-minute outpatient visits allowed no time for queries to be dealt with properly. There were few or no facilities for sheltered work or for out-of-hours occupation and little collaboration between health and social services.

Five extended community support services, run by charities receiving some or all of their funding from statutory sources, are described in a Sainsbury Centre booklet, which provides practical information on how to set up and run them.[77] The staff costs per care hour were as follows: community mental health worker, £62; community psychiatric nurse, £47; auxiliary nurse, £21; social worker (generic caseload), £12; local authority home care worker, £8. More such non-researched examples are described in the National Service Framework (NSF) for mental health.[75]

Users' and carers' interests

Three major charities, the National Schizophrenia Fellowship (NSF), SANE and MIND, provide much-valued services to people with mental illnesses. NSF and SANE are particularly focused on SMI and both have effective telephone helplines. NSF and MIND also provide services such as local membership groups, newsletters and more detailed materials on relevant topics (e.g. caring, coping, and medication and its side-effects). Both run local day centres.

Users' issues

Lawson and colleagues[78] assessed the degree of user involvement (recommended in the original guidelines) in 50 CPA meetings. They found it to be poor, partly because of limited resources. Users would have liked a copy of their care plan and updated information about medication, diagnosis and services. These points are taken up in the National Service Framework[75] (*see* Section 7).

Brown and Birtwhistle[79] followed up a sample of 179 people with schizophrenia who were living with their families in 1981–82 and found that 39 had died and six were not traceable. Of the rest, 74 were still with their families, 31 were in hospital or alternative care, 26 lived alone and three were homeless. Overall, there was little change in the level of clinical or social morbidity or carer distress. The authors calculated that about a quarter of the surviving patients would need residential care during the next 15 years, some of them in intensive settings.

Carers' issues

Kuipers has pointed out that carers are not usually offered much of a choice when someone they live with has an SMI. Many studies have been made of the specifics of such care.[80–84] A study of the 'burden of care', stress and satisfaction with services of relatives of patients first referred to a community-based service ($n = 24$) or to a district hospital ($n = 17$) in Newcastle suggested that the initial severity of the disorder was the chief factor associated with burden in both locations. At follow-up, there were few differences between the two groups. Levels of burden had decreased in both, but levels of 'caseness' (general health questionnaire) remained high. Relatives were generally tolerant and caring, and accepted a duty to offer and, if necessary, provide for the patient.

Malcolm and colleagues[85] interviewed 91 carers who had, on average, 21 years' experience and 53 hours a week contact. Of these, 73 would have liked their relative to have respite care so long as this did not mean loss of their own status as carers. Hostels, staffed group homes and flats/bedsits were acceptable alternatives. Day care was a particular need.

A large literature has accumulated around the concept of 'expressed emotion' (EE). In the first paper,[86] this term was used to describe features noted in samples of speech. It was neutral as to cause but was misinterpreted by some later therapists in a way that seemed to attribute blame to relatives for precipitating or exacerbating onset or relapse. Used according to the original intention, there is limited support from a meta-analysis of controlled trials.[87,88] Scazufca and Kuipers[89] found EE, as expected, to be related to burden of care. EE can be found in staff as well.[90]

The substantial burden from bipolar disorder experienced by the majority of caregivers is described in detail by Perlick and colleagues.[91]

Staffing issues

Tables 21 and 22 show the official numbers of medical, nursing and local authority staff employed in caring for mentally ill people within the scope of this chapter. According to the College Annual Census, the number of consultants in 'general adult psychiatry' in post in 1994 was 1232, with another 140 posts vacant. In 1997, the numbers were 1321 and 222. Thus both posts occupied and posts vacant have increased.

Table 21: Summary of trends in numbers of hospital medical staff caring for the mentally ill, by grade, 1987–96.

Sub-specialty	Consultants		Senior registrars		Registrars	
	1987	1996	1987	1996	1987	1996
Mental illness, specialist	1,465	1,935	379	668	714	606
Mental illness, general	1,044	1,180	257	344	670	516
Forensic	59	91	15	53		
Psychotherapy	65	82	23	30		

Table 22: Summary of trends in numbers of nursing and local authority staff caring for the mentally ill, by grade (whole-time equivalents), 1988–97.

Nurses			Local authority staff		
	1988	1996		1993	1997
Qualified	33,390	35,440	Residential	1,874	1,824
Unqualified	17,740	17,140	Day centre	1,757	1,848
Private RMN	1,197	5,111	Mixed group*	2,300	2,483

*Mixed groups: elderly, learning disability, mental health.

A series of papers has been published describing an unsatisfactory state of clinical staffing, in terms of training, conditions of work and stress. The term 'burnout' has been applied to a perceived loss of morale in personnel working with severely ill people, particularly in acute wards and in community teams. The problems are greater in inner-city areas but are found throughout the mental health services.[92–95]

So far as medical staff are concerned, the clearest evidence of a problem comes from an inquiry by a working party set up by the College and the Department of Health. A questionnaire was sent in March 1997 to all consultants thought to have resigned during 1995 or 1996, before their 65th birthday. There were 142 replies to 173 enquiries (82%). The reasons given indicated disillusion with earlier NHS reforms, which were regarded as increasing bureaucracy, paperwork, undue bed closures, staff shortages and interference by managers in clinical matters.[96] 'Urgent action is required to overcome the medical staffing problems in mental health, which will otherwise destabilise the existing services'.[97]

Studies made of mental health staff more generally suggest that work in the community, at least in inner London, may be more stressful than inpatient care, but not that levels of stress are rising. Most staff believed that their jobs could be improved by further training. For mental health staff, the main training gap was in development of skills in clinical intervention, while ward staff identified a need for further skills in diffusing potentially aggressive situations.[98,99]

Clinical psychologists

In their written evidence to the Commons Health Committee considering NHS staff requirements on 31 July 1998, the British Psychological Society (BPS) made several points germane to the role of psychologists in the mental health services. In particular, in spite of growing demand, the long-standing shortage of trained psychological therapists has not diminished. The total number employed in the NHS is about 3250. The shortage is due in large part to the lack of training places, and full training takes 6 years. Decisions concerning recruitment need to take this timescale into account.

Occupational therapists

In principle, occupational therapists (OTs) with training and experience in mental health problems should be deeply involved in all psychiatric services. However, a ratio of OT to nurse of 1:13 is not uncommon in the community services and OTs are often expected to work across several medical disciplines.

Support staff

A group of 25 professionals, users and senior managers was invited by the Sainsbury Trust to consider the role, training and specific activities of support staff. It was agreed that the help provided was complementary to that of professionals, although there might be a problem in defining boundaries. There should be close supervision. If tasks involving benefits, housing or side-effects of treatment were required, appropriate training would be essential. 'The notion that effective care can be delivered by less expensive care has obvious attraction . . . but the debate must be about the correct balance between professional and non-professional skills'.[100]

The costs of care in London

The problems of providing care for severely mentally ill people in inner London, summarised earlier, are far more serious than in any other location in the UK. The rest of London is less skewed but still has higher input prices for staffing and land, more case-mix complexity and more deprivation, poverty and social isolation. The economic component of the London survey[101] incorporated a study of costs of current provision and of unmet local needs. Units of baseline measurement were used to price seven types of residential care (from regional secure units [RSUs] to unstaffed group homes), together with three other types (supportive housing, day hospitals and day centres). Each had an identified source of information.

Nine staff categories, from consultant to support worker, were specified and a method for costing CMHTs laid down. Assumptions of many kinds were made by the authors, who have listed them and entered appropriate caveats.

A simplified version of the authors' table of places and costs for residential accommodation (omitting the ranges except for the totals) is presented in Table 23. 'Inner London boroughs contribute 43% towards the London-wide number of places and costs, although the population of these boroughs (2.3 million) is only 35% of the total population. The mean number of inpatient hospital beds and residential care places is 190 per 100 000 population for inner boroughs (range 69–412) and 124 for outer boroughs (66–216), costing £6.4m (range 3.3–12.7) and £4m (2.3–6.8) respectively.'

Estimates for the non-residential costs (CMHTs, day hospitals, day centres, supported housing and employment schemes) were made separately. For example, the estimate for the annual cost of providing

Table 23: Hospital and other residential provision in London: places and costs (£000) per 100 000 population.

Service component	Inner London Mean	Outer London Mean	Total Mean (range)
Local secure ward			
Places	7	3	5 (0–16)
Cost	500	221	360 (0–1,175)
Acute ward			
Places	46	29	37 (19–66)
Cost	2,454	1,437	1,946 (934–3,551)
Hostel wards			
Places	14	24	19 (0–65)
Cost	670	1,028	849 (0–3,012)
24-hour staffed hostel			
Places	79	38	59 (12–266)
Costs	1,723	779	1,251 (240–5,794)
Day-staffed hostel			
Places	20	7	14 (0–54)
Costs	220	75	148 (0–564)
Unstaffed hostel/GrpH			
Places	19	19	19 (0–83)
Cost	170	158	164 (0–706)
Other residential*			
Places	*	*	*
Cost			
Total residential			
Places	185*	120*	153* (66–412)
Cost	6,370	4,052	5,211 (2,315–12,668)
Places/cost (%)	43%	57%	

Source: Edited from Chisholm *et al.*, 1997, p. 319.

*In a separate table, the authors provide for an estimated 10–20 per 100 000 places for supported housing/flats. To compare with other data in Section 7, an average of 15 is added to all three totals for the calculations. The costs of these are estimated by the authors as follows: inner London, 10–20 places, £77–158; outer London, 10–20 places, £73–146.

comprehensive CMHT support to a population of 100 000 'is between £950 000 and £1.5m in inner London boroughs, and between £875 000 and £1.5m in outer London boroughs'. Costs for eight different combinations of these elements are provided. The authors end by pointing out some of the calculations that planners can make (with appropriate caution) using these data. For example, if all inpatient units (RSU, local secure and acute) were reduced by 10% (291 beds across London), costs would be reduced by an estimated £16.7 milliom, equivalent to the creation of 744 other kinds of residential places if this were deemed appropriate on clinical and public health grounds. Several other options are listed.

Sources of information concerning the costs of implementing such decisions were not available, but the amount to be added would presumably be very substantial. The issues involved are now (as they were in the 1960s when the large hospitals were beginning to close) central to rational planning of health services. They are taken up in Section 7. A calculation of theoretical interest would also show the number of places for the severely ill (not necessarily in hospital) that could accrue by reducing the services available to people with the least severe mental health problems.

Costs of residential facilities: mentally ill people over 65 in England and Wales

A study of residential facilities in eight areas of England and Wales was carried out by the Research Unit of the Royal College of Psychiatrists and the Centre for the Economics of Mental Health. Local researchers identified 368 facilities for mentally ill people under 65 years of age, providing accommodation for more than 3000 people, of whom just under 2000 met the study criteria.[102]

Table 24 summarises the results for seven types of accommodation. Staffing levels varied as expected with the extent of day and night cover. Half to two-thirds of staff in hospital wards were qualified; in other settings most staff were unqualified. There was substantial variation between sites in the number of places with 24-hour cover (79–218 per 100 000 local population) and in the total number of residential places available per unit population (36–136 per 100 000). These differences were not closely related to the levels of need expected from local deprivation indices. Most residents had severe, long-term psychiatric illnesses, manifested in positive and/or negative symptoms. More than a quarter had moderate to severe

Table 24: Residential services in eight areas of England and Wales: MHRC project.

Services	Extent of cover		Staffing		Weekly cost per client (£)		Places/ 100,000
	Night	Day	Bed ratio	Qualified (%)	Accommodation	Other	
Forensic	Waking	Constant	1.33	62	1,501	41	N/A
Acute ward	Waking	Constant	1.27	68	844	349	33.6
Long-stay ward	Waking	Constant	0.95	51	665	42	18.4
High-staffed hostel	Waking	Constant	0.67	18	285	53	36.7
Mid-staffed hostel	Sleep-in	Constant	0.39	20	238	93	23.7
Low-staffed hostel	Call/none	Regular	0.19	25	173	99	12.2
Group home*	Call/none	Visited	0.16	39	140	122	14.1
Staffed care home*	Sleep-in	Constant	1.01	11	369	94	n7.9

Source: Chisholm *et al.*, 1997; Lelliott *et al.*, 1996.[102]

Bed ratio = number of staff per resident; staff qualification = in nursing or social work.

*Number of residents $\geqslant 7$ except for the two starred, which are 6 or fewer.

physical disabilities or ill health. About one-third were judged to pose a moderate or severe risk of acting violently if discharged, and an overlapping two-thirds to be at risk from self-neglect. The most disabled were in settings with 24-hour cover.

An important finding was the great variation in how local workers defined hostel types. The authors recommend a classification that includes size and extent of day and night cover, so that like can be compared with like.

A further observation was that high-staffed hostels housed fewer people with a history of violence than long-stay wards, probably because the latter had higher levels of qualified staff. The implication is that the new 24-hour staffed hostels supported by the modernisation fund must have sufficient adequately trained registered male nurses permanently on site.

Costs varied as expected with the intensity of care. However, staffed care homes (small, privately managed units) were more expensive per resident than larger hostels. Care package costs were highest in NHS-managed facilities, mostly hospital wards. Costs were higher for inner-city districts. In all districts, costs for units run by local authorities were significantly higher than for voluntary or private sector facilities.[103,104]

Mental illness specialty costs

Table 25 (*see* overleaf) shows the gross expenditure on inpatient and outpatient mental health services. Services for dementia are included, but not those for the learning disabled. The decline in NHS bed-days is apparent and might be linked both to the decline in inpatient expenditure and to the increase in outpatient attendances. The total sum calculated for 1996–97 is £1.6 billion. Inpatient care accounted for about two-thirds (cost per patient-day £132, cost per GP episode £8140). Inpatient psychotherapy is relatively expensive.

Secure provision

The equivalent figures for forensic patients, not including the special hospitals shown in Table 26 (*see* p. 197), were £3.5 million for inpatients, £247 per patient-day and £66 000 per GP episode; patient-days and expenditure more or less doubled during the five years.

Detailed studies have been made of admissions under Part II of the Mental Health Act, covering admissions on section in 20 local authorities and six NHS trusts, which represent 18% of the population of England and Wales, and of admissions under Section 136 (Metropolitan Police, 1996–97). Between 1991 and 1997 the annual rate of use of Part II increased by 32%. Significant predictors of the rate of Part II admissions were as follows: MINI score; the total number of mental health beds; the number of community psychiatric nurses, approved social workers and consultants; suicide rates; and the number of undetermined deaths. The rate depends strongly on age, and peaks at 25–29. Three minority groups, black (26%), Asian and ‘other’ (14%), also had high rates of admission under Section 136. The authors suggest that the increase under Part II might reflect pressures on acute-admission beds in an increasingly ‘risk-averse’ culture. Comorbidity with drug misuse is another likely factor.[105]

A separate study of NHS medium-secure provision in England and Wales was mounted because of failure to meet demand, particularly in London, and the consequential growth of provision by the independent sector. Information was collected about all patients occupying a bed in an inner-London medium-secure unit on a census day in August 1997. Of the 183 patients (25 per 100 000), 90 (49%) were in independent-sector facilities. They were similar to those in NHS units but more likely to have been referred from general psychiatric services (48% vs. 19%) and less likely to have been referred from the

Table 25: Mental illness specialty costs in England, 1991–92 to 1996–97 (includes elderly with psychiatric disorders but does not include mental handicap, forensic).

	Patient-days	GP episodes	Expenditure (£)	Cost/patient-day (£)	Cost/GP episode (£)
Mental illness: inpatients					
1992–93	8,591,348	164,435	1,158,181,535	123	7,043
1993–94	8,157,880	105,794	901,452,269	47	8,521
1994–95	8,021,234	163,288	996,007,086	124	8,101
1995–96	7,858,207	161,039	1,110,267 315	141	8,894
1996–97	7,638,523	164,455	1,009,755,854	132	8,140

	First attendances	Total attendances	Expenditure (£)	Cost/attendance (£)
Mental illness: outpatients				
1992–93	164,285	1,354,436	94,102,169	69
1993–94	92,285	1,484,858	102,381,868	70
1994–95	170,865	1,577,784	118,553,487	75
1995–96	175,870	1,703,382	128,364,884	75
1996–97	190,746	1,710,289	134,435,246	78

	Patient-days	GP episodes	Expenditure (£)	Cost/patient-day (£)	Cost/GP episode (£)
Psychotherapy: inpatients					
1992–93	28,018	151	3,389,536	121	22,447
1993–94	17,287	1,014	6,641,177	317	8,522
1994–95	40,381	532	5,209,926	156	11,623
1995–96	19,237	235	3,793,915	197	16,144
1996–97	21,760	307	3,487,544	161	11,390

	First attendances	Total attendances	Expenditure (£)	Cost/attendance (£)
Psychotherapy: outpatients				
1992–93	9,296	139,116	10,285,522	74
1993–94	10,729	150,876	16,550,147	110
1994–95	10,822	129,465	12,698,208	98
1995–96	10,386	147,595	15,988,120	108
1996–97	12,325	159,109	16,610,140	104

Community mental illness expenditure (also includes child guidance, psychology assessment, psychosexual services, substance use)	
1992–93	251,014,983
1993–94	275,186,270
1994–95	314,404,372
1995–96	385,556,469
1996–97	423,609,095

Source: *NHS Trusts Manual for Accounts, TFR2.*

Table 26: Forensic psychiatry specialty costs in England, 1991–92 to 1996–97.

	Patient-days	GP episodes	Expenditure (£)	Cost/patient-day (£)	Cost/GP episode (£)
Forensic psychiatry: inpatients					
1992–93	270,161	1,557	54,639,912	202	35,093
1993–94	312,608	1,933	63,573,398	203	32,888
1994–95	377,408	2,376	79,251,884	210	33,355
1995–96	412,303	1,839	100,255,371	243	54,516
1996–97	485,903	1,819	119,994,590	247	65,967

	First attendances	Total attendances	Expenditure (£)	Cost/attendance (£)
Forensic psychiatry: outpatients				
1992–93	3,325	18,821	2,227,261	118
1993–94	5,469	19,434	3,158,278	163
1994–95	5,863	24,032	3,004,558	125
1995–96	6,026	31,953	4,443,134	139
1996–97	4,548	30,238	4,796,097	159

Source: *NHS Trusts Manual for Accounts*, *TFR2*.

criminal justice system or a special hospital. There were few differences between black and white patients. It is concluded that the NHS does not meet the need for medium-secure care of patients in the general psychiatric services.[106]

Proposed changes to the Mental Health Act

A postal survey of the views of general and forensic psychiatrists concerning the adequacy of Part III of the current Mental Health Act, 1983, has suggested that there is little demand for change.[107] The Government has published a 'root and branch' review of the Act for consultation. Much attention revolves round the concept of pathological personality, and its relationship on the one hand with serious personal and/or sexual violence and, on the other, with what sounds like an *ICD* disorder. Dissocial personality disorder F60.2 is the only *ICD* diagnosis to mention 'a low threshold for discharge of aggression, including violence'. The proposals are controversial,[108,109] insofar as they imply a role for doctors that goes beyond the provision of a responsible opinion on mental state and medical treatment. A Draft Mental Health Bill was published for consultation in 2002.

The costs of SMIs

The most recent and comprehensive estimate of the costs, at 1996–97 prices, of all mental illnesses in England is summarised by Patel and Knapp.[110] The total at 1996–97 prices is given as £32 billion, including £11.8 billion for 'lost employment', £7.6 billion for DSS payments, £4.1 billion for NHS services, £2.8 billion for 'informal care', £2.5 billion for lost productivity due to suicide and £1.7 billion for social services. Non-NHS costs came to almost seven times those of the NHS.

Separate details for three specific kinds of care – schizophrenia (*ICD-9*: 295), other psychoses (*ICD-9*: 296–298) and neuroses (*ICD-9*: 300) – are given in Table 27 (*see* overleaf), amounting to £3358 million in all. The cost for schizophrenia and other psychoses comes to £1131 million, not including £7.6 billion

Table 27: Costs of SMI in England, 1992–93.

Diagnosis*	Inpatient (£m)	Outpatient (£m)	Primary care (£m)	Medication (£m)	Community health (£m)	Social services (£m)
Schizophrenia	652	1	2	32	26	96
Other psychoses	294	12	16	–	–	–
Neuroses	75	49	39	96	139	150
Total	1,021	62	57	128	165	246

Source: Summarised from Table 1; Patel and Knapp.[110]

*ICD-9 diagnoses are as follows. Schizophrenia: 295.0 simple, 295.1 hebephrenic, 295.2 catatonic, 195.3 paranoid, 295.4 acute, 295.5 latent, 295.6 residual, 295.7 schizoaffective. Other psychoses: affective 296, paranoid states 297, reactive psychosis 298. Neuroses: 300.0 anxiety, 300.1 hysterical, 300.2 phobic, 300.3 obsessional–compulsive, 300.4 depressive, 300.5 neurasthenia, 300.6 depersonalisation, 300.7 hypochondriasis.

for social security benefits or £146.5 million for homeless mentally ill people. The costs are substantially higher (largely because of inpatient costs) than for diseases such as hypertension, diabetes or breast cancer.

McCreadie and Kelly[111] have calculated that ‘with a prevalence of psychosis at 4 per 1000 aged 16–64, there are probably at least 200 000 people with schizophrenia in the UK. If 60% smoke on average 26 cigarettes a day, the contribution to the treasury is £139m per year. If direct treatment costs are estimated at between £397m and £714m per annum they are contributing substantially to the cost of their own care’.

Counselling, helplines and newspapers

Counselling should be distinguished from cognitive behavioural therapies (CBT) in which therapy may be offered weekly for up to 60 minutes over 20 sessions. Techniques are highly structured and entail working with clients to identify negative thoughts and feelings linked to specific situations, and to problems such as symptoms, in order to understand and eventually control them. CBT methods have been fruitfully applied to many F2-6 disorders and are discussed in the context of specific disorders in Section 6. Friedli and King[112] provide an overview of the methods and efficacy.

Counsellors

Data collected during May and June 1993 on the employment of counsellors and mental health professionals in 210 out of 300 responding fundholding practices showed that a third employed counsellors only, 12% employed specialist clinicians only and 10% employed both types. Practices that had formed links with a psychiatrist, psychologist or community psychiatric nurse (CPN) were more likely to employ a counsellor. The proportion of practices employing counsellors (49%) was substantially higher than the 17% found in 1992, and is presumably now higher still. The authors were worried, with reason, by the fact that half the GPs entered ‘not known’ in answer to a question on the qualifications of the counsellors employed.[113]

The question of how far counsellors employed in general practice contribute substantially either to patient satisfaction or to reduction of disability is still difficult to answer. At best there must be some doubt.[114–117]

Helplines

Telephone helplines deserve attention. Three charities provide them and Government proposals envisage a network run from psychiatric emergency clinics (*see* Section 7). Fakhoury[118] analysed data from one of the best known (SANELINE), concluding that the clientele was largely female and concerned with depression (55%) or psychosis (31%).

Newspaper coverage

A survey of relevant headlines in nine daily newspapers was carried out for a month to judge whether the content was positive, neutral or negative. During this time, 213 article headlines on general health-related topics were identified, of which 99 (46%) were critical, with a tendency to criticise doctors. Of the 47 equivalent headlines on psychiatry, 30 (64%) were critical, with a tendency to blame patients. Tabloids and broadsheets did not differ in their rates of negative coverage (OR: 4.42; 95% CI: 1.64–11.94). The author adds that negative statements tend to be made about physical medical practitioners, while psychiatric patients are more likely to get the blame.[119]

6 Effectiveness of services and interventions

Introduction

This section provides information on the effectiveness of the methods of care described in Section 5. Sampling issues are particularly difficult when designing research to provide guidance on the effectiveness of community care or personal treatment. Patients who are unco-operative, violent or addicted, and those with a long history of disablement, tend to be excluded or drop out. The small number entering and even fewer completing many of the trials, and the possibly transitory effects of innovative and motivated researchers on outcomes, are other confounders. Inconsistency in reporting the costs or unwanted side-effects of care or treatment also limits the value of comparisons (*see* Section 8).

Sources of information on effectiveness

The documents used have been edited from four main sources:

- *Evidence-Based Mental Health* (Volumes 1 and 2) (marked * in the text)
- *Cochrane Reviews* (Schizophrenia, Depression, Anxiety and Neurosis) (marked ** in the text)
- relevant psychiatric and epidemiological journals and publications
- suggestions from colleagues and reviewers.

Community services for people with severe mental disorders

Uptake of the CPA

The CPA and the supervision register (now amalgamated with CPA) policies in England are intended to ensure priority for patients needing to receive specialist mental health care. Bindman and colleagues[120] describe their application by provider trusts and address the hypothesis that the numbers prioritised match population-based estimates of local need. CPA co-ordinators in English trusts completed a postal questionnaire. NHS quarterly data from the CPA and supervision registers provided the total number of patients under the care of psychiatric services. The MINI (*see* Appendix II) provided a composite score estimating need in single or combined electoral wards. The study showed that almost all trusts are implementing the CPA, using a tiered system. About 1% of the total population of England is subject to the CPA at any one time, of which about 1% are included in local supervision registers. Substantial variations were found between trusts. Local application of the policies is variable, priority is not closely based on need and inequitable use of resources may result. The authors acknowledge that the numbers are a proxy for the true provision and that the MINI, or any other such system, may not closely represent population needs. It can be argued further that variation is often beneficial and that top-down rules may act to stifle local initiative. In principle, however, an epidemiological and experimental approach should unite both parties.

Hospital vs. CMHTs

Several randomised controlled trials (RCTs) of community teamworking compared with hospital care for severely mentally ill patients in the UK have been published. The designs used, although by no means identical, are sufficiently similar to allow a judgement of the quality of evidence.[121–127]

In summary:

- whatever the interventions are called, a fairly consistent effect is that teamworking helps reduce time spent in hospital; four English studies found some decrease in costs
- there is little or no difference in terms of symptom severity
- social relationships, role functioning and occupations do not improve much
- on the whole, patients prefer a community regimen
- carers experience an increase in burden, but tend to understand the patient's preferences
- acute hospital facilities remain an essential part of comprehensive community care.

Varieties of case management

Marshall and colleagues[128**] made a systematic review of the effectiveness of specific case management compared with 'standard care', finding that the former increased the numbers remaining in contact with services (OR: 0.70; 99% CI: 0.50–0.98; $n = 1210$). However, the numbers admitted to hospital nearly doubled (OR: 1.84; 99% CI: 1.33–2.57; $n = 1300$). There was no difference in clinical or social outcome, or in costs.

Merson and colleagues[129] allocated 100 patients presenting to an A&E clinic at random to a community-based or hospital-based service. Information was collected retrospectively for 3 months, and for a 3-month prospective period. The use of non-psychiatric services was similar for each group, but hospital patients (£130 000) made more use of inpatient beds, while the community group (£56 000) used more home-based interventions. There was no difference in clinical outcome.

Tyrer and colleagues[130**] evaluated the effectiveness of CMHT management compared with non-team standard care for people with both SMI and disordered personality, using randomised or quasi-randomised controlled trials. They concluded that CMHTs might be associated with fewer deaths by suicide or in suspicious circumstances (OR: 0.32; CI: 0.09–1.12). Fewer people were dissatisfied with their care (OR: 0.34; CI: 0.2–0.56) or left the studies early (OR: 0.61; CI: 0.45–0.83). Admission rates, overall clinical outcomes and duration of inpatient treatment did not differ between the groups.

A review of RCTs of assertive community treatment (ACT) for people with SMI, compared with standard community care, hospital-based rehabilitation or case management, is provided by Marshall and Lockwood.[131**] Against standard care, the ACT group were more likely to remain in contact (OR: 0.51; 99% CI: 0.37–0.70), less likely to be admitted (OR: 0.59; 99% CI: 0.41–0.85) and spent less time in hospital. There were advantages in accommodation, activities and patient satisfaction, but not in mental state or social functioning. Compared with hospital rehabilitation services, time in contact was much the same, but ACT patients were less likely to be admitted and more likely to be living independently. Compared with case management, ACT patients spent fewer days in hospital. The reviewers suggest that ACT can reduce costs while improving outcome and satisfaction.

Burns and colleagues[122*] compared two randomised groups of patients with SMI in four inner-city services – one allocated to intensive case management (10–15 per manager, $n = 353$) and the the other to standard care (30–35 per manager, $n = 355$). Over a 2-year period, hospital use did not differ between the groups. There were no differences between African-Caribbean patients and others, or between severely socially disabled patients and others.

A controlled but unblinded trial of rehabilitation was made of 152 unemployed people with SMI who were attending an agency in Washington, DC and receiving intensive case management*. Half were allocated to individual placement and support and half to enhanced vocational rehabilitation. After 18 months, more of the first group were in competitive jobs and fewer in sheltered employment. Quality of life, self-esteem and client satisfaction were also enhanced.[132]

Two demographically similar sectors of Camberwell, a deprived area in south-east London with a long history of community research, were compared in order to assess the value of their different models of inner-city community care.[133] One adopted standard community management, while the other provided more admissions to fewer beds, more non-hospital residential places, a wider range of interventions, more community involvement, and more staff but higher turnover and costs. At follow-up after 2 years, both models produced some improved outcomes, but symptom and disability levels changed little. Occupation in day centres and sheltered work fell off in the intensive sector while remaining steady (day centres) or improving (sheltered work) in the standard sector. Gains were much less pronounced than in experimental studies, and might have been even lower without the stimulation of a research project.

Standards for acute wards

A large-scale literature search was carried out as part of the Clinical Guidelines Programme of the Royal College of Psychiatrists to construct a set of guidelines for the management of imminent violence in acute wards. The only controlled trials found were related to the use of medication and, of these, the designs of most left much to be desired. However, there were sufficient papers, reviews and consensus statements by respected organisations to allow the work and steering groups to develop a set of guidelines for good practice. Recommendations are provided for three overlapping areas – ward design and organisation, anticipating, preventing and dealing with violence, and medication. A fourth area, prediction, could not be rated because of lack of good material.[134]

Costs and effectiveness of pharmacological and psychological treatments

F2, schizophrenia, delusional disorder, 'acute psychosis', unspecified SMI

Medications

The first medications shown to have an unequivocally useful effect (not simply due to sedation) in the treatment of schizophrenia were chlorpromazine and reserpine, both introduced during the 1950s. Haloperidol is probably the commonest of the 'typical' or 'conventional' neuroleptics now in use. Medications are used principally for the positive symptoms described in Section 3, but are much less or not at all effective in ameliorating the negative symptoms. All typicals have unwanted side-effects, some of which can be serious, such as extrapyramidal symptoms (parkinsonism and dystonia) and tardive dyskinesia. Others, such as sedation, dry mouth, constipation, dizziness and impotence, can lead to understandable non-compliance.

Among the more recent 'typicals', clozapine has the longest track record, but it can cause a lowering of the white cell content of the blood, which necessitates a cautionary period under observation when it is first prescribed. More recently there have been reports of cardiomyositis and cardiomyopathy. For these reasons it is only considered for use when others have failed. The cost is an important factor, e.g. £979–1957 per patient-year (maintenance dose 150–300 mg) compared with (at the other end of the scale) £9–29 per patient-year (75–300 mg) for chlorpromazine and £45–790 (5–100 mg) for haloperidol. A further disadvantage is that many atypicals cannot be administered by injection in an emergency or as a 'depot' for longer-term effect.

The atypicals most commonly used are risperidone (£940–1424 per annum for a daily dose of 4–6 mg) and olanzapine (£687–2750 per annum for 5–20 mg daily). Other atypicals under test include quetiapine, ziprazidone and zotapine. None is entirely free from side-effects and all need to establish a long-term track record in properly conducted trials. A useful source of up-to-date information is provided in the report discussed in the next paragraph.

A report from the Centre for Reviews and Dissemination[135**] provides a synopsis of systematic reviews of treatments for schizophrenia. It emphasises that trials are difficult to interpret for everyday use and have such loss to follow-up that the reader is left to speculate on the meaning of the data. Attention is drawn to the fact that trials are generally 'small, short in duration, include participants that are not typical of everyday practice, randomise care regimens that are difficult to generalise, have high attrition rates, and report outcomes that are of dubious clinical value. Most relevant trials are undertaken by those with clear pecuniary interest in the results' (*see also* Section 8). It is not certain that the higher costs of the new drugs can be offset by a decrease in hospital time or indirect costs. Lists are provided of the characteristics of the chief typical, less typical and atypical antipsychotics. Chlorpromazine has clinically valuable antipsychotic properties, evident for a year or more, but can cause irreversible movement disorders.

The National Schizophrenia Guideline Group[136] is also undertaking a comprehensive evaluation of the literature on atypical medication for schizophrenia and allied disorders, focusing on amisulpride, clozapine, olanzapine, quetiapine and risperidone.

A study from the Canadian Co-ordinating Office for Health Technology Assessment (CCOHTA)[137*] computed the cost-effectiveness of treatment with risperidone and clozapine for resistant schizophrenia compared with that of haloperidol and chlorpromazine. Clozapine proved more cost-effective than chlorpromazine or haloperidol. Risperidone was more cost-effective than haloperidol, haloperidol decanoate or fluphenazine decanoate. The evidence-based mental health (EBMH) reviewer, Steven Lawrie, pointed out that the main way to decrease costs is to close beds. Since bed numbers are insufficient in England, the alternative is to spend more on treatment and care for schizophrenia.

In June 2002, NICE published guidance on atypical antipsychotics (amisulpride, olanzapine, quetiapine, risperidone and zotepine) recommending that they are considered in the choice of first-line treatments for individuals with newly diagnosed schizophrenia.

Cognitive behavioural therapy (CBT) for schizoprenia

A series of controlled studies of CBT, mostly in conjunction with medication, has demonstrated an additional value in the combination. The benefits are found in earlier resolution of the positive and negative symptoms and are also evident in the chronic state.[124,126,138] The paper by Tarrier and colleagues[139*] is summarised as an example. Patients on stable medication for schizophrenia (n = 87) were stratified by severity and sex to intensive CBT (20 hours in 10 weeks) plus routine care (n = 33), supportive counselling plus routine care (n = 26), or routine care alone (n = 28). The number of symptoms decreased in the CBT group (1.6, 95% CI: 0.7–2.5; mean decrease in number 7.8, CI: 3.8–12.0). The decrease was less in the supportive counselling group, and slightly increased in the routine care group.

Jones and colleagues[140**] reviewed the effects of CBT for schizophrenia compared with standard care, specific medication and non-intervention. Four small trials were identified. The results favoured CBT plus standard care over standard care alone for reducing relapse rates (short-term OR: 0.31; CI: 0.1–0.98; medium-term OR: 0.38; CI: 0.17–0.83; long-term OR: 0.46; CI: 0.26–0.83, number needed to treat [NNT] = 6, CI: 3–30). CBT did not keep people in care longer than a standard approach. There were no data on compliance with medication.

There is limited support from a meta-analysis of controlled trials[87,88] for methods of helping patients and families to understand the basic symptoms and problems that accompany the experience of schizophrenia. Assessing cost-effectiveness requires a more solid measure of consumer judgement.

F30–31, bipolar disorder and mania

Two recent papers contain reviews of the literature on the efficacy of treatment with lithium for manic and bipolar disorders. They come to opposite conclusions. The review by Moncrieff[141] found that most controlled trials had compared lithium with chlorpromazine and also that they were methodologically flawed. Antipsychotics are now most frequently and usefully prescribed for mania, and clinicians are more familiar with their advantages and deficiencies than they are with lithium, which has risks from toxicity and of mania provoked by withdrawal. She concluded that the time may have come to abandon it. The second paper[142] presents the literature as generally more supportive of lithium. Useful information on monitoring, side-effects and toxicity is provided in the *Drug and Therapeutics Bulletin*,[143] which lists six RCTs. Johnston and Eagles[144] provide prevalence data for hypothyroidism (10.4%; women 14%, men 4.5%) and other risk factors, which are highest (at 20%) for women starting lithium when aged 40–59 years.

If lithium is prescribed, patients need to learn how to use it. Thirty attendees at a lithium clinic were given a video-tape lecture and handout, compared with another 30 controls who were given the demonstration later. There was a substantial and significant improvement in knowledge and patients' attitudes became more favourable. Efficacy was not addressed.[145,146]

In 2003, NICE issued guidance on the use of olanzapine and valproate semisodium for the treatment of the acute symptoms of mania associated with bipolar I disorder.

F32–33.4, depressive disorders

Electroconvulsive therapy (ECT)

This method is used rarely, and almost exclusively, for severe depression resistant to other treatments. Convulsions are induced by electrical stimulation of the brain. Three audits of its use have resulted in clear guidelines for administration. All emphasise the need for training. In spite of the provision of official courses, the most recent survey found that only one-third of the clinics met College guidelines.[147] A survey of use in Wales[148] showed that the number of patients treated had fallen by 44% between 1990 and 1996, and a survey published by the DoH in 1999[149] also showed a reduction in usage. A new system of recording came into operation from January 1999. The College has introduced a new system of accreditation for ECT clinics.

In April 2003, NICE issued guidance on the use of ECT in severe depressive illness, catatonia and prolonged or severe manic episodes.

Medications

The history of antidepressive medications has features similar to those described for neuroleptics, and similar caveats should be observed. Imipramine was the first to be shown to have useful antidepressant effects. The more recent drugs fall into two main groups. The tricyclic antidepressants (TCAs) have to be started at a low dose, which is slowly increased to around 150 mg daily. They can cause dry mouth, constipation, hypotension and sedation. They are cheaper than the selective serotonin reuptake inhibitors (SSRIs). CBT is used, with and without medication, in both primary and secondary care.

A substantial review by the Canadian Co-ordinating Office for Health Technology Assessment (CCOHTA)[150*] provides a clinical and cost comparison between SSRIs and TCAs. Data analysed from 162 RCTs showed that the two methods were equally effective. Patients on SSRIs had a greater number of side-effects and reported nausea and anxiety. Those on TCAs had constipation and dry mouth. Drop-out rates differed little, suggesting similar toleration. The reviewer regarded tricyclics as the most cost-effective first-line treatment for depression but pointed out that SSRIs have advantages and, as prices fell, might become first-line treatment.

Hotopf and colleagues[151] examined 122 RCTs to discover why there was no consensus as to whether SSRIs or tricyclic/heterocyclic antidepressants should be used as the first line of treatment. Design shortcomings were found under five headings: randomisation, outcomes, dosage, generalisation and statistics.

Cornelius and colleagues[152*] studied the effectiveness of fluoxetine (an SSRI) in reducing depression associated with comorbid major depression and alcohol dependence (RCT, 12-week follow-up). They concluded that the drug reduced both symptoms and dependence.

Blackburn and Moore[153] report an RCT of 75 outpatients with recurrent major depression, comparing antidepressants and cognitive therapy during 16 weeks of acute and 2 years of maintenance therapy. During the treatment phase all patients improved, with no difference between groups. The same was true in the maintenance phase. CBT was consistently superior to medication.

Ray and Hodnet[154*] found two RCTs (142 patients, 111 completed the study) concerned with postpartum depression. One ($n = 61$) compared fluoxetine plus CBT with placebo plus counselling. The other ($n = 50$) compared weekly non-directive counselling with routine postpartum care. Women who received extra support were significantly improved ($p = 0.002$; relative risk reduction 47%; 95% CI: 18–66; NNT = 4; CI: 3–10). Gavin Young, the commentator, points out that an earlier study[155] also compared fluoxetine with placebo and showed the drug to be as effective as extra counselling sessions, so that women have a choice.

Hawton and colleagues[156**] reviewed 23 RCTs of psychosocial and/or pharmacological treatment vs. standard or less intensive types of aftercare for deliberate self-harm. They conclude that uncertainty remains as to which forms of psychosocial and physical treatment are most effective. Evans and colleagues[157] studied 827 people admitted to medical wards for deliberate self-harm and followed for 6 months after the index event. Half of them at random were offered a 24-hour crisis telephone consultation service with an on-call psychiatrist and given a card with instructions. There was no overall effect from this intervention (OR: 1.20; 95% CI: 0.82–0.75).

Termon and colleagues[158*] conclude that bright morning light and negative air ionisation alleviate depressive symptoms in patients with seasonal affective disorder. Lee and Chan[159*] conclude from a meta-analysis that there is a dose–response relationship between intensity of light and reduction in typical depressive symptoms (effect size for strong light 2.9; 95% CI: 2.3–3.6).

Upton and colleagues[160] assessed the extent to which guidelines for diagnosing and managing mental disorders in primary care improved recognition, accuracy of diagnosis and treatment standards. Their paper deals chiefly with depression. Bristol GPs already routinely recording morbidity data were invited to participate and 17 GPs were selected. They attended a study day and were given a reference book with diagnostic and management guidelines. Data were collected for 11 weeks before and after the training. Ten per cent of the patients were also interviewed before and after this period, and completed relevant scales. In the event, 'the guidelines had no effect on the detection of mental disorders or on patient satisfaction'.

A large RCT of an educational approach using a clinical practice guideline did not produce improvement in the recognition or successful management of depression by practitioners.[161] The chapter on mental health in primary care to be published in the *Health Care Needs Assessment* (third series) is devoted to these issues, and a substantial CSAG Report[162] is also available.

F34.1, dysthymia (persistent mood disorder)

Dysthymia (F4.1) has survived as a chronic low-grade depression mixed with other symptoms such as insomnia, tearfulness and inadequacy. Two papers by protagonists have come to no firm conclusion about its value as an independent category.[163]

Lima and colleagues[164**] reported on 15 RCTs of medication vs. placebo for dysthymia. The results were similar for all groups of drugs (TCA, SSRI, MAOI, etc.). The Cochrane reviewers concluded that 'in general, drugs are effective in the treatment of dysthymia with no difference between and within class of drugs. Tricyclic antidepressants are more likely to cause adverse events and dropouts'.

F40–42, phobias

After stratification by sub-type, Heimberg and colleagues[165*] compared cognitive behavioural group therapy (CBGT, $n = 36$) for social phobia, using phenelzine, increasing as necessary to 90 mg per day after 5 weeks ($n = 31$), matching placebo ($n = 33$) and supportive group therapy ($n = 33$), during a 12-week RCT. CBGT consisted of 12 sessions of 2.5 hours with between five and seven patients in each group. The relative benefit increase for CBGT vs. placebo was 114% (95% CI: 19–307, NNT = 4, 2–14); that for phenelzine vs. placebo was 94% (95% CI: 15–243, NNT = 4, 2–16). The two sites had the same results, i.e. both CBGT and phenelzine were effective.

F40–41, 42, panic and general anxiety disorders

It is particularly difficult to separate the psychological and pharmacological effects of treatments for these disorders. Lader and Bond[166] provide an overview of controlled trials. They conclude that benzodiazepines are useful for severe general anxiety disorders in the initial stages because they produce rapid symptomatic improvement; psychological treatments can then take over after 2–4 weeks. TCAs, benzodiazepines and, most recently, SSRIs such as paroxetine have been found helpful for panic disorder. Loerch and colleagues[167] assigned 55 patients with panic disorder and agoraphobia at random to treatment with moclobemide plus CBT, moclobemide plus clinical management, placebo plus CBT, or placebo plus clinical management, over an 8-week period. CBT was effective and remained so during a 6-month follow-up period. Moclobemide with clinical management was not superior to placebo.

F42, obsessive–compulsive disorder

Piccinelli and colleagues[168] provide a meta-analysis of data on the efficacy of drug treatments for OCD, using work published from 1975 to 1994. Clomipramine was superior to placebo for both obsessions and compulsions, but SSRIs were less so.

Abramowitz[169*] also evaluated RCTs of OCD, including a total of 37 treatment comparisons. The results support exposure with response prevention (ERP) and CBT vs. placebo. SSRIs were more effective than placebo (effect size 0.71 for self-ratings, $p < 0.05$). Non-SSRIs were no better than placebo. Clomipramine had no more effect than other SSRIs (effect size 0.15).

F43, post-traumatic stress disorder

Consecutive patients aged 16–65 ($n = 133$) admitted to the Welsh Regional Burns Unit agreed to enter at random a trial of psychological debriefing (PD). Of these, 32 were excluded for major physical or psychiatric disorder, residence outside Wales or failure to complete the questionnaire. An interviewer blind to PD status followed up 3 and 13 months later, 23 patients being lost at one or both stages. The outcome was that 16 (26%) of those counselled and four (9%) of the controls still had PTSD after 13 weeks. 'This study seriously questions the wisdom of one-off interventions post-trauma'.[170]

Wessely and colleagues[171**] found eight RCTs of short debriefing for distress after trauma (PTSD). Single sessions did not reduce distress, prevent later onset or reduce depression or anxiety.

Marks and colleagues[172*] selected 87 patients with PTSD (*DSM-III-R* criteria) who were allocated at random to exposure therapy ($n = 23$), cognitive restructuring ($n = 19$), exposure plus cognitive restructuring ($n = 24$) or relaxation ($n = 21$). By the end of the treatment, percentage improvement was 60%, 50% and 58% for the exposure, cognitive and combined therapy groups, respectively, compared with 20% in the relaxation group.

F45, chronic fatigue syndrome (CFS)

Price and Couper[173**] found three usable trials of CBT for chronic fatigue syndrome (CFS). There were significant benefits in physical functioning in adult outpatients compared with orthodox management or relaxation. Patients liked it.

Deale and colleagues[174*] randomised 60 patients with CFS to CBT or relaxation. At 6 months, function and fatigue improved (e.g. 70% and 63% CBT vs. 19% and 15%, respectively).

Clark and colleagues,[175] following an earlier controlled study suggesting that CBT was useful for patients with hypochondriasis, carried out a further trial to amplify the results. Patients referred by GPs and specialists in Oxfordshire who met *DSM-III-R* criteria were randomised to cognitive therapy (CT, $n = 16$), behaviour stress management (BM, $n = 17$) or waiting list (WL, $n = 15$). Both treatments were effective compared with placebo, e.g. the time spent seriously worried at the beginning and end of treatment (on a scale of 0–100) was 56 and 13 (CT), 51 and 23 (BM) and 58 and 35 (WL). A year after treatment all patients were significantly better than before.

Reid and colleagues[26] provide a comprehensive description of CFS and its treatment. RCTs do not provide sufficient evidence to support treatment with antidepressants or corticosteroids. Graded exercise can produce improvement in fatigue and physical functioning. No evidence was found for prolonged rest, which might be harmful. CBT by skilled therapists in specialist centres is effective.

F50, anorexia and bulimia

Eisler and colleagues[176*] compared RCTs of individual supportive therapy vs. family therapy for 80 people who had been in hospital for anorexia or bulimia. After discharge (i.e. when patients had been 'nutritionally rehabilitated') they were divided into four groups: early onset and short history of anorexia; early onset and long history (> 3 years); late onset of anorexia; bulimia. Ninety-one per cent were followed up. In each group people were allocated to individual or family therapy. In conclusion, patients with early onset and short history of anorexia had a good outcome in terms of body weight and regular menstrual cycles after family therapy, compared with those who received individual therapy.

Whittal and colleagues[177*] selected nine RCTs of medication (870 patients) and 26 RCTs of CBT (460 patients) for analysis. Both methods were effective for all outcomes (binge and purge frequency, depression and eating attitudes). For each outcome the effect sizes for CBT were higher than those for medication.

Carter and Fairburn[178*] compared a CBT self-help book about binge eating with six to eight sessions on the book with a facilitator. Women with weekly bulimic episodes were allocated to one of the two groups or to a waiting list. Both methods were successful compared with none, but guided self-help led to a greater reduction in binge eating.

Palmer and Treasure[179] surveyed the arrangements whereby regions commission specialist services and also discuss possible models for care. A specialised treatment service is described by Millar.[180]

F51, non-organic sleep disorders

Nowell and colleagues[181*] provide a meta-analysis of literature on the efficacy of benzodiazepines and zolpidem tartrate for chronic insomnia. There were 22 studies involving 1894 mostly middle-aged patients (60% women) who met the inclusion criteria. The authors conclude that both drugs are effective in reducing sleep-onset latency, increasing total sleep time, reducing the number of awakenings and improving sleep quality. The reviewer points out that diagnoses were not uniform, daytime functioning was not measured and the period of treatment was only 5 weeks. An earlier meta-analysis showed that behavioural treatments were effective and durable[182] but no study has yet been published comparing the two kinds of treatment.

F6, personality disorders

The point is made in Section 3 that, given the uncertainty of definition, it is no surprise that substantial problems are encountered when assigning a diagnosis of one of the eight types of disorder included in the *ICD-10* diagnostic criteria (F60). Apart from interventions aimed at helping the comorbid problems that are often the cause of referral, admission to hospital is not generally regarded as appropriate. People involved with forensic services and those in prison have often been involved with general services before and after any period of special accommodation.

The Office for National Statistics (ONS) for the DoH found that 63% of men on remand, 49% of sentenced men and 31% of women in each group had a ‘personality disorder’. Psychosis during the previous year was diagnosed in 7% of sentenced men, 10% of men on remand and 14% of women in both categories – all higher than the national yearly prevalence. Substance use was common. Twenty-five per cent of women had attempted suicide at least once during the previous year and 2% of men and women within the previous week.

Milton[183] did a postal survey of 50 inpatient forensic health care and prison services concerning the use of routine assessment instruments, which elicited 35 responses. A total of 54 different instruments were routinely employed, of which two-thirds dealt with personality assessment; the others included diagnosis, symptom severity, neuropsychology and behaviour. It is concluded that more uniformity, based on an instrument such as the International Personality Disorder Examination (IPDE),[11] should be encouraged throughout the system.

The College guidelines on the management of imminent violence on acute wards provide a list of risk factors and detailed methods of coping, but found insufficient evidence to formulate a recommendation on how to predict violence.[134]

Dissocial personality disorder (F60.2) is the only *ICD* diagnosis to mention ‘a low threshold for discharge of aggression, including violence’. A Home Office consultation paper identifies a group of ‘dangerous severely personality disordered’ people who need to be detained. Two sets of options are considered, both intended to ensure risk reduction. The proposals are controversial[108,109] insofar as they imply a role for doctors that goes beyond a responsibility to provide an expert opinion on mental state and medical treatment.

Size of effect and quality of evidence

The report from the Centre for Reviews and Dissemination, used in Section 6 as part of the evidence for or against the efficacy of medications for schizophrenia, emphasises that trials are difficult to interpret. Attention is drawn to the fact that trials are generally 'small, short in duration, include participants who are not typical of everyday practice, randomise care regimens that are difficult to generalise, have high attrition rates, and report outcomes that are of dubious clinical value. Most relevant trials are undertaken by those with clear pecuniary interest in the results'. The initial sampling is particularly crucial. A further point to bear in mind is that the new generation of drugs has not been tested for long enough to provide adequate information on the course of the disorder or to ensure that all important side-effects have been revealed. Finally, it is not yet certain that the higher costs of the new drugs can be offset by a decrease in hospital time or in indirect costs. The strictures also apply to new medications for the other *ICD-10* disorders and, in a different context, to procedures such as CBT. No selection from the recent technical literature can have been entirely successful in avoiding these problems.

Can standards based on general medicine be applied more widely?

Methods of assessing community services, such as the CPA, hospital and ward functioning, sheltered housing and occupational rehabilitation, are also open to question about their adequacy, but nevertheless should be included in evaluations of the present kind. The ratings on scales of 'size of effect' and 'quality of evidence', in particular, must be interpreted in terms of the content and context of the procedures, as briefly summarised in Section 5 and earlier in this section.

In addition to the caveats expressed above, it should be understood that the summaries are not sufficient in themselves to provide a basis for ratings. Recourse should be had to the original documents.

Two scales for rating treatments and services

Size of effect

A The procedure/service has a strong beneficial effect.
B The procedure/service has a moderate beneficial effect.
C The procedure/service has a measurable beneficial effect.
D The procedure/service has no measurable beneficial effect.
E The harm of the procedure/service outweighs its benefits.

Quality of evidence

I-1 Evidence from several consistent or one large randomised controlled trial.
I-2 Evidence from at least one properly designed randomised controlled trial.
II-1 Evidence from well-designed controlled trials without randomisation, or from well-designed cohort or case–control analytic studies.
II-2 Evidence from multiple time-series with or without the intervention; dramatic results in uncontrolled experiments.

III Opinions of respected authorities: based on clinical experience, descriptive studies, or reports of expert committees.
IV Evidence inadequate and conflicting.

Community services for people with severe mental disorders

There are substantial variations in quality of service, but overall the more active and skilled the regimen the greater the benefits: A, I-1

- satisfaction of user
- independence of user
- increased contact with staff.

There is some impact in the longer term on: C, I-1

- social functioning
- occupation
- burden on family.

There are some useful examples of sheltered activities and work, but insufficient provision and little research. A, III

There is some action to support carers, but insufficient provision and little research. B, I-2

Use of residential accommodation

Acute wards in vulnerable inner-city areas are unsatisfactory due to overcrowding and staff shortages. C, III

Guidelines for containing violence on acute wards A, III

Detailed protocols are provided in four key areas:

- a safe ward environment, calming features and activities
- risk assessment and action to de-escalate violence
- use of and training for restraint
- use of and training for medication and care in the context of violence.

24-hour nurse-staffed hostels in these areas can provide satisfactory care for some, thus relieving the pressure on acute wards. A, III

There is a shortage of accommodation for people who need longer-term non-hospital residential care. A, III

Treatments

All ratings assume that a specified regimen is followed.

Medication for schizophrenia	A, I-1
Adjunctive CBT for schizophrenia	B, I-1
Antipsychotics for bipolar disorder and mania	A, I-1
Lithium for bipolar disorder and mania when severe and resistant to antipsychotics	C, III
Medication for major depression and bipolar disorder	A, I-1
Medication and/or CBT* for phobias, anxiety and panic disorder	A, I-1
Medication and/or CBT* for OCD	A, I-1
Debriefing for distress after trauma	D, I-2
CBT for somatoform disorder	B, I-1

Medication and/or CBT* for bulimia Therapy in family context also helpful	A, I-2

*CBT tends to be somewhat more effective than medication.

7 Quantified models of care

Introduction

Authors in this series are allowed discretion in Section 7 to outline what they think future services should look like. It begins with brief reminders of the near-best and near-worst of the previous system, as the large psychiatric hospitals began to run down during the mid-1950s. Both offer important lessons. It goes on to list the seven official standards proposed in the National Service Framework for Mental Health (NSF), then deals briefly with responsibilities in primary care. The roles of secondary psychiatric and social care are discussed in the context of the material in the earlier parts of this section and the ideas in the NSF. The final part of the section provides a tentative table of needs and costs. Key technical issues vital for the design of future health and social services are discussed in Section 8.

Hospital-based to community-based services

Three hospitals chosen for study in the late 1950s provided very different social environments for their patients and also differed in the nature and degree of their contacts with local communities. One (Netherne) provided a wide range of facilities, including paid work and other occupations on-site for every patient who could benefit from them, together with sheltered housing and work outside the hospital. The second hospital (Mapperly) was adequate but not outstanding. The third (Severalls), part of which in 1961 still typified those with coercive and deadening regimens, was turned round by the appointment of a new and innovative psychiatrist. At the final 8-year follow-up its standards were close to those of Netherne. Two factors were common, although in different degrees, to all three hospitals. First, the longer patients had been resident the more likely they were to want to stay ('institutionalism'). Second, the negative symptoms of schizophrenia were augmented by a poor social environment, although this effect was reversible. The authors warned that either factor could be found in any setting, including 'in the community', that allowed long-term neglect of people with cognitive problems like those in schizophrenia.[184]

The second study involved the same three hospitals, in their role as providers of acute and follow-up care to patients, during the 5 years after first admission in 1956. The most innovative practice was the early discharge and subsequent vigorous follow-up policy initiated at Mapperley. The hypothesis for test was that this would bring rewards in the shape of fewer symptoms, greater autonomy and more satisfied families, compared with patients discharged from the other two hospitals. In fact, the clinical and care profiles at follow-up were not found to be better than those for Netherne patients. In particular, the most disabled patients were not given priority in follow-up care.[185]

Substituting for long-term hospital care: the TAPS project

An opportunity to appraise the results of deliberate reprovision in the community was later offered when two hospitals (Friern and Claybury) were earmarked for closure. The experiences of long-stay patients have been measured, first in hospital and then in new community accommodation, from 1985 to 1993 ($n = 670$). Of 523 patients (80% with schizophrenia) who survived a 5-year follow-up period, 90% were living in the community, 59% in their original housing. One-third had been readmitted at least once, but there was little crime or vagrancy. Residents valued their independence.[186,187] Residential homes had tended to increase in size to restrict costs. Most staff were untrained. Judged by restrictions, activities and social networks, the private and larger homes were least successful. Housing and staff support accounted for 90% of the care costs. Costs at Friern in 1985–86, at 1994–95 prices, were £595 per patient, compared with £665 in the community. Purchasers and providers are now concerned about the mismatch between service demand and supply, poorly defined responsibilities and cost-shifting between agencies entailed by changes to housing benefit rules.[73,188]

A National Service Framework* for mental health

The Government document adumbrating changes to be made, beginning in spring 1999, stated that care in the community had failed ‘because it left some people vulnerable, others a threat to themselves or a nuisance to others, with a small minority a danger to the public’. Other observations included the undue burden placed on families, underfunding, variable standards, low staff morale, failure to exploit the potential of the new medications, problems with the Mental Health Act and failure to provide continuity of care after discharge from hospital. Broader issues involved poor co-ordination between services, and between primary and secondary care, mismatches between health and local authorities, problems of recruitment, and shortages of many kinds. The NSF is intended to try to put these problems right.

The NSF is part of ‘a package of measures to drive up the quality of services to service users and to reduce unacceptable variations’. Standards are set by the Framework and NICE, delivered by clinical governance and monitored by CHI (*see* Section 8). The Framework is to be implemented according to seven standards.

- Health and social services should promote mental health and combat discrimination.
- Primary care teams should identify mental health needs, offer effective treatment and refer to specialist services as necessary.
- Patients should have access to services at all times.
- There should be a written care plan on action to be taken by users, carers and care co-ordinators, ‘round the clock’, when in crisis.
- Users who need it should have access to a bed, under the least restriction possible and as close to home as possible, consonant with their and the public’s protection.
- Carers’ needs should be assessed and a written care plan provided.
- Health and social services should prevent suicides by implementing the above six standards. They should also help to reduce prison suicides and develop local suicide audit.

The Framework has not been without its critics. Tyrer[189] commented that the solid base of evidence needed for these standards ‘have all the firmness of blancmange. . . . A few oases of excellence shine out . . . but no explanation is given why they remain local’. He also pointed out that a specific suggestion in the Framework, to provide a new telephone helpline (NHS Direct), was not backed by evidence and seemed unlikely to work. A further point could have been added to this criticism – that the much valued and used

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* The National Service Framework (NSF) should not be confused with the National Schizophrenia Fellowship (NSF), which has a 27-year prior claim on the acronym.

phone lines already provided by voluntary organisations such as NSF, SANE and MIND were not mentioned.

Allocation of funds

A key passage in the Framework stated that the Government had 'already committed an extra £700m over 3 years to help local health and social care communities reshape mental health services. . .'. The future speed of implementation will be shaped by evidence of increased cost-effectiveness in delivering mental health services, available resources, and rigorous performance management.

Such statements will be tested in due course. Meanwhile the amounts specified in the *Modernising Mental Health Services* circulars (HSC 1999/038; LAC 99/8) show a total of £40 million extra to be invested in general mental health services for those of working age during 1999–2000. Of this, £19 million was allocated to health authorities (now PCTs) for 24-hour staffed beds, outreach teams and atypical drugs. 'The net result is that only two of the 100 health authorities received more than £1m additional money for new developments; 71 received less than £100 000 and 53 less than £50 000.' By contrast, a placement in a private secure hospital costs about £100 000 per annum, an acute psychiatric bed £50 000–70 000 per annum, and an independent homicide enquiry £500 000–£1 million.[2]

There is £22 million earmarked mainly for social care services, and the remaining £84 million is for selected local authorities in the Mental Health Social Care Partnership Fund. Another £21 million, mainly for extra secure beds and support for the Framework, was 'biddable'.

Interaction between primary and secondary services

The second Framework standard specifies the duties of primary care teams. Goldberg and Huxley[190] described the pathways to care for mental illness in terms of five levels of prevalence:

1 in the community
2 in primary care (including those unrecognised by the GP)
3 identified in primary care
4 in contact with secondary services
5 in hospital.

At each level the prevalence becomes smaller but the disorders become more severe and costly (*see* Table 28).

Table 28: Pathways to psychiatric care.

Level 1: Prevalence in the community; 260–315 per 1000 population at risk per year
Level 2: Prevalence in primary care; 230 per 1000 at risk per year
Level 3: Identification in primary care; 101.5 per 1000 at risk per year
Level 4: Contact with mental illness services; 23.5 per 1000 at risk per year
Level 5: Hospital care; 5.7 per 1000 at risk per year

Source: Goldberg and Huxley.[190]

Depression and/or anxiety are the commonest problems and comprehensive guidelines have been published for the care required.[162] Skilled CBT, which is helpful for many of the common mental disorders and liked by patients, is not available to meet the actual let alone the potential demand from patients or GPs. The extent to which secondary services are unavailable to meet the needs of emergency and out-of-hours services is a further problem, slow to be rectified. Other difficulties identified by CSAG-1999[162] include a failure of information management, insufficient priority given to a strategy for primary mental health care, lack of information about psychotic disorders and their management, insufficient education and training programmes, and uncertainty about guidelines for prescribing. Requirements based on the conclusions of CSAG-1999[162] are generalised below for the broader range of mental health problems encountered in primary care:

- clear definition of responsibilities of PHCTs, CMHTs and specialist services
- access to appropriate psychological therapies
- practical information to support the primary care of mental disorders
- PCT strategies to prioritise disorders and identify a lead GP for planning and commissioning; DoH to ensure recording of morbidity and prescribing
- training, supervision, clinical audit and monitoring according to guidelines, including risk assessment for suicide, as part of clinical governance.

Kendrick[117] points to three problems with many guidelines on severe depression, often based mainly on an earlier joint consensus statement. The diagnosis is difficult to make in primary care, social factors are difficult to take into account and patients are often unwilling to accept drugs.

Two further observations should also be noted. Churchill and McGuire[191] found that of 1990 controlled trials of pharmacotherapies for mental disorders, based solely in primary care, 1872 were assessing medications, mostly funded by pharmaceutical firms. Mann and Tylee,[192] discussing confounders relevant to prescribing, pointed out that 'At any one time in the UK there are at least a thousand drug company representatives seeing GPs about prescribing for depression alone'. The task of evaluating the clinical value and efficacy of medications is now entrusted to NICE (*see* Section 8).

Teamwork with severely mentally ill people: morale and efficiency

Multi-disciplinary visiting panels taking part in the assessment of 11 district services (based on detailed standards created for the purpose) noted the comments of local GPs, clinical specialists and social service representatives to the effect that lines of mutual communication and consultation were often few and ineffective. The users and carers who were interviewed would have liked to be involved but their role as useful participants in the quality-control process had not been recognised. A central conclusion from the audit was that the district services providing the best care were those where personal relationships and communications between staff and management were open (*see* Table 29). High scores for morale were associated with satisfaction for patients, staff and management, and with good clinical practice throughout the organisation. Many of the recruitment and turnover problems mentioned in Section 5 are due to poor morale in wards and teams.[76,193]

The Health Advisory Service (HAS-2000) has since published an updated set of standards for adult mental health care against which services can be tested. The set covers more detail than the Framework. The role of HAS will be reviewed in relation to that of CHI, but there is no doubt that its functions must be continued.

Residential care

Official returns: a health statistics warning

A study of the coverage and accuracy of DoH central returns on the provision of mental health care in 1994 found wide discrepancies between the degree of completion in seven English districts compared with data

Table 29: Mean scores on presence and quality of district services.

District	Purchaser	Provider	Total
District A	18	37	55
District B	21	32	53
District C	16	34	50
District D	18	31	49
District E	18	23	41
District F	13	27	40
District G	11	23	34
District H	10	23	33
District I	13	19	31
District J	7	12	19
District K	8	10	18
Total	153	271	424
Mean per point	21.9	20.9	21.2

Source: CSAG-1995. There were 7 purchaser and 13 provider key points.
Correlation between purchaser and provider scores = 0.70.

specially gathered locally using defined criteria. About half the facilities were not recorded, with a range of accuracy from 30% to 78% across districts. The authors conclude that a new classification is needed, using stricter definitions (Audini *et al.*, in preparation). The sparse official data available and the need to use a large variety of sometimes incompatible sources mean that all interpretations and conclusions must be regarded as tentative.

Meeting the accommodation needs of the most acutely ill

In a descriptive study of an acute psychiatric ward in London, all violent incidents were recorded during a 15-month period. The proportion of permanent staff halved during this time, and that of agency nurses and other temporary staff doubled. Other factors changed little. The frequency of violence on the ward more than doubled. Two-thirds of the relevant variance was associated with changes in staffing patterns.[92]

The data on inner-London acute wards provided in Section 5 reinforce these observations. It is evident that many, particularly in vulnerable areas, do not meet high standards. To adopt a word that was commonly used (sometimes unfairly) in the 1950s and 1960s, at worst they can be ‘dustbins’. Overcrowding is also due to a lack of 24-hour accommodation in high-staffed, community-based hostels, particularly in inner-city areas. The intention to commission extra hostel accommodation, with fully trained staff on call throughout the 24 hours (not just sleeping in), is welcome, but substantial dedicated funding is essential. Acute wards are needed, particularly in vulnerable areas, to cope with emergencies.

Protocols set out the essential parameters[134] as follows:

- provision of a calming physical and social environment with plenty of space
- access to single-sex accommodation
- separate rooms for private interactions between patients, visitors and staff
- separate provision for indoor activities and exercise, and for smokers
- adequate and safe outside space and equipment

- training of ward teams in the de-escalation, prevention and restraint of violence
- equivalent training, part multi-disciplinary, for the staff of community teams
- effective team management with high morale
- collaboration with users and carers.

Dangerousness – and the real problems

Dangerousness is a familiar topic for political and media preoccupation, one that further echoes the pressure put on the large hospitals during the late 1950s and 1960s. That pressure would have been more effective in the long run if it had focused attention on specific problems, such as undue isolation in 'disturbed wards', the poor training of administrators, the need to build up decent residential and day-care services in the community and, above all, identification of adequate supporting funds in advance of attempting closure. The major problem today is not danger of homicide by patients, which is very rare and seldom involves an unknown member of the public. The really serious problems are suicide and suicide attempts, self-harm, self-neglect, poor accommodation, penury, loss of self-respect and burden on families.

Longer-term residential care and the concept of 'institutionalism'

The term 'institutionalism', in the context of residential care, was originally used to describe a process whereby long-stay patients in psychiatric hospitals could gradually adopt, over a period of years, an attitude of indifference about leaving or of positively wishing to stay. A similar phenomenon has been observed in other types of institution, such as the tuberculosis sanatorium in Thomas Mann's novel, *The Magic Mountain.* Particularly at risk were people vulnerable because of a lack of drive and blunting of affect. These problems are risk factors in some forms of schizophrenia, learning disability, dependent personality or physical debility. Such extra disability is often preventable or reversible, as was shown by pioneering hospital staff in the 1950s.[184,194]

Rehabilitation and the new CPA

Equivalents to institutionalism can equally occur 'in the community', where negative symptoms allied with destitution, comorbidity with drugs and disease, lack of physical and social care, and general isolation can have the same effect.[195] Twenty years on, the basic principles of care are still the same, although the large hospitals have mostly gone. Everyone at risk needs a range of available options:

- a secure, non-stigmatising home with a domestic regimen
- private, peaceful, outdoor space that does not intrude on neighbours
- daytime occupation and leisure-time activities
- graduated steps towards independence that allow for the possibility of relapse
- supervision and care by a comprehensive district and social psychiatric service.

Models of services for people with longer-term mental illness who need a degree of shelter lack specification. There is a range of options from normal but adapted and specially sited (housing) to 'core and cluster', centred round a well-staffed hostel ward or local hospital. The TAPS scheme went some way towards achieving similar objectives. Although the needs are clear, there is very little hard data on the numbers, types and costs of the provision required. This is also true of the details and numbers of long-term day centres, workshops and industrial (e.g. Remploy) enterprises required. The Framework gives only two examples, both with the worthy aim of achieving open employment, but no specification of the numbers and needs of the totality of handicapped people. There are no targets and no costings.

Slade and colleagues[196] made a similar point about disincentives that reduce the uptake of benefit entitlements by patients. Mental ill health is already associated with poverty in general. Negative symptoms plus apathy born of helplessness add a form of institutionalism without an institution. The areas of everyday living that should be considered in every district and authority when assessing the numbers, needs and quality of life of people with SMI are summarised in Figure 1.

WORKING HOURS	HOME	LEISURE
No occupational problem	Copes well domestically	Plenty of interests
Sheltered paid work	Supervised flat or lodging	Users' club
Industrial therapy day unit	Visited group home	Reserved hours recreation
Occupational therapy unit	Staffed hostel or haven	OT at home or centre
High-dependency day unit	Ward or secure day unit	Special facilities

Figure 1: Need levels of people at risk from mental illness. People can be in need in any one area and in any combination of areas.

The figure contains a set of three areas of everyday living, each with five levels of disability. A particular individual with SMI could be at different levels of competence in each area: for example, living in a staffed hostel, attending an industrial therapy day unit and belonging to a users' club. A successful project that provides a challenging work environment for people with a mental illness (most with SMI) is provided by the First Step Trust, which provides services for over 300 people in six UK centres. The work available is sufficiently flexible to provide appropriate occupation in any setting, including longer-term hospital (contact: First Step Trust, 32 Hare Street, London SE18 6LZ, www.fst.org.uk).

The costs of teams, day hospitals, day centres and workshops, estimated in the context of the survey of London's Mental Health (*see* Section 5), are shown in Table 19. There are virtually no well-designed comparisons of occupational schemes in specified districts, and only sparse data on size, costs and efficacy. The techniques needed to collect such information and place it in the context of a routinely collected data system are considered in Section 8. Meaningful occupation is the next priority after providing adequate housing. The third element in Figure 1, covering leisure activities appropriate to the needs of all disabled people, including the most handicapped, constitutes perhaps the most challenging task.

An outline model for non-residential care

According to these priorities, a numerical estimate of need should be based on a first assumption that all those in hospital or other protected housing should be offered a choice of formal or informal day activity, either within the setting or (ideally) outside it, with the expectation that at least half of such options would be taken up. Workshops with a financial incentive should be available for those who can work to a standard and keep set hours. The same range of specialist day-care opportunities should be available for all those who, whether or not in protected housing, are on the list of a CMHT, with an average of four to five half-days weekly. At least half of those with long-term disability should be attending some form of day setting. Any travel costs should be subsidised.

Allocation formulae for primary care trusts

Attention needs to be given to ensuring a fair distribution of funds to and by districts. The socio-demographic differences involved are well understood, but checks are required to ensure that poorer areas receive their full (weighted) compensation. Local implementation of the CPA is variable, prioritisation is not always based closely on need and inequitable use of resources may result. The technical problems of designing good research are undoubtedly formidable, but a start could be made by providing accurate, explicit and usable data on the service elements of the allocation formula for primary care trusts.

The dominance of forensic problems in some districts is a specific example of the problem. A suggestion for regional funding of the forensic element draws on the Government commitment in *Modernising Mental Health Care* to centralise the relevant services. The prospect of regional commissioners allocating such monies from the PCT budget has wider and interesting implications.

Quantifying the need for services of people with SMI

The peak occupation in the large hospitals was 345 per 100 000 in 1954 (*see* Section 5). None of the evidence quoted in earlier sections suggests that the incidence of SMI or the longer-term prognosis or prevalence have improved much since the mid-1960s. On the plus side, treatments are slowly getting better, and acute episodes tend to be shorter. However, the long-term course is not, so far, much improved. The official data provided in Section 5 are not of sufficient quality to allow comparison between the 1950s and the 1990s, although the minimum data set (*see* Section 8) will in time provide really useful information. Meanwhile all estimates come with a further substantial 'health warning'.

Estimated needs for sheltered residential and day occupation

The lack of a quantifiable definition for SMI is a handicap when using the numbers in hospital during the late 1950s and early 1960s to estimate the numbers of people now in need of services. The estimate derived from the London survey (*see* Table 23) suggests that a mean of about 168 people per 100 000 population of London are now using a wide range of forms of residential accommodation. The estimate for England and Wales was 147 (*see* Table 24). The estimate that was provided in the first edition of this chapter was 166. These closely similar figures were derived independently of each other. They amount to about half the complement of hospital beds that were occupied in the mid-1950s, i.e. half of 345, or 173 per 100 000. A threefold range around this figure (87–261 per 100 000) allows room for adjustment for local epidemiology and other local clinical and administrative characteristics (Table 30, *see* overleaf). Districts with unusual outliers would need further correction.

Excluding patients in intensive and acute wards, i.e. 40 (20–60 per 100 000), who should have their own comprehensive on-site facilities, at least half of those in residential care (about 68 per 100 000) would need day occupation away from the housing.

The calculation in Table 30 raises the a question of whether the present-day counterparts of the less severe users of the mid-1950s bed complement (about half, i.e. another 173 per 100 000) are also represented in, and should be candidates for, present-day services. It would be sensible to assume that some of the former residents, who had little or no need of medical or nursing facilities, simply lacked

Table 30: Estimated need for residential care: numbers and costs per 100 000 population.

Services	Places/100 000 (range)	Weekly cost (£ per client)			Total weekly cost (£ all clients)
		Housing	Other†	Total	
Intensive-care ward and acute wards	40 (20–60)	844	349	1,193	47,720
Rehabilitation and hostel wards	20 (10–30)	665	42	707	14,140
Hostels, staff awake at night	40 (20–60)	285	53	338	13,520
Hostels, staff sleep-in	24 (12–36)	238	93	331	7,994
Day-staffed or visited group homes	12 (6–18)	173	99	272	3,264
Group homes on call	14 (7–21)	140	122	262	3,668
Supported housing*	25 (12–36)	118	19	137	3,425
Total	175 (87–261)				93,731

* Includes supported bedsits, licensed landladies, etc. Costs estimated from LA sheltered housing for elderly.
† Other costs include residents' living expenses and use of non-residential services apart from staff.
The total estimate is for £93,731 per week = £4,874,012 per year.
London equivalents: inner = £6,370,000; outer = £4,052,000; total = £5,211,000.

housing alternatives. Others, like those with learning disability, dementia or other handicap, would need more specialist accommodation. The rest, perhaps about a quarter of the 1950s complement (87 per 100 000), would at least need formal day provision of the kind outlined above, under rehabilitation and the CPA.

These calculations do not take into account the numbers of people attending psychiatric outpatient clinics, nor those who went unrecognised in the primary care services of the 1950s and consequently were not referred or treated. It would be wise to assume that the estimates are on the low side. However, even as they stand, the suggested numbers needing some form of day care are likely to be substantially higher than is actually available in many if not most districts. Proper data are lacking.

Tables 30 and 31 assume that all those with an SMI who need sheltered residential and/or supported daytime and leisure-time activities should at least be offered a range of alternatives. As far as possible, opportunities should be available for gradual rehabilitation through a sequence of stages, choosing from a wide range on offer, as they were in the best hospitals like Netherne, though not in the community aftercare

Table 31: Estimated numbers of patients needing residential and/or day care per 100 000 population.

Residential setting (number/100,000)		Formal day activities (number/100,000 and range)
Intensive and acute wards	40	(20 inpatient, but off-ward day activities not included in total)
Other formal residential	135	68 (34–102) day centre/workshop, etc.
'Own accommodation'		87 (44–132)
Total	175	155 (78–234)

The term 'formal' indicates that patients' care has been formally agreed and funded.

of those early days. Figure 1, together with the two estimates of numbers and costs (*see* Tables 30 and 31), is put forward as a conservative basis for quantifying the likely needs for care in the year 2000. The total residential need is assessed at 87–261 places/100 000 population, with 78–234 places/100 000 for day care. The uncertainties in this exercise provide a reminder of the urgent need to improve the national, regional and local data on which the future of the mental health and social services should be intelligently planned. Section 8 is highly relevant.

8 Audit, outcome, information and research

Monitoring progress towards a better mental health service

The paragraph that opens 'A National Service Framework for mental health' in Section 7 lists Government intentions to bring about radical changes in the mental health services. To judge progress, and thus anticipate problems before they become insolvable, a proper monitoring system should be put in place. This requires a system of new and demanding standards, the achievement of which could be regularly monitored. In particular, relevant information of a high standard should be routinely collected and made available to all relevant health and social agencies.

Options, guidelines and standards

Geddes and Wessely[197] suggest three levels of clinical policy statement.

- 'Options' are systematically derived, up-to-date statements, providing summaries of evidence on given topics.
- 'Guidelines' are similar, but are aimed at helping individual patients and clinicians to make decisions. They should be supported by evidence.
- 'Standards' need to be applied rigidly. The authors point to the CPA as an example of a standard that should have been a guideline, since the overall outcomes from case management are actually unclear (*see* Section 6). Another example is compulsory debriefing after trauma, now regarded as being unnecessary and perhaps even harmful.

A systematic review of the evidence is required at all three levels, but it is dangerous to call something a standard unless the outcomes are truly known. The distinctions are clear, but top-down adjudication on terminology (e.g. from CHI) is required.

Standards and the wider quality agenda

Lelliott[198] suggests five levels at which 'standards' (the term here covers guidelines as well) can usefully be applied. Each is contingent on the others:

- desired clinical practice, e.g. performance of a practitioner with a patient
- service delivery standards, e.g. assessment, care planning
- organisation of care, e.g. responsibilities and activities of managers
- intra-organisational, e.g. training and supervision, staff levels and skills mix
- population needs assessment, resource allocation and joint planning.

Implementing clinical standards

Claire Palmer[199] points out that getting standards used in routine clinical practice is even more complicated than creating them. The health service has not been very successful in these crucial areas, and helpful advice is provided.

The audit cycle provides an effective basis for clinical information systems

- Assessment of a person's needs.
- Formulation of actions required to meet those needs (e.g. staff, treatments, settings).
- Follow-up to review outcome and, if necessary, reassess needs for another cycle.
- Although every patient's profile is unique, a core of such information (a clinical data set) can be recorded that makes clinical comparisons possible.

The uses of a minimum data set (MDS)

A data set for general psychiatry has been tested and revised.[200] The MDS aggregates data required for existing statistical returns and for the new CPA information systems.

- The MDS does not make large demands on busy clinicians.
- It provides a profile of clinical symptoms and their severity (HoNOS) within a setting of clinical and administrative information that is already collected.
- Training, supervision and confidentiality are required to ensure reasonable comparability and security when HoNOS is used as part of an MDS.

When aggregated and anonymised across a specified clientele, supervised for quality and protected against misuse, such profiles can provide a basis not only for clinical needs, but also for sector, district and regional information systems.[201] Currently, trusts have a complex array of information systems, but a data set could be implemented nationally over a 4-year period.[202]

Outcome indicators

A working group convened by the DoH has undertaken a comprehensive review of outcome indicators for SMI and suggested 18 items to be implemented by periodic survey, with a further six items to be developed. Pilot trials are needed to establish feasibility and usefulness in practice.[203]

Care co-ordination research base

Care co-ordination (*see* Sections 5 and 6) when fully implemented, together with the minimum data set, could provide a useful profile of bottom-up information for comparison across as well as within districts. Rapid progress also needs to be made towards providing compatible information about local authority activities, since many patients use both medical and social care, whether simultaneously or at different times.

Standards for auditing hospital care

A method for auditing and comparing the hospital services provided in 11 districts has been tested in a pilot project, the design of which could be adapted for more extensive comparative studies of standards of care.[76,193]

- Create clinical and administrative standards relevant for the purpose.
- Compare against performance in the chosen facilities.
- Report results to each facility and agree any action needed.
- Repeat the procedure after an agreed period to continue the audit cycle.
- Compare across facilities to extract maximum value from the data.

The information gathered in the CSAG study addressed issues (such as organisational culture and staff morale) that are vital for efficiency but difficult to measure routinely.[204] It also demonstrated the need for tight collaboration between health and social systems. Such studies should be of interest to the CHI (*see* below).

Collecting, using and protecting routine information

A study of the coverage and accuracy of DoH central returns on the provision of mental health care in 1994 found wide discrepancies between the degree of completion in seven English districts compared with data specially gathered locally using defined criteria. About half the facilities were not recorded, with a range of accuracy from 30% to 78% across districts. The authors conclude that a new classification is needed using stricter definitions. The sparse official data available, and the need to use a large variety of other, sometimes incompatible sources, means that all interpretations and conclusions must be regarded as tentative. Collecting the information needed at these levels in order to provide a solid base for the care of people with the full range of mental disorders raises precisely the same problems. The Health Advisory Service-2000 has provided standards for adult mental health services (May 1999). The NHS Information Authority (April 1999) is intended to deliver lifelong electronic health records, 24-hour access, seamless care for patients and fast public access to information. A key issue raised by electronic patient records is the necessity for ensuring privacy.[48,205]

Communication between the bodies responsible for community care requires compatible information on services and needs in common-core data sets. Without such knowledge, clinical governance and evidence-based practice cannot be achieved. CHI has developed clinical governance using reviews of trusts, health authorities and PCGs, and more recently PCTs, e.g. reviewing implementation of the Mental Health Framework (*see* Section 7). The incorporation of social data will become essential.

A fair distribution of funds for mental health services

The York resource allocation formula is intended to provide an equitable distribution of funds for mental health services to each English health authority (now PCTs). The amount actually spent on services is decided by the commissioning agency. A comparison of expenditure and allocation amongst health authorities showed wide variability, with relative underspending in deprived areas other than the four inner-London boroughs. PCTs (particularly in deprived areas outside London) should be informed of the implications of any formulae so that shortfalls in expenditure relative to allocation are avoided.

The National Institute for Clinical Excellence (NICE)

A central aim of NICE is to identify new treatments likely to impact on the NHS, consider their clinical and cost-effectiveness, and accept or reject them. More generally, it is to appraise evidence on health technologies, co-ordinate or take over guideline development, promote clinical audit and undertake confidential enquiries, thus covering many of the tasks outlined above. There will be no lack of work. Two of the first NICE enquiries were concerned with mental health treatments. An early objective for NICE was to apply high and comparable standards of inspection to drug trials, including sampling, design and methodology, standardised disclosure of side-effects and drop-outs, and evidence for claims of improvement over other drugs. This concern with stringent methodology is fully compatible with the concern expressed by Ellis and Adams[206] about the 'cult of the double-blind placebo-controlled trial', which is not the be-all and end-all of methodology. The extra costs of the 'atypical medications' that have proved useful so far could almost account for the £700 million over 3 years announced in *Modernising Mental Health Services*. The old question 'Who pays for community care?' still needs to be answered.[207]

Appendix I: List of *ICD-10* categories, F2–F6

[F0: Dementia, including symptomatic mental disorders]
[F1: Mental and behavioural disorders due to psychoactive substance abuse]

F2: Schizophrenia, schizotypal and delusional disorders

F20.0	Paranoid schizophrenia
F20.1	Hebephrenic schizophrenia
F20.2	Catatonic schizophrenia
F20.3	Undifferentiated schizophrenia
F20.4	Post-schizophrenic depression
F20.5	Residual schizophrenia
F20.6	Simple schizophrenia
F21	Schizotypal disorder
F22.0	Delusional disorder
F23.0	Acute polymorphic psychotic disorder
F23.1	With symptoms of schizophrenia
F23.2	Acute schizophrenia-like psychotic disorder
F23.3	Other acute delusional psychotic disorder
F24	Induced delusional disorder
F25.0	Schizoaffective disorder, manic type
F25.1	Schizoaffective disorder, depressive type
F25.2	Schizoaffective disorder, mixed type

F3: Mood (affective) disorders

F30.0	Hypomania
F30.1	Mania without psychotic symptoms
F30.2	Mania with psychotic symptoms
F31.0	Current episode, hypomanic
F31.1	Manic without psychotic symptoms
F31.2	Manic with psychotic symptoms
F31.3	Moderate or mild depression
F31.4	Severe depression without psychotic symptoms
F31.5	Severe depression with psychotic symptoms
F31.6	Current episode, mixed
F31.7	Currently in remission
F32.0	Depressive episode, mild severity
F32.1	Moderate severity
F32.2	Severe depressive episode without psychotic symptoms
F32.3	With psychotic symptoms
F33.0	Recurrent depressive disorder, current episode mild severity
F33.1	Moderate severity
F33.2	Severe without psychotic symptoms
F33.3	With psychotic symptoms
F33.4	Currently in remission
F34.0	Cyclothymia
F34.1	Dysthymia
F38.0	Other single affective disorders
F38.1	Other recurrent affective disorders

F4: Neurotic, stress-related and somatoform disorders

F40.0	Agoraphobia
F40.1	Social phobias
F40.2	Specific (isolated) phobias
F41.0	Panic disorder (episodic paroxysmal anxiety)
F41.1	Generalised anxiety disorder
F42	Obsessive–compulsive disorder
F43.0	Acute stress reaction
F43.1	Post-traumatic stress disorder
F43.2	Adjustment disorders
F44.0	Dissociative amnesia
F44.1	Dissociative fugue
F44.2	Dissociative stupor
F44.3	Trance and possession disorders
F44.4	Dissociative motor disorders
F44.5	Dissociative convulsions
F44.6	Dissociative anaesthesia and sensory loss
F44.7	Mixed dissociative (conversion) disorders
F44.8	Other dissociative (conversion) disorders
F45.0	Somatisation disorder
F45.1	Undifferentiated somatoform disorder
F45.2	Hypochondriachal disorder
F45.3	Somatoform autonomic dysfunction
F45.4	Persistent somatoform pain disorder
F48.0	Neurasthenia (fatigue syndrome)
F48.1	Depersonalisation–derealisation syndrome

F5: Behavioural syndromes associated with physiological disturbances and physical factors

F50	Eating disorders
F51	Non-organic sleep disorders
F52	Sexual dysfunction
F53	Mental and behavioural disorders associated with the puerperium
F54	Psychological disorders associated with disorders classified elsewhere
F55	Abuse of non-dependence-producing substances

F6: Disorders of adult personality and behaviour

F60.0	Paranoid personality disorder
F60.1	Schizoid personality disorder
F60.2	Dissocial personality disorder
F60.3	Emotionally unstable personality disorder
F60.4	Histrionic personality disorder
F60.5	Anankastic personality disorder
F60.6	Anxious (avoidant) personality disorder
F60.7	Dependent personality disorder
[F7:	Mental retardation]
[F8:	Disorders of psychological development]
[F9:	Behavioural and emotional disorders with onset in childhood and adolescence]

Appendix II: Mental Illness Needs Index (MINI): one-year predicted period prevalence per 100 000 population

This index is intended to meet three requirements:

- grounded conceptually on evidence that the factors used are associated with mental illness
- empirically quantified
- based on statistical indicators available for the relevant geographical areas.

The MINI was commissioned by the DoH as part of the Mental Illness Research and Development Programme. The empirical work was undertaken in the former North East Thames Region, concentrating chiefly on a set of 558 electoral wards. There was a sharp gradient of bed use and admission prevalence, the highest values being in the inner city.

The predictor variables used were as follows:

- permanently sick
- unemployed
- moved in last year
- Black Caribbean
- Indian subcontinent
- proportion single, widowed or divorced
- proportion living in hostels or common lodging houses
- proportion living in a house with no access to a car.

The numbers were calibrated from 1991 data using ONS clusters. They are likely to be a little higher now but there is no reason to suppose that they will have changed relative to each other. Details of the analyses are given by Glover and colleagues (1998), who also provide caveats as to the strengths and weaknesses of the model. 'The MINI seems to predict the substantial variation in mental health care as well as the York index and seems to perform better than Jarman's UPA. . . . A computer program calculating the index for any sector definable in terms of electoral wards in England and Wales and relating this to published ranges of required service provision is available from the authors.'

Reference

Glover GR, Robin E, Emami J, Arabscheibani GR. A needs index for mental health care. *Soc Psychiatry Psychiatr Epidemiol* 1998; **33**: 89–96.

Health authority	**MINI predicted prevalence**	**ONS cluster***
Northern and Yorkshire		
Bradford	292.0	4 Urban
Calderdale and Kirklees	264.3	4 Urban
County Durham	304.0	5 Mining and industrial
East Riding	270.8	4 Urban
Gateshead and South Tyneside	347.3	5 Mining and industrial
Leeds	293.8	4 Urban
Newcastle and North Tyneside	343.6	5 Mining and industrial
North Cumbria	243.1	1 Rural
North Yorkshire	220.1	1 Rural
Northumberland	249.6	4 Urban

Reference (continued)

Health authority	MINI predicted prevalence	ONS cluster*
Sunderland	357.4	5 Mining and industrial
Tees	316.9	5 Mining and industrial
Wakefield	274.5	5 Mining and industrial
Trent		
Barnsley	311.3	5 Mining and industrial
Doncaster	299.4	5 Mining and industrial
Leicestershire	213.7	1 Rural
Lincolnshire	210.0	1 Rural
North Derbyshire	231.2	1 Rural
North Nottinghamshire	244.1	1 Rural
Nottingham	270.8	4 Urban
Rotherham	274.5	5 Mining and industrial
Sheffield	306.7	5 Mining and industrial
South Derbyshire	227.5	1 Rural
South Humberside	244.1	5 Mining and industrial
Anglia and Oxford		
Bedfordshire	201.7	2 Prospering
Berkshire	184.2	2 Prospering
Buckinghamshire	163.0	2 Prospering
Cambridge and Huntingdon	177.7	2 Prospering
East Norfolk	209.1	3 Maturing
North West Anglia	203.5	1 Rural
Northamptonshire	200.8	1 Rural
Oxfordshire	191.5	2 Prospering
Suffolk	187.9	1 Rural
North Thames		
Barking and Havering	231.2	4 Urban
Barnet	254.2	3 Maturing
Brent and Harrow	298.4	3 Maturing
Camden and Islington	455.1	6 Inner London
Ealing, Hammersmith and Hounslow	333.5	3 Maturing
East and North Hertfordshire	175.0	2 Prospering
East London and the City	419.2	6 Inner London
Enfield and Haringay	324.2	2 Prospering
Hillingdon	201.7	2 Prospering
Kensington, Chelsea and Westminster	437.6	6 Inner London
North Essex	184.2	2 Prospering
Redbridge and Waltham Forest	285.5	3 Maturing
South Essex	207.2	4 Urban
West Hertfordshire	182.3	2 Prospering
South Thames		
Bexley and Greenwich	256.1	3 Maturing
Bromley	209.1	2 Prospering
Croydon	257.0	3 Maturing
East Kent	249.6	3 Maturing
East Surrey	170.4	2 Prospering
East Sussex, Brighton and Hove	270.8	3 Maturing

Kingston and Richmond	238.5	2 Prospering
Lambeth, Southwark and Lewisham	408.1	6 Inner London
Merton, Sutton and Wandsworth	304.9	3 Maturing
West Kent	193.4	2 Prospering
West Surrey	164.8	2 Prospering
West Sussex	195.2	2 Prospering
South and West		
Avon	234.9	2 Prospering
Cornwall and Isles of Scilly	222.9	1 Rural
Dorset	215.5	3 Maturing
Gloucestershire	198.9	2 Prospering
Isle of Wight	244.1	3 Maturing
North and East Devon	218.3	1 Rural
North and Mid Hampshire	160.2	2 Prospering
Portsmouth and South East Hampshire	233.9	4 Urban
Somerset	190.6	1 Rural
South and West Devon	254.2	3 Maturing
Southampton and South West Hampshire	219.2	4 Urban
Wiltshire	182.3	2 Prospering
West Midlands		
Birmingham	322.4	4 Urban
Coventry	289.2	4 Urban
Dudley	218.3	1 Rural
Herefordshire	202.6	1 Rural
North Staffordshire	265.3	5 Mining and industrial
Sandwell	290.1	4 Urban
Shropshire	206.3	1 Rural
Solihull	185.1	2 Prospering
South Staffordshire	189.7	1 Rural
Walsall	265.3	4 Urban
Warwickshire	201.7	1 Rural
Wolverhampton	294.8	4 Urban
Worcestershire	192.5	1 Rural
North and West		
Bury and Rochdale	279.1	4 Urban
East Lancashire	287.4	4 Urban
Liverpool	422.8	5 Mining and industrial
Manchester	425.6	5 Mining and industrial
Morecambe Bay	264.3	3 Maturing
North Cheshire	263.4	5 Mining and industrial
North West Lancashire	306.7	3 Maturing
Salford and Trafford	308.6	4 Urban
Sefton	313.2	3 Maturing
South Cheshire	210.0	1 Rural
South Lancashire	212.7	1 Rural
St Helen's and Knowsley	335.3	5 Mining and industrial
Stockport	223.8	2 Prospering
West Pennine	288.3	4 Urban
Wigan and Bolton	289.2	5 Mining and industrial
Wirral	300.3	3 Maturing

* Column 3 refers to the ONS area classification.

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