The Influence of Patient-Practitioner Agreement on Outcome of Care

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Abstract: A previous study suggested that patient-practitioner agreement and follow-up in ambulatory care facilitates problem resolution as judged by patients. In this study in another medical practice, practitioner-patient agreement on what problems required follow-up was associated with greater problem resolution as judged by the practitioners regardless of the severity of the problems. In this study, patients did not judge problems mentioned only by themselves to be less improved than problems mentioned by both them and their practitioners. However, in this study more of the problems mentioned only by patients were mentioned in the note of the visit contained in the medical record. Patients expected less and reported less improvement of problems that were neither mentioned by the practitioner nor written in the medical record than was the case for problems listed both by patients and practitioners. The findings of this study confirm those of the previous study in suggesting that practitioner-patient agreement about problems is associated with greater expectations for improvement and with better outcome as perceived by patients. In addition, they indicate that practitioners also report better outcome under the same circumstances. (*Am J Public Health* 1981; 71:127-132.)

The initial process of care, recognition of patients' problems by practitioners, has received little attention in research although it is clear that all other processes (diagnosis, management, reassessment) depend upon adequate and accurate perception of the underlying reason for the visit. A growing literature, much of it from Great Britain,[1-3] addresses this issue by analyzing the verbal interactions between doctors and patients and demonstrating patterns of communication that are intuitively considered dysfunctional. There also has been more systematic study of the gaps in recognition of patients' problems and of their impact on patient care. Accurate recognition of patients' problems is associated with better understanding on the part of patients,[4,5] more compliance,[6,7] and better outcomes.[8,9] Practitioners do better at recognizing patients' problems when there is continuity of care.[10] Medical records specifically designed to improve information recognition also facilitate problem-recognition by practitioners.[11-13]

Roter showed that professional dominance of the practitioner-patient interaction could be reduced by encouraging patients to express their problems more forcefully.[14] In a study authored by one of us,[15] practitioner-patient agreement on problems requiring follow-up was associated with better recognition of the problem at follow-up by the practitioner than was the case when only the patient believed follow-up necessary. Moreover, those problems that both patient and practitioner acknowledged were more often reported as improved by the patient. In that study neither the practitioners' perception of improvement nor an estimate of the severity of the problems were determined. The study to be reported was therefore designed to address the issue in an entirely different setting: to determine whether practitioners would also judge more problems as improved if they were mentioned as needing follow-up by both themselves and their patients as compared with problems listed only by practitioners themselves, and to assess the relationships between severity of the problems, their listing, and their outcome.

Methods

This study involved patients who were seen at the Metropolitan Health (Care-First) Plan office between mid-June and mid-August 1979 and were given appointments to return for follow-up. Care-First is a prepaid Health Maintenance Organization plan providing comprehensive and preventive services to primarily working-class families in Baltimore, Maryland. Physician care is provided by five internists and three pediatricians with full-time faculty appointments at the Baltimore City Hospitals and the Johns Hopkins University School of Medicine. Two nurse practitioners also provide care.

The study design was the same as that reported for the previous study.[15] In brief, all patients given an appointment

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for a follow-up visit were interviewed at the conclusion of the visit (index visit) at which the appointment was made. Although interviews were not conducted at all office sessions, the entire spectrum of office hours was included, each one in proportion to its frequency during the week. The interviewer used a structured form to determine what problems were to be reexamined at the follow-up visit, expectations for improvement of each problem, its perceived seriousness,* and the patient's (or the parent of the patient's) concern about it. After the index visit, the practitioner completed a questionnaire addressing the same issues without knowledge of the patient's responses.

Just before seeing the practitioner at the follow-up visit, all patients were asked about the degree of improvement of each problem they previously mentioned. After the visit, practitioners were requested to indicate the degree of improvement of problems they had listed as requiring follow-up.*

In the analysis, the study population was divided into two groups (I and II) according to the completeness of information on outcome. Patients (N = 94) who returned for their follow-up appointments and therefore had information on outcome obtained from both patient and practitioner comprised Group I. Patients (N = 29) who were either scheduled to return after the study period (no information on outcome from either practitioner or patient) or who (N = 12) were interviewed by telephone because they did not keep their appointments (no information on outcome available from practitioner) comprised Group II.

Results

Table 1 shows the similarity of population characteristics of Group I (69.6 per cent) and Group II (30.4 per cent). Following the 135 index visits, patients and practitioners listed a total of 275 problems requiring follow-up. For the adults in both Groups, almost one-half (49.1 per cent, 49.4 per cent, respectively) of the problems were listed by both patient and practitioner. For the children in both groups, the agreement was 77-78 per cent. The overall agreement on problems requiring follow-up was 52 per cent. The remainder of this paper deals only with the findings in Group I, as this is the group for whom information on follow-up is available from both practitioner and patient and is the group comparable to Group A in the previous study.[15]

Problems that were listed by both practitioner and patient were significantly more likely (73 per cent) to be of moderate or marked concern to the patient than problems listed only by the patient (51 per cent). Similarly, problems that were jointly listed were more likely to be perceived by the practitioner as of greater concern to the patient (75 per cent) than problems listed only by the practitioner (45 per cent). Neither patients' nor practitioners' assessments of severity of the problem were associated with joint listing.

Table 2 shows that practitioners were more likely to record no improvement for problems that they alone listed. Adults and children differed in the extent to which improvement was reported, but in both cases improvement was reported as greater when both patient and practitioner had listed the problem. For adults, practitioners reported little or no improvement for 66 per cent of those problems previously listed by themselves only, compared to 40 per cent of those listed by themselves and their patients. For children, 100 per cent of the problems listed by practitioners only showed little or no improvement according to the practitioner, as compared with 6 per cent of the problems listed by both. Improvement as reported by the practitioner was related to the practitioner's initial assessment of seriousness. Of the

TABLE 1—Characteristics of the Study Groups*

Characteristics	Group I				Group II			
Total # in group (%)	94 (69.6)				41 (30.4)			
	Adult		Child		Adult		Child	
# of patients (%)	77	(81.9)	17	(18.1)	35	(85.4)	6	(14.6)
Same practitioner (%) at both visits	62	(80.5)	15	(88.2)	NA		NA	
Same type practitioner (%) at both visits	69	(89.6)	16	(94.1)	NA		NA	
Mean # problems per patient	2.1		1.3		2.3		1.5	
Patient and practitioner agree on main problem	55		15		22		5	
Problems listed by:								
Practitioner only (%)	44	(27.0)	1	(4.5)	19	(23.5)	2	(22.2)
Patient only (%)	39	(23.0)	4	(18.2)	22	(27.2)	0	(0.0)
Both (%)	80	(49.1)	17	(77.3)	40	(49.4)	7	(77.8)
Average number of problems listed by:								
Practitioner only	0.57		0.06		0.54		0.38	
Patient only	0.51		0.24		0.63		0.0	
Both	1.04		1.00		1.14		1.17	

*Group I = complete information for both index and follow-up visits
Group II = information lacking for follow-up visits

*Not obtained in the previous study.

TABLE 2—Outcome of Care as Judged by Practitioners According to Prior Agreement on the Need for Follow-up

	Problem Status on Follow-up*	
	Moderate or Marked Improvement or Resolution of Problem	Slight or No Improvement or Worsening of Problem
Problem mentioned by		
Practitioner and Patient	44 (49.4%)	45 (50.6%)
Practitioner only	12 (26.7%)	33 (73.3%)

Chi Square = 5.47; $p = .02$
$R^2 = 0.05$ (Categorical Analysis of Variance)
*For consistency with previous study, outcome is categorized as indicated. If improvement is categorized as Worse/None vs. Slight, moderate, marked, resolved, the x^2 value is 12.02; $p < .01$; $R^2 = 0.10$

problems the practitioner originally thought of little or no seriousness, 55 per cent were thought to be improved on follow-up, whereas 36 per cent of problems originally thought to be moderately or very severe were reported as improved subsequently. However, problems that both patient and practitioner listed were more likely to be reported as improved *regardless* of perception of severity. In fact, problems initially regarded as moderate or very serious were significantly more likely ($p < .05$) to be reported as improved if they were mentioned by both practitioner and patient (46 per cent) than if they were mentioned by the practitioner only (17 per cent). Neither the patient's initial concern about the problem nor the practitioner's assessment of the patient's concern were associated with improvement as judged by the practitioner.

Improvement as reported by patients did not vary according to whether the problem had been mentioned by both the practitioner and patient or by the patient only. Patients reported moderate or marked improvement or resolution of 56 per cent of problems mentioned by both themselves and practitioners and for 57 per cent of problems mentioned only by themselves. Neither the patient's initial concern about the problem nor the seriousness of the problem as perceived by the patient were related to improvement of the problem as reported by the patient.

Although the practitioner and patient agreed (more than can be accounted for by chance alone) on the extent of improvement for those problems that were jointly listed, practitioners and patients judging improvement of the same problem did not agree 20 per cent of the time about whether the problem they both recognized as needing follow-up was improved at the time of the follow-up visit.

Discussion

The findings in this study support the previous conclusion that agreement between patients and practitioners facilitates problem resolution.[15] Whereas the previous study elicited only the patients' assessment of outcome, this study included practitioners' assessments as well. This study found that the practitioners reported improvement in a greater proportion of problems that were listed as needing follow-up by both themselves and patients than was the case for problems they only had listed as requiring follow-up.

In contrast to the previous study, however, the present study did not find that problems listed only by patients, particularly adult patients, were less likely to be considered improved by the patient than problems both practitioners and patients listed. This discrepancy can be explained by greater recognition of patients' problems and greater expectations for improvement in this study. The results of the previous study suggested that certain problems not listed as needing follow-up by practitioners were not dealt with in the index visit to the extent that other problems were; that patients perceived this; and that patients expected a poorer outcome and experienced a poorer outcome.[15] For example, only 37 per cent of problems which were listed as needing follow-up by the patient but not the practitioner were noted in the medical record note of the index visit. Patients expected fewer than one-third of these problems to show improvement, as compared with expectations of improvement for one-half of the problems which the practitioner had recorded in the medical record. When the patient returned for follow-up, only 7 per cent of problems not mentioned by the practitioner and not noted in the medical record were reported as improved. In comparison, 44 per cent of problems not listed by the practitioner but recorded in the record were reported as improved.

In Care-First, however, 59 per cent of problems listed only by the patients as needing follow-up were mentioned in the practitioners' index visit note. As was the case in the previous study, expectation for improvement was greater where the problem was mentioned in the medical record (83 per cent as compared with 29 per cent where it was not mentioned), so that overall expectations for improvement were much higher than in the previous study. Similarly, reported improvement for problems mentioned in the medical record (73 per cent) was greater than when the problem was not mentioned in the medical record (33 per cent). Problems neither on the practitioner's list nor in the medical record had a very low expectation for improvement (14 per cent), consistent with the low reported improvement of these problems (17 per cent), just as was the case in the previous study.

Thus it appears that discrepancies between practitioners and patients in their assessments of what problems require follow-up are associated with significant differences in outcome of care regardless of the perceived severity of the problem. When patients' problems are not recognized by practitioners, as evidenced by practitioners not mentioning them as needing follow-up or recording them in the patients' medical charts, both patients' expectations for improvement and reported improvement are less than is the case when both practitioner and patient signify recognition of the problems. Although problems of concern to patients are more likely to be jointly recognized as needing follow-up, neither the patients' concern nor perceived seriousness are associated with reported outcome. When problems are recognized only by practitioners as needing follow-up, they are less likely to be improved on follow-up even if they were problems that the practitioner believed to be least serious initially.

In summary, this study indicates that practitioner-patient agreement about problems is associated with a better outcome, as judged by both practitioner and patient, regardless of the severity of the problem. These findings suggest several areas for further examination:

- First, the number of patients in this study was relatively small, particularly with regard to children. Although the results are consistent with previous work using the same research design in a completely different medical practice, larger samples will be required to examine simultaneously the relative effect of different aspects of the practitioner-patient relationship on the recognition of problems and their improvement. For example, what characteristics of patients and of practitioners are associated with agreement on problems? What characteristics of problems facilitate joint agreement? Is continuity of care associated with better outcomes, just as it is associated with better recognition of the problems on follow-up?[10] Are medical record formats that enhance the recording of patients' problems, such as records to which patients actively contribute, associated with better results of care, just as they contribute to the practitioners' follow-up of problems?[13]
- The second area for further investigation involves other ways of assessing outcome. This study used subjective assessments by practitioners and patients as the criterion for improvement. Although practitioners' and patients' agreement on the outcome is greater than would occur by chance alone, the 20 per cent disagreement suggests that both assessments are necessary, at least in the absence of objective measures that are widely accepted as reasonable criteria for improvement of patients with a wide variety of types of problems. No such measures now exist. Future studies might, however, incorporate results of laboratory tests (where they are appropriate) or changes in particular physical signs of disease (where they are present) to provide a wider view of the spectrum of outcome[16] than is obtained by subjective judgments alone.
- A third and more difficult area for further investigation concerns the nature of the problems themselves. In this study, carried out in a primary care clinic, the problems were typical of those occuring in primary care practice. Examples are middle ear infection, fatigue, elevated blood pressure, skin rash, diabetes, dysmenorrhea, and various types of pain. The only characteristics of problems assessed were subjective judgments of severity and concern on the part of patients and practitioners. The specification of case-mix is difficult even in inpatient settings[17] where there is considerably less variability in severity of illness than is the case in outpatient care. As it is not now possible to stratify outpatient diagnoses according to severity or prognosis, methdologic work will be required before it is possible to examine the relationships between objective characteristics of problems, their recognition and management by practitioners, and their improvement as assessed by different types of measures.

Despite these limitations, the findings of this study buttress theoretical notions about the importance of the dynamics of the practitioner-patient interaction.[18] Although much is known about the content of this interaction,[19, 20] the mechanisms by which initial agreement about the problem, its severity, and its expectation for improvement influence the outcome of care require elucidation.

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