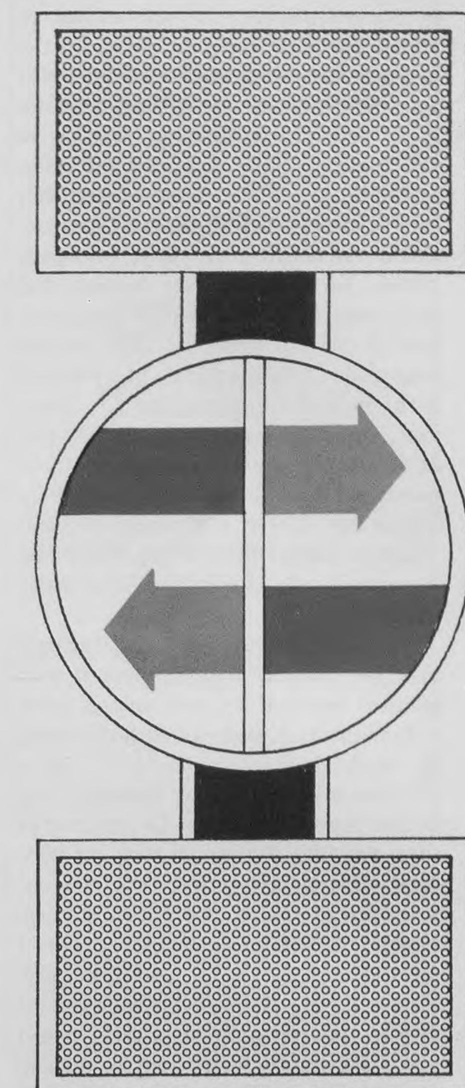
Doctor-Patient Communications in a Private Family Practice

Diehl Snyder, James J. Lynch, PhD, and Leopoldo Gruss, MD
Baltimore, Maryland



One hundred fifty-five randomly selected patients in a private family physician's office were interviewed immediately before and immediately after their visit with the doctor in an attempt to assess the degree of misunderstanding that occurs in doctor-patient communications. Fifty-four percent of these patients either forgot to mention all their medical problems to the physician or they confused or forgot certain instructions concerning their diagnosis or treatment.

A X^2 analysis failed to reveal any significant sex or age differences in the proportions of misunderstandings. There was also no correlation between the number of misunderstandings, the amount of time the doctor spent with the patients, the patients' rating of their own health on a scale of one to ten, and the patients' complaints or praises about their medical treatment. The number of years of formal education completed by the patient showed a direct relationship to the number of misunderstandings. Patients on their first three visits to this office tended to misunderstand more of their medical instructions. Furthermore, the study suggested that patients with chronic internal diseases and those who express excessive trust in their physician might have an increased proportion of misunderstandings.

Few problems are more vexing to modern medicine than the fact that so many individuals fail to comply with standards that are conducive to physical well-being. The per capita consumption of cigarettes in the United States is approaching an all time record high despite the surgeon general's report and massive medical publicity pointing out the relationship between smoking, and lung cancer and cardiac disease. The United States' 1970 immunization survey showed that only 57.2 percent of preschool children had been vaccinated against measles, a figure that was 4.2 percent lower than in 1969.[1] When live oral polio vaccine first became available, 90 percent of the United States' children between the ages of one and four were given adequate protection. By 1973, 40 percent of the United States' children in this age range were no longer adequately protected.[2]

While the source of this problem undoubtedly involves a variety of cultural, economic, social, and interpersonal factors, the one area that has received the most concentrated attention has been patients' compliance with direct medical advice. The data from a wide number of studies suggest that somewhere between one third and one half of all patients do not comply with physicians' instructions.[3-7] It has also been noted that physicians not only grossly underestimate the rates of noncompliance in their practices, but they are also inaccurate when they attempt to identify noncompliant patients.[8-12] It has been suggested that negative feelings about medical treatment are an important and widespread factor that significantly increases patient non-compliance with treatment regimens. For example, Francis, Korsch, and Morris studied 800 outpatient visits to a hospital pediatric clinic and reported in 1969 that 24 percent of the patients were grossly dissatisfied with their treatment.[13] Like other researchers, these investigators observe three key factors

From the Departments of Psychiatry and Family Medicine, University of Maryland, School of Medicine, Baltimore, Maryland. Requests for reprints should be addressed to Mr. Diehl Snyder, c/o Department of Family Medicine, 645 West Redwood Street, Baltimore, Md 21201.

in noncompliance: (1) the extent to which patients' expectations from the medical visit were unmet, (2) lack of warmth in the doctor-patient relationship, and (3) failure to receive an explanation of the diagnosis and cause of the child's illness. They suggest that this negativity is due to the depersonalized structure of large hospital clinics. In addition, they believe that such negativity is probably less prevalent in private practices that involve long-term relationships of patients with individual physicians.[13] However, since the overwhelming majority of studies of patient compliance have been conducted in large university outpatient clinics, it is not at all clear whether similar patient negativity and noncompliance occur in private medical practice.[14]

In both private and institutional practice, patient noncompliance with medical instructions may emerge from a fundamental lack of understanding of medical instructions.[15,16] In a 1974 study, Mazzullo, Lasagna, and Griner pointed out that 64 percent of their patients did not understand standard written instructions that accompany certain widely prescribed medications.[17] Given this high percentage of misunderstandings of common prescription instructions, an even greater degree of misunderstandings might occur during doctor-patient communications. This study was undertaken as an initial attempt to assess the degree of patient negativity and misunderstanding that occurs in a private practitioner's office.

Methods

This study was conducted in the office of a family physician engaged in a large private practice located in a predominantly white, working-class area of Baltimore. The physician had maintained his office in the same building for 14 years. A male medical student who had worked previously in this office and who was familiar with the routine of this practice collected the data in this study.

With the knowledge and cooperation of the physician, the medical student interviewed patients, at random, both before and after their meeting with the physician. The medical student also remained with the physician during the entire time the doctor was with the patient and wrote down as nearly as possible everything said by the doctor during the interview. After the doctor finished with the patient, the student remained behind and immediately asked the patient what the doctor had told him about his illness.

Patient Sample

The patient population of this practice represented a broad spectrum of problems brought to the attention of most family physicians. In all, during the course of one summer, 155 patients seen by the doctor were interviewed by the medical student. The average patient age was 34.2 years and ranged from two weeks of age to 76 years of age. When the patient was under 16 years of age, both the patient and parent were interviewed. The average education was 10.8 years of school, ranging from no formal education to 21 years of education. Of the 155 patients (all were Caucasian but one), 65 were male, and 90 were female.

Office Structure

The physician's suite of offices had a 20-seat waiting room, a nurses' room with medical charts, and five examination rooms. Three of the examination rooms were used continually for patients, one was held open for walk-in emergencies, and one was used for nursing care of patients.

Physician's Routine

The physician's routine during the survey was standard for all patients and was not changed when the medical student interviewed the patient. The physician picked up the patient's chart and brought it into the examination room. He then proceeded to ask the history of the present illness, followed by a physical examination. If needed, the physician called a nurse and ordered the required tests, x-rays, electrocardiogram, physical therapy, etc. He then left the room and went to the next patient. When the nurse had completed the ordered work-up on the patient, the doctor returned, discussed the patient's illness and gave treatment instructions. The physician then wrote the charge for the office visit on the chart, gave the chart to the patient to give to the nurse, and went on to the next patient. Approximately five patients were seen each hour.

Observer's Routine

The observer was a medical student participating in a Family Practice Preceptorship Program arranged by the Department of Family Practice of the University of Maryland Medical School. As such, he spent one-half day per week in the physician's office from February to June, and then spent eight weeks during the summer months when the data for this study were collected. He was assigned to this physician's office to gain experience in family medicine, and as such was not given any specific responsibilities. He was completely free to talk with all patients during their visits to the doctor's office and was permitted to participate in all patient-doctor conversations and physical examinations.

Patients were chosen randomly for this study. The student was usually able to interview about five patients per day with the following routine:

The medical student took an interview sheet into one of the examination rooms where a patient was waiting for the doctor. He then introduced himself and told the patient that his doctor would soon be present. He proceeded to explain that he and the doctor were conducting a survey to try to improve communication and understanding between doctors and their patients. He asked the patient if he would mind answering some questions, explaining that he was not recording any names and all remarks would remain anonymous. Only one patient declined to participate in this survey. The student then asked a series of routine questions which included: date of birth, marital status, sex, number of children, number of years of schooling, occupation, length of time patient had been visiting this doctor, frequency of visits per year to this doctor, whether the patient had been treated for this type of illness before, whether anyone else in the family had a similar medical problem, and current medications used by the patient. If any time remained after answering the routine questions, the patient's present

illness was then discussed until the doctor entered. The student stayed in the examination room with the doctor and patient and recorded the time that the doctor spent with the patient as well as the medical instructions given by the doctor.

After the physician left the room, the observer then asked the patient to tell him in his own words what the doctor had told him about his illness. He then asked the patient a series of standardized follow-up questions on the survey form relevant to the illness and the physician's instructions, for example: "Are you to get any medicine?" "How often are you going to take the medicine?" "Did the doctor suggest any type of exercise or physical therapy?" "When do you plan to see the doctor again?" etc. The patient was then asked to rate how healthy he felt that day by picking a number between one and ten where one represented feeling like a person with "two feet in the grave" and ten represented feeling like "superman or superwoman." After the series of questions probing the patient's understanding of his illness, the patient was asked, "Do you have any suggestions for ways that a family physician could improve his office setup or communication with patients to give you and your family better medical care?" This question was structured to permit the patient to make negative comments in a positive manner. The patient then left the examination room and the observer completed the interview form, noting the incongruities between the doctor's instructions and the patient's interpretation of these instructions.

Controls

The physician being observed was familiar with the nature of the study. To determine whether the physician behaved or communicated differently with patients who were involved in the study, the medical student, without the physician's knowledge, carefully recorded the amount of time the doctor spent with 143 patients who were not part of the study. If indeed the physician's behavior were altered by the fact that a study was being conducted, then a variation in the amount of time spent with the two groups of patients might be expected. There was no significant difference in the time spent with the two groups.

The medical student did not discuss any of the results of his findings with the physician until all 155 patients had been interviewed. Furthermore, he randomly spent time observing the physician with patients whom he did not interview and he did not subjectively notice any changes in the behavior of either the doctor or the patients.

Results

Of the 155 patients, 71 (46 percent) had no communication misunderstandings; that is, they remembered to tell the doctor everything that was bothering them and also remembered everything the physician said or instructed them to do. However, 84 patients (54 percent) either forgot to mention certain of their medical problems to the physician, or confused or forgot certain facts concerning their diagnosis or treatment regimens. Table 1 lists six general areas of patient misunderstandings.

Table 1
Types of Patient Misunderstandings and Miscommunication in 84 Patients*

	Type of Problem	No. of Patients
I.	Misunderstandings about medication	41
II.	Patients with medical problems they did not mention or forgot to mention to the physician	29
III.	Misunderstandings about treatment instructions	27
IV.	Misunderstandings about diagnosis	23
V.	Misunderstandings about diet instructions	11
VI.	Misunderstandings about return appointments	7

*Multiple misunderstandings by individual patients are included.

Description of Misunderstandings and Miscommunications

The relative medical importance of what patients forgot to mention to the physician or what they misunderstood is very difficult to quantify. In light of this difficulty, it seems more useful simply to give selected examples of the types of misunderstandings that occurred.

I. Misunderstandings About Medications

Forty-one patients misunderstood their medication instructions. These problems ranged from forgetting that medication had been prescribed to remembering that medication had been prescribed but forgetting for what purpose. Dosage schedules were also forgotten or misunderstood as illustrated by the following examples.

1. A 26-year-old woman who was experiencing unwanted side effects from her newly prescribed oral contraceptives was told to complete this month's cycle with the pill she was presently taking and then switch to a new prescription. She misunderstood and replied, "I'm to continue taking the same pills until they are all gone, and then in six months I'm to start with this new prescription."

2. Perhaps the most dramatic case of distortion and misunderstanding of medical instructions was produced by a 28-year-old man who came in for the third time in three weeks for problems with gastric ulcers. The physician carefully explained the dietary instructions and prescribed medications to the patient. He then asked the patient if he understood, and when the patient hesitated, the physician sat down and in a stepwise fashion wrote out sequentially all the dietary and medical instructions. When queried afterwards about what the doctor said, the patient commented, "Let's see what he wrote down," whereupon the patient proceeded to misread most of the instructions.

II. Medical Problems Patients Forgot to Tell the Doctor

Twenty-nine patients noted that they forgot to tell the physician something that was bothering them. Three

additional patients thought that they had forgotten to mention problems that they had in fact discussed with the physician. Two examples of problems patients forgot to mention were:

1. A 25-year-old man was treated for his "nerves" and weight loss. When asked whether he forgot anything he said, "No." The wife then asked whether her husband had "mentioned his stomach pains, his loose bowels, and his black stools."

2. A 14-year-old girl who complained of backache and intermittent abdominal pain forgot to mention, "I've been urinating 18 to 20 times per day."

In cases where the patients forgot to tell the doctor information, the doctor was recalled after the interview form was completed and these symptoms were discussed.

III. Misunderstandings About Treatment Instructions

Twenty-seven patients misunderstood some of the instructions the doctor gave them concerning their treatment regimens. This group included a broad spectrum of treatment instructions and likewise a broad range of misunderstandings as the following examples point out.

1. A 48-year-old man was instructed to buy a cervical pillow at the pharmacy to use at night to correct his poor sleeping posture. When asked what the doctor told him, he said, "I'm to take one of my big pillows at home and stuff it under my knees at night so that I can't roll over."

2. A 24-year-old mother instructed to bathe her child twice a day reported afterwards that the doctor told her to "bathe the child four times per day."

IV. Misunderstandings About Diagnosis

Twenty-three patients misunderstood or forgot their diagnosis. Illustrations of these diagnostic misunderstandings are:

1. A 34-year-old man came into the office complaining that he had arthritis. The doctor assured the patient that he did not have arthritis and he prescribed medication for his pain. When asked what the doctor said, the patient answered, "He said it was arthritis – that's as simple as I can make it."

2. A 31-year-old woman, who came in complaining of a head cold, commented afterwards, "The doctor never tells me what is really wrong with me. That's the way I like it. If I'm going to die, I just want to wake up dead – I don't want to know that it's going to happen."

V. Misunderstandings About Diet Instructions

Misunderstandings about diet instructions occurred with eleven patients. The following examples indicate the diversity of the misunderstandings.

1. A 28-year-old woman who requested a reducing diet was instructed to write out her menus for breakfast, lunch, and supper for the next three weeks in advance so that she would know when she got up what she was going to eat each day. When questioned she responded, "I'm to get up every morning and make three menus – then forget about food."

2. A 50-year-old male steelworker who came to the office for diabetes problems replied to the question of dietary instructions, "I'd rather you wait until my wife comes in and ask her the questions. This stuff (diabetes chart of insulin doses) is all 'Greek' to me. She is a registered nurse and knows all about it and I'd rather she answer the questions. I don't give a damn about this stuff and so you ask her about the questions. She puts my meals and medicine in front of me and I just eat it. I don't mean that I don't appreciate what she does, but the whole thing just makes me feel so helpless."

VI. Misunderstandings About Return Appointments

Seven patients misunderstood when their next appointment with the doctor was to be. The doctor would tell them the day of their next office visit and write it on their chart. One example of responses to the question, "When do you plan to see the doctor again?" was a 49-year-old woman who was asked to return in six weeks. She remembered, "I'm to see the doctor in six months."

Following the interview, patients were reminded of their return appointment date and time by the nurses as they left the office.

Patient Profile – Correlations with Misunderstandings

The number of misunderstandings according to the age and sex of the patients is listed in Table 2. A χ^2 analysis failed to show any significant age or sex differences in the proportions of misunderstandings.

While the average educational level of the 123 adult patients (16 years of age or older) was 10.8 years of schooling, surprisingly, the average educational level of the adult patients who misunderstood or forgot to tell the physician something was 12.6 years.

The physician spent on the average 10.0 minutes with each patient, varying between 3 and 27 minutes for an individual patient. Only the time when the doctor actually was with the patient was recorded; the time required for laboratory tests, x-rays, and therapies administered by the nurses was not included. The physician spent a mean of 9.7 minutes with 143 control patients, a statistically nonsignificant difference in time spent with the two populations. A mean of 10.4 minutes was spent with the 84 patients who misunderstood or forgot something.

The 155 patients who were interviewed had been coming to this physician for an average of 5.8 years. Of these patients, 127 (82 percent) had visited the physician more than three times and had been coming to this physician for an average of 7.1 years. Interestingly, 12 of the 19 patients (64 percent) who reported this to be their first visit, misunderstood or forgot to tell the physician something. Also, for the 28 patients who reported this to be either their first, second, or third visit to the physician, 18 (64 percent) misunderstood or forgot some information. Of the remaining 127 patients who had been to the physician more than three times, 66 (52 percent) forgot or misunderstood some information.

Responses to Questions on Ways to Improve Patient Treatment

Of the study population, 64 patients (41 percent) verbalized a complaint in response to the question regarding ways to improve their treatment. However, 50 of these complained exclusively about the long wait before seeing the doctor. Only one patient complained about the doctor.

Table 2
Numbers and Percentages of Misunderstandings, Complaints and Praises Listed According to the Age and Sex of the Patients

Age of Patients in Years	Number of Patients in that Age Group	Patients Who Misunderstood or Forgot Something		Patients Who Complained		Patients Who Praised	
Males		Number of Patients	% of Group	Number of Patients	% of Group	Number of Patients	% of Group
0–15	18	9	50	9	50	6	33
16–30	18	13	72	8	44	6	33
31–45	15	8	53	7	46	7	47
46–60	15	10	67	10	67	8	53
≥ 61	4	2	50	0	0	3	75
Male Subtotals	70	42	60	34	49	30	42
Females							
0–15	14	6	43	4	28	5	36
16–30	18	9	50	5	28	6	33
31–45	20	11	55	6	30	11	55
46–60	21	13	62	10	48	9	43
≥ 61	12	3	25	5	42	4	33
Female Subtotals	85	42	49	30	35	35	41
Totals	155	84	54	64	41	65	42

The other 13 complaints mentioned various items including out-of-date magazines in the waiting room, shortage of available parking space, and excessive warm and cool temperatures.

Eighteen of the above patients both complained and praised the doctor, although 17 of the 18 complaints were exclusively centered on the long waiting period. Almost everyone who complained about the wait commented that they understood the necessity of waiting and did not know how it could be avoided. They viewed the wait as having little connection with their physician.

In addition, although not explicitly requested, 65 patients (42 percent) praised and complimented the physician with comments that ranged from expressions of confidence to lavish praise.

The remaining 26 patients (17 percent) had no suggestions and gave no response to the question on ways to improve their treatment.

There was no significant difference between the amount of time the doctor spent with the 64 patients who complained about their treatment (a mean of 10.1 minutes) and the amount of time spent with those 65 patients who praised it. Also, as shown in Table 2, there was no significant difference between the percentage of misunderstandings by those patients who complained about their medical care and the percentage of misunderstandings by those patients who praised it.

Discussion

Several impressions emerge from this study. First, the patient population differs significantly from those reported by other studies in terms of relative satisfaction with their medical treatment. While Francis, Korsch, and Morris, for example, observed that 24 percent of the population they studied were grossly dissatisfied with their medical treatment, only one patient in this study expressed even the slightest dissatisfaction with the physician, his diagnostic ability, or treatment regimen.[13] This is not surprising since the patient population was generally self-selected over a period of many years. Except for the 19 patients for whom this was their first visit, we can only presume that most of the patients grossly dissatisfied with their medical care would have previously sought another physician. Whether such positive effect is true of all private prac-

tices can only be assessed by additional exploration.

This study suggests that in assessing the nature of a patient's understanding and compliance with medical instructions, many of the published studies may not be directly relevant to private practice health-care delivery systems. While patient misunderstandings and consequent noncompliance clearly exist in private practices, the source and degree of these problems seem different from those already reported in the literature.

Mazzullo, Lasagna, and Griner found in their study that 64 percent of patients misinterpreted prescription instructions.[17] So also 54 percent of patients in this study misunderstood, misinterpreted, or forgot items pertinent to their care. The source of this problem, however, is far more complex than the misreading of prescription instructions. We could not identify any single factor that was responsible for these misunderstandings, and we concur with other investigators that their source was multifactorial.[18]

A X^2 analysis of Table 2 failed to reveal any significant sex or age differences in the proportions of misunderstandings, complaints, or praises. There was also no correlation between the number of misunderstandings, complaints, and praises, and how the patients rated their own health. The amount of time the doctor spent with the patient did not seem to influence any of the measured factors. Interestingly, the number of years of formal education completed by the patient showed a direct relationship to the percentage of misunderstandings. Also, patients on their first visits to this office tended to misunderstand more of their medical instructions.

In addition, although difficult to assess objectively, the interview records suggest two additional factors which may influence doctor-patient misunderstandings. First, those patients with external acute illnesses such as burns, lacerations, and rashes tended to have fewer misunderstandings than those patients with chronic internal diseases like diabetes, arthritis, or hypertension. Second, those patients who expressed excessive belief and trust in their doctor tended to misunderstand more of their treatment instructions. Perhaps these extremely satisfied patients in their high regard for their physician shifted much of the responsibility for their health to him and thus did not listen to his medical advice.

In light of these data, the physician would be well advised to consciously underestimate his ability to communicate. A doctor should never assume that the patient understands critical medical instructions. The physician should, in some fashion, ask the patient to tell him what he understands his treatment regimen to be. Since it appears that patients with chronic illnesses more frequently misunderstand treatment instructions, the doctor should begin each check-up visit with a question such as, "What have you been doing to treat yourself?" Also, at the conclusion of each interview, in order to prevent the possibility of patients forgetting to discuss medical problems, the doctor should ask if there is anything else bothering the patient that he has not mentioned. The use of these suggestions will not, however, completely prevent doctor-patient misunderstandings. Language and communication are, at best, imperfect, and the potential for being misunderstood will always exist.

Finally, we live in an era in which the utility and efficiency of various "health delivery systems" is being reexamined. As medical technology advances, we must not forget to measure the importance of a physician's rapport with his patient.[19] Dr. L. J. Henderson told the Harvard Medical School class in 1934:

> It is not only to a mob that reason and good sense cannot effectively be talked. A patient sitting in your office, facing you, is rarely in a favorable state of mind to appreciate the precise significance of a logical statement, and it is in general not merely difficult but quite impossible for him to perceive the precise meaning of a train of thought. It is also out of the question that the physician should convey what he desires to convey to the patient, if he follows the practice of blurting out just what comes into his mind. The patient is moved by fears and by many other sentiments, and these, together with reason, are being modified by the doctor's words and phrases, by his manner and expression. This generalization appears to me to be as well founded as the generalizations of physical science.[20]

Now, as then, patients' fears and understandings are modified by a doctor's words and manners. Therefore, the extent to which the understanding and compliance of patients can be modified by the various "health delivery systems" should be carefully assessed in order to accurately determine their relative utility and efficiency.

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