Patient-Physician Relationship and Service Utilization: Preliminary Findings

Rollin W. Nagel, Ph.D.; Angele McGrady, Ph.D.;
Denis J. Lynch, Ph.D.; and Elmer F. Wahl, M.D.

Background: Difficult physician-patient encounters pose a challenge in all aspects of health care. Characteristics of both physicians and patients affect the office encounter and utilization of services. The objectives of this study were to explore the impact of patients' characteristics and the patient-physician relationship on service utilization.

Method: A sample of 22 family practice patients and their physicians completed questionnaires prior to and/or after an office visit. Chart review yielded demographic information and history. The number of office visits and phone calls were obtained from billing records.

Results: The number of patient-reported physical problems was correlated with negative affect ($r = 0.63$, $p < .002$), the number of phone calls to the office ($r = 0.52$, $p < .02$), and the difficulty of the encounter as perceived by the physician ($r = 0.58$, $p < .005$). The number of phone calls also correlated with the number of life events ($r = 0.43$, $p < .05$) and the patient's perception of the physician's warmth ($r = 0.48$, $p < .03$) and understanding ($r = 0.44$, $p < .04$).

Conclusion: Life stress, negative affect, physical complaints, and the patients' perception of their physician impact utilization. Armed with information about patient characteristics prior to the office visit, the physician can increase efficiency and facilitate a more productive encounter.

(Primary Care Companion J Clin Psychiatry 2003;5:15–18)

Received Nov. 4, 2002; accepted Jan. 16, 2003. From the Departments of Family Medicine and Pediatrics, Medical College of Ohio, Toledo, Ohio.

The authors report no financial affiliation or other relationship related to the subject of this article.

Corresponding author and reprints: Rollin W. Nagel, Ph.D., Garden Lake Building, 1015 Garden Lake Parkway, Toledo, OH 43614 (e-mail: rnagel@mco.edu).

Difficulties in the relationship between patient and physician affect various aspects of medical care, including diagnosis,[1] adherence,[2] and utilization of medical services.[3] Patients most likely to be considered difficult by their physicians tend to have a higher prevalence of psychiatric disorders such as depression or somatoform disorder.[4–6] The difficult patient is older, is more often divorced or widowed, and presents with a greater number of chronic problems and unexplained symptoms.[7]

The tendency to somatize psychological distress into physical symptoms in a psychiatric population is increased by negative mood, numerous life stressors, daily hassles, and inadequate coping, according to a model proposed by Wickramasekera.[8] In a test of components of this model in a sample of family practice patients, McGrady and associates[9] found that patients with somatoform pain disorder reported more negative mood and a greater number of chronic physical problems and had higher utilization of services.

Earlier explanations of problems in the physician-patient relationship blamed the patient for unsatisfactory outcomes.[10] However, because a relationship involves 2 parties, analysis of the relationship must consider each party's perception of the encounter.[11] In particular, examination of the physician's ability to convey basic caring characteristics is critical, because physician characteristics also affect utilization. For example, patients who perceive their physicians as aloof or uncaring may not seek necessary medical help.[12]

Despite this need to consider both parties in the medical encounter, it is important to emphasize that the medical appointment and in fact the entire relationship exist to benefit the patient. For this reason, particular sensitivity should be directed to patient needs and the circumstances that brought patients to the medical encounter. Life events, stressors, coping mechanisms, basic personality style, and the way in which symptoms are reported are all important contributors to patient presentation, thus influencing the relationship with the physician.

The goal of this study was to examine the impact of the physician-patient relationship and patient characteristics on medical utilization. It was hypothesized that a perception of difficulty by either the physician or patient would influence medical utilization. In addition, it was predicted

that components of the High-Risk Model of Threat Perception[8] would identify patient characteristics associated with problems in utilization.

METHOD

Patients in an academic family practice center waiting to see their physician were asked to complete a packet of questionnaires comprising the Prime-MD Patient Questionnaire (PRIME-MD PQ),[13] Eysenck Personality Inventory,[14] adapted Recent Life Changes Questionnaire (RLCQ),[15] the Barrett-Lennard Relationship Inventory[16] pertaining to their recent office visit, and a page of demographic information. Before each business day, potential study participants were identified from the billing database and the daily schedule. Inclusion criteria were patients 18 years of age and older who could read English and provide consent and who had been patients in the practice at least a year. The research assistant contacted eligible patients individually in the examination room prior to their interaction with the physician to ascertain interest in study participation and obtain consent. Eligible patients were contacted in a way that did not interrupt the normal flow of patients in the office. Patients completed the questionnaires while waiting to see and/or after seeing their physician. The instruments required approximately 30 minutes to complete.

The physician seeing the patient completed the Doctor-Patient Relationship Inventory[4] to describe his or her reactions following the encounter with the patient. The number of office visits, coded by medical complexity (low, medium, high), and the number of phone calls to the office during the previous year were assessed later by reviewing the patient's chart or billing database.

Instruments

The PRIME-MD PQ[13] is a screening device that yields information on patient-reported symptoms of mood disturbance, anxiety, eating disorder, somatoform disorder, and alcohol use. This instrument has been used extensively with primary care patients across the country.[17] Of particular interest for this study were the 15 physical symptoms used as screening triggers for somatoform disorder. A summary score indicating the number of reported symptoms experienced by the patient during the past month was obtained.

Twenty-four of the 57 Eysenck Personality Inventory[14] items measure negative affect, the subscale calculated for this study. Negative affect refers to a tendency to report unpleasant emotions, which have been related to an increase in symptoms and physical complaints.[18,19]

The adapted RLCQ[15] is a 41-item inventory that asks patients to endorse events that have occurred in their lives within the past year. Scores can be obtained by either summing the number of life events or summing the weighted life events endorsed. For the weighted summary score, each event is given a value based on the severity of the stress that this event can cause for that patient. For example, the highest value is assigned to "death of a spouse" while a lowest value is assigned to "minor violation of the law." High total scores on life events scales have been associated with increased susceptibility to physical illness.[8,20]

The Barrett-Lennard Relationship Inventory was initially developed to assess qualities of the therapist-patient relationship[21] and has been adapted for use in medical situations to assess the patient-physician relationship.[16] Besides yielding a global measure of the relationship, it also assesses the warmth, honesty, and understanding experienced in the relationship by the patient. The subscale scores can range from 8 to 48.

The Doctor-Patient Relationship Questionnaire was developed as a "valid and efficient method for identifying patients that physicians experience as difficult."[4(p1)] The revised 10-item form, which can yield scores that range from 10 to 60, was used in this study. Higher scores indicate greater difficulty of the encounter as perceived by the physician.

Data Analysis

Descriptive statistics were calculated from the completed inventories. Pearson product moment correlation coefficients were calculated to examine the relationship between the continuous variables.

RESULTS

Twenty-two patients had complete information on the inventory of questionnaires used in this study. The demographics of these patients were a mean age of 52 years, 64% female (N = 14), 64% married (N = 14), 86% white (N = 19), and 82% (N = 18) with at least a high school education. These characteristics were similar to those for the overall practice. Descriptive patient-physician relationship information for the instruments and medical service utilization results can be reviewed in Table 1. Patients tended to view their physicians as warm (mean = 41.4), understanding (mean = 39.4), and honest (mean = 41.2), and physicians generally did not rate their patients as very difficult (mean = 17.9).

As hypothesized, the number of PRIME-MD PQ somatizing symptoms recently experienced by the patient was associated with negative affect ($r = 0.63$, $p < .002$) and the number of stress-provoking life events encountered by the patient ($r = 0.52$, $p < .02$) or its weighted summary ($r = 0.55$, $p < .009$). In addition, patients who experienced more PRIME-MD PQ somatizing symptoms had a higher number of phone calls to their physician's office ($r = 0.52$, $p < .02$) and were viewed by their physician as more difficult ($r = 0.58$, $p < .005$).

Table 1. Descriptive Patient-Physician Relationship and Medical Service Utilization Results in 22 Patients

Measure	Mean	SD
Barrett-Lennard Relationship score[a]		
Warmth	41.4	4.1
Understanding	39.4	6.1
Honesty	41.2	5.8
Total	122.0	14.1
Doctor-Patient Relationship score[b]	17.9	8.0
Number of office visits by complexity level		
Low	4.5	4.2
Medium	0.7	1.2
High	1.1	1.5
Total visits	6.3	5.2
Number of chronic problems	8.6	5.7
Phone calls to office	5.6	5.6
Eysenck negative affect score[c]	7.4	4.8
PRIME-MD somatizing symptoms[d]	4.7	3.4
Number of life events[e]	4.7	4.1
Weighted scale of life events[f]	201.4	177.9

[a]Subscale scores range from 8 to 48, with the lower scores indicating a lower degree of the quality.
[b]The score ranges from 10 to 60, with higher scores indicating greater difficulty of the encounter as perceived by the physician.
[c]The neuroticism scale of the Eysenck Personality Inventory measures negative affect; the score ranges from 0-24 with higher scores indicating greater negative affect.
[d]Scored as the number of reported symptoms experienced by the patient during the past month.
[e]Represents the number of 41 possible life events that the patient experienced in the past year.
[f]Represents weighted value given to 41 possible life events experienced by the patient in the past year.

Neither patient characteristics nor perceptions of difficulty by the physician were associated with the number of visits to the physician in the previous year or the number of patient chronic problems as diagnosed by their physician. Only the number of high complexity visits by a patient was related to the patient's perception of their physician as warm ($r = 0.45$, $p < .04$), and the number of phone calls to the physician's office was related to the number ($r = 0.43$, $p < .05$) and weighted summary ($r = 0.53$, $p < .02$) of recent life events experienced by the patient. Contrary to hypothesized expectations, increased number of phone calls to the office in the past year by the patient was associated with the patient's perception of the physician as warm ($r = 0.48$, $p < .03$) and understanding ($r = 0.44$, $p < .04$).

DISCUSSION

This study demonstrates that patients who have a greater number of physical complaints/somatizing tendencies have experienced more stressful life events during the past year and have more negative affect. According to the High-Risk Model of Threat Perception, both life events and negative affect increase the risk for somatization.[8] The results from this study support the High-Risk Model and also extend the Model by incorporating the patient-physician relationship and service utilization findings. These somatizing patients have a greater number of phone calls to their physicians' office and are viewed by their physician as more difficult.

While the number of phone calls to the office increased for patients with somatizing tendencies, this characteristic did not result in more diagnosed chronic problems, visits to their physician, or a negative view of their physician, as anticipated. Their physicians, while viewing these patients as more difficult, did not appear to be perpetuating a maladaptive treatment cycle[22] by inappropriately diagnosing additional conditions with associated increased visits to their physician. The increased number of phone calls to the office may act as a substitute for visits to the office resulting in cost implications. However, it is beyond the scope of our data to determine the appropriateness of the content of the phone call or whether the call actually substituted for an office visit. While the appropriateness of the phone calls to the office is not discernible, patients with more phone calls to the office viewed their physician as warm and understanding.

Regardless, if there are ways for physicians to assess which patients have experienced more stress during the past year, perhaps they can develop strategies to make the encounter more beneficial to the patient. Use of the RLCQ,[15] particularly at the yearly wellness visit, may help the physician identify those patients who need more time, need a higher complexity visit, and are at increased risk for psychological or physical symptoms. In addition, questions regarding stressors in the occupational, social, or family life of the patient may be asked in the interview and may elucidate information about recent life events that have an effect on the patient's health and ability to cope with medical problems.

There are many potential opportunities for further research in this area. The study should be replicated with more patients in other practice settings, for example, rural and nonacademic practices. Other aspects of the High-Risk Model, such as coping and social support, should also be addressed in future studies.

REFERENCES

1. Hahn S, Thompson K, Wills T, et al. The difficult doctor-patient relationship: somatization, personality and psychopathology. J Clin Epidemiol 1994;47:647–657
2. Gonzalez J, Cruess D, Antoni M, et al. Better patient-physician relationship and adaptive coping strategies relate to optimal anti-retroviral medication adherence in HIV+ patients. Ann Behav Med 2000;22:S175
3. Jackson J, Kroenke K. Difficult patient encounters in the ambulatory clinic: clinical predictors and outcomes. Arch Intern Med 1999;159: 1069–1075
4. Hahn SR, Kroenke K, Spitzer RL, et al. The difficult patient: prevalence, psychopathology, and functional impairment. J Gen Intern Med 1996;11: 1–8
5. Katon W, Von Korff M, Lin E, et al. Distressed high utilizers of medical care: DSM-III-R diagnoses and treatment needs. Gen Hosp Psychiatry 1990;12:355–362
6. Schafer S, Nowlis DP. Personality disorders among difficult patients. Arch Fam Med 1998;7:126–129
7. Chandy J, Schwenk T, Roi L, et al. Medical care and demographic

characteristics of "difficult "patients. J Fam Pract 1987;24:607–610
8. Wickramasekera I. Somatization concepts, data, and predictions from the high-risk model of threat perception. J Nerv Ment Dis 1995;183:15–23
9. McGrady A, Lynch D, Nagel R, et al. Application of the high-risk model of threat perception for a primary care patient population. J Nerv Ment Dis 1999;187:369–375
10. Ries R, Bokan J, Katon W, et al. The medical care abuser: differential diagnosis and management. J Fam Pract 1981;13:257–265
11. Schwenk T, Marquez J, Lefever D, et al. Physician and patient determinants of difficult physician-patient relationship. J Fam Pract 1989;28: 59–63
12. Sickel A, Moore P, Williams D, et al. The impact of doctor-patient relationship on patients' health-care treatment seeking. Ann Behav Med 2000;22:S196
13. Spitzer RL, Williams DSW, Kroenke K, et al. PRIME-MD Instruction Manual. New York, NY: Biometric Research, New York State Psychiatric Institute; 1995
14. Eysenck HJ, Eysenck SB. Eysenck Personality Inventory Form A. San Diego, Calif: Educational and Industrial Testing Service; 1968
15. Miller MA, Rahe RH. Life changes scaling for the 1990s. J Psychosom Res 1997;43:279–292
16. Simmons J, Roberge L, Kendrick SB, et al. The interpersonal relationship in clinical practice: the Barrett-Lennard Relationship Inventory as an assessment instrument. Eval Health Prof 1995;18:103–112
17. Linzer M, Spitzer R, Kroenke K, et al. Gender, quality of life, and mental disorders in primary care: results from the PRIME-MD 1000 study. Am J Med 1996;101:526–533
18. Cohen S, Rodriguez M. Pathways linking affective disturbances and physical disorders. Health Psychol 1995;14:374–380
19. Hull JG, Tedlie JC, Lehn DA. Modeling the relation of personality variables to symptom complaints: the unique role of negative affectivity. In: Hoyle RH, ed. Structural Equation Modeling. Thousand Oaks, Calif: Sage Publications; 1991:217–235
20. Rahe RH, Meyer M, Smith M, et al. Social stress and illness onset. J Psychosom Res 1964;8:35–44
21. Barrett-Lennard GT. Dimension of therapist responses as causal factors in therapeutic change. Psychol Monogr 1962;76:1–36
22. Walker EA, Unützer J, Katon WJ. Understanding and caring for the distressed patient with multiple medically unexplained symptoms. J Am Board Fam Pract 1998;1:347–356