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Service innovation: the first year of lifestyle clinics for psychiatric out-patients[†]

AIMS AND METHOD

We sought to develop and introduce annual physical health checks and offer lifestyle advice for out-patients diagnosed with schizophrenia or bipolar disorder in two semi-rural areas in the north-east of Scotland. The results for the first year of the clinics are presented.

RESULTS

Seventy-eight patients were

invited to the clinics in the first year. Attendance rates varied from 76% in one centre to 38% in the other; 75 individual significant physical health problems were identified and highlighted to the patient and their general practitioner.

CLINICAL IMPLICATIONS

The high attendance rate in one half of the catchment area

demonstrates the potential for physical health screening for this vulnerable group of patients. The identification of significant levels of previously undiagnosed physical morbidity offers opportunity for intervention. Several innovative lifestyle interventions arose from the project and have been maintained.

More than 70 years ago the poor physical health of people admitted to mental hospitals was raised as a matter of some concern.¹ For over 25 years, the excess mortality among people with schizophrenia and affective disorder has been recognised as more than a function of suicide and accidental death.² More recently, increased mortality and/or morbidity are described for both schizophrenia³ and for people with mental illness in general.⁴

The causes of poor physical health among people with mental illness may be multifactorial,⁵ but the long-term effects of antipsychotic medication and high rates of substance misuse have been implicated, in addition to poor diet, smoking and lack of exercise.^{6–8} A metabolic syndrome has been proposed in schizophrenia,⁹ with lifestyle factors or hypercortisolaemia as candidate contributors to excessive visceral fat accumulation. Recognition of the serious implication of these findings led Thakore¹⁰ to conclude that patients need to have a thorough physical assessment at diagnosis and at regular intervals thereafter. The recent National Institute for Health and Clinical Excellence guidelines for the management of bipolar disorder¹¹ recommend an annual physical health review in primary care. Additionally, both the Scottish and the UK governments have in recent years prioritised the physical health of people with mental illness.^{12,13} The Scottish government, for instance, commits to 'improve the physical health of those with severe and enduring mental illness . . . by ensuring every such patient has a physical health assessment at least every 15 months.'¹²

Barriers have been identified in access to primary care for people with mental illness¹⁴ and even the monitoring of critical physical parameters for psychiatric in-patients has been described as haphazard.¹⁵ However, in one study, many people with psychosis accepted the offer of cardiovascular screening assessment¹⁶ and their interest in risk assessment surprised the study authors. From this backdrop, and having recently created an electronic register of patients who have schizophrenia or bipolar disorder in our catchment areas, we undertook to introduce annual physical health screening clinics for this vulnerable group of out-patients.

Method

Designing the clinic format

The launch pad for the project was a 1-day workshop involving both of the community mental health teams (CMHTs) from the towns of Fraserburgh and Peterhead in north-east Scotland. We invited colleagues from the Alloway Centre in neighbouring Tayside to present their monitoring protocol, and ended the day with a mandate for a multidisciplinary group to develop our own screening protocol based on the available evidence. We drew heavily from the recommendations of the Mount Sinai Conference on the Pharmacotherapy of Schizophrenia.¹⁷ Consultant colleagues in the regional laboratories offered advice regarding individual tests, and a series of meetings was organised with the general

[†]See invited commentary, pp. 448–450, this issue.



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practitioners (GPs) and their nursing staff to facilitate arrangements regarding accommodation for the clinics and nursing staff input to perform screening tests. The physical parameters measured and information collected in the first year of the clinics are presented in Table 1.

A medical member of staff in each team screened the completed clinic packs and highlighted abnormal results. Feedback of abnormal screening results was given informally to the patient by their CMHT keyworker and formally by the team by letter to the GP. The CMHT keyworkers were responsible for ensuring that any appointments for further investigations or treatment were attended by their client.

Clinics in practice

The team secretary used a recently created electronic register to identify patients known to the CMHT to have schizophrenia or bipolar disorder. Four such patients, selected alphabetically from the list, were invited to attend the monthly 'lifestyle clinic' in their own GP practice. The clinics were run jointly by a community psychiatric nurse and a practice nurse. The written invitation to the clinic included an information sheet describing the clinic and a consent form. The keyworkers in the CMHT also received a copy of the invitation and arranged to contact their clients and help organise transport to the clinic if required. We were pleasantly surprised by the ease with which our team secretary could book rooms for the clinics in the GP premises.

The frequency of clinics and the number of patients invited were calculated using the total number of out-patients on the register to allow for an annual turnover of the entire list as a rolling programme. The register remains 'live' by monthly review at a CMHT meeting, with newly diagnosed patients added and departures removed.

Lifestyle interventions

The community psychiatric nurses in the clinics utilised existing resources initially to address obesity, smoking,

substance misuse and lack of exercise. However, the project has become a catalyst for a number of innovative developments. A weekly 'walking group' has been maintained for more than 3 years. The interest of a community dietician resulted in their formal alignment to the teams to help with weight reduction programmes. Furthermore, an outreach nurse has set up a smoking cessation group in a local resource centre, supported by the appointment of a mental health-specific smoking cessation specialist post in Grampian. An existing football group for mental health service users served as an excellent resource for clinic attendees who were looking for regular exercise and team sport. This highly successful team managed by community psychiatric nurses has a squad of about 20 male and female football players that travels to tournaments nationally and abroad.

Results

A principal consideration of the first year of the clinics was to determine the viability of the project in terms of attendance rates. In total, 78 patients were invited to attend for screening in the two centres during the first year of the clinics' operation: 48 patients (62%) attended for screening, 27 men and 21 women, aged 21–63 years. Every patient who attended consented to take part in the screening clinic. A significantly different attendance rates were noted in the two centres (comparable data for gender, age and diagnosis between the centres for all 78 patients invited to attend are presented in Table 2). There were 11 attendances from 29 invitations in the first centre compared with 37 attendances from 49 invitations in the second centre (76% v. 38%, Yates-corrected $\chi^2 = 9.34$, d.f. = 1, $P < 0.003$).

A range of abnormal results was uncovered, totalling 75 anomalies that were deemed clinically significant and worthy of feedback to the patient and the GP. To illustrate this, the frequency of normal, abnormal or unrecorded results for each parameter is shown in Table 3 (unrecorded results represent missing data from the

Table 1. Patient assessment and data collected at annual lifestyle clinic attendance

Measurement	Comments
Weight and height recorded	BMI calculated and compared with standards; referral made to community dietician if indicated
Pulse, blood pressure and urinalysis	Practice nurse follows practice protocol for identified hypertension, glycosuria and proteinuria
Electrocardiogram	Corrected QT interval (QTc) noted and formal reporting requested via cardiology department
Serum biochemistry, lipids, prolactin, full blood count and thyroid function	Fasting glucose and lipid measurement was deemed impractical but arranged where indicated
Liverpool University Side Effect Rating Scale (LUNSERS) ^a	Scored by community psychiatric nurse; side-effects discussed with patient and information fed back to treating psychiatrist
Exercise levels and rates of alcohol, street drug and tobacco use recorded	If indicated, patients referred to football, walking or smoking cessation groups, or substance misuse clinic

BMI, body mass index.

a. Day JC, Wood G, Dewey M, Bentall RP. A self-rating scale for measuring neuroleptic side-effects. Validation in a group of schizophrenic patients. *Br J Psychiatry* 1995; **166**: 650–3.

**Table 2. Characteristics of all patients invited to attend clinics in the first year**

Centre	Males n (%)	Females n (%)	Age, years Mean (s.d.)	Diagnosis of schizophrenia n (%)	Diagnosis of bipolar disorder n (%)
Centre I, n = 29	17 (58.6)	12 (41.4)	42.5 (13.3)	20 (69)	9 (31)
Centre II, n = 49	22 (44.9)	27 (55.1)	41.8 (10.4)	32 (65.3)	17 (34.7)

Table 3. Summary of assessment results

	Normal n (%)	Abnormal n (%)	Not recorded n (%)	Comments
BMI	12 (25)	24 (50)	12 (25)	23 overweight (missing record of height for the 12 where no record made)
Blood pressure	31 (64.6)	5 (10.4)	12 (25)	Using British Hypertension Society norms; one person with malignant hypertension referred on urgently via GP
Urinalysis	32 (66.7)	10 (20.8)	6 (12.5)	Haematuria, proteinuria or both
Electrocardiogram	37 (77.1)	7 (14.6)	4 (8.3)	Identified four cases of sinus tachycardia, one sinus bradycardia, one bundle branch block and one old infarct
Full blood count	30 (62.5)	11 (22.9)	7 (14.6)	Five people with macrocytosis, three with anaemia, two with elevated white cell count and one with low vitamin B12 level
Biochemistry	21 (43.8)	18 (37.5)	9 (18.7)	Identified 11 lipid abnormalities, 1 hyponatraemia, 4 elevated prolactin levels (> 600 mμ/l), 5 elevated gamma-glutamyltransferase and 1 hypothyroidism (some individuals had more than one abnormality)

BMI, body mass index; GP, general practitioner.

returned clinic packs). The number of anomalies for all patients are shown in Table 4. We do acknowledge, however, that we have no way of knowing whether these anomalies may have been detected subsequently in the absence of our clinics, either in primary care or during any in-patient care.

Discussion

During the development of our screening clinics, considerable debate emerged around two critical issues. First, we wondered whether a significant number of our patients with severe mental illness would attend for screening, and second, whether physical health monitoring should be a responsibility of the CMHT rather than primary care staff.

Attendance rates for psychiatric out-patients have been a cause for recent concern,¹⁸ with non-attendance in this group often being cited as twice that of out-patients in other specialties.^{19,20} However, in one of our centres the attendance rate for the first year was an impressive 76% of those invited (admittedly, in the second centre the comparative attendance rate was less

than 40%). Presentation of these data back to team members at the project review at the end of year 1 revealed considerable misgivings about the project in the second centre. This related partly to heavy workload but also to the confusion as to where the responsibility for such screening should lie. Not all the community psychiatric nurses in the second centre were committed to the project initially and we believe this was reflected in their patients' relatively low attendance rates. Interestingly, this has been reversed in the second and third year of the project, both in terms of the nurses' ambivalence and improved patient attendance in the second centre.

The seat of responsibility for out-patient physical health screening is certainly worthy of closer scrutiny. A previous study in our region certainly suggests that people with schizophrenia have ample contact with GPs to allow for screening to take place.²¹ However, a recent large controlled study concluded that patients with schizophrenia are less likely to receive important physical health checks than controls.²² From our own experience in the lifestyle clinics, we feel that with encouragement from their community psychiatric nurse and with practical arrangements in place for transport, patients certainly attended in high numbers and have continued to do so in the subsequent years since the clinics were first introduced.

Solutions to ensure that critical physical health monitoring takes place certainly require delicate negotiations at the primary/secondary care interface and recognition that a degree of administrative and clinical responsibility has to be grasped by the CMHT. We believe that we have developed systems appreciated by patients,

Table 4. Number of abnormalities for all patients

	n (%)
No abnormal results	12 (25)
One abnormal result	7 (14.6)
Two or more abnormal results	29 (60.4)



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their GPs and the CMHT, and that the alternative would be for a valuable opportunity to improve the physical health of this group of patients to be missed completely.

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Declaration of interest

None.

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Falling between the cracks. Invited commentary on . . . Service innovation: the first year of lifestyle clinics for psychiatric outpatients[†]

SUMMARY

Hamilton's paper describes a thorough and pragmatic approach to the introduction of physical health checks in people registered with mental health services. This is a moral and political priority, but translating

this into day-to-day practice in already stretched community mental health teams requires leadership and vision. Pivotal in Hamilton's success was the establishment of good channels of communication between the mental and physical healthcare

teams. Hearing about good practice and positive experiences in other teams should help in the widespread introduction of reliable systems to improve physical health in mental health service users.

By now, it is well accepted by clinicians and policy-makers alike that the physical health of people with severe mental illness is very poor, with a greatly shortened life expectancy.¹ Much of this excess mortality is due to

diseases that are common in the general population² and which health services are well versed in treating. The main challenges faced by physicians lie in actually identifying the physical health problems of people with severe

[†]See original paper, pp. 445–448, this issue.