

Maximizing Patient Compliance by Shaping Attitudes of Self-Directed Health Care

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Research studies consistently find that a large proportion of patients do not comply with physicians' recommendations. Consequences of such high noncompliance on the efficiency and effectiveness of health-care delivery systems are dramatic and obvious. Recognition of this problem was the impetus for beginning this patient compliance study. Key factors involved in maximizing patient compliance were identified and incorporated into a procedure which patients in the experimental group experienced. Patients in the control group experienced no special treatment.

Compliance rates were higher for the experimental group; however, compliance rates in both control and experimental groups tended to be higher than cited in the literature. It was found that patients in the experimental group seemed to react more favorably to the personal interaction they received as part of the procedure than to other facets of the procedure. Findings of the study imply that increased compliance may be the end result if greater emphasis is placed on building a partnership with the patient rather than making compliance itself a major goal.

Patient noncompliance has been the subject of numerous research studies in which findings consistently indicate that a large proportion of patients do not comply with physicians' recommendations. A review of literature¹⁻³ demonstrates that a range of 15 to 93 percent of patients are noncompliant. This wide range is attributed to the variety of populations studied, various methods of data collection, and different medical problems investigated. Despite the range, a pattern emerges in

which at least one third of the patients in most studies failed to comply with physicians' orders.

The consequences of such high noncompliance rates on the efficiency and effectiveness of health-care delivery systems are dramatic and obvious. Recognition of this problem has given rise to considerable discussion and research investigating variables involved in compliance. Research efforts to date have provided descriptive information regarding the influence on patient compliance of such variables as: the physician-patient interaction,⁴ patient characteristics,⁵ the therapeutic regimen,⁶ and socioenvironmental factors.⁷ Research in which findings from such studies have been applied in an attempt to

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maximize patient compliance has been limited. The lack of empirically validated principles or specific procedures designed to facilitate compliance in a primary care medical setting was the impetus of beginning developmental work in this area. The Patient Compliance Study was initiated with the purpose of developing an efficient and practical procedure for maximizing patient compliance and shaping attitudes and habits of self-directed health care and maintenance.

Preliminary Phase

Prior to the initiation of the study, exploratory data were collected from patients of the Family Practice Center. The purpose of the initial investigation was to ascertain patients' reactions to talking about compliance and to determine common reasons for noncompliance. One hundred thirty-five patients were interviewed by a nurse after they had seen the physician. A check was made to assess the clarity of the physician's recommendations to the patient. Patients were told that they would be called at a later date and would be asked to estimate the percentage of time they had followed the physician's recommendation. Patients were assured that this would in no way affect their medical care, regardless of the level of compliance. Patients were contacted two weeks after the visit, and asked to estimate the percentage of time they had complied with the physician's recommendations. No patient refused to cooperate. Sixty-six percent of the patients estimated that they had complied with the physician's recommendations most of the time, while 34 percent said that they had not. Reasons reported by patients for noncompliance frequently had nothing to do with lack of information or understanding. When asked about reasons for not complying, the largest category was disagreement with what the physician had recommended. Other reasons cited, in rank order, were side effects of medication, forgetting, financial reasons, or being too busy to follow recommendations. Questionnaires with

cover letters were mailed to patients at the completion of the exploratory study. The purpose of this procedure was to obtain a reliability estimate of the patients' follow-up reports of compliance success and to determine their reaction to the procedure. Physician's recommendations for the individual patient were written on the form, and each patient was asked to again estimate his percentage of compliance with each recommendation. In addition, patients were asked to give their reaction to the procedure. Questionnaires were returned by 45 percent of the patients. It was estimated that inaccuracies in telephone reports of compliance ranged from 10 to 20 percent. Nearly all patients were enthusiastically supportive of the personal interaction of the nurse after they had seen the physician.

Methods

On the basis of this exploratory work, key factors to be considered in maximizing compliance were identified. These factors were:

1. Good rapport and free communication between the patient and physician;
2. Interaction which results in the patient feeling that:
 - a) concerns were understood
 - b) expectations were met
 - c) the health-care professional was genuinely concerned about him;
3. Patient understanding of his medical problem, causes, treatment regime, expected outcomes of treatment, and consequences of noncompliance;
4. Patient participation in planning treatment regimen, identification of, analysis of, and solutions to problems which might interfere with compliance.

Compliance categories were developed with evaluation to be based on the patients' estimates of compliance in each category.

The study group consisted of 182 patients in the experimental group and 156 patients in the control group. Patients from both groups were chosen at random from the Family Practice Center and from

a nearby comprehensive health-care clinic. Six physicians were involved in the study, including two family physicians, one internist, and three family practice residents.

A preliminary interview with the patients of the experimental group was conducted by a nurse before each patient saw the physician. The interview focused on the patient's reasons for the visit to the physician, and what he hoped to have accomplished from the visit with the physician. Each patient was given an explanation of the project, namely that the purpose was to enable him to get the most from the visit with the physician. Following the physician's examination, the nurse again interviewed the patient. A self-treatment form was filled out jointly by the nurse and patient, listing each of the physician's recommendations, the reasons for each recommendation, and exactly how they were to be carried out. Supplemental materials in the form of pamphlets and brochures were given to the patient when appropriate. During the discussion, the nurse and patient identified problems that might interfere with compliance. Alternatives were offered when possible and resources were used as needed to assist in the resolution of problems. Consequences of following or not following recommendations were explained. Patients were told that they would be contacted at a later date and would be asked to estimate their degree of compliance with the physician's recommendations. During the interview the nurse assessed expected compliance difficulty, history of poor compliance, and the degree of complexity of the treatment regime. Patients falling into poor compliance categories were contacted within two to three days of the visit in order to give support and identify additional problems that might interfere with compliance. These patients as well as all other patients in the experimental group were contacted two weeks after the initial visit and asked to estimate the percentage of time they followed the physician's recommendations.

Patients in the control group were chosen at random from the register of appointments. Physician's recommendations for these patients were obtained from their chart. Patients were contacted by telephone two weeks after their visit. They were given an explanation of the project and were also assured that their medical care would in no way be adversely affected by their degree of compliance.

Results

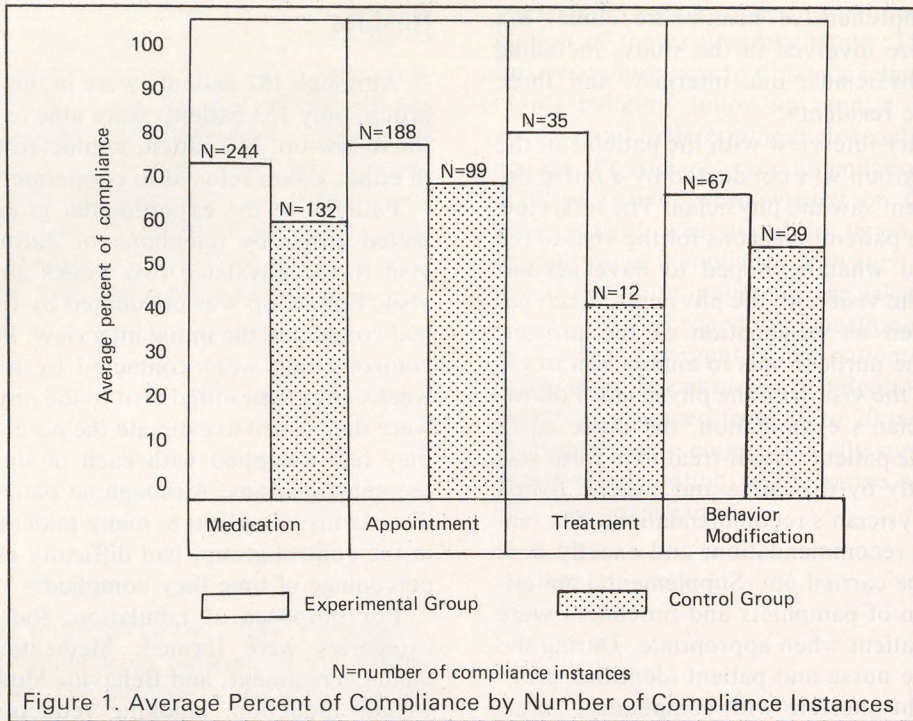
Although 182 patients were in the experimental group, only 153 patients were able to be contacted for follow-up. No patient contacted for follow-up in either group refused to cooperate.

Patients in the experimental group were contacted either by telephone or during the return visit to the physician two weeks after the initial visit. Follow-up was conducted by the nurse who had conducted the initial interview. Patients in the control group were contacted by telephone two weeks after their initial visit to the physician. They were then asked to estimate the percentage of time they had complied with each of the physician's recommendations. Although no patient refused to discuss his compliance, many patients, especially in the control group, had difficulty estimating the percentage of time they complied.

For purposes of tabulation, four compliance categories were formed: Medication, Appointments, Treatment, and Behavior Modification, ie, weight reduction, smoking reduction, or other changes in life-style. Compliance was tabulated in terms of compliance instances, or how many times the patient had the opportunity to comply or not comply with the physician's recommendations. The percentage of compliance was based on the total number of compliance instances in each category.

The compliance category containing the most compliance instances was Medication, with Appointments, Behavior Modification, and Treatment following in rank order. Patient compliance estimates for each category ranged from 0 to 100 percent. Patients in the experimental group had a higher percentage of compliance in each category than those in the control group (Figure 1). Mean patient compliance for all categories combined showed the experimental group with 73 percent, while the mean patient compliance for the control group was 55 percent.

There seemed to be little correlation between previous experience with the recommended regime and the rate of compliance. Patients' own expected rates of compliance did not seem to be related to the rates actually attained. When asked at the initial interview how often they expected to be able to comply with the physician's recommendations, nearly all patients said they thought they would comply 100 percent of the time.



Discussion

Although compliance rates were higher in each category for the experimental group, compliance rates in both control and experimental groups tended to be higher than cited in the literature. As previously mentioned, difference in compliance rates as compared to previous studies might be attributed to variety of populations, various methods of data collection, and different medical problems. Patients in the study represented a broad range of medical problems, age, and socioeconomic status.

The data collected in this study were based on patients' reported degree of compliance. The same nurse collected data on all patients from both the

experimental and control groups; therefore general approaches to both groups remained the same. Although patients in both groups were assured that the amount of compliance reported would in no way affect their medical care, allowances for patients' tendency to estimate higher compliance rates than actually attained must be made.

Difficulties in accurately measuring patient compliance levels necessitate further research and investigation. Whereas urine testing or drug levels in the blood may be one of the more accurate means of measuring drug compliance, compliance measures for other recommendations such as behavior change or specific treatments are still de-

pendent on patient reporting. Improvement or deterioration of condition is not always an accurate estimate of the degree of compliance, since there is not always a direct correlation between the two.

The purpose of the study was to explore the effect of one procedure on patient compliance. Many other variables contribute to compliance levels as well. Differences in effect of the procedure according to medical problem, age, or socioeconomic status were not determined. Differences in patient/physician rapport might also contribute to overall compliance rates, although there did not appear to be large variances in compliance rates for individual physicians.

Although the effect of the procedure on compliance was the major focus of the study, other interesting observations resulted as well. One of these was the patients' readiness to talk about, not only their compliance habits, but their reactions to their medical care and medical problems as well. This is especially surprising in the control group, who in nearly 60 percent of the instances did not know the nurse conducting the telephone follow-up. These patients were generally open with their comments, their problems, and their impressions even though these comments were not solicited.

Patients reacted more favorably to the personal interaction and support involved in the procedure than to other facets of the procedure such as clarification of physician's recommendations or supplemental materials. The following patient comments help to illustrate this point:

...I valued being treated like a rational person.

...valuable...it's nice to feel that someone cares if you take your medicine and cares about you even if she's paid to do it. Dr. Welby—we need you.

I'm so surprised that anyone is actually taking time to ask my feelings about things. I'm so used to being treated like an impersonal piece of meat when I go to the doctor.

Patients did not comment favorably or unfavorably about supplemental materials such as brochures or pamphlets, or about the value of having physicians' recommendations written on the self-treatment sheet. Comments were limited almost exclusively to the personal interaction that took place as a result of the procedure.

The degree of patient compliance indisputably has an effect on the efficiency and effectiveness of medical practice. Philosophical questions arise, however, about the extent to which the medical practitioner should attempt to manipulate patients' behavior. In this era of patients' rights, compliance programs may be more successful and less offensive if greater emphasis is placed on assisting the patient to make his own informed decisions, helping to identify and find solutions to problems which may interfere with compliance, and giving support and guidance as needed. The age of the dictatorial approach to medical care may well be over as patients become more sophisticated and aware through the media. Emphasis might be placed on building a partnership between patient and health-care professional rather than on compliance as a major goal. Increased compliance may surprisingly be the end result.

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