

# Management of Problem Patients With Multiple Chronic Diseases

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Residents in a university-based family medicine program perceived patients with diabetes mellitus, hypertension, and obesity as problem patients. The residents' perceptions of 166 patients were compared with information from a chart audit. A resident questionnaire outlined the goals, obstacles, and strategies pertaining to management of these patients as well as residents' perceptions of patient expectations. The results prompted a shift in focus from the problem patient to the problem patient-physician relationship and brought forth improved strategies that hold potential for making a difference in patient and physician satisfaction and outcome of care.

Studies of problem patients have focused on behavioral traits or physical attributes of the patients.<sup>1</sup> Most papers have utilized case reports to illustrate generalizations.<sup>2,3</sup> This paper reports a study of a defined population group perceived as problem patients cared for in a university-based family medicine residency program. Family medicine residents in the East Carolina University School of Medicine Family Medicine Residency Program (in Pitt County) have described a folk-archetypal patient as one with the "Pitt County triad"—diabetes mellitus, hypertension, and obesity. On hospital rounds, in the Family Practice Center, and in informal meetings, residents have expressed much frustration in caring for these patients. The amount of frustration stimulated an investigation into whether anything could help clarify problem areas in management or resident satisfaction. This investigation focused not only on a comparison of residents' perceptions of these patients with readily available objective information but also on an examination of the problem-solving strategies used with these patients with multiple chronic diseases.

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## Methods

### *Resident Questionnaire*

Most discussions of problem patients have focused on features of the patients, implying that the problem lies in the patient. An important assumption in this study was that if a patient is labeled a problem patient, then there is some dissatisfaction or conflict in the working relationship of patient and resident. For this study of the management of a defined population group with chronic conditions, the focus of the problem was on the patient-physician relationship. Schmidt and Tannenbaum<sup>4</sup> have discussed techniques for diagnosing conflicts between individuals from the perspective of organizational managers. These techniques were modified in designing a questionnaire for second-year and third-year family medicine residents to determine whether there were any feasible grounds for establishing a therapeutic relationship based on compatible goals and expectations and whether there were any logical problem-solving strategies with which to develop a therapeutic working relationship. Four questions that addressed these issues in particular were posed to the residents: (1) What are your goals in caring for these patients? (2) What are the major obstacles to achieving these goals? (3) What are your strategies for overcoming these obstacles? (4) What do your patients want

from you? The questionnaire also was designed to elicit the residents' impressions of the archetypal "Pitt County triad" patient concerning demographic information, typical physiologic findings, treatments employed, and residents' degree of satisfaction in caring for them.

Twenty questionnaires were circulated. Responses were anonymous. Thirteen completed questionnaires were returned, for a 65 percent return rate.

### Chart Audit

The Eastern Carolina Family Practice Center is a university-based center located in a town with a population of 40,000. The town is the largest in a several-county region of eastern North Carolina dominated economically by agriculture. The patient population of 17,000 is composed of lower- and middle-class rural or small-town people. Each patient encounter in the Eastern Carolina Family Practice Center is coded using IHCPPC-2 diagnostic code numbers at the time of the encounter, and the code numbers are entered into a computerized file. A list of all patients coded for both hypertension and diabetes mellitus was generated covering the two years preceding the beginning of the chart audit. The medical records of these patients were reviewed to determine whether obesity was listed on the problem list or whether the last weight recorded was 20 percent more than ideal body weight for the height recorded in the chart, using standard height and weight tables. Only those 166 charts that fit the above criteria for obesity were considered further.

Charts were reviewed for demographic data, medical problems, and interventions. The charts were also audited for health screening for secondary problems of diabetes and hypertension as well as for objective methods and findings for monitoring these conditions. Comments relating to compliance and frequency of missed appointments were noted.

No qualitative assessments were made on the various diagnoses, screening methods, or interventions. For example, diabetic and hypertensive retinopathy was considered "screened for" if there was a chart notation such as "fundi benign." There was no distinction made between a chart notation "diet discussed" and an extensive consultation with a registered dietician. Both were considered positive for nutritional counseling.

Table 1. Demographic Profile

	Residents' Archetype (%)	Chart Information (%)
Race		
Black	100	73
White	0	27
Sex		
Female	100	85
Male	0	15
Economic status		
Poor	100	0
Uncertain	0	100
Age (yr)		
Less than 50	38	26
50 to 60	54	25
Greater than 60	8	49

## Results

### Demographic Data

The residents unanimously described the typical "Pitt County triad" patient as female, black, and poor. They ranged in their impressions of the patients' ages: 38 percent thought the archetype was 40 to 50 years old, 54 percent thought 51 to 60 years old, 8 percent thought 60 to 70 years old. The chart audit determined that the vast majority were black women (Table 1). The charts did not provide useful economic information. Seventy-nine percent were unemployed. Eighteen percent were on Medicaid. Many patients were older than the residents had perceived, with 49 percent being over 60 years of age.

### Residents' Goals of Management

Residents gave unstructured short answers to the question, "What are your goals in caring for these patients?" Multiple goals and various types of goals were mentioned. The author then categorized the 38 separate goal statements according to whether the goals were medical-physiologic, behavior change, or intellectual-psychological in nature. Medical-physiologic goals were mentioned 26 times by the residents, with examples such as "reasonable blood pressure control," "control blood sugar," "weight loss," "decrease mortality and morbidity," "avoid complications of disease," and various numerical parameters of blood

	Resident Estimate (%)	Chart			
		Average	SD	Range	Median
<i>Blood Pressure (mmHg)</i>					
Systolic		144	18	104-200	
≤140	16				
140-160	46				
>160	38				
Diastolic		86	9	54-122	
≤90	38				
90-100	46				
>100	16				
<i>Blood Glucose (mg/dL)</i>					
<200	16	213	79	60-565	212
200-250	68				
>250	16				

glucose or blood pressure. One resident included the goal "to do the least harm." Intellectual-psychological goals were mentioned seven times, with goals emphasizing patient education about complications of disease, increasing patient motivation and responsibility for self-care, and improving the patient's subjective sense of well-being. Five behavior-change goals were listed, such as "diet change," "increase exercise," and "change lifestyle."

Residents were asked to estimate the typical blood glucose levels and blood pressure determinations of their patients (Table 2). The charts were then audited for information pertinent to the stated goals.

The findings of the chart audit are reported in Table 2. The last three blood glucose levels in the chart were used to obtain the average and median measurements. Fasting blood glucose levels were recorded most frequently, but two-hour postprandial and random readings were used intermittently in no discernible plan. All levels were used in averaging. Glycosylated hemoglobin levels were recorded for only one patient. Likewise, the last three recorded blood pressure measurements were reviewed and summarized. The most common practice was to measure blood pressure in one arm in the sitting position, but rarely was position or cuff size documented. As shown, the residents estimated the diabetic control accurately, but generally overestimated the severity of hypertension.

The frequency of documented complications of

Complication	Screening Documented	
	Present	
Stroke	6.2	16.4
Retinopathy	13.7	60.3
Neuropathy	15.5	41.6
Nephropathy	7.6	17.0
Ischemic heart disease	7.4	19.9
Congestive heart failure	27.9	54.6
Peripheral vascular disease	12.4	68.9
Skin ulcers	8.1	26.9

diabetes or hypertension as well as the frequency of any documented screening for these complications within the year prior to the last patient visit are displayed in Table 3. The quality of the screening was not evaluated. Any documentation was counted, whether it was subjective or objective notation in a progress note, flow sheet, or laboratory or radiographic examination.

A search was made for a subgroup of patients very poorly controlled. Less than 1 percent of patients had both an average blood glucose level greater than 250 mg/dL and a diastolic blood pressure over 105 mmHg. More patients (23.6 percent) had a blood glucose level greater than 250 mg/dL

with a diastolic blood pressure less than 105 mmHg. Less than 3 percent had a blood glucose level under 300 mg/dL with a diastolic blood pressure greater than 110 mmHg.

It was documented that these patients often had several other chronic or recurrent conditions. The most common concurrent diagnoses were depression (45.4 percent), osteoarthritis (42.8 percent), arteriosclerotic heart disease (36 percent), and chronic obstructive pulmonary disease (25.5 percent). Surprisingly, most (66.7 percent) had not been hospitalized in the previous two years, 42 (26 percent) had been hospitalized once, 9 twice, 1 person three times, and 1 person four times.

As only those patients who were still obese at the time of the study were audited, little useful information was obtained relative to management of obesity. It was noted that most patients experienced a change in weight in the previous year: 41 percent lost more than 10 pounds, 5 percent stayed within 10 pounds, and 54 percent gained 10 pounds. These increments of weight change did not correlate with any difference in blood pressure or blood glucose levels.

The charts were not useful instruments for auditing progress toward any of the intellectual, psychological, or behavioral goals.

### *Residents' Perceived Obstacles*

In the graduate and undergraduate family medicine curriculum at this institution, five resources to health are emphasized: medical science, the physician as a person, the patient as a person, the family, and the community. These resources are presented not only as the arenas in which dysfunction or illness may be identified but also as the arenas from which health care management interventions can arise. The consideration of all five resources can promote a comprehensive approach to health care. The residents' answers to the question "What are the major obstacles to achieving these goals?" were tabulated according to which of the five resources were perceived as obstacles. Multiple obstacles were named; 31 responses were mentioned. Patient factors were seen as the obstacles 21 times (noncompliance, low intelligence, lack of sophistication, low motivation, poor eating or exercise habits, etc). Family or community factors were mentioned eight times (poverty, lack of support system for change, traditional beliefs and lifestyles, etc). Only once was inadequate medical

science perceived as an obstacle, when a resident noted that these patients had "incurable, chronic diseases." Only once was the physician identified as an obstacle because "not enough time was efficiently spent with patients."

Except for occasional subjective notations in progress notes, the chart was not very helpful in documenting the dimensions or the existence of these obstacles. In the charts 50.3 percent of the patients were described as noncompliant. The patients so labeled averaged 16.3 visits in two years, with an average of 1.7 missed appointments. Those patients not labeled noncompliant averaged 10.1 visits in two years, with an average of 0.87 missed appointments. So, regardless of other compliance factors, the patients were generally very diligent about visiting their physicians. Since family charts were not being used at the time of the audit, there was no consistency in documenting the "triad" conditions in family members. From information available, 36 percent had family members with diabetes, 40 percent had relatives with hypertension, but only 1.2 percent of the charts claimed obesity in family members.

### *Residents' Strategies*

The answers to the question "What are your strategies for overcoming these obstacles?" were also tabulated according to which resource was used. The physician as the strategic resource was mentioned 19 times, mostly in terms of what the physician would do to or with a patient (eg, counsel, educate, give positive reinforcement). A few residents focused on themselves more directly (eg, remain calm and patient, build rapport, accomplish more each visit).

The patient might be considered to be involved in the above strategies in a passive way, but only once was the patient included in a strategy in an active way, when the resident discussed the use of home self-monitoring systems. Family resources were not included in any strategies. Community resources, primarily utilization of social workers and nutritionists, were mentioned five times, and one resident suggested group therapy as a possibly useful plan. Medical science was explicitly cited as a strategy only twice, as in the comments "maximize treatments" and give "adequate treatment."

From the review of the charts and the drug profiles in the Family Practice Center pharmacy, it was apparent that medical science (eg, pharmaco-

**Table 4. Most Frequently Prescribed Drugs to 166 Patients**

<b>Drugs Prescribed</b>	<b>Number of Patients Prescribed Drug</b>
Diuretics	133
Hydrochlorothiazide	(81)
Furosemide	(41)
Chlorthalidone	(6)
Combination	(5)
Oral hypoglycemics	74
Tolbutamide	(35)
Chlorpropamide	(21)
Tolazamide	(18)
Insulin	81
Nonsteroidal anti-inflammatory agents	36
Ibuprofen	(17)
Naproxen	(13)
Indomethacin	(6)
Digoxin	33
Potassium chloride	22
Methyldopa	20
Aspirin	17
Beta-blockers	16
Propranolol	(11)
Metoprolol	(5)
Prazosin	15
Amitriptyline	13
Isosorbide dinitrate	12
Reserpine	11
Hydralazine	7

therapy) was indeed a commonly employed strategy. Fifty-six percent of the patients were prescribed four or more drugs, the most common of which are listed in Table 4. The chart review was not an illuminating method for evaluating treatment effectiveness or drug interactions, as noted by the following observations: (1) there was no significant difference in blood pressure or blood glucose in patients treated with insulin compared with all others, (2) there was no significant difference in blood pressure or blood glucose in patients treated with oral hypoglycemics compared with all others, (3) as a group, patients on aspirin or nonsteroidal anti-inflammatory drugs did not have blood pressures higher than all others, and (4) as a group, patients on thiazide diuretics did not have blood glucose levels higher than all others.

The progress notes documented discussions of diet with 87.5 percent of patients within the past year, and exercise had been discussed with at least

32.1 percent of patients. There was no way to assess the style, content, or effect of these discussions, however, and there were no systematic evaluations of patients' understanding of their diseases.

#### *Residents' Perceptions of Patients' Expectations*

The residents' 21 responses to the question "What do these patients want from you?" were categorized by the same criteria as the residents' goals: intellectual-psychological, behavior change, or medical-physiologic. Nine general psychological responses were given, such as "feel good," "better quality of life," "happiness," "convenient treatment," and "understanding, caring, listening." The one response that could be considered to fall under behavior change was "friendly help." Six responses were medical-physiologic, such as "a cure," "control of symptoms," and

"pills." Four residents directly stated they did not know what their patients wanted from them. None of the charts contained answers to this question.

## Discussion

### *Management of Disease*

Parameters of disease control indicate considerable difficulty in obtaining "desirable" blood glucose levels in a group of predominantly black women with type II diabetes mellitus. Results were similar to an audit of private physicians in the Northwest.<sup>5</sup> Hypertension was relatively better controlled, contrary to the residents' expectations. The records were not very systematically audited for management of obesity, but the general impression was that the only regularly obtained information pertinent to obesity was the weight. Most patients had gained weight during the previous year.

Identified complications of diabetes, hypertension, and obesity were not uncommon, but the medical records were not reliable tools for ensuring the absence of complications in other patients. The charts left many questions unanswered concerning screening for complications. Do residents need to screen more systematically? Do they need to screen with more reliable methods? Or, do they merely need to better document their screening efforts?

Despite multiple problems and exposure to the risks of polypharmacy, most patients had not been hospitalized in the previous two years, and only a few had been hospitalized more than once.

### *Management of Patient-Physician Relationship*

The resident questionnaire using techniques to evaluate conflicts in working relationships was very helpful in illuminating several dysfunctional aspects of the patient-physician relationship that resulted in labeling the patient a problem patient. First, there was little concurrence in the residents' goals and the patients' perceived goals. Many residents did not know their patients' expectations, and many assumed the patients had unrealistic expectations. No negotiation of mutually acceptable goals was evident. Negotiation of goals would be ideal for every patient, but may be particularly important when the patient is perceived to be a problem patient.<sup>6</sup>

Second, for predominantly older black female patients with multiple chronic, incurable conditions, the predominantly young white male providers most commonly listed the patient as the obstacle to goal achievement. When there is a cultural difference between provider and patient, and when the patient is perceived as an obstacle as well as a problem, periodic reassessment of providers' cultural biases may be needed to keep therapeutic relationships viable.<sup>7</sup>

Third, although the patient was seen as the obstacle, most strategies mentioned did not actively involve the patient, but were the responsibility of the physician. The strong likelihood existed, therefore, that the dynamics of the relationship would involve the personality of the physician in trying to overcome the obstacles of the patient's personality, ignorance, and so on. This effort by the physician could easily lead to an adversarial relationship instead of a therapeutic alliance.<sup>8,9</sup>

Fourth, most of the residents' strategies involved patient counseling and education. Residents and physicians get little training as counselors or educators, little reinforcement for assuming these roles, and even less instruction in how to evaluate their effectiveness in these roles.<sup>10</sup> Most of their comments suggested that their teaching style reflected the way they have been taught, by repetition of intellectual facts with fear as the motivating emotion.

It is no surprise, then, that most residents characterized their relationship with these patients as frustrating; some were neutral, but no one claimed a rewarding experience.

Most of the residents' perceptions of "Pitt County triad" patients were corroborated by the chart audit. Significant discrepancies were as follows: First, as a group, the patients were older than residents perceived. This realization itself could have an influence on the residents' expectations of themselves as well as the patients' expectations, possibly decreasing resident frustration. Second, hypertension was not as poorly controlled in these patients as anticipated, possibly giving residents a greater sense of accomplishment or at least decreasing the sense of failure. Third, patients kept their frequent appointments very consistently, possibly encouraging residents to reassess the diffuse noncompliant label applied to these patients.

The residents' responses to the questionnaire

showed a profusion of goals in managing a group of patients with similar problems, which may reflect a lack of focus for what they want to accomplish with chronic disease patients. This lack of focus makes evaluation impossible, inviting frustration and discouragement for the resident. Frustration would be accentuated by the difficulty in meeting traditional physiologic goals of "good" control of type II diabetes mellitus complicated by the increase of problems secondary to age.

To better answer the question "What do we want to accomplish with these patients?" as well as to enjoy the work with these patients, a re-examination of the physician's function of providing service may be helpful.<sup>11,12</sup> To be of service to the patient, not only are professionally recognized and accepted treatment protocols provided, but the family physician has the obligation to establish a therapeutic relationship with the patient. Establishing such a relationship requires knowing what the patient expects of the physician. It was apparent that this area was neglected with this group of patients. When the residents did presume to know what the patients wanted, often patients' and physicians' goals were in conflict, but no resolution was systematically negotiated or documented.

The dictated, problem-oriented medical record was somewhat useful for monitoring certain physiologic parameters, but because of the way it had been used, it was not helpful in assessing the health of the patient-physician relationship, goal definitions, or achievements. If the record is to be the chief research and evaluation instrument in family medicine, more attention to its purpose and content will be essential.

Further research is needed to clarify what patients want from physicians, as with Kleinman's explanatory model of disease.<sup>7</sup> For the most part, this model has been utilized in cross-cultural settings involving cultures from different nations. As medicine becomes more of an insulated subculture itself, it may require such a technique to facilitate translation between medical and lay cultures. Certainly in this study, where there were differences in age, race, education, and socioeconomic status, obvious cultural barriers existed.

Once primary providers know what patients want, they can determine whether negotiation of mutually agreeable goals and strategies is possible. The primary care physicians could then consider the risks of compromising within personally ac-

ceptable limits or of telling patients that their differences are irreconcilable and, therefore, a therapeutic relationship cannot be established. This action implies that the physician's primary goal is maintaining the integrity of the patient-physician relationship, not merely achieving certain physiologic parameters determined by other specialties. What can then be studied is whether a therapeutic relationship does indeed have significant effects, not only on patient and physician satisfaction, but also on the physiologic course of chronic disease. All of these areas of study would highlight the need for faculty and resident education in knowledge, skills, and particularly attitudes that would allow these areas to be explored and documented.

## Summary

By shifting the focus from problem patients to problem patient-physician relationships, opportunities for new perspectives and more useful strategies are brought forth that hold potential for making a difference in patient and physician satisfaction and outcome of disease. These perspectives invite changes in how residents are trained, how patients are engaged, and how physicians monitor their effectiveness.

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