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Effects of a nationwide programme: interventions to reduce perceived barriers to collaboration and to increase structural one-on-one contact

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ABSTRACT

Objective To describe the implementation of a nationwide programme and to determine the effects of specific quality improvement (QI) interventions within this programme on perceived barriers to collaboration between general practitioner (GPs) and mental health professionals and frequency of structural one-on-one contact regarding individual patients.

Methods The implementation of regional QI-interventions, perceived barriers to collaboration, and frequency of structural one-on-one contact, were assessed in a cohort study involving two surveys (2001 and 2003) among a random sample of 2757 GPs.

Results 1336 and 1358 GPs returned baseline and follow-up questionnaires respectively. Most of the interventions were only offered to a minority of GPs. Less than 25% of GPs that had been offered interventions actually participated. The frequency of structural one-on-one contact with mental health professionals did not change, but barriers to collaboration decreased between 2001 and 2003. For GPs who actually participated in interactive small group meetings or in intervention in which mental health professionals were integrated in general practice, a reduction of perceived barriers could be observed as well as an increase in the frequency of structural one-on-one contact.

Conclusion Interventions that could be characterized as interactive small group meetings as well as interventions that involved the integration of mental health professionals in general practice led to a reduction of perceived barriers as well as an increase in the frequency of structural one-on-one contact. These findings add to the knowledge of which interventions have an effect on the collaboration between different health care providers.

INTRODUCTION

The results of numerous studies suggest that an extensive part of the adult population will suffer from a mental health disorder on at least one occasion in their lives [1–3]. Only a small part of this population will contact a care provider. Primary care doctors are usually the first to be contacted [4]. In countries such as the Netherlands and Great-Britain where the GP functions as a gatekeeper, most such patients are also treated by the GP [5–8]. Only a small proportion is thus referred to a mental health professional in primary care (primary care psychologists, social workers) or secondary care (secondary care psychiatrists/psychologists, professionals within public mental health care facilities) [9,10].

To improve the quality of primary mental health care, the patient should initially be diagnosed and treated by the GP and only later referred – as needed – for specialized mental health care. In other words, GPs must identify, diagnose and manage patients with mental health problems but also be prepared to refer patients to mental health professionals when confronted with a lack of time or the knowledge needed to adequately treat the patient in question. To accomplish this, collaboration between GPs and mental health professionals is critical.

However, GPs report various barriers to adequate collaboration with mental health professionals including insufficient possibilities for short-term treatment or joint treatment and an unclear organizational structure of mental health care services [11,12]. As perceived barriers to collaboration seem to have a negative relation with collaboration between GPs and mental health professionals [13] it is important to diminish such barriers. From 2001 to 2004 a nationwide programme aimed at the implementation of quality improvement (QI) interventions was undertaken in the Netherlands. Some of these interventions could be described as educational interventions while others could be described as organizational interventions. Several studies have shown that interventions in which educational and organizational elements are combined to improve not only detection and management of mental health problems but also patient outcomes [13–18]. However, it is not clear whether such interventions can increase collaboration between professionals or diminish perceived barriers to collaboration. Therefore, the aim of the present study was to determine the effect of the interventions in the nationwide programme on collaboration and perceived barriers. To do so we assessed: (i) frequency of one-on-one contact between GPs and mental health professionals and perceived barriers before the start of the nationwide programme; (ii) exposure of GPs to the interventions; (iii) changes in collaboration and perceived barriers between 2001 and 2003; and (iv) the influence of participation in different interventions on frequency of one-on-one contact and perceived barriers.

METHODS

Study population

A cohort study involving two surveys of a sample of GPs in 2001 and 2003 was undertaken to answer our research questions. A sample of 2757 Dutch GPs (about one-third of the national population of GPs) was randomly selected from a database containing the addresses and information on the practice setting for all GPs in the Netherlands. The sample was stratified according to region, type of practice and degree of urbanization. Only one GP per practice was approached. In June 2001, a questionnaire was sent to assess the baseline situation. In September 2003, the same questionnaire was sent to assess the situation 26 months after baseline assessment. After 2, 6 and 10 weeks reminders were sent to optimize responding. GPs that responded received a gift to thank them for their participation in the study. In both 2001 and 2003, non-respondent surveys were also undertaken to assess the possibility of a selection bias. Non-respondents consisted of GPs who had not returned their questionnaire after 12 weeks.

The nationwide programme

In the nationwide programme the Dutch College of General Practitioners and the National Association of General Practitioners adopted a combined top-down, bottom-up approach to improve the quality of mental health care. One important objective of this programme was to improve the collaboration between GPs and mental health professionals.

At the *national level*, the professional organizations undertook a number of measures to support the QI efforts of their regional departments. Responsibility for the actual QI initiatives was left to the *regional departments*. They were stimulated to design their own QI plans on the basis of a needs assessment and the baseline measurement. Already existing interventions or interventions that were part of pilot programmes that were implemented throughout the country [19] could also be included in the improvement plans. The QI plans were subsequently funded. The adoption of a bottom-up approach implied that the regional departments were allowed to develop their own interventions and adopt their own methods for implementation with possibly differing levels of support.

Submitted QI plans consisted of various combinations of interventions, including educational and organizational interventions. The educational interventions consisted of (a) large scale conferences with passive participation, and (b) interactive small group meetings (Box 1). Organizational interventions consisted of interventions in which mental health professionals were integrated in general practice. Some of these organizational interventions could be characterized as replacement models while others were more like consultation-liaison models [17].

[Box 1]

Data collection

The following information was collected for each of the GPs.

1 Actual collaboration was operationalized as the frequency of structural one-on-one contact between GPs and four categories of mental health professionals: (1) social workers; (2) primary care psychologists; (3) professionals within public mental health care facilities; and (4) psychiatrists/psychologists in secondary care. For each category of mental health professionals we asked how often the GP consulted with them on individual patients. The response categories were: 'I regularly consult with this mental health professional', 'I consult with this mental health professional whenever I need to (ad hoc)', or 'I never consult with this mental health professional'. Only one response option could be selected.

2 Perceived barriers to collaboration with mental health professionals were measured using six statements addressing the following barriers: (1) long waiting lists; (2) lack of motivation of patients for treatment; (3) unclear organizational structure of mental health care services; (4) insufficient possibilities for short-term treatment; (5) insufficient possibilities for joint treatment; and (6) insufficient advice for care of patients after treatment by mental health professionals. The five response categories ranged from 'I completely disagree with this statement' (value 1) to 'I completely agree with this statement' (value 5). For each category of mental health care professional, an overall measure of perceived barriers to collaboration was constructed by calculating the mean for the six statements. The Cronbach's alphas for these overall measures ranged from 0.66 to 0.76.

3 Availability of and participation in interventions. Availability of and participation in each of the 10 different interventions were assessed in 2003 by asking if the interventions had been *offered* to the GP (availability: yes/no) and if the GP had *actually participated* in each of the different interventions (yes/no).

4 Possible confounders. Information on those variables shown to be potential confounders of collaboration in a previous study [13] was also collected. This included the age of the GP, information on the type of practice (solo, duo, group/health centre), and the region in which a GP held practice.

In the non-respondent survey, information on the frequency of structural one-on-one contact between GPs and the four categories of mental health professionals was gathered. These questions were similar to those in the main survey.

Statistical analyses

The unit of analysis was the individual GP. Descriptive statistics were used to compare the demographic characteristics of the study population at baseline, at follow-up, and to the national population of GPs. The demographic characteristics of the respondents and non-respondents at baseline and at follow-up along with the frequencies of structural one-on-one contact with the different groups of mental health professionals were also compared. Chi-square tests were applied to the results for the respondents versus non-respondents.

Descriptive statistics were used to describe the frequency of structural one-on-one contact and perceived barriers to collaboration with the different groups of mental health professionals. Changes in the frequency of structural one-on-one contact and perceived barriers between July 2001 and September 2003 were tested for in a repeated measures analysis. A two-sided *P*-value of 0.01 was taken to indicate statistical significance. An increase or decrease of 5% was considered relevant.

The availability of, and participation in, each intervention – as assessed in 2003 – were analysed using descriptive statistics.

To assess the contributions of the different interventions (independent variables) to any changes in the frequency of structural one-on-one contact or changes in the percentage of GPs that perceived barriers to collaboration (dependent variables), bivariate and multivariate regression analyses were performed. A *P*-value of 0.05 was taken to indicate statistical significance. Age, type of practice and region were included as covariates.

RESULTS

Response rates and demographic characteristics of the study population

At baseline, 1336 (49%) of the 2757 GPs returned the questionnaire. At follow-up, 1358 (49%) of the 2757 GPs returned the questionnaire.

For most characteristics the respondents were comparable to the general Dutch population of GPs (Table 1). Comparison of demographic characteristics of the respondents and non-respondents showed only relatively small differences. However, comparison of the frequencies of structural one-on-one contact showed that the non-respondents tended to have structural one-on-one contact with mental health professionals more often.

Collaboration between GPs and mental health professionals before the start of the programme

In 2001 GPs structural one-on-one contact with social workers was more regularly when compared with the other mental health professionals (Table 2). Structural one-on-one contact on a regular basis was nevertheless not very common. The majority of the GPs only had structural one-on-one contact with mental health professionals on an *ad hoc* basis or never. GPs experienced most barriers in their collaboration with professionals within public mental health care facilities (Table 3). Least barriers were experienced in the collaboration with primary care psychologists. Long waiting lists and insufficient possibilities for conjoint treatment were the most important barriers in the collaboration with all professionals.

Availability of, and actual participation in interventions of the nationwide programme

Only local meetings with secondary care psychiatrists and the integration of a primary care psychiatric nurse in general practice had actually been made *available* to more than 50% of the GPs in 2003. The other interventions were offered to less than 50% of the GPs, with multidisciplinary discussion meetings and joint consultations being least available. Of those GPs to which an intervention had been made available, only a minority actually *participated*. When available, GPs most often participated in interventions in which a primary care

psychiatric nurse had been integrated in general practice (38%). They least often participated in joint consultations with GPs, secondary care psychiatrists and patients (3%) (Table 4).

Changes in collaboration with mental health professionals

[TABLE 1]

[TABLE 2]

[TABLE 3]

[TABLE 4]

In 2003, GPs seemed to have structural one-on-one contact with professionals within public mental health care facilities on a more regular basis than in 2001 (19% in 2003 vs. 12% in 2001). However, the frequency of structural one-on-one contact regarding individual patients with professionals within public mental health care facilities and other mental health professionals did not change significantly between 2001 and 2003.

For five of the barriers, GPs perceived in their collaboration with professionals within public mental health care facilities a significant decrease between 2001 and 2003 was detected (Table 3). A significant decrease was also observed for two or more barriers to collaboration with primary care psychologists and secondary care psychiatrists/psychologists. Although less GPs perceived long waiting lists as an important barrier compared with 2001, it remained the most important barrier GPs perceived. Another critical barrier was the unclear organizational structure of mental health care services. In fact, this barrier was found to increase significantly between 2001 and 2003 for social workers, primary care psychologists and psychiatrists/psychologists in secondary care.

Results of the regression analyses showed that GPs had structural one-on-one contact with social workers, primary care psychologists, and secondary care psychiatrists/psychologists more often after they had participated in discussions with pharmacists and secondary care psychiatrists. Structural one-on-one contact with providers within public mental health care facilities was higher after GPs had participated in interventions involving the integration of secondary care psychiatrists in general practice.

Barriers in the collaboration with primary care psychologists and secondary care psychiatrists/psychologists were perceived as less of a barrier after GPs had participated in discussions of individual patients with mental health professionals in primary or secondary mental health care. Barriers perceived to collaboration with professionals within public mental health care facilities diminished after the GPs had access to a primary care psychiatric nurse integrated in general practice.

DISCUSSION

Most of the interventions were only offered to a minority of the GPs. For most of the interventions less than 25% of GPs that had been offered the intervention actually participated. The frequency of structural one-on-one contact with mental health professionals did not change. Perceived barriers to collaboration decreased between 2001 and 2003. For GPs who actually participated in specific interventions a reduction of perceived barriers could be observed as well as an increase in the frequency of structural one-on-one contact.

Methodological issues

The surveys involved about one-fifth (17%) of all Dutch GPs. The response rate for the two surveys was 49%. Although non-response can possibly lead to misinterpretations of percentages, it has less of an impact on the interpretation of the associations between

variables [20]. The fact that the non-respondents had one-on-one contact with mental health professionals more often than the respondents suggests that the actual frequency of structural one-on-one contact with mental health professionals could have been underestimated within the context of the present study. Conversely, GPs who already had structural one-on-one contact with mental health professionals on a regular basis may be less interested in additional interventions and the target of the present study might well be exactly those GPs with the greatest margin to improve. Finally, at the time of the second survey in 2003 all of the interventions had yet to be effectively implemented, which means that the follow-up survey may have been too early to fully measure the intervention effects.

Interpretation of results

Reviewing the results of this study we can see that we observed relevant changes in both the frequency of structural one-on-one contact between GPs and public mental health care facilities as well as in perceived barriers. Since 1987 the collaboration between the two professionals has declined. The contact between the two professionals decreased [19] while the problem of long waiting lists increased from 7% in 1987 to 47% in 2001 [21,22]. After the implementation of the nationwide programme the frequency of contact seemed to have increased again, while the perception of long waiting lists as a barrier to collaboration decreased to 38%. Other barriers such as insufficient possibilities for short-term treatment or insufficient advice regarding care for patients after treatment by a mental health professional have steadily decreased since 1987 [20,21].

Our study suggested that these changes in the collaboration with public mental health care facilities were influenced by the participation of GPs in interventions, which comprised the explicit introduction of an on-site mental health professional in general practice (psychiatrist or primary care psychiatric nurse). Important features of these mental health professionals are that they are very accessible for both the patient and the GP, they clearly offer possibilities for short-term treatment, and they can provide – in most cases – feedback to GPs [23]. Interventions that stimulated structural one-on-one contact with primary care psychologists and secondary care psychiatrists have been interventions in which groups of GPs have met with a pharmacist or psychiatrist to discuss pharmacological treatment of patients. As we do not know the exact content of these interventions we can only speculate on how these interventions had an effect on structural one-on-one contact between professionals.

Interventions that decreased perceived barriers in the collaboration with professionals other than those in public mental health care facilities have been interventions in which GPs had discussions about individual patients with mental health professionals in primary or secondary mental health care. It could well be that these discussions highlighted specific barriers in the collaboration between these professionals. The fact that these barriers have been discussed might have been enough to tackle a specific barrier or to lower the perception of such a barrier. It could also be that these meetings have been the solution to some of these perceived barriers. These meetings in itself already stimulated the exchange of information between professionals which also could have led to less a need for possibilities for joint treatment.

There should be ongoing attention for the stimulation of collaboration between GPs and mental health professionals as collaboration between professionals is necessary to adequately treat patients with mental health disorders. To improve structural one-on-one contact and to diminish experienced barriers both interactive small group meetings as well as the integration of mental health professionals in general practice can be used. However, exactly how these interventions change professional behaviour or the way in which they influence perceived barriers still needs some additional attention.

CONCLUSION

The results of the present study showed that the frequency of structural one-on-one contact of GPs with mental health professionals, with the exception of public mental health care facilities, did not seem to increase while perceived barriers to collaboration decreased.

Interventions that could be characterized as interactive small group meetings as well as interventions that involved the integration of mental health professionals in general practice led to a reduction of perceived barriers as well as an increase in the frequency of structural one-on-one contact. These findings add to the knowledge of which interventions have an effect on the collaboration between different health care providers.

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BOX AND TABLES

Box 1 Interventions offered at a regional level*

Large scale conferences with passive participation:

- Local meetings of GPs with secondary care psychiatrists concerning mental health issues
- Local meetings of GPs with GP specialists concerning mental health issues

Interactive small group meetings:

- Discussion of individual patients with primary care psychologists or social workers
- Discussion of individual patients with psychiatrists/psychologist in secondary care or providers within public mental health care facilities
- Discussion of pharmaceuticals with GPs, pharmacists and secondary care psychiatrists
- Multidisciplinary discussion meetings

Integration of mental health professionals in general practice:

- Integration of primary care psychologists or social workers in general practice
- Integration of secondary care psychiatrists in general practice
- Integration of primary care psychiatric nurses in general practice
- Joint consultations with GPs, secondary care psychiatrists, and patients

*Note: Each region implemented different combinations of interventions.

Table 1 Demographic characteristics of all GPs, GPs who responded in 2001 and/or 2003, and GPs who did not respond in 2001 and/or 2003

	All Dutch GPs (<i>n</i> = 7726)*	Respondents 2001 (<i>n</i> = 1336)	Respondents 2003 (<i>n</i> = 1358)	Non-respondents 2001 (<i>n</i> = 1421)	Non-respondents 2003 (<i>n</i> = 1398)
Age (%)					
<35 years	4	2	1	2	1
35–39 years	13	13	9	9	7
40–44 years	20	17	15	18	14
45–49 years	26	27	27	24	22
50–54 years	24	24	27	24	24
55+ years	14	17	22	17	31
Sex (%)					
Male	75	78	79	83	82
Type of practice (%)					
Single-handed	64	58	60	68	67
Duo	25	28	27	23	24
Group/health centre	10	14	13	9	9
Degree of urbanization (%)					
Very urban	42	39	37	41	43
Average urban	20	20	20	20	20
Rural	38	41	43	39	37

*Netherlands Institute for Health Services Research, December 31, 2000.

Table 2 Distribution of GPs one-on-one contact with four types of mental health care specialists in 2001 versus 2003 (percentages of GPs)*

	2001				2003			
	Regularly (%)	<i>Ad hoc</i> (%)	Never (%)	<i>n</i>	Regularly (%)	<i>Ad hoc</i> (%)	Never (%)	<i>n</i>
Social workers	28	43	29	1302	25	43	32	1340
Primary care psychologists	12	63	25	1287	15	59	26	1332
Public mental health care facilities	12	64	24	1302	19	57	4	1330
Secondary care psychiatrists/ psychologists	6	54	40	1208	8	52	40	1234

*Note: There were no differences between 2001 and 2003 significant at a level of $P < 0.01$ (test: repeated measurement analyses).

Table 3 Perceived barriers to collaboration for different groups of mental health care specialists (percentages of GPs)

	Social workers [†]		Primary care psychologists [‡]		Public mental health care facilities [§]		Psychiatrists/ psychologists [¶]	
	2001 (%)	2003 (%)	2001 (%)	2003 (%)	2001 (%)	2003 (%)	2001 (%)	2003 (%)
Long waiting lists	48	38*	44	37*	81	69*	48	37*
Lack of motivation of patients for treatment	11	11	8	5*	47	37*	20	14*
Unclear organizational structure of mental health care services	26	31*	11	14*	39	33*	15	21*
Insufficient possibilities for joint treatment	27	29	21	20	34	31	30	31
Insufficient possibilities for short-term treatment	17	15	11	10	33	23*	17	17
Insufficient advice regarding care for patients after treatment by mental health specialist	31	29	18	16	29	21*	23	20
Mean score (SD)**	2.7 (0.8)	2.7 (0.7)	2.5 (0.6)	2.5 (0.6)	3.3 (0.7)	3.1 (0.6)	2.8 (0.6)	2.8 (0.7)

*Difference between 2001 and 2003 significant at a level of $P < 0.01$ (test: repeated measurement analyses).

[†]2001 *n* = 1282, 2003 *n* = 1326.

[‡]2001 *n* = 1275, 2003 *n* = 1321.

[§]2001 *n* = 1284, 2003 *n* = 1327.

[¶]2001 *n* = 1193, 2003 *n* = 1199.

**Range 1–5. Higher score implies that barriers in the collaboration with this professional were perceived as more important.

Table 4 Perceived need for, availability of, and actual participation in QI-interventions (percentages of GPs)

	Need*, % (n)	Offered*, % (n)	Offered and participated†, % (n)
Large scale conferences with passive participation			
Local meetings of GPs with secondary care psychiatrists concerning mental health issues	77 (979/1271)	53 (698/1318)	28 (195/698)
Local meetings of GPs with GP specialists concerning mental health issues	54 (678/1255)	44 (575/1301)	20 (144/575)
Interactive small group meetings			
Discussion of individual patients with primary care psychologists or social workers	51 (639/1252)	44 (578/1301)	27 (156/578)
Discussion of individual patients with psychiatrists/psychologist in secondary care or providers within public mental health care facilities	45 (567/1260)	41 (544/1308)	22 (223/544)
Discussion on pharmaceuticals with GPs, pharmacists, and secondary care psychiatrists	58 (739/1274)	40 (534/1317)	24 (128/534)
Multidisciplinary discussion meetings	17 (213/1251)	26 (343/1305)	4 (14/343)
Integration of mental health professionals in general practice			
Integration of primary care psychologists or social workers in general practice	59 (759/1286)	38 (497/1317)	17 (189/497)
Integration of secondary care psychiatrists in general practice	48 (608/1266)	33 (425/1313)	11 (47/425)
Integration of primary care psychiatric nurses in general practice	59 (753/1277)	60 (797/1318)	38 (303/797)
Joint consultations with GPs, secondary care psychiatrists, and patients	36 (445/1286)	24 (312/1306)	3 (9/312)

*Percentage of GPs who expressed a need for the intervention in 2001 [*n* need/*n* total (missings not included)].

†Percentage of GPs who were offered the intervention in 2003 [*n* offered/*n* total (missings not included)].

*Percentage of GPs who were offered the intervention *and* subsequently actually participated in the intervention in 2003 (*n* participated/*n* offered).