Frequent Use of Medical Services

Patient Reports of Intentions to Seek Care

Peggy J. Wagner, PhD; William Phillips, MD; Monica Radford; J. Larry Hornsby, EDD

**Objective:** To examine differences between frequent and infrequent users in decisions to seek medical care based on symptom type and duration of experience of the symptom.

**Design:** Retrospective study.

**Setting:** University family practice clinic.

**Patients:** Fifty-eight of 130 patients returned the completed instruments, a response rate of 45%.

**Main Outcome Measures:** The following two instruments were used: the Intentions to Seek Care questionnaire, which measures intention to see a physician, self-treat, or use medications for 11 different symptoms after three time periods—1 day, 3 days, and 1 week of symptom duration—and the SF-36 Health Survey measure.

**Results:** Initial analyses suggested that patients perceive three clusters of symptoms, which we have labeled as serious, mild, and psychological. Scale scores for these groups of symptoms yielded significant reliability and were used in subsequent analyses. Multivariate analysis of variance comparing source of care, symptom duration, and frequent vs infrequent user groups indicated that both user groups are more likely to seek care from physicians for symptoms that are serious. Analysis of mild and psychological symptoms yielded significant three-way interactions, with frequent users more likely than infrequent users to seek care from physicians at a 1-day duration. Such differences disappear by 7 days. Significantly lower scores were obtained on five of the eight SF-36 Health Survey dimensions for the infrequent users.

**Conclusions:** Frequent users are more likely than infrequent users to report that they would seek care for minor symptoms. Infrequent users tend to self-treat for 3 to 7 days, after which time physician advice is sought. Efforts to teach patients optimal timing of use for different symptoms may be an effective intervention.

(Arch Fam Med. 1995;4:594-599)

---

**Editor’s Note:** I found it quite interesting that the frequently utilizing patients who seek care early for minor symptoms may see this as responsible behavior and do not necessarily treat themselves more frequently with over-the-counter medications. With the same minor symptoms, the frequent users seek care earlier rather than wait— it is not that the symptoms are different or that they perceive the symptoms differently; it is that they perceive the role of the physician differently. However, this study did not take into account that the frequent users perceived themselves as more ill, and there are many of our ill patients whom we want to seek care early (such as those who have diabetes or severe chronic obstructive pulmonary disease or who are receiving steroids).

Marjorie A. Bowman, MD, MPA

---

In the face of today’s attempts at health care reform, it is likely that controls may be placed on the frequency of visits to medical providers in an effort to correct unnecessary and excessive use and/or misuse of health care services. Generally, the viewpoint of the provider is taken as the “correct” use; however, proposed reforms suggest that government and insurers will soon play a major part.

Physicians view 7% to 25% of visits as “trivial, inappropriate, or unnecessary.” This, of course, is judgment based on a medical background, one in which “true” disease almost always has a discernible cause and at least some hope of mitigation of symptoms on treatment. Insurance companies, from an alternate point of view still inside the health care circle, see excessive use of health care services based on cost. An inordinate amount of spending for one person’s repeated care,
METHODS

SAMPLE

Patients were selected for inclusion into the study based on family use patterns to ensure that use was represented across family size. The computerized patient information system of a large family practice clinic affiliated with a medical university in the South was searched for families with two to seven family members. A mean use score was calculated based on the number of visits per family divided by the number of family members. All prenatal visits were excluded. Representation for a frequent use and an infrequent use sample was made based on the proportion of families of various sizes in the clinic as a whole, that is, 66% of the sample selected included patients from two-member families; 20% from three-member families; 10% from four-member or greater families.

Patients, selected according to the above proportion in a randomized fashion, were telephoned by a medical student research fellow and asked if they were willing to complete the questionnaires. Sixty-five infrequent users were mailed questionnaires and 25 returned them, a response rate of 38.5%. In the frequent use population, 33 of the 65 mailed questionnaires were returned, a return rate of 51%. The combined return rate was 45%. According to computer records, the mean visit frequency of the respondents in the frequent-use population was 18.17 visits per individual in the baseline year. Respondents in the infrequent-use group had mean individual use rates of 2.05 visits.

INSTRUMENTS

Two primary questionnaires were administered. First, the Intentions to Seek Care questionnaire was developed to measure patients’ self-reported likelihood of seeking care for a variety of minor and major symptoms. The following 11 symptoms were examined: stomach ache, sore throat, headache, vomiting, no appetite, being overtired, pain in chest, lump in abdomen, blood in urine, feeling blue, and feeling anxious. Likelihood of seeking help from the following three sources of care for each symptom was assessed: a physician, over-the-counter medications, and self-care. Patients could indicate use of any or all sources of care. Finally, a dimension of symptom duration was measured in that patients were asked about seeking help for each of the above symptoms if they had just experienced it when they woke up in the morning, if they had the symptom for 3 consecutive days, and if they had the symptom for a 1-week period. Five-point Likert scales were used for each question.

The second questionnaire was the SF-36 Health Survey (SF-36), a standardized measure of health status and functioning used as a validation instrument. The SF-36 produces scores on the following eight dimensions of health: Physical Functioning, Role-Physical (role limitations due to physical health problems), Bodily Pain, General Health, Vitality (energy or fatigue), Social Functioning, Role-Emotional (role limitations due to emotional problems), and Mental Health (psychological distress and psychological well-being). Five of the scales define good health status as the absence of any limitations, and on these scales a score of 100 is achieved when there are no limitations (Physical Functioning, Role-Physical, Bodily Pain, Social Functioning, and Role-Emotional). The other three scales (General Health, Vitality, and Mental Health) are bipolar in nature, and a score of 50 represents no limitations, a score of less than 50 is symptomatic, and a score of greater than 50 represents a positive or growth state. Table 1 presents normative data for the US population showing the peaks and valleys of the different dimensions of health.

CLASSIFICATION OF SYMPTOM GROUPS

Table 2 presents the mean self-reported inclination to use each of the three health care sources regardless of time. Symptoms clustered in three noticeable groups. The first three items (group 1 [serious]: blood in urine, lump in abdomen, and pain in chest) represent uncommon but usually serious symptoms. Patients report a strong tendency to seek help from a physician and very little inclination to use over-the-counter medications or to treat themselves. The next four items (group 2 [mild]: vomiting, stomach ache, sore throat, and headache) are more common symptoms that could be from a serious cause. Interestingly, patients in this group show relatively equal probabilities of seeking care from a physician, taking medication, and self-treating. The last group, which has psychological overtones (group 3 [psychological]: no appetite, being overtired, feeling anxious, and feeling blue), appears to consist of symptoms for which patients depend on themselves for their care, rather than taking medications or seeking help from a physician.

Items within these three symptom groups were added across symptoms to produce scales measuring inclination to use physicians, medications, and self-treatment at the three time intervals. Twenty-seven variables resulted, eg, immediate use of a physician for serious items, use of a physician after 3 days for mild items, and use of a physician after 1 week for psychological items. Cronbach’s α reliability scores were calculated for the resulting scales and were above .85 for 24 of the 27 combined scales. Subsequent analyses used these combined scale scores.

ANALYSES

Differences between frequent and infrequent users were tested with multivariate analyses of variance for each scale score, using duration and source of care as repeated measures. Comparisons of self-perception of use and SF-36 scores were tested using t tests.

Extreme frequency of use has been related to hypochondriasis, with the stereotypical description of persistent presentation to a primary care physician. Patients are convinced that they are ill and are often sent home without a diagnosis or hope for cure. Patients remain frustrated because suffering is real, and they perceive the physician as failing when no diagnosis is given. Physicians, too, remain frustrated because they cannot provide relief. The cycle continues, and eventually health
of primary health care services today. Somatization and hypochondriasis offer one possible explanation.

Life stress increases use of medical services for both somatizers and nonsomatizers, with the impact greater in the somatizers. Stress-exposed subjects in a study of inflammatory bowel disease were found to have increased risk for disease activity, with the difference being as much as twofold. These life situations seem to relate to frequency of medical services use, creating a potentially self-perpetuating situation, with more life stress creating more disease activity and more disease activity increasing life stress. It is important to note that both positive and negative life events are stressful, although unanticipated negative life changes are more predictive of health and illness activity. Gaskin et al found that temporary, immediate stressors are more predictive of experienced pain than permanent, long-term patient characteristics.

Mechanic has pointed out that the physician’s frustration at the frequent-use patient probably arises from the fact that the patient’s illness and the physician’s organic diagnostic tools do not often match in these situations. Physicians cannot change life stress or easily have an impact on somatizing behavior. Mechanic also reports that physicians “were most likely to attribute triviality to their patients’ complaints when they had insufficient time to investigate them.” Physicians, then, often project their inability to resolve the patient’s illness onto the patient by viewing the patient with disdain or even contempt as an unnecessary user. Perhaps the “problem,” then, does not always lie entirely with the patient but with the physician’s lack of time and corollary desire to help and the difficulty in changing both life stress and chronic behavior patterns evidenced in somatizing characteristics.

Finally, patient-physician communication and the reality of holding different opinions as to the definition of appropriate use and indeed the outcome of medical services may lead to repeated use. The “worried-well” population may indeed make frequent medical visits as a preventive measure (assuming responsibility for health) or as a means of coping with life stress but are instead viewed by the physician as annoying misusers.

Recognizing the mutual nature of this problem, the current study examines how patients perceive their reasons and timing in seeking medical care. Specifically, the study compares frequent users and infrequent users along the following dimensions: the rapidity with which these

### Table 1. Summary of Differences Between Frequent and Infrequent Users on the SF-36 Health Survey Scales

<table>
<thead>
<tr>
<th></th>
<th>Physical Functioning</th>
<th>Role-Physical</th>
<th>Bodily Pain</th>
<th>General Health</th>
<th>Vitality</th>
<th>Social Functioning</th>
<th>Role-Emotional</th>
<th>Mental Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>National mean</td>
<td>84.15</td>
<td>80.96</td>
<td>75.15</td>
<td>71.95</td>
<td>62.86</td>
<td>83.28</td>
<td>81.26</td>
<td>74.74</td>
</tr>
<tr>
<td>Frequent user</td>
<td>61.61</td>
<td>59.94</td>
<td>57.53</td>
<td>54.88</td>
<td>39.84</td>
<td>61.69</td>
<td>59.90</td>
<td>62.48</td>
</tr>
<tr>
<td>Infrequent user</td>
<td>77.12†</td>
<td>76.04‡</td>
<td>64.26</td>
<td>72.35‡</td>
<td>52.53†</td>
<td>89.43†</td>
<td>76.39</td>
<td>68.68</td>
</tr>
</tbody>
</table>

*Scales are described in the “Instruments” subsection of the “Methods” section of the text.
+P<.05, compared with frequent users.
+P<.01, compared with frequent users.
S<.01, compared with frequent users.

### Table 2. Mean Self-reported Inclination to Use Health Resources Regardless of Time

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Physician Mean</th>
<th>Over-the-Counter Medication Mean</th>
<th>Self-treatment Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1 (serious)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood in urine</td>
<td>12.93</td>
<td>4.13</td>
<td>6.18</td>
</tr>
<tr>
<td>Lump in abdomen</td>
<td>12.43</td>
<td>4.24</td>
<td>6.84</td>
</tr>
<tr>
<td>Pain in chest</td>
<td>12.17</td>
<td>5.08</td>
<td>7.24</td>
</tr>
<tr>
<td>Group 2 (mild)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vomiting</td>
<td>10.89</td>
<td>7.62</td>
<td>9.03</td>
</tr>
<tr>
<td>Stomachache</td>
<td>9.53</td>
<td>6.51</td>
<td>10.03</td>
</tr>
<tr>
<td>Sore throat</td>
<td>9.28</td>
<td>6.98</td>
<td>9.97</td>
</tr>
<tr>
<td>Headache</td>
<td>9.23</td>
<td>10.69</td>
<td>10.33</td>
</tr>
<tr>
<td>Group 3 (psychological)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No appetite</td>
<td>7.48</td>
<td>4.86</td>
<td>11.32</td>
</tr>
<tr>
<td>Being overtired</td>
<td>7.33</td>
<td>4.78</td>
<td>11.67</td>
</tr>
<tr>
<td>Feeling anxious</td>
<td>6.70</td>
<td>4.64</td>
<td>12.04</td>
</tr>
<tr>
<td>Feeling blue</td>
<td>6.63</td>
<td>4.51</td>
<td>12.36</td>
</tr>
</tbody>
</table>

*Symptoms are described in the “Classification of Symptom Groups” subsection of the “Methods” section of the text and are listed by rank order of physician use. Data are calculated as the sums of responses on a scale of 1 to 5, indicating likelihood to use immediately, at 3 days, and at 1 week (5 indicates most likely). Range of responses is from 3 to 15.

status as perceived by the patient correlates much more with his or her fears and beliefs about disease than with the physician's clinical opinion regarding the patient's health. This hypochondriacal stereotype overlaps tremendously with somatization disorder. Data suggest that 38% of general practice patients with somatization disorder demonstrate hypochondriacal symptoms. Indeed, patients' experience of somatic symptoms is second only to the number of medical diagnoses in predicting future medical services use. One third of somatizing patients regularly use hospital services for longer than 20 years. The age of onset of somatization ranges from late childhood until the beginning of the 30s, making almost the entire range of family physicians' patients possible targets. In fact, in a family practice studied by Collyer in 1979, 4% of families consumed 32% of the physician's time. Wagner and Hendrich also found that 10% of patients accounts for 25% of medical services use. Clearly, then, some small subset of primary care patients accounts for the immense use and accordant rise in the cost
groups intend to seek care, the source of care, and the kinds of problems for which care is sought.

The primary hypothesis is that frequent users will report greater intentions than infrequent users to seek physician care for all symptoms, regardless of severity, at an earlier time in the course of the problem.

RESULTS

Results are presented by the three groups of symptoms, serious, mild, and psychological.

SERIOUS SYMPTOMS

A significant main effect was observed for the serious symptom combined variable for source of care, with physicians being the most likely source of care (F=117.23; P<.001). A time-by-source interaction was also obtained (F=3.40; P=.020), with an increase in physician use across time. No differences were observed between frequent- and infrequent-user groups.

MILD SYMPTOMS

A significant three-way interaction among the effect of frequent vs infrequent use, source of care, and duration of symptom was obtained (F=3.96; P=.012). Figure 1 and Figure 2 present this interaction. Frequent users are more likely than infrequent users to seek care from a physician at 1-day's duration, increasing dramatically at 3 days to a level almost equal to the 1-week level. Infrequent users, on the other hand, match the help-seeking tendencies of frequent users at 1 week's duration but do not increase their desire to see a physician until the 3-day duration has passed.

Time-by-source interactions were also significant, with use of physician help increasing with duration, and use of medication and self-care decreasing with duration (F=49.61; P<.001).

PSYCHOLOGICAL SYMPTOMS

A main effect of time was obtained (F=5.10; P=.012) for the psychological symptoms measure, with an increase in inclination to seek care at 1 week's duration. A significant main effect of source of care (F=94.94; P<.001) indicated that self-care was the treatment sought. A significant three-way interaction involving frequency of use, duration of symptom experience, and source of care (F=4.36; P=.007) was obtained. Figure 3 and Figure 4 show this interaction in which, although self-care remained the overall treatment of choice, the frequent-use group had a greater likelihood of seeing a physician at 3 day's duration compared with the infrequent-user group, which reached the same level of seeing a physician at 1 week's duration.

SF-36 DIFFERENCES

Table 1 presents the means on each of the eight health dimensions of the SF-36 for the frequent- and infrequent-user groups and the national means for comparisons. Frequent users have lower scores than infrequent users on all eight dimensions and are significantly different on five—Physical Functioning, Role-Physical, General Health, Vitality, and Social Functioning.
The results of this study indicate that frequent users do not simply seek physician care more than infrequent users. Rather, the symptom type must be taken into account to observe differences in self-reported inclinations to seek treatment. Indeed, both frequent and infrequent users seek physician care for symptoms that are serious in nature. Because of the significant and life-threatening nature of such symptoms, all patients act quickly. When there is no doubt about need, no differences in use exist.

It is in the gray areas of decision making that differences are noted. For mild symptoms, both frequent and infrequent users seek help from other sources of care. In addition, it is in this gray area that timing of medical services use distinguishes the frequent and infrequent user. Infrequent users seek care after experiencing symptoms for 3 to 7 days, whereas frequent users often seek care on the first day these symptoms are present. Since these symptoms often fade in a week, infrequent users may never seek medical care. Frequent users rely on physicians quickly, and, given that such symptoms are common, the frequent users see physicians more often.

Physicians may be able to use this information to recognize that patients need to be educated about appropriate timing of treatment-seeking behavior and the circumstances in which seeking help might be safely delayed. Since illness behavior appears to originate in childhood, frequent-use families could be targeted with information and “preventive maintenance,” which would help them to redefine wellness and personal responsibility for health. Previous research has suggested that frequent users may see physician visitation as a personally responsible behavior; thus, education needs to focus on the many different ways patients can take charge of their health outside of the physician’s office.

It is interesting that frequent users do not self-report a greater tendency to use over-the-counter medications for these mild symptoms. This suggests that it is not simply increased treatment but treatment that is coupled with the need to see a physician, or a lack of confidence in their own ability to self-treat. If frequent use is in part determined by hypochondriasis or somatization as suggested in previous literature, than personal reinforcement and personal attention are necessary components that need to be obtained somewhere. Physicians need to consider alternate routes that could be used for obtaining this personal ingredient or begin to legitimize the provision of reinforcement and caring as acceptable elements in the provision of primary care.

Psychological symptoms present another pattern. Use of physicians is not seen as the treatment of choice by either frequent or infrequent users; rather, self-treatment is the route most patients would take. Perhaps this is because of society’s tolerance of admitting to somatic problems and intolerance of psychological problems, or perhaps it is due to the patient’s failure to view physicians as sources of care for psychological issues. Given the prevalence of depression among primary care patients, it is also possible that patients do not recognize depression when they experience it. Thus patients say that they would self-treat, and, yet, many persons present with symptoms that would be categorized as depression. Perhaps patients have misinterpreted such symptoms, labeled them as somatic problems, and gone to see a physician. When asked directly, they would not use the physician for such psychological concerns. Again, an issue of patient education about signs of depression is raised. With increased duration, fre-
quent users report greater likelihood of use than infrequent users. Overall it appears, however, that with 1 week of symptom experience, these are not problems that would be carried to a physician. Future research needs to clarify this issue and to identify alternate sources of care that might be sought and the duration of symptom presence that must exist before help for psychological problems is enlisted.

Testing a simple intervention in which patients are accurately and periodically made aware of their frequency of use in comparison with that of other patients might have a significant impact on their self-perception and actual use. Very rarely do physicians teach their patients when to seek help; instead those behaviors are determined by family and personal histories. Physicians might want to consider educating patients using the simplest formats about the hows and whys and whens of health care-seeking behavior. Working together, responsibility for health can be refined, and the frustration of managing different patient and physician goals can be minimized.

In conclusion, the results suggest that frequent users might benefit from educational interventions that focus on use. The current study, limited by retrospective collection and lack of diagnostic data, highlights areas for future research. Prospective research using an expanded symptom list, following the inclination-to-use approach taken in this study, could be paired within specific diagnostic or problem categories to predict patterns of use.

Accepted for publication February 21, 1995.
Correspondence to Director of Research, Medical College of Georgia, Department of Family Medicine, HB-3040, Augusta, GA 30912 (Dr Wagner).

REFERENCES


Practice Commentary

Physicians generally know who the “high-maintenance” patients are in their practices. Some are truly unhealthier than average; others seek care for relatively minor, self-limiting complaints.

This survey attempted to quantify the differences between frequent and infrequent users’ intentions to seek care. The goal is to improve utilization by teaching inappropriately frequent users when it is safe and appropriate to do their own watchful waiting.

The study sample size is small. Families were selected for their previously documented patterns of frequent and infrequent use, without attention to important confounding variables such as patient age, medical history, or socioeconomic status.

Therefore, even though I intuitively agree with the authors’ conclusion that frequent users seek care earlier for minor symptoms, their survey does not prove this point.

Rob Scott Thompson, DO, MS
United Health Services
Johnson City, NY