Evidence that the Two-Way Communication Checklist identifies patient–doctor needs discordance resulting in better 6-month outcome

van Os J, Triffaux J-M. Evidence that the Two-Way Communication Checklist identifies patient–doctor needs discordance resulting in better 6-month outcome.

Objective: To assess an intervention aimed at reducing patient–professional carer needs discordance.
Method: In a group of 460 patients with schizophrenia, the Two-Way Communication Checklist (2-COM), an instrument to rate needs, was completed at baseline, 2 months and 6 months by both the patient and the professional carer, allowing for the quantification of patient–carer needs discordance.
Results: Reduction in patient-reported 2-COM needs in the group with low baseline needs discordance was much greater at 2 and 6 months (2 months: $\beta = -0.65$, $P < 0.001$; 6 months: $\beta = -1.00$, $P < 0.001$) than in the group with high baseline discordance (2 months: $\beta = -0.35$, $P < 0.001$; 6 months: $\beta = -0.49$, $P < 0.001$). Reduction in needs discordance between baseline and 2 months ($\beta = -0.07$, $P = 0.004$) as well between 2 and 6 months ($\beta = -0.05$, $P = 0.020$) was associated with greater levels of CGI clinical improvement.
Conclusion: The fact that patient–carer needs discordance impacts negatively, and its reduction positively, on 6-month outcome suggests that systematic inventory of patient–carer views on needs is necessary.

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Significant outcomes

- Patient–carer needs discordance impacts negatively on 6-month outcome in patients with severe mental illness.
- Reduction in patient–carer needs discordance impacts positively on 6-month outcome in patients with severe mental illness.
- Treatment guidelines for patients with severe mental illness may be improved by adding specific interventions for enhancing patient–carer communication.

Limitations

- Data were collected during routine practice without randomization and without blinding.
- As no control group was included, observed improvements cannot be conclusively attributed to the use of the 2-COM.
- Follow-up time was rather short in relation to the mostly lengthy treatment careers of patients with severe mental illness.

Introduction

The initiation of psychiatric treatment is preceded by communication between the patient and the professional carer, the quality of which underlies the therapeutic relationship (1) and represents a critical factor with respect to the degree of subsequent adherence, in particular in patients

with severe mental illness. Several studies have shown that there is discordance between professional carers and patients with regard to unmet needs and the treatments required to remedy these, and it has been suggested that reducing the degree of discordance will probably result in better treatment outcomes (2–6) associated with needs-based interventions (7).

The Two-Way Communication Checklist (2-COM) is a simple communication tool developed with the aim of improving communication between patient and professional carer in everyday clinical practice. In a previous observational study of 243 patients who completed the 2-COM prior to routine appointment, both doctors and patients found the checklist useful in revealing new information. In addition, patients, but not clinicians, considered that the checklist had resulted in a change in treatment. The results indicated that the 2-COM was most highly regarded by those patients with the highest number of care needs (8), suggesting that the 2-COM captures negative appraisals associated with perceptions of care (9). In a subsequent randomized controlled trial, it was shown that using the 2-COM actually changed the behaviour of professional carers, as reflected in changes of treatment and attitude. Patients with schizophrenia ($n = 134$) were randomly allocated to either standard care or the 2-COM. Before seeing their clinician for a routine follow-up, the active intervention group were given the 2-COM, and told to indicate those areas they wanted to discuss with their doctor. The results indicated that the 2-COM induced a stable improvement of patient-reported quality of doctor/patient communication over a period of 6 weeks, and induced changes in management immediately after the intervention (10).

Given these encouraging results, it may be hypothesized that repeated use of the 2-COM will actually result in a decrease in the level of patient–professional carer discordance over a more extended period of time. If this were the case, then the 2-COM could be regarded as not only revealing new treatment needs and inducing appropriate changes in management to remedy these, but additionally as actually reducing patient–carer discordance over time.

Aims of the study

The current observational study followed a group of patients with a diagnosis of schizophrenia for a period of 6 months, with the aim to examine the hypothesis that repeated use of the 2-COM would result in a decrease in discordance over time, whilst keeping antipsychotic treatment constant. It was hypothesized that reduction in discordance would be clinically relevant, in that: i) higher levels of discordance at baseline would be associated with less reduction in patient needs over time; and ii) greater levels of reduction in discordance over time would be associated with better global improvement.

Material and methods

Sample

Out-patients and in-patients with a clinical diagnosis of schizophrenia or schizoaffective disorder were recruited at centres in Belgium and the Netherlands between 2003 and 2006. Subjects were included if they: i) had a clinical diagnosis of schizophrenia, schizoaffective disorder or schizophreniform disorder; ii) were over the age of 18 years; iii) were changed to the antipsychotic quetiapine within the parameters of standard care at the beginning of the study; and iv) remained on this antipsychotic for the duration of the study. Criteria iii) and iv) served to ensure that antipsychotic treatment was constant over the period of the study, to avoid changes in needs occasioned by differential side-effects and effectiveness associated with different antipsychotic treatments and switches therein. Under the terms of the WGBO (Medical Treatment Contracts Act) in the Netherlands, observational studies of routine clinical practice do not require ethics committee approval, but permission of the patient for use of anonymized data is required. Patients gave consent by signing the questionnaires. In Belgium, approval of a special deontological commission was necessary and obtained.

Procedures

Patients were seen at baseline, approximately 8 weeks and approximately 26 weeks post-baseline. Visits coincided with visits as planned under standard care. At each visit, both patients and psychiatrists filled in a slightly modified version of the 2-COM (see below). The psychiatrist additionally recorded demographic and treatment details and filled in the clinical Global Impression Scale (CGI) (11), ranging from 1 = normal, not ill to 7 = extremely ill.

2-COM

The slightly adapted version of the 2-COM used in the study was a simple list of 19 common problems,

or areas of perceived need, that might be experienced by patients with severe mental illness. The list includes problems with housing, relationships, money, lack of activities, psychological distress, sexuality, symptoms and treatment side-effects (12, 13). The basic psychometric properties of the instrument have been described previously (8) (see also http://www.2coms.homestead.com). The 2-COM has shown adequate test–retest reliability and is well accepted by patients as a valued aid to communication with their doctor (8, 10). Patients could answer, for each area of need, the degree to which the need was present on a five-point scale raging from never, seldom, sometimes, often and always. The five-point scale (previous versions of the 2-COM used dichotomous needs assessments) was introduced to allow for a more sensitive and statistically powerful dimensional assessment of needs discordance. Both patients and psychiatrists rated the 2-COM before the actual consultation. The patient rated the areas of need indicated in the 2-COM as perceived by the patient. The psychiatrist was asked to rate the areas of need as perceived by the psychiatrist. Patients submitted the 2-COM in a sealed envelop to the psychiatrist, thus assuring anonymity and increasing the likelihood of providing independent answers.

Power

A repeated measures power analysis using estimates of effect sizes based on previous 2-COM work revealed that around 700 patients would be needed to detect a reduction in discordance of 0.1 SD effect size, and around 200 patients would be needed for an effect size of 0.2 SD. Inclusion therefore aimed to include around 500 patients with complete measures for the baseline and two follow-up measurements.

Analyses

A variable 'time' was constructed denoting baseline (value '0'), the first follow-up (value '1') and the second follow-up (value '2'). For both patients and professional carers, 2-COM total scores were calculated, weighted for the number of missing items due to partial non-response. The effect of time on patient 2-COM score and carer 2-COM score was assessed in a multiple regression model of 2-COM score, adjusted for baseline 2-COM score and baseline CGI score.

A score denoting the level of discordance between patients and carers was constructed as follows: [(patient 2-COM total score − carer-COM score)/patient 2-COM score] × 100. The absolute value of this discordance score was used in the analyses and will hereafter be referred to as 'discordance score'. A discordance score of 5 would indicate that there was a 5% difference in need between patient and carer. The degree of discordance between patients and carers at baseline and follow-up was expressed as the intra-class correlation coefficient. To asses the effect of time on discordance, the discordance score was regressed on time, modelled as two dummy variables (first and second follow-up respectively) using the baseline as the reference category.

To assess whether the degree of discordance at baseline would impact on the course of patient needs, the patient 2-COM score was regressed on the interaction between time and baseline discordance score, adjusted for baseline patient 2-COM score and baseline CGI score. In the case of significant interaction, stratified effect sizes for time on reduction in needs were calculated for those with low (below the median) and high (median or higher) levels of baseline discordance by applying and testing the appropriate linear combinations using the STATA LINCOM command.

To assess whether greater reduction in discordance score over time would be associated with better global improvement, the CGI global improvement score was regressed, adjusting for time, baseline CGI score and baseline discordance score, on two variables indicating the difference in: i) discordance between baseline and the first follow-up; and ii) the difference in discordance between the first and second follow-ups. The adjustment for baseline CGI score was necessary to control for the confounding mechanism of worse clinical state predicting both more discordance and poorer outcome at follow-up. All multiple regression coefficients were expressed as standardized coefficients (β), y-standardized for discrete independent variables and fully standardized for continuous independent variables. Interactions were assessed by likelihood ratio test.

Results

Sample

Of 795 eligible patients, 789 entered into the study. At the first follow-up, 702 patients were seen and at the second follow-up 557 patients. Of the 789 patients included at baseline, 460 (58%) had valid 2-COM data at baseline and at least one follow-up assessment. All analyses were conducted in the risk set of 460. Compared with the 329 excluded

Table 1. Baseline measures for risk set and comparison with patients excluded due to missing 2-COM data

Baseline measure	Risk set (n = 460) % or mean (SD)	Excluded patients (n = 329) % or mean (SD)	P
Demographic / clinical			
Male sex	58	55	0.46
First episode	17	20	0.31
Concomitant medication	74	73	0.72
Age in years	38.5 (13.0)	38.9 (14.0)	0.67
Illness duration in years	9.4 (9.8)	9.2 (9.5)	0.73
CGI	4.3 (1.3)	4.5 (1.2)	0.11
Weight	76.8 (16.0)	76.9 (16.5)	0.91
2-COM assessment			
Baseline carer-rated needs	3.1 (0.7)	3.0 (0.6)	0.19
Baseline patient-rated needs	3.2 (0.5)	3.1 (0.5)	0.14
Baseline needs % discordance	12.7 (14.4)	14.1 (17.6)	0.29

patients, the risk set was very similar for relevant baseline demographic and clinical variables as well as for baseline 2-COM-rated needs and needs discordance (Table 1). Similarly, there were no differences in weight suggesting no major divergence in treatment side-effects and cumulative antipsychotic load. The majority of the risk set was male (58%), mean age was 38.5 years (SD 13.0) and mean CGI was 4.3 (SD 1.3) – between 'moderately' and 'considerably' ill (Table 1).

Does 2-COM discordance decrease over time?

Both patient and carer-reported 2-COM scores decreased over time by around one standard deviation over the three time points (Table 2). In the regression model, the average reduction in patient-reported 2-COM score per time point, adjusted for baseline patient 2-COM score and baseline CGI, was significant and of small-to-moderate effect size (β linear trend: -0.38, $P < 0.001$), with a similar effect size for the carer-reported 2-COM score (β linear trend: -0.47, $P < 0.001$). The intraclass correlation coefficient between patient and carer 2-COM scores increased over time from 0.53 at baseline to 0.67 at the second follow-up and the mean percentage discordance decreased from 12.7% at

Table 2. Patient and carer-reported 2-COM scores, intraclass correlation and percentage discordance over time (risk set = 460 patients)

Time	Mean 2-COM score (SD)		Intraclass correlation (95% CI)	Mean % discordance (SD)
	Patient	Carer		
Baseline	3.1 (0.7)	3.2 (0.5)	0.53 (0.40, 0.65)	12.7 (14.4)
First follow-up	2.8 (0.6)	2.8 (0.5)	0.61 (0.49, 0.73)	11.8 (11.8)
Second follow-up	2.6 (0.6)	2.7 (0.5)	0.67 (0.56, 0.78)	10.8 (11.8)

baseline to 10.8% at the second follow-up (Table 2). In the regression model of percentage discordance, adjusted for baseline discordance, baseline patient 2-COM score, baseline carer 2-COM score and baseline CGI, the average reduction in percentage discordance per time point was significant and of small effect size (β linear trend: -0.07, $P < 0.001$).

Does greater level of discordance predict less reduction in need?

To assess whether greater levels of discordance at baseline would predict less reduction in patient-reported needs as measured by the 2-COM, the effect of time, modelled as two dummy variables, as well as the interaction between the time dummy variables and baseline discordance score, were assessed in a regression model of patient 2-COM score, adjusted for patient-reported needs at baseline, discordance score at baseline and baseline CGI. This revealed a significant interaction between time and baseline discordance ($\chi^2 = 70.8$, df = 2, $P < 0.001$) indicating that the reduction in patient needs over time was less for patients with greater levels of discordance at baseline. Thus, calculating the effect of time on patient needs separately for those with low and high baseline discordance revealed that the effect of time for those in the lowest median baseline discordance group (first follow-up: $\beta = -0.65$, $P < 0.001$; second follow-up: $\beta = -1.00$, $P < 0.001$) was much greater than the group with the highest median baseline discordance (first follow-up: $\beta = -0.35$, $P < 0.001$; second follow-up: $\beta = -0.49$, $P < 0.001$). There was no evidence for a similar strong or significant interaction in the model of professional carer 2-COM score ($\chi^2 = 5.5$, df = 2, $P = 0.07$).

Is greater reduction in discordance associated with better outcome?

In the model of CGI global improvement score, adjusted for time, baseline CGI score and baseline discordance score, both the difference in discordance between baseline and the first follow-up ($\beta = -0.07$, $P = 0.004$) and the difference in discordance between the first and second follow-ups ($\beta = -0.05$, $P = 0.020$) displayed significant associations of small effect size.

Discussion

In addition to previous evidence indicating that the 2-COM is considered useful (8), and induces treatment changes in the short term (10), the

current investigation suggest that discordance between patients and clinicians with regard to 2-COM-rated needs predicts less reduction in patient-reported needs over a 6-month period, and that if reduction in 2-COM-rated discordance occurs, 6-month improvement is greater. In addition, the data suggest that the use of the 2-COM may contribute to a reduction in patient–carer needs discordance over time. If confirmed, such a mechanism would be of considerable importance, given the fact that in psychiatry, patient–carer concordance with regard to diagnosis and treatment is among the lowest in medicine, particularly in the area of severe mental illness (14).

There are a number of limitations. First, in the absence of a control group, blinding and a randomized design, no conclusions can be drawn with regard to causality. Second, attrition was considerable at 42%. One hypothesis is that the 2-COM may actually induce attrition because previously latent discordance may become expressed, leading the clinician to discontinue its use. Although there were no baseline differences between the risk set and the excluded group of patients, discordance scores were slightly higher in the excluded group (Table 1). Some degree of preparation may be required before using the 2-COM or similar instruments in routine clinical practice.

Of interest was the fact that greater baseline discordance predicted less reduction in 2-COM patient-reported needs over the 6-month follow-up, but was not associated with differential reduction in 2-COM carer-reported needs. This suggests that professional carers are not sensitive to the effects that reduction in discordance can have on the patient, and reinforces the view that patient-reported outcomes are important to assess systematically in clinical practice.

There is increasing interest in the issue of patient–clinician communication in psychiatry. Priebe et al. (15) tested a new computer-mediated intervention aimed at structuring patient–clinician dialogues. Patients receiving the intervention had better subjective quality of life, fewer unmet needs and higher treatment satisfaction after 12 months. The current results confirm these findings and in addition suggest that such effects may in part be mediated by reduction in patient–carer needs discordance. Tools to enhance patient–carer communication may thus form a useful and cost-effective addition to existing treatment guidelines.

Declaration of interest

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