How Illness Presents: A Study of Patient Behavior

Moira A. Stewart, PhD, Ian R. McWhinney, MD, and Carol W. Buck, MD, PhD
London, Ontario

In 1972 McWhinney presented a classification of patient behavior which provided the physician with a framework in which to describe his assessment of the reason for the patient's visit. The present paper assesses the reliability of this classification schema involving seven categories of patient behavior comparing the assessments of the investigators with those of the cooperating physicians. There was agreement in 75 percent of the cases. For a random sample of women, 389 visits over a six-month period were classified. Signal behavior was noted in 14 percent of all visits and psychosocial problems were presented frankly in another 22 percent. The distribution of patient behaviors differed for patient and doctor-initiated visits and differed among the five participating physicians. Characteristics of the doctor, rather than those of the patient, had the greater influence on the degree to which patients used frank presentation rather than signal behavior to provoke discussion of psychosocial problems.

The first purpose of this study was to assess the reliability of a classification of patient behavior. Our second purpose was to apply the classification to a sample of patients from five practices. We wanted to test our predictions regarding relationships between patient behavior and certain characteristics of patients and physicians.

Description of the Classification of Patient Behavior

A classification of patient behavior was presented in 1972 by one of the authors.[1] The taxonomy was intended for use by physicians alongside the classification of the patient's illness. The purpose of the taxonomy was to provide the physician with a framework in which to describe his assessment of the reason for the visit. It was felt that the taxonomy would order physicians' thoughts on the behavioral aspects of a patient's visit, just as the diagnostic process orders thoughts on the pathology of signs and symptoms. It was expected that the use of the taxonomy by physicians would help them to understand their patients and thereby pave the way for better management.

The seven categories of the taxonomy of patient behavior were as follows:

1. *Limit of Tolerance* – The symptoms are causing pain, discomfort, or disability which has become intolerable. This large category covers many straightforward episodes of illness, from an attack of influenza to a fractured femur. The capacity of a symptom to cause distress will depend on many variables, including the patient's cultural background and occupation. Episodes in this category are not confined to physical symptoms. Depression, anxiety, or other psychological symptoms may be causing sufficient distress or disability to justify a visit to the physician.

2. *Limit of Anxiety* – The patient visits the physician not because his symptoms are causing distress but because of their implications. Since episodes in this category depend on the patient's (or a relative's) knowledge and beliefs about illness, social and cultural factors play an important part. Some of these episodes might be considered by the physician to be "unnecessary" in a medical sense but necessary from the patient's point of view.

3. *Signal Behavior* – In these cases, the presenting illness or symptom is used as a "ticket of admission" to the doctor so that some underlying problem can be presented. Four kinds of presenting illness can fall into this category: (a) attendance for a minor illness, (b) attendance for a chronic illness without any apparent change in its severity, (c) attendance for unorganized symptoms without organic pathology, and (d) delayed recovery from an illness or injury without apparent reason for the delay.

4. *Administrative* – This category covers attendances which fall into none of the first three categories and whose sole purpose is administrative (eg, provision of a certificate of illness for an employer).

5. *Opportunity* – The patient mentions a symptom solely because the opportunity has arisen (eg, a mother bringing baby for a well-baby check, mentions a symptom of her own).

6. *No Illness* – Attendances for preventive purposes, such as antenatal or well-baby care.

7. *Lanthanic** – The doctor discovers a condition of which the patient is unaware.

Test of Reliability

During Spring 1971, two of the authors visited eight cooperating

From the Department of Family Medicine and the Department of Epidemiology and Preventive Medicine, University of Western Ontario, London, Ontario. Requests for reprints should be addressed to Dr. Moira Stewart, Department of Epidemiology and Preventive Medicine, Faculty of Medicine, University of Western Ontario, London, Ontario.

*This term was introduced by Dr. A.R. Feinstein in his book Clinical Judgment. The Williams and Wilkins Company, Baltimore, 1967.

physicians in their offices. Separately, we viewed consultations between patient and physician – some by sitting in the consultation room and some by viewing through a one-way window. Each investigator was thoroughly familiar with the meaning of the classification of patient behavior and explained it to the cooperating physician. The investigator and the physician individually classified the complaints presented by each patient. The reliability of the classification schema was estimated by comparing the assessment of the investigator and the physician. There was agreement in approximately 75 percent of the cases.

Given our particular interest in the category of signal behavior and our belief that this category is a difficult one to identify and manage, we decided to perform an additional test of the capacity of physicians to detect this behavior. We wrote eight resumés of visits to physicians, four representing signal behavior and four representing other categories of patient behavior. Eleven physicians classified each resumé and their designation agreed with the intent of the resumé 75 percent of the time.

On the basis of these findings we concluded that no more than 25 percent error could be expected for any category. We decided that with more vigorous explanation of the classification schema, future studies might achieve even greater agreement.

Check *ONE* category for each patient visit.

1. Limit of Tolerance
   a) Symptom . . . . . _____
   b) Psychosocial problem . . . . . _____
2. Limit of Anxiety
   a) Symptom . . . . . _____
   b) Psychosocial problem . . . . . _____
3. Signal Behavior . . . . . _____
   A problem of living presenting as symptoms.
4. Administrative . . . . . _____
5. Opportunity . . . . . _____
6. No Illness or No Problem . . . . . _____
7. Lanthanic . . . . . _____
   Doctor discovered condition.

Date of This Visit _____

Symptoms or problems presented 1. _____
2. _____
3. _____

Condition discovered by physician 1. _____
2. _____

Patient identification Name _____ Age _____

Physician identification _____

CIRCLE ONE: Patient-initiated Doctor-initiated

Figure 1. Taxonomy of Patient Behavior

Methods

In order to obtain an estimate of the relative frequency of the categories of patient behavior, we had physicians classify visits during a six-month period using the form shown in Figure 1. These were visits of a sample of women, 20 years of age or older, whose names were obtained from a list of randomly selected family files in five teaching practices in London, Ontario. The five physicians classified the visits some months after they had taken place. The physicians used their medical records as an aide-mémoire and none expressed any difficulty in classifying after-the-fact.

There were 219 women in the sample obtained. One hundred and twenty-three women, or 56.2 percent, had visited the physician at least once during the six months under study. These women accounted for 389 visits during the study period.

Results

Each of the 389 visits was classified by the physician, and the distribution of presenting behavior is shown in Table 1.

For comparative purposes, four groupings were made of these categories: (1) all symptoms (limit of tolerance or limit of anxiety), (2) all psychosocial problems which were presented frankly (limit of tolerance or limit of anxiety), (3) signal behavior, and (4) no illness. The distribution of these four groups differed significantly from one doctor to another. (See Table 2.) Some physicians showed high proportions of the "no illness" category. Some physicians had high proportions of visits with problems of living.

If we discount any differences among the doctors in their ability to classify accurately (and there was no

evidence in the reliability tests of differences among the five participating physicians), we must conclude either that physicians build up different kinds of practices or that subjective differences enter into the classification of their *own* patients.

The four groups of patient behavior were found to differ for patient-initiated visits and doctor-initiated visits. Patient-initiated visits were characterized by more symptoms and more signals. (See Table 3.) This finding leads us to recommend that physicians pay close attention to the patient-initiated visits in order not to miss the message or signal from nearly one quarter of these patients.

We then studied only the signals and the frank psychosocial presentations, omitting all other reasons for visiting. We expected differences among the five physicians in the ratio of signal behavior to frank presentations of psychosocial problems, and we predicted that two particular physicians would have much higher proportions of frank presentations than the other three. We regarded these two physicians as particularly interested in psychosocial problems, and as open and accepting regarding problems of living. We anticipated that they would communicate to their patients their willingness to listen, and our expectations were borne out by the data. (See Table 4.) The two physicians we chose were #2 and #3.

Given our contention that signal behavior is difficult to assess and manage, we are encouraged to note that some physicians can decrease the frequency of this complex behavior by encouraging frank discussion of psychosocial problems.

In order to relate patient behavior to background characteristics of the patients, we changed our analysis from one based on visits to one based on patients. We found no differences between high and low social classes as to whether their problems of living were presented frankly or as signals. In addition, there were no significant differences among educational levels or among age levels.

Discussion

Mechanic[2] has reviewed studies which showed social and cultural influences on response to symptoms and on vocabularies of discomfort. Bart[3] presented data which suggested that

Table 1. Frequency Distribution of the Categories of Patient Behavior

Category	Number	Percent
Limit of Tolerance	139	35.7
a) Symptom (83 visits; 21.3%)		
b) Psychosocial problem (56 visits; 14.4%)		
Limit of Anxiety	99	25.4
a) Symptom (72 visits; 18.5%)		
b) Psychosocial problem (27 visits; 6.9%)		
Signal Behavior	54	13.9
Administrative	5	1.3
Opportunity	2	0.5
No Illness	86	22.1
Lanthanic	4	1.0
Total	389	100.0

Table 2. Distribution of Patient Behavior for Each Participating Physician

	Percentage Distributions of Patient Behavior					
Physician	Symptom	Signal	Frank Psychosocial Problem	No Illness	Total	N
#1	52.8	5.7	5.7	35.8	100.0	53
#2	37.6	18.8	33.3	10.3	100.0	117
#3	33.6	8.6	31.9	25.9	100.0	116
#4	38.6	34.1	4.6	22.7	100.0	44
#5	56.2	8.3	4.2	31.3	100.0	48
Total	41.0	14.3	21.9	22.8	100.0	378*

$\chi^2 = 72.33$ on 12df $p<0.001$

*11 visits classified in the three remaining categories are not included here. (Administrative, Opportunity, and Lanthanic)

women who were less well educated and of lower socioeconomic class expressed psychological distress through "signals." She said that such patients have a different vocabulary of discomfort from those patients we call "frank" presenters. Korsch et al[4] found that well-educated mothers were more likely to express their anxieties frankly to the doctor. Our data did not support these findings, and we suggest that while social and cultural attributes of the patient may be important influences on the presenting behavior, they may not be as important as the manner of the doctor himself.

While it could be argued that our findings were affected by the 25 percent error shown in the reliability test, we emphasize that none of the five physicians showed a tendency to systematic error. Any errors were most likely to be distributed equally over the categories of patient behavior. Since we felt that the reliability test showed a need for a more intensive explanation of the taxonomy of patient behavior, we exposed the five cooperating physicians to additional explanations of the taxonomy before they began classifying the visits of their patients. We therefore have every reason to believe that the distributions and comparisons were based on a reliability of greater than 75 percent.

One of the purposes of the taxonomy of patient behavior put forward by McWhinney,[1] was to aid physicians when they confront presenting complaints which do not fall neatly into a diagnostic category. We found that the proportion of visits for problems of living was slightly greater than one third. This is a substantial part of a practice, and this finding underlines the importance of skill in identifying and handling personal problems.

Several recommendations can be made on the basis of our findings. Physicians would be wise to look at patient-initiated visits, especially those for minor illnesses, in a new light. These types of visits are very likely to be masks or signals of other problems which the patient finds difficult to express. Furthermore, the evidence suggested that the physician himself, and his interest in psychosocial problems, influences the patient's presentation. A physician who is open and willing to listen to problems of living seems to encourage the frank presentation of psychosocial problems and thereby decreases the number of complicated signals.

Table 3. Distribution of Patient Behavior According to Who Initiated the Visit

	Percentage Distributions of Patient Behavior					
Who Initiated the Visit	Symptom	Frank Psychosocial Signal	Problem	No Illness	Total	N
Patient-initiated	50.4	21.9	19.3	8.4	100.0	228
Doctor-initiated	26.7	2.7	26.0	44.7	100.0	150
Total	41.0	14.3	21.9	22.8	100.0	378*

$\chi^2 = 90.32$ on 3df $p<0.001$

*11 visits classified in the three remaining categories are not included here. (Administrative, Opportunity, and Lanthanic)

Table 4. Frank vs Signal Behavior Shown for Each Participating Physician

	Percentage Distributions of Frank and Signal Behavior			
Physician	Signal	Frank Psychosocial Problem	Total	N
#1	50.0	50.0	100.0	6
#2	36.1	63.9	100.0	61
#3	21.3	78.7	100.0	47
#4	88.2	11.8	100.0	17
#5	66.7	33.3	100.0	6
Total	39.4	60.6	100.0	137

$\chi^2 = 25.8$ on 4df $p<0.001$

Acknowledgements

The authors express appreciation for the interest and cooperation of the family physicians who participated in the research: Drs. G.E. Pratt, M. Brennan, I. Vinger, A.T. Hunter and B. Hennen and the physicians of the Grandview Medical Centre, Cambridge, Ontario.

M. Stewart has been supported by a Fellowship from the Physicians' Services Incorporated Foundation (Ontario) and by a National Research Scholarship from Health and Welfare Canada.

References

1. McWhinney IR: Beyond diagnosis. An approach to the integration of behavioural science and clinical medicine. N Engl J Med 287:384-387, 1972

2. Mechanic D: Social psychologic factors affecting the presentation of bodily complaints. N Engl J Med 286:1132-1139, 1972

3. Bart PB: Social structure and vocabularies of discomfort: What happened to female hysteria? J Health Soc Behav 9:188-193, 1968

4. Korsch BM, Gozzi EK, Francis V: Gaps in doctor-patient communications. I: Doctor-patient interaction and patient satisfaction. Pediatrics 42:855-871, 1968