Physical Health Monitoring in a Community Mental Health Team

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Service Development

Introduction

The metabolic syndrome is driving the twin global epidemic of type 2 diabetes and cardiovascular disease. Consequently there is a moral, medical and economic imperative to identify individuals with metabolic syndrome as early as possible. Nowhere is this more needed than in mental health services.

People with schizophrenia are at greater risk of obesity, type 2 diabetes, dyslipidaemia and hypertension than the general population. This leads to an increased incidence of cardiovascular disease and a reduced life expectancy (20% shorter), over and above that imposed by their severe mental illness (Newman & Bland 1991). Brown (1997) suggested that 60% of excess mortality in schizophrenia was attributable to physical illness, with cardiovascular disease being the major contributor. Service users with schizophrenia are reported to be twice more likely to die from cardiovascular disease than the general population (Casey 2005). Service users with severe mental illness often lead sedentary lifestyles, misuse substances and need antipsychotic medication which has been found to be associated with impaired glucose regulation, weight gain and dyslipidaemia (De Hert et al 2006). The risk of developing diabetes has been found to increase when treated with first generation antipsychotics. There is an even greater amount of literature on the association of second generation antipsychotics and metabolic syndrome.
As a consequence, international steering groups (the American Psychiatric Association (APA); the Belgian working group, the International Diabetes Federation (IDF); and, the British Expert group) (Expert Group 2004) have proposed stringent screening guidelines for the detection of metabolic syndrome.

The recent local Trust Formulary (Bedfordshire & Luton Partnership NHS Trust 2007) now provides clear guidelines on the screening of service users who are prescribed antipsychotics. It is noteworthy that the diagnosis of diabetes in service users with severe mental illness tends to occur around 10 years earlier than in the general population (Sernyak et al 2002). Furthermore, approximately 70% of cases of diabetes in service users with severe mental illness are undiagnosed (Subramaniam et al 2003).

Given the increased risk of deaths due to cardiovascular disease in service users with schizophrenia, efforts should be made to lower the modifiable risk factors in this population. However, several barriers appear to exist that interfere with the rapid adoption of new monitoring guidelines, which include: communication; training; equipment; and, system limitations in most mental health clinics (Jennex & Gardner 2008). Makin et al (2007) found, in a recent study, that despite the publication of a number of recommendations regarding physical health screening in this population, monitoring rates were poor, and physical health worsened during the follow-up period.

**Establishing a Pilot Physical Health Monitoring Clinic: (Jan – Aug 2008)**

A pilot study was undertaken with the aim of establishing within the Trust a screening and monitoring process and to recognize and acknowledge the difficulties that were likely to be encountered. The overall aim was to be able to effectively establish regular clinics.

Following the description of the pilot, a brief description of the service user physical health monitoring clinic which is currently offered for those service users being prescribed anti-psychotic medication in the Luton West Community Mental Health Team (CMHT) (formerly the Luton North West and Luton South West CMHTs) is provided.
Aims of the Pilot:

- To screen a cross-section of high risk service users who are prescribed anti-psychotic medication using International Diabetic Federation (IDF) metabolic clinic criteria (shown in Table 1);
- To obtain feedback from service users regarding the usefulness of the clinic;
- To standardise the physical health monitoring process and to establish a database of the results;
- To establish a protocol for the screening of all service users who are prescribed anti-psychotic medications in accordance with existing Trust protocol.

**Table 1: IDF Criteria for Metabolic Syndrome**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Risk Measure (3 criteria are needed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waist Size</td>
<td>o Males &gt; 102 cms</td>
</tr>
<tr>
<td>(ethnic group specific)</td>
<td>o Females &gt; 88 cms</td>
</tr>
<tr>
<td>Blood Pressure</td>
<td>o &gt;= 130/85 mm/Hg</td>
</tr>
<tr>
<td></td>
<td>o being treated with an anti-hypertensive</td>
</tr>
<tr>
<td>High Density Lipid Levels</td>
<td>o Males &lt; 40 mg/dl</td>
</tr>
<tr>
<td></td>
<td>o Females &lt; 50 mg/dl</td>
</tr>
<tr>
<td>Triglyceride Levels</td>
<td>o &gt;= 150 mg/dl</td>
</tr>
<tr>
<td>Glucose Levels</td>
<td>o &gt;= 100 mg/dl</td>
</tr>
</tbody>
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**Methodology**

The pilot was commenced for service users of the Luton North West (LNW) and Luton South West (LSW) catchment areas. Care coordinators were requested to identify 40 service users being prescribed anti-psychotic medication for whom there were additional risk factors – for example: for those prescribed clozapine or olanzapine, being diabetic, obese, of Asian or Afro-Caribbean ethnicity, or having a cardiovascular disorder. A total of 22 service users from LNW and 20 from LSW were identified. Letters were forwarded to their GPs requesting information about their cardiovascular status along with reports of any recent results in order to prevent duplication. Relevant information from the case files and information from the GP was entered into a proforma prior to attending the clinic. Invitation letters were forwarded to service users.
Four clinics were held: two for each team, with 8 – 12 service users being invited to each clinic, each for a 15-minute appointment. One regular clinic was changed in advance and the other three were held at previously allocated non-clinic times. One doctor was present on each clinic day, with assistance from a clinical attachment doctor being provided at some clinics.

The equipment that was available for each clinic included:
- an electronic weighing machine;
- a fixed height measuring stand;
- a sphygmomanometer;
- measuring tapes;
- body mass index (BMI) wall charts/discs;
- dietary advice packs (provided by Eli Lily).

Written material designed specifically for this clinic was made available:
- metabolic clinic proforma;
- service user information leaflets (designed by Dr IM);
- a brief 4-item service user feedback form.

A metabolic clinic pack with the proforma, blood testing request cards and a feedback form were made available for each service user.

On the clinic day, the proforma was completed with the assistance of the service user, and height, weight, BMI and waist circumference measures were recorded. The need for diet control, weight management and regular exercise were reinforced and a written advice pack was given to each service user. Blood testing request cards were given to those service users for whom there were no available results from the previous two months, requesting fasting lipid testing, blood sugar testing, urea and electrolyte levels, creatinine levels and liver function testing. Electro-Cardio-Graph (ECG) request forms were given to only those found to have tachycardia. Anonymous feedback forms were provided which were completed in the waiting area and collected following clinic attendance.
Findings

Of 42 service users invited to a clinic, 21 attended (50%).

Of these 21 service users, 13 (62%) received blood testing (with some results being obtained via telephone from the Luton & Dunstable Hospital Pathology Laboratory).

Of the 13 service users receiving blood testing, 4 (31%) fulfilled the criteria for ‘Metabolic Syndrome’.

Three of four (75%) service-users had an ECG.

All ECG results were normal.

Service User Experience: survey findings

Of the 21 distributed brief survey forms, 19 completed survey forms were returned, yielding a response rate of 90%.

Of those returning a completed survey form, 17 (90%) service users felt that the clinic was useful: increasing their awareness of physical health; and/or motivating improvements in lifestyle and eating habits.

Of those returning a completed survey form, two (10%) service-users were somewhat negative: one was not sure about the usefulness of the clinic; another did not feel motivated to change their behavioural patterns.

Some useful suggestions were made by this group of service users, which included:
- to be ‘called on time’;
- to ‘make it faster’;
- that ‘monitoring should be done at Calnwood (the local mental health service) rather than by the GP’;
- that the ‘Blood card should be sent with the invite’ to the clinic.

The results of physical investigations were entered into a secure IT database that had been created by Dr IM with the support of the IT Department, allowing access by all the practitioners involved. The results
were forwarded to the service-user’s GP and copied to the care coordinator, with specific reference to the presence or absence of metabolic syndrome in accordance with the IDF criteria. Service users were informed by letter to consult their respective GP about their results. It was then planned to offer an appointment for follow-up within 6 – 12 months. The proforma and clinic folders were filed with the main service user records.

Discussion

Following the successful completion of the pilot, a number of interesting issues were raised and considered:

- The concept of metabolic syndrome, though useful, was not practical as GPs do not use the IDF criteria. Hence, using that as a standard for sharing information with the GP was not feasible. Instead it was decided to use the Trust protocol for screening criteria and decisions regarding the frequency of follow-up care. The recent Trust Formulary (Bedfordshire & Luton Partnership NHS Trust 2007) provides clear guidelines on the screening of service users who are prescribed anti-psychotic medication. Consequently, the clinic was renamed the ‘Physical Health Monitoring Clinic’.

- It was noted that since the clinic would probably require an appropriate chaperone whilst measuring waist circumference, which was not always possible, it was decided not to incorporate this as a requirement within future clinics until arrangements could be made for this.

- A high percentage of service users (38%) did not subsequently have blood testing completed when the blood testing request cards were provided at the clinic. It was felt that sending biochemistry blood testing request cards out with the invitation letter may improve the percentage of service users whom actually attend for blood testing.

- It was agreed to complete the proforma for those service-users who are prescribed an anti-psychotic medication for the first time, as part of the service user outpatient clinic care review.
Service Development: regular physical health monitoring clinics (from October 2008)

After considering the above, a protocol was developed by Dr GK who has now established regular physical health monitoring clinics. These currently take place every two months. An average of 10 service users are assessed at each clinic, whether for an initial assessment or at a follow-up appointment. Service users are advised about healthy lifestyle choices. Abnormal investigation findings are recorded and entered into the dedicated IT database. A letter is forwarded to the respective GP alerting him/her of any abnormal results and requesting him/her to take appropriate action. The care coordinator (where applicable) is informed, so as to reinforce issues relevant to physical health as part of the Care Programme Approach (CPA) process.

Follow-up appointments are offered at 3 – 12 month intervals in accordance with local Trust guidelines on the use of anti-psychotic medications. The service user’s regular mental health review is adjusted accordingly, based on clinical need.

Conclusion

This service development helps psychiatrists to fulfill their medical responsibility to their service users’ physical health, and ensures that physical health monitoring is not left to the chance of being provided by others.

Creating and developing new health programs and services may be required to achieve the complex goal of the satisfactory provision of medical care to psychiatric service users.

The physical health monitoring clinic is an innovative first step in the goal of effectively meeting the physical and mental health needs of our service users. Ideally we hope that this type of clinic will in future be available to all service users needing to take psychotropic medication.
References

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