Physician Views on Frequent Medical Use: Patient Beliefs and Demographic and Diagnostic Correlates

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Background. Health care "misusers" have long been identified as hypochondriacs, problem patients, "worried well" patients, and persistent somatizers. The stereotypical pattern includes persistent pursuit of medical care, a wide range of chronic symptoms, and underlying depression. The purpose of this study was to gather prevalence data on individual patients and to examine patient variables that influence the use of medical services by this population.

Methods. Frequent health care users in an HMO were classified by their primary care providers in terms of appropriate use (36%), moderate misuse (inappropriate or psychosomatic, 27%), and extreme misuse (both inappropriate and psychosomatic, 37%) categories. Utilization and diagnostic data were compared using analysis of variance or chi-square tests.

Results. All patients rated as misusers to any degree represented only 17.1% of the population, yet accounted for 42.7% of the visits. Extreme misusers accounted for 25% of visits and 10% of the population. Compared with frequent appropriate users, misusers had a greater belief in their own responsibility for health (internal health locus of control), expressed more concern about their mental health, and rated psychological symptoms as more serious. In addition, extreme misusers were younger, reported more symptoms, and believed less in the physician's control of their health. Misusers sought care for minor symptoms or for complaints that were not diagnosed as disease.

Conclusions. Misuse as a physician-perceived variable is highly prevalent. Misusers differ in their beliefs about health care as well as in the kinds and severity of problems for which care is sought. Physicians need to be sensitive to the interpersonal nature of this problem so as not to discourage preventive medical use, and to recognize the value of these visits to the "worried well" population.

Key words. Health behavior; hypochondriasis; health services misuse.
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The existence of a subset of patients who use medical services frequently and, in the eyes of their physicians, inappropriately has long been recognized. These medical "misusers" have been discussed in the literature under a variety of labels including "hypochondriacs," "problem patients," "worried well," and "persistent somatizers." According to the stereotype, a major characteristic of these patients is their persistent pursuit of medical care for a wide range of physical and psychological symptoms. Usually, no underlying organic disorder is discernible. Their symptoms fluctuate over time and include many complaints typically viewed as mild in severity. Psychological distress and symptoms of depression are often also present.

A variety of interpretations have been suggested for this active use of medical services for vague, minor, fluctuating somatic and psychological symptoms. Barsky[1] posits that these persons may actually experience symptoms more intensely than others and that this lowered sensitivity threshold leads to increased use of medical

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services. Or perhaps bodily events have greater importance for frequent users of medical services. Mechanic[2] provides evidence of this and emphasizes the highly internalized nature of this population. An alternative explanation suggested by Wolinsky and Wolinsky[3] focuses on the need for legitimation of symptoms through the highly regarded physician authority. Legitimation may provide access to such reinforcers as release from work, attention and affection, and even financial reward from insurance payments. More recent studies[4,5] suggest the importance of stress in producing this behavior. Such patients may truly suffer from somatization disorder and express their needs through bodily symptoms.[6] In many cases, depression may be masked by somatic symptoms.[7] It appears as if these patients believe it is better to be sick than crazy.

Whatever the causes of their frequent medical use, this group is an expensive one and thus provides a good target for potential reductions in medical expenditures. To more accurately assess the cost implications of this population, it is first necessary to establish the extent of the problem. Prevalence rates have been only indirectly established by means of physicians' estimates of the proportion of visits that are trivial, inappropriate, or unnecessary. These rates range from 7% to 25%, and appear to rely heavily on the wording of the questions to which the physicians responded.[8–10]

The purpose of the present study is to provide more direct prevalence estimates of the misuser population and to examine their perceptions of health care and use of services and diagnoses received in order to more accurately describe this population. It is important to emphasize that in this paper the problem of misuse is identified by the physician, for it is only when use of medical services is seen as inappropriate that frequent use is labeled "misuse." From the perspective of the patient (and some health care providers) seeking medical help for symptom explanation or reduction is appropriate behavior. Thus, the "misuser" is created from the social context of the medical setting. (An interesting comparison group not studied here is the "misuser" who *under*utilizes medical treatment, ie, those whom a physician would see as needing medical care but who decide not to seek such care.) In addition, many providers see frequent and regular visits as the correct way to manage patients with somatoform disorders, which may be what this group represents. Unless the use is viewed as inappropriate, those patients are not included. More comprehensive study of this physician-identified population may identify specific characteristics that lead medical providers to perceive some frequent medical users as problem patients.

Methods

All subscribers of a health maintenance organization (HMO) 18 years or older were mailed a questionnaire concerning their beliefs about health and health care. A sample of 1552 adults (46%) returned the questionnaire. Of these, 1208 remained enrolled for the course of the study. Thirty-five respondents who used only specialty medical services (obstetrics/gynecology) were also excluded. Comparisons of a sample of nonrespondents to respondents yielded no differences in terms of age, sex, or length of enrollment.

Use of medical and mental health HMO-provided services was monitored over a 12-month period. The mean number of medical visits by the 1208 subjects during the measurement year was 4.48 (SD = ±4.14). Subjects were subsequently classified as nonusers (0 visits per year; n = 279), low-frequency users (1 to 4 visits per year; n = 607), and high-frequency users (5 or more visits per year above the mean; n = 322). At the end of the year, the high-frequency users were rated by their primary care providers along three 5-point Likert-type scales: appropriateness/inappropriateness of visits; overuse/underuse; and psychosomatic/not psychosomatic. The raters included three physicians, who rated 45% of the subjects, and three physician assistants, who rated the remaining subjects. All clinicians were the primary provider for that patient, whom they had seen during the assessment year.

Measures

A patient self-report questionnaire was developed using the health belief model.[11] This model, based on Lewin's work on values and expectancies,[12] posits four basic dimensions that influence the way patients use health care services: susceptibility, seriousness, barriers, and benefits of treatment. Perceived susceptibility refers to a patient's perception of his or her own risk of contracting a condition, disorder, or problem. Perceived seriousness reflects the patient's perception of the severity of the symptoms that he or she may experience. The other two dimensions deal with the patient's perceptions of barriers to treatment and benefits of receiving treatment for his or her symptoms. Questionnaire items were designed to reflect these dimensions, using 5-point Likert-type scales as the response continuums.

Specifically, the questionnaire assessed the perceived susceptibility, seriousness, barriers to treatment, and benefits of treatment for 13 symptoms. Six of the symptoms reflected more somatic concerns (stomach discomfort, headaches, loss of appetite, tiredness, difficulty sleeping, and weight gain) and seven were more directly psycho-

Table 1. HMO Subscriber Use of Medical Services During Year, by Types of Frequent Users

Patient Group	No. of Patients	Percent of Subscribers* (N = 1208)	Percent of Users† (n = 930)	Percent of Users' Visits‡ (n = 3897)
Appropriate user	115	9.6	12.5	28.3
Misuser	207	17.1	22.3	42.7
Inappropriate	19	1.6	2.0	3.0
Psychosomatic	69	5.7	7.4	15.1
Both inappropriate and psychosomatic	119	9.9	12.8	24.5

**Those HMO subscribers who enrolled in the study.*
†Those who used medical services at least once during measurement year.
‡Visits made by 930 users during measurement year.

logical in nature (depression, nervous breakdown, trouble with interpersonal relationships, feeling unappreciated, anxiety, drinking too much, and dissatisfaction with one's sex life). Factor analysis of responses to these items supported the distinction between somatic and psychological symptoms. Reliability testing of survey items indicated moderate to high intercorrelations among items assessing each aspect of the health belief model, so that items were combined to produce composite scores. (Details of factor analyses and reliability results are available from the author.) The actual questionnaire items have been described in detail elsewhere.[13]

Eight belief-based composite scales resulted, reflecting somatic or psychological elements of susceptibility, seriousness, benefits of treatment from a physician, and benefits of treatment from a counselor. The exception to the composite approach was that items measuring barriers to treatment were not highly related statistically, and thus six distinct barriers were analyzed.

Additional items measuring the frequency of occurrence and intensity of the same 13 symptoms correlated highly with the susceptibility composite scales. Also, on a more general level, subjects indicated how concerned they were with their mental and physical health, and rated their health status. Finally, the questionnaire included a modified version of the health locus of control scale.[14] The six "internal locus" items deal with the belief that the patient is responsible for his or her health, whereas the "powerful others locus" items put that responsibility on the medical provider or health system.

In sum, a total of 19 variables were included in the reported analyses: eight composite belief measures; six barriers; and five measures of general health orientations, including mental health concern, health concern, health status, internal health locus, and powerful-others health locus.

Development of Misuser Categories

The analyses described below were conducted only among high-frequency users (n = 322). Subjects were classified as either having or not having each of the three provider-determined misuse attributes: inappropriateness, overuse, and psychosomaticism. Cutoffs on the 5-point scales were determined by a median split on each scale.

Considering each scale separately, 58.7% of patients were labeled as psychosomatic, 42.7% as inappropriate users, and 21.4% as overusers. Sixty-four percent of patients were rated by their providers as having at least one of these "misuse" attributes. Failure to find any statistical differences attributable to the overuse/underuse dimension led to the exclusion of that variable in subsequent analyses. Therefore, three misuser groups resulted. Two have high ratings on only one dimension, either inappropriateness or psychosomaticism. The third misuser group was viewed by their providers as both inappropriate and psychosomatic users. These three groups are compared with the "appropriate users," who received no misuse ratings and represented one third of the frequent-user population.

Groups were described in terms of percentages. Tests for differences among groups were made using analysis of variance followed by Duncan's multiple range test procedures and chi-squares for diagnostic and categorical data. Because of multiple chi-square comparisons, an alpha level of .01 was used.

Results

Prevalence

The percentage of all HMO subscribers and of actual users accounted for by each of the frequent user groups are presented in Table 1. Overall, 17.1% of subscribers received one or more "misuse" rating, with 9.9% seen as both psychosomatic and inappropriate users. In addition, all misusers accounted for 42.7% of the patient visits, with patients whose use was viewed as both inappropriate and psychosomatic accounting for 24.5% of all visits. Thus, a relatively small population accounted for a disproportionate number of medical visits.

Mental Health Use

Those patients perceived to be in the category of both inappropriate and psychosomatic were most likely to use mental health services (provided by the HMO and referred to by primary care providers). In fact, 29.8% of persons who used mental health services during the measurement year fell into that misuser group. However, in contrast to medical use, they do not account for a disproportionate number of mental health care visits (27.5%).

Only 22 of the 322 (6.8%) frequent users were referred for mental health counseling; 17 of those 22 were rated as psychosomatic. However, of the 207 patients rated as misusers, only 9% were referred for psychological counseling.

Health Beliefs

Because of sample size, patients with high ratings on only one misuse dimension were combined to test for differences in the 19 health belief measures among patients.

The misuser groups were different from the appropriate users in that they exhibited greater levels of concern about their mental health ($F = 4.19$, $P < .02$), greater perceived seriousness of psychological symptoms ($F = 3.00$, $P < .05$), and a greater belief in their own responsibility for their health ($F = 4.18$, $P < .02$).

In addition, those receiving two misuse ratings (ie, both inappropriate and psychosomatic) differed significantly from the other two groups. They were younger ($F = 8.82$, $P < .001$), and reported greater combined frequency and intensity of both psychological ($F = 4.41$, $P < .01$) and somatic symptoms ($F = 4.84$, $P < .008$). Also, this group was different from patients with one misuse rating by virtue of a lesser belief in the control exerted by powerful others (providers) for their health care ($F = 5.76$, $P < .004$).

Medical Visits

The misuser groups, even though seen as inappropriate users of medical services, actually made fewer medical visits than frequent appropriate users ($F = 4.32$, $P < .02$). As seen in Table 2, the difference was approximately 1.5 visits per year. However, the mean length of each medical visit as recorded by their providers at each appointment was quite similar among the groups (appropriate users, 22.5 minutes; one misuse rating, 23.4 minutes; two misuse ratings, 22.9 minutes), indicating that on any particular visit, the same amount of time was spent with patients regardless of whether they were seen as inappropriate or psychosomatic medical users.

Table 2. Mean Values of Questionnaire Items Differing Among Types of Frequent Users

Variable	Appropriate User	Moderate Misuser	Extreme Misuser
Mental health concern*	2.33	2.69	2.60
Seriousness of psychological symptoms†	2.32	2.60	2.54
Psychological symptomatology‡	2.17	2.23	3.29
Somatic symptomatology‡	2.18	2.02	3.14
Internal health locus*	2.67	2.83	2.83
Powerful others health locus‡	2.40	2.55	2.28
Age§	42.39	43.83	36.75
Number of medical visits*	9.59	8.15	8.00

*P < .02.
†P < .05.
‡P < .01.
§P < .001.

Diagnoses

Each of 18 broad diagnostic categories were compared (Table 3). The misuser groups had greater proportions of persons with musculoskeletal disorders ($\chi^2 = 11.47$, $P < .003$) and mental disorders ($\chi^2 = 8.42$, $P < .01$) than the appropriate users. Patients with two misuse ratings had fewer circulatory system problems ($\chi^2 =$

Table 3. Percent of Frequent Users Receiving Various General Diagnoses During a 1-Year Period

Diagnostic Category	Appropriate User	Moderate Misuser	Extreme Misuser
Preventive care examinations	69.6	64.8	69.2
Respiratory system disorders	33.9	33.0	43.3
Circulatory system disorders*	33.0	37.5	20.0
Infective/parasitic diseases	7.0	3.4	10.0
Digestive system disorders	18.3	15.9	15.8
Genitourinary system disorders	33.0	29.5	40.0
Endocrine, metabolic, nutritional, allergic disorders	22.6	20.5	13.3
Nervous system disorders	5.2	5.7	4.2
Eye disorders	32.2	34.1	24.2
Ear disorders†	5.2	13.6	12.5
Musculoskeletal disorders*	17.4	38.6	28.3
Skin disorders	30.4	27.3	36.7
Neoplasms	12.2	4.5	9.2
Blood diseases	4.3	1.1	0.0
Mental disorders*	2.6	6.8	12.5
Accidents, poisoning, trauma	6.1	9.1	13.3
Ill-defined conditions	15.7	21.6	27.5
No diagnosis*	33.9	36.4	50.0

*P < .01.

8.62, $P < .01$) and more visits labeled "no diagnosis" ($\chi^2 = 7.19$, $P < .03$) than the other two groups.

Although extremely small incidence rates generally precluded statistical testing, 23 comparisons for specific problems were possible, and 3 produced significant differences at .01 level.* Persons with two misuse ratings received fewer diagnoses of hypertension ($\chi^2 = 11.61$, $P < .003$) and miscellaneous musculoskeletal problems ($\chi^2 = 10.60$, $P < .005$) than the other two groups. In addition, that group had a proportionately greater number of problems ($\chi^2 = 11.53$, $P < .003$) classified by medical providers as "no disease" (25.8% with two misuse ratings received this diagnosis at least once, compared with 12.2% of appropriate users and 10.2% of patients with one misuse rating).

Discussion

In this study, prevalence data were obtained on those patients perceived by their providers as misusers within an urban HMO. The definition of "misusers" was limited to those subscribers who make at least five medical visits per year and who are considered by medical professionals to be either inappropriate or psychosomatic users, or both. Inappropriate underuse is not considered. Because these results are based on ratings of specific patients, rather than on general estimates, they improve on the prevalence data previously available on medical misuse within a primary care setting. This study revealed that patients perceived as both psychosomatic and inappropriate users represented 10% of the subscriber population, but accounted for 25% of all medical visits. Similarly, even patients rated as either inappropriate or psychosomatic users made use of medical services two and a half times more frequently than expected. In an HMO setting where coverage provides for almost unlimited services, the cost implications of such frequent use are substantial. Similar issues arise with insurance coverage. Given that it is the health care provider who has identified these misusers, coupled with their frequent medical visits, it is easy to understand why concurrent physician and patient frustration result. Such mutual frustration is a burden to family physicians, particularly as this patient behavior has been demonstrated to occur with some consistency in both inpatient and outpatient settings.[15–17]

The social context of misuse, as a physician-identified problem, permits interpretation of the results as both a patient and medical care provider problem. Future research needs to establish alternative measures of misuse that are assessed independently of the medical situation. The relation between physician-perceived and patient-perceived constructs needs to be pursued. At this time, however, the data can highlight areas in which those labeled as "misusers" differ from appropriate users. Whether it is the physician's perception or patient's behavior that leads to the inappropriate-use rating is still unclear.

For example, the patient's perception of responsibility for health differentiates the misusers from the frequent appropriate users, with misusers believing *more* strongly in their own responsibility for health. In addition, patients rated as psychosomatic and inappropriate users indicated less confidence in the power of medical providers. Perhaps some highly internalized patients have ways of interacting with medical professionals that lead to their being classified as inappropriate or psychosomatic. Alternatively, it could be that self-responsible patients are more likely to seek care for minor symptoms as a preventive measure, which may not be seen by the provider as appropriate use. The additional loss of belief in medical providers may be either a cause or a result of being perceived as one of the "worried well." That is, patients may lose confidence in providers because they are treated as "crocks." Or, providers may label patients "crocks" because they treat physicians without the customary respect, owing to a lack of trust in physicians' expertise as well as their own self-obtained knowledge. Research is needed to explore the relation between perceived responsibility for health care and patient behavior, its change over time, and its effect on mutual physician and patient frustration. Providers need to be aware that patients' visits about relatively minor symptoms may truly reflect an acceptance of patients' responsibility for their health rather than health care system abuse.

Beliefs about mental health also differ among the various frequent-user groups. On the whole, misusers are more concerned about their mental health and see psychological symptoms as more serious than do appropriate users. In addition, more serious misusers report more psychological and somatic symptoms. This suggests that these patients sense the possibility of underlying emotional problems, which may be recognized by the providers and labeled "psychosomaticism." Alternatively, patients expressing psychological symptomatology may be labeled "misusers" because of the physicians' inability to recognize these diagnoses or because of a lack of interest

**The following problems occurred frequently enough for testing, and no significant group differences were found: health examination; health screening; health supervision; upper respiratory infections; ear disorders; asthma; other respiratory diseases; nonrespiratory allergies; hypertensive heart or renal disease; miscellaneous disorders of the gastrointestinal tract; urinary tract infections; vaginitis; other disorders of the female genital organs; eye examination; miscellaneous diseases of the eye; local skin infections; eczema; other diseases of the skin; benign neoplasms; and miscellaneous ill-defined conditions.*

in treating such problems. Even though these patients are seen as inappropriate medical patients, alternatives are apparently rarely offered. These data indicate that only 22 of the 207 misusers (9%) received mental health counseling in addition to basic medical care; therefore, in most cases the physician remained the only source of counseling even in a system where mental health services were provided. One well-known alternative that family physicians use to manage patients with numerous somatic complaints consists of frequent, regularly scheduled visits. Although time constraints may limit counseling in the physician's office, it is a fact that counseling remains part of daily patient care, and for many the physician's office is the only place such care will be received. Perhaps the low referral rate indicates a need for improvement in a multidisciplinary approach. Even specialized treatment alternatives outside both the medical or mental health system may be viable and cost-saving options. But most important, once again the need for education of primary care providers about mental health issues is apparent.

The final area of comparison between misusers and appropriate users was the type of diagnosis given. The so-called misusers were in many cases no different from other frequent users. As expected, they were more likely to have considerably more visits labeled "no medical problem." In addition, they were more likely to receive a variety of less severe diagnoses suggesting help-seeking for minor problems. Again, the relationship was not obvious. Perhaps, the assignment of "no diagnosis" and problems of lesser severity led the physician to classify these patients as "misusers." On the other hand, such early help seeking and preventive care behavior are values that HMOs and family physicians have typically encouraged, and in many cases they serve an appropriate adaptive function. Is such adaptive behavior, when used frequently, interpreted negatively?

Physicians need to reconsider their own definitions of appropriate patient use. Does one need to be physiologically ill to be seen as a legitimate user? It may also be quite appropriate to seek help when one simply "feels bad," and feeling bad does not always yield a medical diagnosis. Yet patients can substantially benefit from the counseling of an astute physician or referrals to other resources if needed. It is time to recognize the needs of all patients and to develop treatment, triage, and prevention systems to assess the quality and outcome of care delivered to those whom physicians identify as "misusers."

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