

CONSUMER BEHAVIOR IN THE HEALTH MARKETPLACE: EMPHASIS ON ACCESS TO CARE

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The particular aspect of “consumer behavior in the health marketplace” I should like to emphasize is the problem of *access* to medical care.

Health care policy makers, planners, administrators, and medical care consumers themselves are increasingly voicing their concern that access to the medical care system should be improved. A plethora of programs has been launched during the past decade with the expressed objective of achieving equity of access to medical care in the United States.

Some of these programs are directed at increasing the buying power or medical knowledge of the health care consumer—e.g., Medicaid, Medicare, national health insurance, and health education and nutrition programs. Others seek to improve the availability or organization of medical manpower and facilities—e.g., development of family practice as a specialty, paramedical training programs, and HMOs.

All these programs are intended in some way to provide equal access to the medical care system to various groups in the population. Just what the concept of “access” means, however, much less how it might be measured and what methods should be used to evaluate it, is ill-defined. Thus far, access has been primarily a political concept. It has for some time been an expressed or, at least, implicit goal of health policy, but few attempts have been made to provide systematic conceptual or empirical definitions of access that would permit policy makers and consumers actually to monitor the effectiveness of various programs in providing equal access to the medical system.

Two main themes regarding the access concept which appear in the literature might be likened to “process” and “impact” evaluation criteria, i.e., *descriptive* indicators showing how the system itself

works and outcome indicators measuring the effectiveness of the system in realizing its objectives.

Some researchers tend to equate access with characteristics of the consumer or the delivery system—family income, attitudes toward medical care, the distribution and organization of manpower, etc. that affect access to care. These are what might be called “process” measures of access. They are properties of the *population-at-risk* or the *delivery system* which must be affected or altered or changed in some way to improve access to care.

On the other hand, other researchers argue that access can best be evaluated through outcome indicators of the individual’s passage through the system measurements such as utilization rates or satisfaction scores. These measures correspond to “impact” or output-type indicators. Such indices serve as *external validators* of the impact of the characteristics of the delivery system and population-at-risk on *actual* utilization and satisfaction with the care received.

Our model of access (Figure I) tends to focus on the “impact” or end-product indicators as dependent variables and the predictor or “process” measures as independent variables in a theoretical framework of their relationship and influence on one another.

Research of social indicators has helped guide the development of this conceptualization. Social indicators are statistics designed to reflect the “quality of (social) life,” much as the economic indicators, such as the Gross National Product, unemployment rate, etc., are meant to reflect the nation’s financial “well-being.” Access to medical care might be considered a kind of social indicator of the *process* and *outcome* of an individual’s passage through the medical care system.

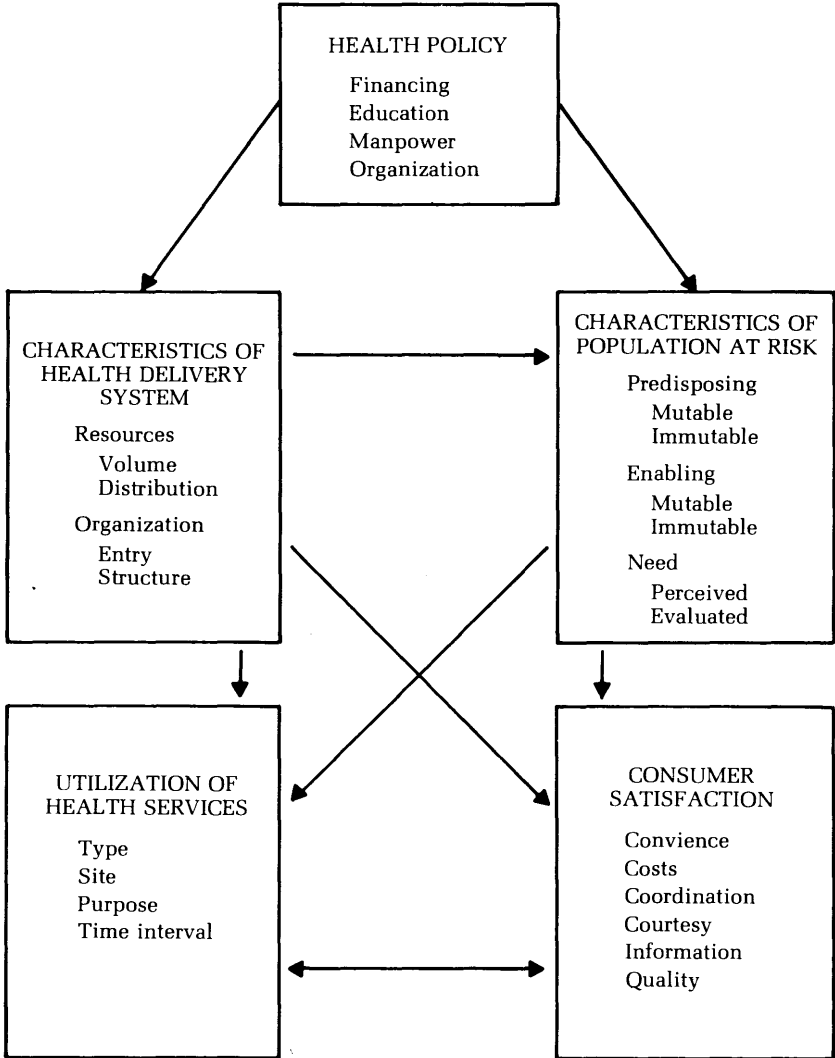
The research on the utilization of health services suggests important “independent” or process, and “dependent” or outcome variables that might be incorporated into a theoretical framework for the study of access to health care also.

Ronald Andersen and John Newman, in their article entitled, “Societal and Individual Determinants of Medical Care Utilization,” published in the Winter 1973 *Milbank Memorial Fund Quarterly*, for example, describe a comprehensive model of the individual and societal determinants of utilization that suggests important substantive categories for the study of access. Further, they point out that some of the determinants of utilization are capable of being altered by public policy—income, insurance coverage, physician-population ratios—while others are not—age, sex, race. The manipulatable predictors they call “mutable” variables and those that cannot be changed by health policy in the short run “immutable.”

The basic framework for the study of access presented in Figure I then is based on the research on social indicators, on the utilization literature and on the existing material on “access” itself as a concept.

FIGURE I

A Framework for the Study of Access to Medical Care



PROCESS INDICES OF ACCESS

Process indices, as suggested in the theoretical model of the access concept, refer to characteristics of the delivery system or characteristics of the population-at-risk that affect people's use of and satisfaction with care.

The indices which I would like to look at for various population subgroups are (1) whether one has a regular source of medical care, (2) the time spent waiting to get an appointment and (3) the time spent waiting in the doctor's office. These measures reflect something of the process of consumers' gaining entry to the health care system and the differential burdens of care-seeking experienced by different groups in the population.

The findings I will present are based on a 1970 national survey conducted by the Center for Health Administration Studies at the University of Chicago.

Regular Source of Care

Source of care, referring to where people report they usually go when they are sick or want advice about their health, influences whether they seek care. More importantly, once the decision to seek care is made, the regular source largely determines the type, site, volume and continuity of care the patient received. Further, there is evidence that people who have a regular attending physician are more satisfied with the care they receive than those who do not have a particular place they can go when the need arises (Table I and Appendix A).

Approximately 11 percent of the sample could identify no medical person or place that they went to for medical advice or treatment on a routine basis. The majority of the respondents reported they had a medical doctor—general practitioner or specialist—as their regular source of care. About 19 percent of the people indicated a clinic as their usual care source. Children were *least* apt to report having no regular source of care. They were *more* likely to have clinics as their usual source of care, compared to the other age groups. Those children who reported a physician as their usual source were more apt to go to specialists than to general practitioners. Children under the care of pediatricians probably account for this difference, since pediatricians are defined as specialists. (Those age groups most likely to report no regular source of care were the young and middle-aged adults.)

Males were somewhat less likely to report a regular source of care than females. Women were also more apt to have a specialist as a usual source than men. This difference is probably because women have obstetrician-gynecologist-type practitioners (who are also defined as specialists) as their usual source of care.

Non-whites, compared to whites, were less likely to have any

regular source of care and more likely to use a clinic, if they reported a source at all.

The inner city and rural farm residents were most apt to have no regular care source. Inner city dwellers were more apt to have clinics as their usual source of care than other city or rural residents. People who lived in rural areas were much more apt to have general practitioners as their regular attending physicians, while city dwellers outside the inner city were more apt to report specialists as their regular source of care.

People below the poverty level were almost twice as likely to report having no regular source of care than the nonpoor. When those below the poverty level did have a regular care source, it was almost twice as apt to be a clinic. Further, people above the poverty level were much more likely to report having a specialist as their usual source of care than were the poor.

Appointment Waiting Time

Those persons who want to make appointments to see their physicians often must wait several days before they can be scheduled (Table I). This inconvenience undoubtedly contributes to potential consumers' complaints about the medical care system and to expressions of generalized dissatisfaction with the process of care-seeking. It may also reduce demand for service.

Over one-third of those who generally had appointments had to wait three days or longer to be scheduled.

Older adults 55 to 64 years of age were less apt than the other age groups to be able to see the doctor within two days after contacting him for an appointment. The comparatively large percent of children who had to wait more than two weeks to get an appointment may be a function of the kinds of care they receive (periodic preventive checkups) and of the kind of physician they see (e.g., specialists).

Males were somewhat more likely than females to get an appointment to see the doctor within a couple of days of requesting it.

There was little difference in the appointment waiting times between whites and non-whites.

People living in the inner cities of Standard Metropolitan Statistical Areas (SMSA) had longer waits to get an appointment with their doctor than did people living in other parts of the city or in rural areas.

The percent waiting more than two weeks to get an appointment was somewhat higher for the non-poor than the poor. The poor were more apt to have walk-in visits rather than scheduled appointments, however.

People who have general practitioners as their regular source of care were more apt to get an appointment in a couple of days than were those persons who reported clinics or specialists as their regular care source.

TABLE I

Appointment Waiting Time at Regular Source of Care by Selected Characteristics of Population-at-risk.

CHARACTERISTIC	APPOINTMENT WAITING TIME			
	Percent same day to 2 days	Percent 3 days to 2 weeks	Percent more than 2 weeks	Total Percent
Age				
1-5	64	24	12	100
6-17	64	29	8	101 ^a
18-34	62	29	9	100
35-54	63	30	8	101 ^a
55-64	58	32	10	100
65 and over	62	29	9	100
Sex				
Male	65	27	8	100
Female	60	30	10	100
Race				
White	62	29	9	100
Nonwhite	64	26	10	100
Residence				
SMSA, central city	54	33	14	101 ^a
SMSA, other urban	66	26	9	101 ^a
Urban, non-SMSA	68	29	3	100
Rural nonfarm	65	28	7	100
Rural farm	68	26	7	101 ^a
Poverty level				
Above	63	28	9	101 ^a
Below	63	31	6	100
Regular source of care				
Clinic	55	34	12	101 ^a
GP	69	24	6	99 ^a
Specialist	55	33	12	100
Total	63	29	9	101^{a,b}

^aDoes not add up to 100 because of rounding error.

^bPercent table N is of U.S. population equals 65; percent who do not have a regular source of care, or who have a regular source but do not usually have an appointment with him, or NA equals 35.

The time one must wait to get an appointment then is a function of the type of doctor one usually sees (one has to wait longer for specialists) and of the reason for the visit (one would probably have to wait longer to get scheduled for a general exam than for a symptom-related visit).

Office Waiting Time

People complain that they must often wait long periods of time in a doctor's office before being seen. These long waiting times are apt to influence where people choose to go for care, how often they go, and how satisfied they are with the care they eventually receive (Table II).

TABLE II

Office Waiting Time at Regular Source of Care by Selected Characteristics of Population-at-risk.

CHARACTERISTIC	OFFICE WAITING TIME				Total Percent
	Percent immediate	Percent 1 to 30 minutes	Percent 31 to 60 minutes	Percent more than one hour	
Age					
1-5	8	52	22	18	100
6-17	6	48	25	22	101 ^a
18-34	7	53	23	18	101 ^a
35-54	7	49	27	17	100
55-64	9	43	23	24	99 ^a
65 and over	6	47	26	22	101 ^a
Sex					
Male	7	50	24	19	100
Female	6	48	25	20	99 ^a
Race					
White	7	51	24	18	100
Nonwhite	3	36	28	33	100
Residence					
SMSA, central city	8	47	21	25	101 ^a
SMSA, other urban	7	58	24	11	100
Urban, non-SMSA	6	49	27	18	100
Rural nonfarm	7	47	24	22	100
Rural farm	4	29	39	28	100
Poverty level					
Above	8	53	24	16	101 ^a
Below	4	36	27	33	100
Regular source of care					
Clinic	5	44	24	26	99 ^a
GP	7	46	25	23	101 ^a
Specialist	9	57	24	10	100
Total	7	49	24	20	100^b

^aDoes not add up to 100 because of rounding error.

^bPercent table N is of U.S. population equals 87; percent who do not have regular source of care or NA equals 13.

Twenty percent of those who reported a regular source of care had to wait more than an hour to see their doctors.

Older adults and children 6–17 were more likely to have waits of 30 minutes or more to see a physician than the other age groups.

Men were somewhat more apt to see the doctor immediately or within half an hour than women.

Non-whites generally had much longer waits in a doctor's office than did whites.

Rural farm residents were apt to report the longest waits to see a physician and SMSA residents outside the inner-city were most likely to see the doctor within thirty minutes than people in the other residence categories.

The poor (many of whom are non-whites, also) report long waiting times before seeing a physician. The non-poor were more apt than the poor to see a doctor immediately.

People who reported specialists as their regular source of care were more likely to see the doctor immediately than people who went to clinics or general practitioners. Clinic users reported the longest waiting times before seeing a doctor.

The time that one must wait to see a physician is undoubtedly influenced by whether one has an appointment to see him. The 1969 National Center for Health Statistics Health Interview Survey showed that 43.8 percent of patients with an appointment waited less than 15 minutes to see the physician in his office, compared to 37.6 percent of the people with no appointment.

According to the 1970 Center for Health Administration Studies, University of Chicago survey data, people who generally had an appointment with their regular source of care were more apt to see him immediately or within thirty minutes than were those who simply walked in for a visit. This relationship is true, in general, for all of the population subgroups being studied.

OUTCOME INDICES OF ACCESS

As suggested in the framework for the study of access, utilization and satisfaction with care may be viewed as outcome indicators of individuals' entry to and passage through the medical care system.

Now, I would like to focus on selected indicators of the population's *utilization* of and satisfaction with care and examine how their attitudes and health care-seeking behavior are influenced by some of the process indicators we have just reviewed.

These analyses should provide further insights into the behavior of consumers in the health care marketplace and into what factors tend to facilitate or impede their entry into the system.

Percent Seeing a Physician

Table III shows that having a regular source of care is the most important of the several process measures we have reviewed so far in

determining whether or not one contacts a physician. Regardless of income levels, people with a usual point of entry to the system were much more likely to have contacted a doctor in the year than those without a usual care source. Seventy-five percent of the people above poverty level with a usual source of care contacted a doctor in 1970, compared to 42 percent of the non-poor without a regular source of care. The differences between those with and without a regular source of care were even more pronounced for the poor. Sixty-six percent of the poor with a usual source saw a doctor in the year compared to only 28 percent of those with no routinized point of entry to the system.

TABLE III

Percent Seeing a Physician in the Year by Selected Process Measures of Access and Poverty Level.

Process Measures	Poverty Level	Percent seeing a Physician	
Regular source of care			73
	Regular source		
		Above	75
		Below	66
No regular source			37
		Above	42
		Below	28
Appointment waiting time at regular source of care			73
	Week or less		
		Above	74
		Below	68
	More than week		78
		Above	79
	Below	72	
Office waiting time at regular source of care			74
	30 minutes or less		
		Above	75
		Below	69
	More than 30 minutes		70
		Above	74
	Below	62	

Among those with a regular source of care, however, the other two process barriers we have discussed—average waiting to get an appointment or to see the physician once in his office—seem to have little impact on the decision to seek initial entry to the system. How-

ever, analyses of the relationship of these experiences to consumers' satisfaction with medical care in Table IV show that the longer one has to wait to see the physician, especially in terms of office waiting time, the more *dissatisfied* consumers are apt to be with a variety of their experiences with the system—not just office waiting time, but other indicators of the availability of services and the perceived concern of medical providers for them.

TABLE IV

Percent Dissatisfied with Different Dimensions of Care by Selected Process Measures of Access and Poverty Level.

Process Measures	Poverty Level	Percent Dissatisfied with ^a Different Dimensions of Care		
		Office Waiting Time	Availability of Care After Hours	Concern of Doctors for Overall Health
Regular source of care				
Regular source		34	40	15
	Above	31	40	16
	Below	41	39	12
No regular source		41	48	20
	Above	43	48	20
	Below	36	49	22
Appointment waiting time at regular source of care				
Week or less		28	37	14
	Above	27	37	15
	Below	33	37	12
More than week		44	49	18
	Above	42	48	19
	Below	54	54	16
Waiting time at regular source of care				
30 minutes or less		19	34	12
	Above	19	34	13
	Below	20	32	7
More than 30 minutes		52	48	19
	Above	49	49	20
	Below	67	45	16

^aThis table includes only female heads of households, wife of male heads and male heads with no spouses in which one or more family members saw a doctor or were hospitalized during the preceding year.

Another very important determinant of whether people seek medical attention and one which is receiving the most attention in terms of national health policy efforts is whether they have some form of health insurance coverage. Table V shows that people who have some form of voluntary health insurance are more likely to see a physician than those who do not. The one exception—the below poverty level group with no regular source of care—probably reflects the impact of Medicaid coverage to some extent. A strong generalization derived from Table V is that regardless of income or insurance coverage, people with a regular source of care are more likely to see a doctor than those without a regular care source.

TABLE V

Percent under 65 Seeing a Physician in the Year by Regular Source of Care, Poverty Level and Insurance Coverage.

Regular Source of Care	Poverty Level	Insurance Coverage	Percent Seeing a Physician
Regular source	Above	Insured	75
		Not insured	67
	Below	Insured	62
		Not insured	58
No regular source	Above	Insured	45
		Not insured	35
	Below	Insured	27
		Not insured	30
			Total

Mean Visits to a Physician

For those people who *do* see a doctor, level of access can be further differentiated by the number of visits they make. Table VI shows the average for persons under 65 was 5.6 visits per person per year. The people with the most visits are those with a regular source of care no matter what their income level or health insurance coverage might be. Thus, regular source of care is more important than the economic variables both for determining who will see a doctor and for determining the total number of visits made once entry is gained. Interestingly enough, among people with a regular source those *without* insurance averaged more visits than those *with* insurance, and the poverty groups tended to have more visits than the higher income groups. One possible reason for the greater number of visits by the uninsured and the poor following initial entry is that, though these people may be less apt to see a doctor, initially, once they contact him more visits may be required to remedy their backlog of unmet need.

TABLE VI

Mean Number of Physician Visits in the Year for Persons under 65 Seeing a Physician by Regular Source of Care, Poverty Level and Insurance Coverage.

Regular Source of Care	Poverty Level	Insurance Coverage	Mean Visits for Persons Seeing a Physician
Regular source	Above	Insured	5.5
		Not insured	6.2
	Below	Insured	5.7
		Not insured	6.9
No regular source	Above	Insured	3.4
		Not insured	3.4
	Below	Insured	3.1
		Not insured	3.5
		Total	5.6

Use-Disability Index

We have generally assumed that having a regular source of care results in more physician contacts. A plausible *alternative* explanation for our findings is that sick people seek out physicians and subsequently report these physicians as their “regular sources of care.” If this reasoning accounts for the apparent high access of people with a regular source of care, differences should be equalized when we examine the use of physician services relative to the need for care.

One particular index, the use-disability ratio, which reflects the number of physician visits per 100 disability days for those with one or more disability days, is intended to summarize the use of services relative to the experienced need for care. Table VII shows that the average for the U.S. population under 65 was 34, i.e., 34.6 physician visits per 100 days of disability for those with one or more disability days.

The index supports the findings previously cited that having a regular source of care is an important determinant of access: the three groups with the highest index scores have a regular care source, and the three groups with the lowest index scores have no regular care source. These findings suggest the importance of regular source is not simply that sicker people who saw doctors were more likely to *claim* a regular source of care.

The presence of health insurance and income above the poverty level is generally related to higher index scores. Thus, while the people without health insurance and with low incomes may have a relatively high number of physician visits *once they enter the system*,

TABLE VII

Physician Visits per 100 Disability Days for Persons under 65 by Regular Source of Care, Poverty Level and Insurance Coverage.

Regular Source of Care	Poverty Level	Insurance Coverage	Physician Visits per 100 Disability Days (Use-Disability Index)
Regular source	Above	Insured	40.6
		Not insured	24.7
	Below	Insured	30.4
		Not insured	17.8
No regular source	Above	Insured	22.6
		Not insured	7.1
	Below	Insured	17.5
		Not insured	4.6
		Total	34.6

the medical care they consume relative to their need as measured by disability days is relatively low compared to the rest of the population.

The large joint effects of the organizational and economic factors on access to medical care are reflected in the fact that the group with the highest index score (high income with health insurance and a regular source of care) has almost ten times as many visits per 100 disability days as the group with the lowest index score (poverty income, no health insurance, no regular source of care).

Summary and Implications

The findings reported here suggest that the "success" of existing policy in narrowing the differentials in access to medical care in the United States is less clear-cut than much of the current research implies.

Though the most recent data show that differentials in the use of physician services by income are narrowing, the poor still see a doctor relatively less in proportion to their disability than the non-poor.

Having insurance coverage tends to encourage the use of physician services. This effect is most dramatic, however, for those who also have a regular family doctor from whom they obtain care.

Not having a regular source of care seems to significantly inhibit people from seeking medical care when the need arises, especially inhibiting those for whom economic (income or insurance coverage) barriers exist.

Further, among those who have a usual source of care we saw that waiting long periods of time to get an appointment with a physician or to see him once in his office is more a problem for some groups than

others; however, such waits have little impact on the decision to seek care initially. Waiting does, however, certainly seem to influence the level of satisfaction health services consumers have with the care they eventually receive.

These findings suggest then the value of considering the economic and organizational aspects together in any efforts to evaluate the success of existing health policy or to predict the potential effectiveness of any proposed mechanisms for improving access to the health delivery system in the United States. Economic factors interact with how the delivery system itself operates to influence whether the people who need care receive it and how satisfied consumers are with the care they eventually receive.

APPENDIX A

DEFINITION OF VARIABLES

Process Measures

Poverty Level

A family was considered “below near poverty level” if they reported their annual income to be less than the following amount for a given family size:

<i>Family Size</i>	<i>Annual Income</i>
1	\$2,600
2	3,700
3	4,500
4	5,700
5	6,600
6	7,500
7	9,100

Regular Source of Care

The respondent’s regular source of care was based on an inquiry about the “particular medical person or clinic (PERSON) usually goes to when sick or for advice about health.”

Appointment Waiting Time at Regular Source of Care

Those who usually have an appointment to see their regular source of care were asked, “Except for emergencies, how long does (PERSON) usually have to wait to get an appointment with the doctor?”

Office Waiting Time at Regular Source of Care

Respondents who indicated a regular source of care were also asked “How long does (PERSON) usually have to wait to see the

doctor, once (he/she) gets there?" This refers to the time spent waiting in the physician's office before being seen.

Insurance Coverage

Insurance coverage is based on whether or not the person reported he had "any kind of medical, surgical or hospital plan that meets any part of a doctor's bill or hospital expenses." This refers only to private voluntary health insurance coverage—not Medicaid or Medicare eligibility.

Outcome Measures

Percent Seeing a Physician in the Year

The percent seeing a physician refers to the proportion of the sample who had at least one physician visit during the survey year.

Mean Number of Physician Visits for Persons Seeing a Physician in the Year

The mean number of physician visits for persons seeing a doctor refers to the sum of all visits related to hospitalized illness, other nonhospitalized illness, pregnancy, other minor illness and routine checkups, shots, tests, and ophthalmologist visits for the survey year. It includes seeing either a doctor or osteopath or his nurse or technician at the following sites: patient's home; doctor's office or private clinic; hospital outpatient department or emergency room; industrial, school, camp, or college health services; and any clinic such as a board of health clinic or neighborhood health center. Excluded are telephone calls and visits by a doctor to a hospital inpatient.

Physician Visits per 100 Disability Days (Use-Disability Index)

The index is computed by dividing the mean number of physician visits in a year for those with one or more disability days (days when a person had to go to bed or limit his usual activities because of not feeling well) by their mean disability days and multiplying the result by 100. The index represents the number of physician visits per 100 disability days experienced in the year.

Percent Dissatisfied with Different Dimensions of Care

The head of household and spouse of head in 1970 were asked, "Thinking over the medical care you and those close to you have received over the past few years from doctors and hospitals, how satisfied have you been with each of the following: (list of items). They were asked to indicate whether they were "very satisfied," "satisfied," or "very dissatisfied."

The precise wording of the items reported in Table 5 was (a) waiting time in doctor's office or clinics (b) availability of medical care at night and on weekends; (c) concern of doctors for your overall health rather than just an isolated symptom or disease.