Are specialist mental health services being targeted on the most needy patients? The effects of setting up special services in general practice

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SUMMARY

Background. Around 25% of patients with psychoses lose contact with specialist psychiatric services, despite the government’s policy to focus the efforts of community teams on this group.

Aim. To identify patient and practice factors associated with continuing contact and loss of contact with specialist services.

Method. Cross-sectional comparison was made of patients in and out of specialist contact, through detailed interviews with 102 patients among 26 south west London practices. Associations were sought between contact with specialist services and patient factors (illness severity, social functioning, quality of life, needs for care, and satisfaction with general practitioner [GP] services) and practice factors (size, location, fundholding status, training status, and the presence of mental health professionals on site).

Results. Thirty-one (30%) patients were currently out of specialist contact. No significant differences were found between those in and out of contact on any measures of diagnosis or psychiatric history. Those in contact had significantly more symptoms, poorer social functioning, poorer quality of life, and more needs for care. The proportion out of contact was significantly higher in two practices that had employed their own mental health professionals to provide services on site for severe mental illnesses. Two factors remained significant predictors of contact in a logistic regression model: whether or not the patient’s practice offered a special service on site, and greater patient needs for care.

Conclusions. Secondary mental health services are being targeted towards the more needy patients. The provision of special services in practices can shift care further away from secondary care while still meeting patients’ needs.

Keywords: community-based mental health teams; specialist services; psychiatric services; primary care.

Original papers

Permission was sought from the GP and, where appropriate, the CMHT keyworker, to request an interview. Patients were contacted by letter (including an information sheet), assuring them of confidentiality and that a decision on their part not to participate would not affect their care. After four weeks a second letter was sent to non-responders, after which no further contact was attempted.

**Interviews**

Patients consenting were interviewed at their homes, or on their GP’s premises if they preferred. Interviews lasted 60 to 90 minutes, and included a specially constructed demographic questionnaire (age, gender, ethnicity, education, employment, benefits, accommodation, marital status), plus illness factors (duration, admissions, compulsory admissions), followed by assessments of:

- symptom severity on the Comprehensive Psychopathological Rating Scale (CPRS)\(^\text{14}\) and Krawiecka Scale,\(^\text{15}\)
- social functioning on the Social Role Performance Schedule (SRPS),\(^\text{16}\)
- met and unmet needs on the Camberwell Assessment of Needs (CAN),\(^\text{17}\)
- quality of life on the Lancashire Quality of Life (LQoL) Schedule,\(^\text{18}\) and
- patients’ views on their GP’s services, on the general satisfaction questionnaire (GSS).\(^\text{19}\)

We aimed to interview 60 patients in contact and 60 out of contact with specialist services. This was calculated to be sufficient to detect a clinically significant difference of 0.8 points on the Krawiecka scale,\(^\text{15}\) with a power of 90% at the 5% significance level. Interviewed patients were compared to those who declined using medical records.

**Representativeness of the patients interviewed**

To assess the impact of possible response biases on the representativeness of the interviewed sample, we explored whether associations between specialist contact and variables, for which we had data on all 365 patients identified, differed between those interviewed and those not interviewed. Variables on which we had data included age, gender, duration of illness, previous compulsory admission, GP consulting rate, and diagnostic category. Logistic regression was used to determine the significance, in predicting specialist contact, of interactions between these variables and whether or not the patients were interviewed.

**Practices**

GP or practice managers provided information on list size, number of partners, fundholding and training status, mental health professionals working on the premises, whether the practice kept lists of mentally ill people, and any agreed policies for their care.

Participating practices were compared with all MSW practices using health authority data with regard to size, area, and fundholding status using appropriate non-parametric statistical tests.

**Specialist services**

Bivariate analysis using non-parametric tests was aimed at identifying patient and practice factors that predicted contact with specialist services. To determine whether factors were still significant after controlling for other factors likely to be correlated, multivariate analysis was carried out using forward stepwise logistic regression. The aim was to develop a model of predictors of contact, to estimate odds ratios for significant factors with 95% confidence intervals. Nagelkerke’s R² coefficient\(^\text{20}\) was used to estimate the percentage variation in contact attributable by the factors identified.

Further logistic regression models were generated to examine the significance of interactions between factors significantly associated with contact. To take into account the clustering of patients within practices, a random effects logistic regression model was also fitted to determine whether significant inter-practice variation in levels of specialist contact remained after controlling for all practice and patient factors found to be significantly associated with contact.

**Results**

**Total sample of patients identified**

In total, 365 patients were identified, with 257 in contact with specialist services and 108 (28%) out of contact (contact was uncertain for four). Two patients had moved away and seven were not approached at the request of their GP or keyworker. Of the remaining 356, 139 declined to be interviewed, 112 failed to respond to two letters, and 102 (29%) agreed, of whom 71 were currently in specialist contact, and 31 (30%) out of contact. Those interviewed were patients of 26 out of the 33 practices enrolled.

Interviewed patients were slightly older (median = 52 versus 48 years for the whole sample, \(P = 0.01\), Mann-Whitney U), had a longer duration of illness (median = 29 versus 22 years respectively, \(P = 0.04\), Mann-Whitney U), were slightly less likely to have been hospitalised compulsorily (49% versus 55%, \(P = 0.04\), Fisher’s exact test) and had consulted their GP more frequently in the past year (median = 7.5 contacts versus 5.5, \(P<0.001\), Mann-Whitney U). Patients with schizophrenia were under-represented and patients with bipolar illness over-represented among those interviewed (46% versus 56%, and 27% versus 18% respectively, \(P = 0.02\), Fisher’s exact test). No differences were found in gender or in number of hospital admissions.

No interactions — between whether or not patients were interviewed, and age, gender, duration of illness, previous compulsory admission, consulting rate, and diagnostic category — were found to be significant at the 5% level in predicting specialist contact. The effect of these variables in predicting specialist contact was therefore not significantly different between those interviewed and those not interviewed.

**Patient factors (interviewed sample)**

No significant differences were found between those in and out of contact in age, gender, ethnicity, or educational achievement. Those in contact were significantly more likely to be single, out of work, in receipt of benefits, and in sheltered housing or a hostel (Table 1).

Diagnoses were: 57 schizophrenia or schizoaffective disorder, 28 bipolar disorder, and 17 other psychoses. The median duration of illness was 29 years. Fifty-four patients had had four or more psychiatric hospital admissions, and 50 had had one or more compulsory admissions. There were no significant differences in diagnosis or psychiatric history between patients in and out of contact.

Those in contact scored more highly on the CPRS and their global ratings were significantly worse, all six patients with severe or incapacitating illness being in contact. Krawiecka total scores were also significantly higher among those in contact (Table 2). They had more needs for care, more unmet needs (where the interviewer judged more formal help was needed), poorer social role performance, and poorer quality of life (Table 2).
Of 141 practices in MSW, 65 were participating in other studies of psychotic patients. Of the remaining 76, 33 (43%) agreed to participate. No significant differences were found between participating and non-participating practices in number of partners, location, training status, or fundholding status.

**Practice factors (total sample identified)**

Table 3 shows that a number of practice characteristics were found to be associated with a greater proportion of patients being out of contact with specialist services. The most important differences were related to special mental health care provision in two fundholding practices. One employed a psychiatrist to see their patients at the surgery, so diverting some from the local CMHT. Contacts with this psychiatrist were not counted as contacts with secondary care, as he was working as a primary care provider. The other practice employed their own community psychiatric nurse (CPN) and negotiated a special contract with the local Trust whereby a psychiatrist, a social worker, and an occupational therapist visited the surgery to see patients. In this second practice one partner was formulating in-house patient care programmes. Contacts with the practice-employed CPN were also not counted as specialist contacts, as she was considered a primary care provider. Contacts with the other visiting professionals did count as secondary care contacts.

**Multivariate analysis (interviewed sample)**

Logistic regression models revealed, first, that receiving benefits, type of accommodation, and marital status did not significantly predict contact after controlling for employment status. Secondly, the Krawiecka score was not significant after controlling for the CPRS score. Thirdly, providing a special service on site for severe mental illnesses remained a significant predictor after controlling for practice size, practice area, and fundholding status.
Overall logistic regression model

Table 4 shows the overall logistic regression model fitted to all factors associated with being in contact. Two factors remained significant predictors: whether or not the patient’s practice offered a special service for severe mental illnesses, and the patient’s total needs for care on the CAN. Table 4 shows that those patients from practices with no special service on site were more than nine times as likely to be in contact. The likelihood of contact increased 1.3 times for each point increase on the CAN score. Nagelkerke’s R² for the model suggested that around 35% of the variation in contact was accounted for by these two factors.

Logistic regression models that included possible interactions between significant factors demonstrated that none significantly improved the prediction of contact. After controlling for the provision of special services, no significant differences between practices remained in a random effects logistic regression model.

This suggests there was no other significant practice factor which we failed to identify.

Discussion

Limitations of the study

The response rate among general practices (43%) was fair and, as far as we could determine, the participating practices were representative of the health authority overall.

The proportion of patients interviewed was low but reflects our reassurance that saying no would not affect patients’ care. The local ethics committee instructed us not to visit non-responders without prior permission, which might have increased the proportion interviewed as in some previous studies. Given the differences between those interviewed and the overall sample of patients identified, it is possible that interviewed patients were less needy than those who refused. We may have underestimated...
absolute numbers of unmet needs. However, the proportion out
of specialist contact in the interviewed sample was the same as in
the total sample. There was a lack of significance in predicting
specialist contact, of interactions between variables measured on
the total sample, and whether or not patients were interviewed.
This supported our assumption that the direction and strength of
associations with specialist contact found for variables measured
only on those interviewed were likely to be the same for the
whole sample of patients identified. We are therefore confident
that our results reflect the relative levels of need of those in and
out of contact.

The interviewer was aware of the contact status of patients, as
current contact inevitably became apparent at interview. Possible
bias in rating symptoms and needs for care arising from this
knowledge must therefore be considered.

**Patient factors**

The sample was slightly smaller than anticipated, and we may
have failed to detect some differences between patients in and
out of contact. Nevertheless, several significant and clinically
important differences were found. Contact was associated with
more severe illness, poorer social functioning, poorer quality of
life, and more needs for care. Those out of contact were by no
means completely well, but they had on average half the number
of psychiatric symptoms of those in contact, and none was
judged to have severely incapacitating illness.

**Practice factors**

It might be expected that larger, suburban, fundholding, and bet-
ter-staffed practices would take more responsibility for these
patients than inner-city practices in small premises with fewer
staff. In the event, these factors did not predict contact except
through association with the provision of practice-based services
for severe mental illness.

We expected to find counsellors and clinical psychologists in
practices, but these professionals are usually involved with less
severe problems of anxiety and depression. The practice-
employed psychiatrist in one practice and CPN in another worked
with patients with psychoses. We did not include contacts with
these two as secondary care, and this should be borne in mind
when interpreting our findings. Had we done so we would have
been unable to measure the impact of employing such profession-
als in practices on the proportion of patients in contact with sec-
ondary care. In the event this was the single most important pre-
dictor of contact, even after controlling for needs for care.

**Conclusions**

Our results demonstrate that secondary care services are being
targeted towards more needy patients in MSW, and that unmet
needs are relatively uncommon among those out of contact. Our
findings may not generalise to the whole country, although the
health authority area studied ranges from deprived inner city to
leafy suburbs. The findings should assure service planners that to
assume that all psychotic patients require secondary care would
be inefficient, as a proportion would be offered more expensive
care with no obvious benefit. An analogy may be drawn with
diabetes patients, where the provision of routine care in general
practice for stable patients frees up hospital specialists to be

<table>
<thead>
<tr>
<th>Practice characteristics</th>
<th>Number (%) of patients in contact</th>
<th>Number (%) of patients out of contact</th>
<th>P-value for difference</th>
<th>Statistical test used</th>
</tr>
</thead>
<tbody>
<tr>
<td>All practices (n = 33)</td>
<td>257 (71)</td>
<td>104 (29)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of full-time equivalent partners</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>1 (n = 15)</td>
<td>47 (66)</td>
<td>24 (34)</td>
<td>0.487</td>
<td>Fisher’s exact test</td>
</tr>
<tr>
<td>2 (n = 7)</td>
<td>48 (80)</td>
<td>12 (20)</td>
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<td>3 or more (n = 11)</td>
<td>162 (70)</td>
<td>68 (30)</td>
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<tr>
<td>Fundholding (n = 13)</td>
<td>158 (69)</td>
<td>72 (31)</td>
<td>0.420</td>
<td>Fisher’s exact test</td>
</tr>
<tr>
<td>Non-fundholding (n = 20)</td>
<td>98 (75)</td>
<td>32 (25)</td>
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<tr>
<td>Training (n = 7)</td>
<td>84 (65)</td>
<td>45 (35)</td>
<td>0.069</td>
<td>Fisher’s exact test</td>
</tr>
<tr>
<td>Non-training (n = 26)</td>
<td>173 (75)</td>
<td>59 (25)</td>
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<td>Psychiatrist works on site</td>
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<td></td>
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</tr>
<tr>
<td>Yes (n = 2)</td>
<td>33 (53)</td>
<td>29 (47)</td>
<td>0.001</td>
<td>Fisher’s exact test</td>
</tr>
<tr>
<td>No (n = 31)</td>
<td>224 (75)</td>
<td>79 (25)</td>
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<td></td>
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<tr>
<td>CPN/SW/OT* works on site</td>
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<tr>
<td>Yes (n = 1)</td>
<td>8 (27)</td>
<td>22 (73)</td>
<td></td>
<td>&lt;0.001 Fisher’s exact test</td>
</tr>
<tr>
<td>No (n = 32)</td>
<td>249 (75)</td>
<td>82 (25)</td>
<td></td>
<td></td>
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<tr>
<td>Practice keeps a list of people with mental health problems</td>
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<td></td>
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<tr>
<td>Yes (n = 11)</td>
<td>153 (69)</td>
<td>68 (31)</td>
<td>0.341</td>
<td>Fisher’s exact test</td>
</tr>
<tr>
<td>No (n = 22)</td>
<td>104 (74)</td>
<td>36 (24)</td>
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<tr>
<td>Practice has agreed policy for mental health care</td>
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<tr>
<td>Yes (n = 6)</td>
<td>90 (69)</td>
<td>40 (31)</td>
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<td>Fisher’s exact test</td>
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<tr>
<td>No (n = 27)</td>
<td>167 (72)</td>
<td>64 (28)</td>
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<tr>
<td>Clinical psychologist works on site</td>
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<tr>
<td>Yes (n = 5)</td>
<td>81 (65)</td>
<td>43 (35)</td>
<td>0.087</td>
<td>Fisher’s exact test</td>
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<tr>
<td>No (n = 28)</td>
<td>176 (74)</td>
<td>61 (26)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practice-employed counsellor works on site</td>
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<td></td>
<td></td>
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<tr>
<td>Yes (n = 14)</td>
<td>119 (75)</td>
<td>40 (25)</td>
<td>0.240</td>
<td>Fisher’s exact test</td>
</tr>
<tr>
<td>No (n = 19)</td>
<td>138 (69)</td>
<td>63 (31)</td>
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</tbody>
</table>

*CPN = community psychiatric nurse; SW = social worker; OT = occupational therapist.
more available to deal with the more challenging problems of diagnosis.

GP involvement in purchasing is likely to increase with the formation of primary care groups (PCGs), especially where these become Trusts. At PCG level, psychotic patients are likely to be more salient than at practice level, and the 50 or so practitioners within each PCG are likely to include at least one interested in shaping service provision for these patients. The services currently provided by only a few fundholders may therefore spread more widely in PCGs, so that more psychotic patients will be looked after entirely in primary care. This might further free specialist services to concentrate more on those who need more intensive or proactive care.

References