
Physical health of patients in continuing care

Alistair Santhouse & Frank Holloway

As psychiatrists, we are responsible for large numbers of patients who require follow-up over years, and often lifelong. Usually these patients suffer from chronic psychotic illnesses, and their psychiatrist may be their main point of contact with the medical profession. As a group they face a whole range of problems – not only from the psychiatric condition itself, with its associated stigma and psychosocial stresses, but also from unemployment, poverty, poor housing and worse physical health.

This review will look at the evidence that patients in continuing care have increased morbidity and mortality. The types of illness excess will be examined and explanations suggested as to why such an increase exists. Finally, we present practical steps that might usefully be taken to reduce physical illness and premature death in this vulnerable group.

Epidemiology

Numerous studies have investigated the physical health of the chronic psychiatric population, dating back to the mid-19th century (although anecdotally before this). Bleuler and Kraepelin both talked of increased morbidity and mortality, and Brown (1997) quotes studies from the mid-19th century in which the mortality of 'lunatics' was 3–14 times higher than that of the general population.

All modern studies show an increase in the standardised mortality ratios (SMRs) for people with a mental illness. (Note: for SMRs cited in this paper, the reference category has been taken as 1 rather than 100, to provide uniformity across the papers

quoted.) The most common focus in the literature is on schizophrenia, but the SMR for many other conditions is high. Harris & Barraclough (1998) conclude from an analysis of 152 studies covering 27 mental disorder categories that all mental disorders have an increased risk of premature death. Meta-analysis (Brown, 1997) showed an aggregate SMR for schizophrenia of 1.5 (a figure close to the Harris & Barraclough study). It also showed that only 80% of people with schizophrenia die from natural causes, compared with 97% of the general population. Unnatural deaths accounted for roughly 40% of the increased mortality, and natural deaths about 60%.

A retrospective study in Canada involving over 3500 patients showed an SMR of 2.4. The authors estimated the life expectancy of someone with schizophrenia to be around 20% shorter than that of the general population, and noted that the increased mortality is largely due to the young dying early (Newman & Bland, 1991). Accidents and suicide cause the excess of unnatural deaths. Suicide, accounting for roughly 10% of all deaths in schizophrenia, has an overall SMR of 8.4 (Brown, 1997), that is, suicide is 8.4 times more likely in this group than in the population at large. Accidents have an SMR of roughly 2.0, while homicide is considerably more likely (SMR 7.3) but overall sufficiently uncommon to account for only 1% of the excess mortality in a population with schizophrenia.

Bipolar disorders have an SMR of 2.0, with unnatural causes of death nine times more likely, and natural causes of death one-and-a-half times more likely. Among long-stay in-patients of mixed diagnoses, the SMR remains high at 1.8. Overall, 'community-based care' has an SMR of 2.0, and

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mixed psychiatric out-patients an SMR of 1.8 (Harris & Barraclough, 1998).

Natural causes of excess mortality

From which medical illnesses do continuing care patients suffer? By and large, in schizophrenia, it is the same range of illnesses as the general population – although the most robust findings seem to show that it is an increase of heart disease, respiratory disease, endocrine disease, infections and (in men) gastrointestinal disease that accounts for the increased mortality. Curiously, deaths from cancer and particularly lung cancer in men are reduced – although this is not a uniform finding. Mortensen & Juel (1993) calculated an ‘avoidable mortality’ factor based on age of death as an indicator of quality of medical care, and showed that this was increased in men (SMR 2.19) – that is, that many deaths in these patients are avoidable if treatment is given.

Sudden death

Ruschena *et al* (1998) noted an increase in sudden deaths among mixed psychiatric patients compared with those not in contact with services. In total, sudden death was five times more likely in this group, and even aside from suicide and accidents, the sudden death rate was still higher. Among these, the excess of natural deaths was accounted for by death due to cardiovascular disease. The authors speculated that cardiovascular deaths may relate to aspects of pharmacological treatment, and perhaps, in part, to generally poor standards of health care. Comorbid substance misuse further increased the risks.

Infectious diseases

Human immunodeficiency virus (HIV) and hepatitis C infection are emerging problems affecting people with long-term mental illness. Sewell (1996), looking at the few studies to have examined the prevalence of HIV in schizophrenia (in the USA), provides a range of 5–7% of HIV infection, with worrying implications for the future care of patients and the interaction between these two illnesses. Tuberculosis, traditionally associated with schizophrenia, again appears set to rise among the mentally ill for a number of reasons, including bacterial resistance and patient lifestyle (see below).

Causes of excess morbidity

Medication

A range of non-life-threatening illnesses are also prevalent. Neurological side-effects of neuroleptic medication, such as Parkinsonian symptoms, akathisia and tardive dyskinesia, are widely known. Hypotension may cause falls and other injuries. Other neuroleptic side-effects include sexual dysfunction, antimuscarinic effects (dry mouth, urinary difficulties, blurred vision, constipation), weight gain, and gynaecomastia or menstrual disturbances. Weight gain itself is a cause of further morbidity, with secondary osteoarthritis, cardiovascular risk, gallstones, diabetes mellitus, sleep apnoea and hiatus hernia (Clark, 1994).

Self-care

Brugha *et al* (1989) looked at unmet need in the physical health of the mentally ill. Forty-nine per cent of 121 subjects were reported to be overweight. A simple rating of oral hygiene showed the presence of dental or gum disease to be 28%. The problem of oral hygiene is taken up by Cormac & Jenkins (1999) who expand on the effects of poor dental hygiene in psychiatric populations, and subsequent discomfort, poor speech, halitosis and effects on social presentation.

Self-harm

There is a small but important group of patients who have ongoing morbidity following attempts at self-harm, particularly those who attempt suicide or self-injury by jumping from heights.

Explanations for increased morbidity and mortality

There are many possible reasons why psychiatric patients in continuing care suffer a disproportionate amount of physical illness, and tend to die younger. The explanations are an interplay of patient lifestyle and socio-economic status, behaviours in seeking health care, doctor’s ability and willingness to diagnose illness, the treatments the patient must take (both for medical and psychiatric indications) and the patient’s compliance with medical advice (Box 1).

Box 1. Reasons for worse physical health of psychiatric populations

Patient lifestyle and socio-economic status
Behaviour in seeking health care
Factors relating to doctor in diagnosis of illness
Treatment and compliance
Patient lifestyle

Patient lifestyle

Homelessness

People with continuing psychiatric difficulties have in the past been subject to exploitation and have always had to endure worse living conditions than most in the population. Homelessness is common among psychiatric populations, with reduced social networks, reduced family support and lack of employment being likely contributors. Herman *et al.*, (1998), in a study of persons newly hospitalised with a psychotic disorder, showed that 15% had had an episode of homelessness either prior to admission or within two years of their first psychiatric hospitalisation. Those with negative symptoms of schizophrenia, and Black patients rather than White, were especially at risk in this American study. Other lifestyle issues may contribute to morbidity.

Education

Lack of education about healthy living and eating, as well as poverty and poor living conditions, may lead to unhealthy diets and, in the extreme, to malnutrition. We have already discussed the problems of lack of attention to dental care and poor oral hygiene. Apathy and loss of motivation, with consequent lack of exercise, serve to compound many of the problems outlined above.

Smoking

Patients with schizophrenia are far more likely to misuse substances of a wide variety. Smoking is more common, with an increase among older patients with schizophrenia reported to be six times that of controls (with a rate of 7%) in one study (Jeste *et al.*, 1996). Current smoking was related to earlier onset of illness and higher daily neuroleptic dose – although the latter may have been the effect of enzyme induction caused by tobacco products leading to higher metabolism of neuroleptics and hence a higher dose. Among psychiatric out-patients, the rate of smoking is increased by a rate of

1.6 times compared with controls, with prevalence especially increased in those with schizophrenia and mania, and those previously admitted to hospital (Hughes *et al.*, 1986). Smoking is a major risk factor for cardiovascular and respiratory disease.

Alcohol

The prevalence of alcohol consumption is known to be higher. Estimates from the Epidemiologic Catchment Area (ECA) study are that alcohol dependence and abuse are over three times higher among a population with schizophrenia compared with the general population, with prevalence rates of about 30% (Regier *et al.*, 1990). Alcohol use is thought to be contributory to the increase in gastrointestinal symptoms and, in particular, peptic ulceration – although alcohol has an enormous number of effects on both the physical and psychological well-being of the user. Alcohol use in people with schizophrenia is associated with lower age, male gender, non-compliance with medication and use of other street drugs, as well as chronic medical problems, reduced psychosocial supports and increased rates of hospitalisation. This appears to be the case for those over and under 40 years of age, and applies to mild as well as heavy drinkers (Drake *et al.*, 1989).

Drugs

Drug misuse is also a factor in increased morbidity. A person with schizophrenia is a little over six times more likely to misuse substances, and in those with a diagnosis of drug use disorder, schizophrenia will account for just under 7% of them (Regier *et al.*, 1990). This comorbid drug use has direct effects on physical symptoms: that is, injection of drugs exposing to risk of HIV and hepatitis B and C, as well as abscesses and infective endocarditis; cannabis ingestion typically involves smoking of tobacco without filters on the cigarettes; and cocaine and amphetamines are epileptogenic. Indirect physical effects would include exacerbation of psychiatric symptoms and possibly poorer judgement and lack of awareness of risk, thereby leading to unprotected sex and poor impulse control.

Polydipsia

Some patient behaviours, although not strictly lifestyle issues, put them at risk of morbidity. Polydipsia is a condition in which patients drink excessive amounts of fluid. This may be secondary to a known cause, such as disease (i.e. diabetes mellitus) or the side-effects of medication – either acting directly on the kidneys (i.e. lithium) or indirectly, for example causing a dry mouth and stimulating thirst (i.e. procyclidine). Primary

polydipsia is where this excessive fluid intake cannot be explained by other causes. The motivation to drink excessively is diverse, but might include reasons relating to psychosis, hypochondriasis, and perhaps even boredom. Although the condition itself is not well-understood, the effects of polydipsia are to cause initially lethargy, nausea and vomiting, and – where severe hyponatraemia occurs as a dilutional effect of water intoxication – fits and ultimately death. In a cross-sectional study looking at the prevalence of water intoxication in a long-term institution, 26% of a sample of 360 patients had primary polydipsia (de Leon *et al*, 1996). It is likely that polydipsia is more common among those living in institutions.

Poverty

People with a chronic mental illness are, in general, poor, ill-housed and unemployed. Their excess mortality and morbidity is shared with those of low economic status within the general population.

Illness behaviour

The sequence of events that leads to someone consulting their doctor is a complex one. The first step is awareness of a symptom as morbid, and then subsequently perceiving it as in need of medical attention. This second step passes through a number of filters, including self-medication, learned behaviours, lay advice, convenience of taking time off, and waiting for symptoms to abate naturally before a doctor is consulted.

Patients with chronic mental health problems less frequently present with physical problems. Pain is an important percept in the recognition of illness and insight may be lacking in the perception of this symptom. It is reported that people with schizophrenia have a higher pain threshold. A review by Dworkin (1994) cites papers reporting absent or diminished pain among patients with schizophrenia in conditions as diverse as appendicitis, perforated peptic ulceration, fractures, burns and myocardial infarction.

There may be avoidance of health professionals for a variety of reasons, including apathy and mistrust of the medical profession. It should be noted that a significant proportion of the people with chronic mental illnesses are not registered with a general practitioner (GP), and this applies particularly to those who are also homeless. Even where medical attention is sought, there may be difficulties making and keeping appointments or remaining in a waiting room. Communication skills may be poor when the doctor is seen, and patients

may be more accepting of an inferior service. If treatment is offered, compliance with it is frequently poor. This may be because of a lack of explanation or understanding about benefits of the treatment, forgetfulness about taking a course of treatment, or disinclination to take further medication, especially if there is a lack of trust between doctor and patient.

Factors relating to doctors

One of the issues that concerns psychiatrists is who should actually be providing medical care to their patients. A study by McIntyre & Romano (1977) reported that although most psychiatrists believed that a physical examination was important, especially when a patient was taking medication, less than 10% were actually doing one on a regular basis in the out-patient department. A competent physical examination of patients, most authorities agree, is mandatory for each new referral unless this has already been carried out elsewhere – and on a regular basis for any patient receiving neuroleptic medication. Reasons cited as to why physical examinations were not performed included a perceived lack of competence in physical examination, and concern that examination might affect the relationship with the patient (a claim largely unsupported by other evidence). Despite the fact that patients in continuing care have a large number of physical problems, psychiatrists do not have the confidence in their own abilities to diagnose them. Usually, and arbitrarily, in many psychiatric hospitals physical examinations are performed for those patients admitted to a ward (when a more junior doctor closer to medical jobs is available) but not for out-patients. To compound the difficulties of physical examination in out-patients, facilities such as ophthalmoscopes and other neurological examining equipment are often lacking.

There is frequently confusion or conflict between the patient's GP and the psychiatrist about responsibility for long-term physical care of patients. Kendrick *et al* (1991) asked 369 GPs whether they thought that physical problems should be screened for by psychiatrists or themselves. Thirty-seven per cent thought the psychiatrist should do this, and 77% thought that the GP should (the question was asked twice, first for psychiatrists, then for GPs). There was much wider agreement that the GP should actually manage the physical problem (93%).

At the least, therefore, psychiatrists should be trying to identify physical problems, even if they are not expected to treat all of them. There are a number of reasons why this should be so. Perhaps the most

obvious relate to side-effects of medication – thus, neuroleptics, with their large side-effect profile (see above), require monitoring, with full blood counts and electrocardiograms (ECGs) where larger doses are given. Lithium's side-effects and toxic effects need supervision, including measurement of renal and thyroid function. One should also be aware of side-effects of other psychoactive drugs. Also, the psychiatrist may be seeing the patient frequently, and therefore may be the first to notice a change in the patient's physical condition. An excellent review article by Felker *et al* (1996) noted that there are no typical presentations of medical problems; in fact, atypical presentations are relatively more common where there is medical and psychiatric comorbidity. The causes of excess morbidity are the same illnesses as for the rest of the population, but these can often take the form of non-specific symptoms, such as change in vision. Additionally, and importantly, unless the psychiatrist thinks of physical problems, then important diagnoses will be missed. There are a number of medical conditions which present with psychiatric symptoms (McClelland & Wilson, 1997) and these usually cannot be elucidated by psychiatric symptoms alone (Box 2).

Where specialist opinion is sought, patients with long-term psychiatric illness present management problems to the physicians and surgeons looking after their care. Felker *et al* (1996) systematically review the reasons for this. Cognitive impairment will hinder history-taking, and inadequate histories will lead to erroneous diagnostic assumptions. This will be compounded when it is difficult to corroborate histories. The physician may also find patient behaviour difficult to tolerate, embarrassing and

disruptive, not in keeping with the 'rules' of a consultation, and, especially where the patient generates anxiety or resentment, the process of history and physical examination will likely be curtailed. There may be less time giving explanations to patients and negotiating treatment, and poorer follow-up. In providing explanations, few medical attendants take adequate account of the information-processing deficits experienced by people with schizophrenia.

Treatment may be more cursory, and a compromise of the ideal. Cormac & Jenkins (1999), talking about dental care, notes that dentists are more inclined to treat difficult psychiatric patients' dental problems by tooth extraction rather than restoration. A similar pattern of treatment may happen in specialist medical or surgical clinics, such as empirical and pragmatic treatment of upper gastrointestinal symptoms with medication, rather than investigative procedures such as gastroscopy.

What steps may be taken to minimise physical comorbidity?

A first step would be the education of health professionals, both within a psychiatric setting and in the general medical, surgical and general practice clinics. Psychiatrists need to be aware of the scale of the problem and aware that with vigilance they can influence outcome for their patients. Continuing medical education for psychiatrists to rehearse medical knowledge would allow them to gain the confidence that many appear to lack, and would reinforce the importance of arriving at a medical diagnosis. A good working relationship with physicians and surgeons interested in working with patients in continuing care would be of great benefit for both referrals and informal advice. Colleagues in hospital medicine need to be aware of the difficulties of providing medical assessments, and be encouraged to allow longer appointment times and indulge difficult or awkward behaviour more than they might otherwise. Liaison clinics with psychiatrists and other specialists could allow better assessments to be made.

Paramedical professionals – such as community psychiatric nurses, occupational therapists, physiotherapists or social workers – involved with care of patients in continuing care may be encouraged to act as advocates for their patient's physical health. Patients themselves should be encouraged to

Box 2. Some physical causes of psychiatric disease

Neurological

Epilepsy
Cerebral tumours
Cerebrovascular disease
Hydrocephalus
Intracerebral infection (e.g. syphilis, HIV)

Systemic

Heart disease (e.g. endocarditis)
Liver disease
Endocrine and metabolic disease (e.g. thyroid disease, Cushing's disease)
Drugs/toxins
Autoimmune diseases (e.g. systemic lupus erythematosus)

present themselves for checks of their physical health (Box 3). There is a role for the education of patients about a range of lifestyle issues, such as diet, exercise, sexual health, smoking, etc. These should be backed up by positive action, with access to dietitians, clinics to give up smoking and so forth.

Screening

Screening may be divided into physical screening and laboratory tests.

In a study looking at unmet need in physical health of people with long-term mental illnesses, Brugha *et al* (1989) screened – first, using a thorough history, and subsequently (among those who consented), using laboratory tests – 145 long-term users of services. Fifty-nine were judged to have a physical health problem and in 10 of these the problem was perceived to be unmet. Of the 88 who had laboratory tests, 39 were adjudged to have unmet needs – many not urgent, but some important, for example, undetected hypothyroidism. Overall, they considered that 12 patients had important unmet needs, and of the laboratory tests done, thyroid function tests and liver function tests were especially useful.

Use of laboratory tests can detect coexisting physical diseases (further details are available from the authors upon request).

- They may monitor known physical diseases, such as diabetes, hypothyroidism, liver disease, etc.
- There may be disturbances secondary to the psychiatric condition, such as malnutrition, although these need to be picked up within a couple of days after admission, as they correct quickly on a normal diet.

Box 3. Ways to reduce physical morbidity

Education and encouragement of patients
 Continuing education of doctors (across range of specialities)
 Good inter-disciplinary relationship between psychiatry and other specialities
 Longer appointment times in general medical/surgical clinics
 Liaison clinics
 Patient advocacy for health issues
 Screening for disease
 Regular review of health issues in the Care Programme Approach

- Drug and alcohol use can be screened for – and are difficult to exclude if laboratory tests are not done.
- Control of drug therapy will enable the doctor to check compliance, or whether physical symptoms are due to levels above therapeutic – i.e. lithium, anticonvulsants, antipsychotics, antidepressants.
- Some chronic conditions may change the mental state, and often in schizophrenia these are assumed to be part of the schizophrenia process. Epilepsy, syphilis, HIV, intracranial space-occupying lesions and endocrinopathies may have to be excluded with investigations ranging from laboratory tests to electroencephalogram or magnetic resonance imaging scans.
- There may also be value in screening for sensory disabilities, such as visual or hearing impairment, especially in the elderly. Correction of these can reduce misinterpretations and reduce psychopathology.

There are no clear national recommendations for the physical and biochemical screening of patients referred to mental health services: in their absence local guidelines should be drawn up for the basic screening of people referred to mental health services and for in-patients.

Using primary care proactively in the treatment of physical problems in long-stay patients has been tried by Fisher & Roberts (1998) who report a study in which a GP looked after the physical health of long-stay in-patients attending the hospital twice-weekly. Annual reviews included assessments by an optician, dentist and chiropodist, and physical examinations. Included in physical examinations for women were breast examinations and cervical smears. Patients preferred this service to the normal situation where the six-monthly change of junior doctors means that they are not able build up the trust required for detailed physical examination. A summary of physical problems was also recorded in the case notes. A potential drawback of this approach is that psychiatrists would be even more likely to lose their skills in physical examination and thinking about medical issues outside their speciality.

Primary care in any event is an important link between patients and mental health services. Patients should be encouraged to register, and psychiatrists and community nurses should ensure this is done. It would be prudent for nursing homes and community teams to have good links with primary care.

Other issues that psychiatrists need to consider are appropriate pre-treatment screening, for example, renal function before lithium is started, and ECG-monitoring in people receiving high-dose

antipsychotics. Attention should also be paid to drug side-effects: patients should be fully informed of side-effects that are common, and a pre-treatment plan agreed.

Another way to improve the physical care of continuing care patients would be to include physical health for review in the patient's Care Programme Approach (CPA) meetings. Mental health teams should ensure that patients are registered with a GP. Teams should liaise with their primary care colleagues about the management of known chronic physical illness, such as diabetes and hypertension. It may be prudent to include a review of annual visits to an optician, dentist and chiropodist.

Finally, although perhaps beyond the scope of this review, many of the fundamental problems which perpetuate poor physical health and which are particularly common among the mentally ill – such as poverty, unemployment and poor housing – will need to be resolved by political will and government policy. Professionals can maximise patients' incomes and ensure decent housing and adequate opportunities for work: these might in the longer term decrease the risks of ill-health of patients in continuing care.

Summary

There is no longer any doubt that the people with long-term mental illnesses are a physically morbid group. Standardised mortality ratios are higher, from a combination of unnatural causes of death (suicides and accidents) and natural causes, which are quite often treatable. Aside from mortality, morbidity is also increased and adds to these patients' difficulties.

The medical profession, for a number of reasons, does not serve these patients well. This is owing to a combination of patient factors, in which they are less complaining and more accepting of substandard medical treatment. Doctors are undecided about who should screen for physical illness, and who should treat it. Psychiatrists frequently do not see this as their role, and vigilance for side-effects of medication and coincidental illness is often poor.

Possible strategies for prevention include education of doctors, patients and paramedical professionals, and advocacy on behalf of patients by mental health professionals. Clarification of shared care among primary carers and better communication between different specialities would aid patient care. Finally, a more structured approach to the physical problems of patients in continuing care, such as

introduction of physical review and screening in the CPA, is another strategy worth considering.

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Multiple choice questions

- Concerning the standardised mortality ratio (SMR):
 - schizophrenia has the highest SMR of all mental illnesses
 - in schizophrenia, the SMR is higher for unnatural compared with natural deaths
 - it can be altered for mental illness with good care
 - the increase in schizophrenia is accounted for solely by lifestyle
 - cardiac deaths are an important cause of sudden death for schizophrenia.
- Reasons that patients with schizophrenia present less frequently with physical illness may include:
 - reduced pain threshold
 - apathy
 - mistrust of doctors
 - not being registered with a GP
 - increased self-treatment.
- Treatment of psychiatric patients in general medical/surgical clinics can be problematic because of:
 - embarrassment of the doctor by patient behaviour
 - lack of time
 - other professions being unable to understand psychiatry
 - junior staff always treating the patient
 - lack of patient advocacy.
- Steps that may be useful in reducing physical comorbidity in continuing care patients include:
 - random home visits by the GP
 - patient education
 - screening for side-effects of drugs
 - arguing with patients about changing their lifestyle
 - incorporating physical health in a CPA review.
- Physical illnesses that have psychiatric symptoms include:
 - systemic lupus erythematosus
 - acquired immune deficiency syndrome
 - infective endocarditis
 - Cushing's disease
 - epilepsy.

MCQ answers

1	2	3	4	5
a F	a T	a T	a F	a T
b T	b T	b T	b T	b T
c T	c T	c F	c T	c T
d F	d T	d F	d F	d T
e T	e F	e T	e T	e T

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