

# Daily Illness Characteristics and Health Care Decisions of Older People

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*Although investigations of health care decision making typically deal with patterns of health service use, increasing attention has focused on lay- and self-care actions in response to illness symptoms. This study examined the health care actions of a community sample of 142 older adults, who recorded illness symptoms and corresponding health care actions in daily health diaries for a 14-day period. Self-treatment and no-action decisions were found to be the most frequent response to illness symptoms. Professional-care decisions were associated with greater health care need, such as multiple symptoms and increased pain. Lay-care decisions were significantly related to symptoms of shorter duration. Women were also more likely than men to self-treat their illness symptoms. Results suggest that older people deal with a greater number of recurrent chronic symptoms than previously thought and that they make most treatment decisions without consulting their doctors or other health care providers. This investigation underscores the importance of a prospective diary methodology for studying the daily complexities of chronic illness experiences and for validating and conducting useful interventions.*

Much of what is known about how older people deal with illness is based on studies of their interactions with the health care system and on analyses of treatment-seeking outcomes (Dean, 1986a). In fact, a widely used explanatory model for health behavior continues to demonstrate the strong relationship between health need and the use of medical services (Andersen & Newman, 1973). However, it is increasingly evident that professional care is only one of many choices that individuals make in response to illness

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symptoms (Dean, Hickey, & Holstein, 1986). The process of making decisions about one's health is a very personal one, often beginning with some sort of active self-care or, simply, the passive self-treatment of taking no action at all (Ford, 1986). From a historical perspective, the emphasis on medical treatment is comparatively recent; self-care and informal measures have always been the first, if not the most frequent, recourse of action in the face of illness (Dean, 1986b).

Although few studies focus on how older adults deal with recurrent chronic symptoms on a day-to-day basis, it is likely that self-care and nonmedical treatment are quite prevalent. Following a lifetime of experience with their own health and illnesses, older people may have greater confidence in the efficacy of self-care over professional treatment for their chronic illnesses (which may or may not get better anyway). Their familiarity with symptom patterns and, perhaps, even the fear of losing their "credibility" with health professionals and family members over seemingly small complaints may be more important factors in determining the steps they take to alleviate their symptoms or to reduce the probability of needing further treatment (Brody & Kleban, 1981).

Traditional theoretical frameworks for understanding health behavior are thought to be less applicable in late life because of the nature of chronic illness, the potential influence of various psychosocial factors and life experiences, and the wide array of possible outcome behaviors. The most prominent models of health care behavior have focused on health beliefs and perceptions (Rosenstock, 1974), and on predisposing, enabling, and need factors (Andersen & Newman, 1973). For the most part, however, these factors account for only a small amount of the variance in studies of older adults that have included a range of outcome measures. In her review, Dean (1984) found that general health beliefs have only a limited influence on self-care behavior and decisions to seek professional treatment.

Specific health beliefs or attitudes regarding personal responsibility or control over health are more likely to have a greater influence on health care decisions—especially in the area of self-care (Dean, 1989). Such beliefs, however, often interact with long-standing perceptions of the characteristics of the illness threat, or with beliefs about the potential efficacy of treatment or the likely results of ignoring the symptoms. In fact, when variables related to illness characteristics or experiences are introduced, they have been found to be more important (Mechanic, 1979). Thus many studies suggest the importance of symptom-related factors, such as seriousness and likelihood of recurrence, and expected treatment outcomes in determining daily health care decisions (e.g., Berkanovic, Telesky, & Reeder, 1981; Tanner, Cockerham, & Spaeth, 1983).

Using a different approach Holtzman, Akiyama, and Maxwell (1986) reported that older people are strongly influenced by their perceptions of treatment efficacy. They compared older persons' beliefs about the most appropriate ways to treat common symptoms with their actual responses to the same symptoms. They found that perceptions of seriousness did not correspond to personal health behavior. Older persons regarded many more symptoms as serious and requiring professional treatment than their own personal behavior reflected. They concluded that self-care decisions were made on the basis of their potential for effectiveness, if not the perception that professional treatment was unlikely to be any more effective.

The study reported here focused on the relationship of professional-treatment decisions and lay-care decisions to specific beliefs about illness and treatment. However, in addition to looking at how illness symptoms influence daily health care actions, we were interested in the extent to which older patients are involved directly in their own care on a day-to-day basis.

Health care decisions were examined in a community sample of older persons who recorded their reactions to symptoms on a daily basis over a 2-week period. We were particularly interested in three issues: (a) how relatively healthy adults deal with the daily recurrence of chronic illness symptoms; (b) what illness characteristics and personal factors might affect the type of health care decisions they make; and (c) the usefulness of a daily health diary for assessing symptom experiences and health care decisions in an older population. This article extends an earlier summary of the overall study (Rakowski, Julius, Hickey, Verbrugge, & Halter, 1988) by reporting more specifically about how older people respond to illness symptoms on a daily basis and how their health care decisions are influenced by gender and age, health-related attitudes, and by the characteristics of their illness symptoms.

Unlike most other studies in this area, which have relied on retrospective interview data, our investigation made use of a prospective diary methodology to increase the likelihood that respondents would record most of their daily illness symptoms and health care actions as they occurred. It has been suggested that health diaries are a more efficient way of collecting an abundance of data about chronic illness episodes (Verbrugge, 1980). For older persons likely to experience simultaneous illness problems, health diaries not only enhance the potential for capturing more relevant data, but also make it easier to track the relationship between multiple illnesses and various health care actions and decisions. Because older people are often reluctant to share information about their illness symptoms with others (e.g., Brody & Kleban, 1981), the diary method represents a less threatening way to collect such information.

## Methods

### *Participants and Procedure*

Symptom experiences and health care decisions were based on daily health diaries maintained for a 2-week period by 142 older adults (82 women and 60 men) between the ages of 62 and 94. Reflecting the population composition of their Detroit suburban community, they were predominantly Jewish (45%) and almost exclusively White. Participants were part of an original random sample of 243 noninstitutionalized older adults who agreed to participate in the third wave of a longitudinal epidemiologic survey. Of the original group, 18 had died, 22 could not be located, and 31 declined to be interviewed, resulting in interviews with 172 (70.8%) of the original sample. Of this group, 20 declined to participate in the health diary part of the study, and 10 who agreed, failed to return the diaries. Although those who returned the diaries (82.6% of those interviewed) tended to be somewhat younger than those who declined to participate, there were no differences in other basic demographic and personal characteristics, or in health status and number of reported illnesses.

Respondents maintained a daily health log that contained a list of 36 possible symptoms and a corresponding list of 22 health actions or responses to illness symptoms (cf. Rakowski et al., 1988, p. 282). Symptoms were numbered so that they could be clearly linked to health care actions/responses. The symptom list was organized by organ systems, although not categorized as such in the diary itself. The list of health actions included several possible responses within four general approaches to treatment (using medications, seeking professional care, self-initiated responses of an informal nature, and taking no action). Both lists were based on standard measures used in other health interview surveys, as well as on earlier experiences with the diary method (Verbrugge, 1980).

Participants recorded their illness symptoms each day, indicating the specific actions they took in response to each symptom by writing the symptom number next to the action taken. To maximize participation for 14 consecutive days, the response format was designed to be completed as easily and quickly as possible. Participants were asked to indicate only those actions related to symptoms, that is, any other daily health care or health maintenance activities, including the use of medications on a regular basis, were not recorded unless in direct response to a specific symptom. Also, in those few cases where more than one response was recorded, the more active or formal decision (e.g., "scheduled appointment") was used on the basis that it better

reflected the endpoint of a decision process. Prior to using the health diary, it was pretested with a separate group of elderly persons to ensure that the symptom/action lists were comprehensive and relatively easy to complete (see Rakowski et al., 1988, for a full description of the diary).

Participants were introduced to the health diary during the course of a community health survey, at which time basic information was collected about their health status. The purpose of the diary was explained following the health interview, and interested respondents were given an opportunity to complete a sample day with supervision. A follow-up telephone call was made after 1 week to determine whether there were any problems in completing the diaries; after a second week, participants returned the diaries by mail. Respondents were recontacted by telephone in the event of incomplete or unclear entries.

*Dependent variables.* Two illness behavior indices were constructed by combining various symptom responses checked in the diaries. Although all responses were self-initiated and, therefore, a form of self-care, response categories were worded to indicate clearly the choice between "medical help" and "on my own." *Informal lay care* included self/lay-care actions (e.g., "stayed in bed," "changed diet," "cut down on activities," "talked with someone for advice," and so on) and the taking of nonprescribed or over-the-counter medications. *Formal professional care* resulted from combining various actions related to seeking professional treatment (e.g., "called for advice from physician/nurse/dentist" "went to emergency room," "visited medical/dental office," "scheduled appointment," and so on) and using prescription medications. These two indices of health care decision making were the major outcome measures for the analyses we report.

The index of each of the two types of illness behavior indicated the ratio of the number of action responses in a certain behavior category to the total number of action responses an individual reported during the 2-week period. It was possible for ratio scores to range from 0% to 100% because a few respondents reported no actions in response to symptoms, and others who experienced only a few illness symptoms in the 14 days, may have employed only a single type of health care action in response to all of their symptoms. Thus an individual who reported only a few symptoms during the 14-day period and who took only self-care actions in response to them, had a ratio score of 0% for professional care and 100% for self-care actions.

*Independent variables.* The health interviews, conducted before the participants completed the diaries, provided additional information about personal characteristics and life outlook, and current health status and health

attitudes. Age and gender are the only demographic variables reported here, based on earlier analyses which found other demographic variables to be less important (Rakowski et al., 1988). Life outlook was based on three different measures: the Philadelphia Geriatric Center Morale Scale, a future-orientation scale drawn from the work of William Rakowski and a Cantril-ladder rating of current quality of life. Health status was measured by a single question: "Overall, how healthy would you say you are now?" Health attitudes included *locus of health control*, which contained seven items worded to reflect personal versus other control over health ( $\alpha = 0.78$ ); *perceived interference of illness with daily life*, which included three items indicating resistance to letting illness interfere with daily activities ( $\alpha = 0.54$ ); and *concern or sensitivity about one's health*, also assessed with three items measuring the degree of concern that the respondent felt about current health status ( $\alpha = 0.44$ ). This measure resulted from a factor analysis of 17 items drawn from the Rand Health Insurance Study and various studies of the Health Belief Model. A more detailed description of the measures and their reliability can be found in an earlier article (Rakowski, Julius, Hickey, & Halter, 1987).

In addition to these variables, four dichotomous indicators assessed illness characteristics or the perceived need to take action in response to symptoms. *Symptom days with pain* differentiated those who reported pain along with illness symptoms from those who reported no pain on symptom days. *Average number of symptoms* distinguished single-symptom days from days on which multiple symptoms were experienced. *Symptom duration* indicated the average length of symptom episodes based on the number of consecutive days on which the same symptom was reported; this variable was divided into "fewer than 3 days" and "3 days or longer," on the basis of suggestions from clinicians regarding how long people are likely to self-treat illness symptoms. *Health now* was based on a self-reported above average or good health (good) versus average or less than average health (poor).

## Results

The 10 most frequently reported illness symptoms were identified initially, followed by an analysis of symptom patterns and how the respondents dealt with their illness episodes on a daily basis. We then analyzed the relationship of the type of health care decision with the personal and illness characteristics of the respondents using both bivariate and multivariate methods. By holding "all else equal," the multiple regression analysis was intended to demonstrate the relative strength of the various individual pre-

ditors. On the other hand, because our intent was to compare professional-care actions with self/lay-care actions in a way useful for practitioners, the bivariate approach provided an opportunity to identify all possible influences on these two health care behavior outcomes without ruling out anything.

*Symptom frequency.* Altogether, 128 respondents reported 696 illness episodes encompassing 2,910 daily symptoms and actions during the 2-week period. Illness episodes were defined in terms of consecutive days on which the same symptom was reported. Of the 142 respondents who completed the diaries, 14 reported no symptoms during that period. The respondents reported a total of 582 (20%) actions based on professional-treatment responses and 1,280 (44%) actions based on self/lay-care actions in response to the symptoms. No actions were taken for 1,048 (36%) symptoms reported. These figures show that, on a day-to-day basis, the respondents took twice as many actions based on lay-care decisions as they did on professional-care decisions.

In Table 1 we present the 10 most frequently reported symptoms and the different types of actions taken in response to them. The high incidence of musculoskeletal symptoms is consistent with other reports that arthritis-related pains represent the most frequent chronic complaints of the elderly. In general, arthritis-related symptoms and allergy symptoms were treated by both professional and lay care, particularly by prescribed and/or over-the-counter medicines. Headache and cough were also largely treated by medication. By contrast, the respondents did not seek either professional care or take medicines for fatigue or lack of energy, one of the more prominent symptoms.

The "no action" category included no actions and responses that did not fit any other category. However, because the number of unclear responses were almost negligible for most symptoms, we should consider that the percentages in this column are more indicative of no action. Most people did not take any actions when they had ringing in ears, shortness of breath, and pain, weakness or numbness in face, arm or leg.

The issue of whether to include "no action" as a form of self-care is somewhat controversial. Some have suggested that by taking no action in response to illness symptoms, people are making a clear and deliberate self-care choice (Dean, 1989; Haug, Wykle, & Namazi, 1989). However, one could just as easily argue that no conscious decision is involved in doing "nothing" about various illness symptoms, that many people give little thought to their symptoms for various reasons. Because the first approach tends to obscure the differences between deliberate actions involving informal and lay care and seeking professional treatment, "no action" has been excluded from the analyses reported in Tables 2 and 3.

Table 1. Most Common Symptoms and Health Care Decisions Reported as a Percentage of All Responses to That Symptom

Symptoms	Professional-Care Decision			Lay-Care Decision			
	Professional Help	Prescription Medicine	Total	Self-Treatment	Over-the-Counter Medicine	Total	No Action Decision
Pain in joints/bones (n = 504)	11	27	38	16	24	40	22
Pain in back/neck (n = 376)	9	24	33	17	22	39	28
Pain, weakness, or numbness in face/arm/leg (n = 227)	4	19	23	18	9	27	50
Fatigue, no energy or lack of pep (n = 201)	4	2	6	49	0	49	45
Swollen leg/foot/ankle (n = 191)	5	39	44	25	6	31	25
Allergy symptoms (n = 139)	19	36	55	8	16	24	21
Ringing in ears (n = 131)	8	1	9	1	6	7	84
Headache or migraine (n = 119)	7	8	15	5	38	43	42
Cough (n = 103)	5	23	28	8	33	41	31
Shortness of breath (n = 96)	3	21	24	14	0	14	62

NOTE: Columns sum horizontally to 100%.



**Table 2. Illness Characteristics and Health Care Decisions**

	Professional-Care Decision				Lay-Care Decision					
	M(%)	SD	M(%)	SD	t	M(%)	SD	M(%)	SD	t
Symptom days with pain										
	No pain (n = 27)	Pain (n = 100)	No pain (n = 27)	Pain (n = 100)		No pain (n = 27)	Pain (n = 100)			
	8.2	18.2	23.3	22.9	-3.17**	48.1	39.1	42.2	26.6	.93
Average Number of symptoms per day										
	Single (n = 60)	Multiple (n = 67)	Single (n = 60)	Multiple (n = 67)		Single (n = 60)	Multiple (n = 67)			
	14.0	23.3	26.4	21.8	-3.10**	47.9	35.9	39.5	22.2	1.61
Average symptom duration										
	< 3 days (n = 62)	> 3 days (n = 65)	< 3 days (n = 62)	> 3 days (n = 65)		< 3 days (n = 62)	> 3 days (n = 65)			
	11.9	17.9	27.9	24.3	-4.21**	48.9	33.8	38.3	24.2	2.03*
Health now										
	Good (n = 65)	Poor (n = 61)	Good (n = 65)	Poor (n = 61)		Good (n = 65)	Poor (n = 61)			
	16.0	21.7	25.1	24.2	2.23*	45.2	32.5	41.6	26.6	-68

\*\*p < .01; \*p < .05.

Table 3. Attitudinal and Demographic Characteristics and Health Care Decisions

Variables	Professional-Care Decision					Lay-Care Decision				
	Positive		Negative		t	Positive		Negative		t
	M(%)	SD	M(%)	SD		M(%)	SD	M(%)	SD	
Health control	13.4 (n = 74)	17.3	29.3 (n = 52)	26.4	4.09**	47.5 (n = 74)	31.3	37.7 (n = 52)	26.8	-1.84
Health concern	10.1 (n = 22)	14.1	22.2 (n = 102)	23.9	2.29*	51.6 (n = 22)	37.4	42.2 (n = 102)	27.7	-1.35
Illness interference	19.2 (n = 109)	22.6	26.8 (n = 16)	24.2	1.25	44.0 (n = 109)	30.6	42.7 (n = 16)	22.7	-1.16
Future outlook	16.0 (n = 76)	19.7	25.0 (n = 49)	25.2	2.21*	46.5 (n = 76)	31.9	39.1 (n = 49)	25.9	-1.34
Morale	18.5 (n = 101)	23.2	26.4 (n = 23)	20.5	1.50	45.4 (n = 101)	30.9	35.8 (n = 23)	23.9	-1.41
Age	62-74 (n = 96)	22.8	75-94 (n = 31)	22.1	-1.53	62-74 (n = 96)	31.0	75-94 (n = 31)	25.3	-1.18
Gender	Male (n = 51)	22.1	Female (n = 76)	23.4	-1.2	Male (n = 51)	32.7	Female (n = 76)	26.5	-2.33*

\*\*p &lt; .01; \*p &lt; .05.

*Illness characteristics and responses.* In Table 2 we summarize the relationship between illness characteristics and health care decisions. The predictable association was found between greater health needs and medical treatment seeking. More specifically, a greater percentage of symptom responses were professional-care decisions in the presence of pain, multiple symptoms, and/or symptoms of longer duration, and by persons in "poor self-perceived health." Shorter symptom duration was the only illness characteristic related to lay-care decisions. Overall, lay-care actions were still made more frequently for all types of symptoms than were professional-care decisions. However, professional-care actions were more likely to be influenced by the characteristics and duration of the symptoms, as well as by overall perceptions of health status.

When examining the relationship of demographic characteristics to health care decisions (Table 3), we found that women were more likely than men to respond to their illness symptoms with lay-care actions. There were, however, no significant gender differences in professional-care decisions.

Attitudinal factors were based on Likert-type-scaled items in which "above average" and "good" were considered *positive*, and "average," "below average," and "poor" were labeled *negative* attitudes for purposes of this report. Among the attitudinal characteristics, the level of concern or sensitivity about health and the locus of health control were significantly associated with professional-care decisions. Less concern or sensitivity about health and a weaker sense of health control appear to be linked to professional-care decisions. Also, those who had poor future outlook tended to respond to illness symptoms by actions based on professional-care decisions. These attitudinal characteristics, however, were not significantly related to lay-care decisions. Just as in Table 2, the data in Table 3 are presented in the context of a contrast between professional- and lay-care decisions. Overall, lay-care decisions were more common than professional-care decisions.

Finally, the illness behavior indices were regressed separately against the 11 demographic, attitudinal, and illness characteristics to determine the relative importance of those variables in health care decisions. The multiple regression analyses confirmed the overall significance of these factors in professional-care actions ( $R^2 = .27$ ;  $p = .0004$ ) and self-/lay-care actions ( $R^2 = .20$ ;  $p = .0107$ ). Among the individual predictors in the multiple regression equations, *health concern* was the only factor significantly associated with both professional-care ( $p = .035$ ) and lay-care actions ( $p = .001$ ). People who are more sensitive or vigilant about their health are more likely to do something in response to illness symptoms. Thus, by controlling for the various objective indicators of illness need (e.g., number/duration of symptoms, pain, and so on), a personal orientation to health behavior emerged as important.

## Discussion

These findings are consistent with Dean (1986b) and others who have reported that self-care and lay treatment are the first, if not the most frequent recourse of action in the face of illness. However, this study goes beyond many earlier ones by aggregating the response patterns to illness symptoms based on daily records of behavior. The results suggest that self-care decisions are far more important than previously thought and should be given more prominence when characterizing the health care behavior of the elderly and in the consideration of various health care interventions. For the most part, if a particular symptom is neither painful nor long lasting, and older people are confident of their own judgments about their health, they are less likely to make professional treatment decisions.

The multivariate analyses provided useful confirmations of the overall importance of various personal, attitudinal, and illness characteristics in determining responses to illness symptoms on a daily basis. It is likely that there is an interaction among these variables that must be considered carefully in the design of additional studies. However, at this stage in the development of conceptual models for understanding the health behaviors of older people, it is important not to rule out something that might be potentially useful in explaining how older people respond to illness symptoms. Moreover, from the perspective of the practitioner, it is helpful to know all of the factors that motivate older people to take various actions on behalf of their own health. Therefore, the results of the bivariate analyses should be given careful consideration.

Although self-care predominance in the treatment of chronic illness episodes is a somewhat predictable finding, this study provides more empirical validation than what has been available from previous investigations. The health diary captures considerable data about illness episodes and health care actions resulting in a more thorough description of the daily experiences of illness and their consequences. Because the diary methodology has rarely been used in studies of older people, the study reported here validates this prospective approach for collecting important information from this age group—especially when there are problems with recall and a need for more detailed data. An additional value of the diary approach is its potential for providing a substantial data base for treatment intervention and program development.

The daily health diaries reviewed here also reveal an interesting picture of the kinds of routine problems dealt with by relatively healthy older people on a day-to-day basis that have not been identified in other studies. Once

again, this is important information for the practitioner. For example, arthritis pains, weakness, and fatigue are even more frequent complaints than previously thought, accounting for over 60% of all symptoms reported. The diary method seems to be especially useful in highlighting the frequency of these symptoms, suggesting their potential impact on the overall quality of the daily lives of older people. That these data were collected from a fairly healthy sample of older people should lend even more significance to this finding.

The health diary data also indicated heavy use of prescribed and over-the-counter medications by this group of older people. These data probably underreported medication usage, because the diary directed participants to record only those medications taken in response to specific symptoms, and not their use of other medications taken on a daily basis for the prevention of illness symptoms (e.g., antihypertensives). This is consistent with other studies that suggest that older persons who are not limited financially or otherwise in their access to medications, are more likely to be heavy users (Anderson & Cartwright, 1986; Eve, 1986; Ostrom, Hammarlund, Christensen, Plein, & Kethley, 1985). However, our investigation provided more specific information about which symptoms are more likely to be treated with medications than what has been learned from previous interview studies. For example, the decision to use some type of medication was made about 50% of the time for symptoms related to joint and muscle pains, headaches, coughs, and allergies. Whether participants were using recently prescribed medications or merely self-treating with prescription medicines they had on hand from earlier illnesses could not be determined.

In addition to focusing on how older adults deal with the daily recurrence of chronic illness symptoms, we were interested in how various characteristics of their illness symptoms might affect the type of health care decisions they make. Consistent with most of the literature, health need factors were again found to be associated with professional-treatment decisions (Andersen & Newman, 1973; Berkanovic et al., 1981; Ford, 1986; Tanner et al., 1983; Wolinsky et al., 1983). Greater pain, symptoms of a longer duration and/or a serious nature, and more negative self-perceived health were associated with professional-care decisions. Health need factors were much less important in determining self-care responses to illness, suggesting the influence of other factors, as well as the need for a conceptual framework to account for multiple, and possible interactive, predictors of self-care behavior.

In addition to health needs, this study showed that personal concerns about how much control older persons have over their health and how it affects their future outlook and other aspects of their lives were also associated with their professional-care decisions. Although the literature is equivocal regarding the influence of locus of control on health care decisions (Dean, 1989),

there is some consistency in the overall pattern reported here. People with negative health experiences tend to rely more on professional assistance. A lack of self-confidence in one's ability to deal effectively with illness symptoms could similarly lead to a greater reliance on professional treatment for symptoms that might be dealt with as effectively with some form of self-treatment. Not surprisingly, symptoms of shorter duration were most often self-treated.

Gender was also associated with self-treatment decisions. As reported earlier (Rakowski et al., 1988), women were far more likely than men to take a more active role in their health care on a daily basis. Although there were no gender differences in professional-care decisions (presumably for more serious illnesses), women are more likely to initiate nonmedical self-care actions. This finding is consistent with what is known about other patterns of health behavior among men and women (Dean, 1989). Men are more likely to ignore many symptoms until they are serious enough to seek professional care. Women have higher reported morbidity and are more frequent users of health services; typically, they are also experienced caretakers of sick family members and in a position to know more about the treatment of various symptoms. The traditional socialization of males may result in ignoring minor symptoms and the early stages of illness whereas women are more likely to "do something" (Akiyama, Hickey, & Rakowski, 1987).

Lay-care decisions were not explained by any other demographic, attitudinal, or need factors. In fact, such decisions did not appear to follow a predictable pattern other than that nonmedical self-care was the most frequent response to illness—an important finding. Lay-care decisions seem to be typical responses to more routine as well as more serious symptoms of illness. The absence of a pattern should not be surprising if lay-care decisions are the result of people doing "what works best" in each situation (Holtzman et al., 1986).

As indicated at the outset, no single conceptual model seems applicable to the wide range of health care decisions that older people make in response to daily illness symptoms. Generalized health beliefs are less important in determining self-care and professional treatment decisions than are specific perceptions about the nature of the symptom, one's previous experience with it, and the perceived efficacy of various treatment options.

## Conclusion

The extensive and recurrent illness symptoms reported by the relatively healthy older population studied here are indicative of the chronic nature of

their health problems in late life. Studying a larger and more representative cross-section of the older population should only enhance this basic finding. We also identified important attitudinal and demographic factors, as well as the characteristics of illness symptoms. Such factors were found to be especially important influences on professional treatment decisions.

The health diary method provides a useful way to identify the number and type of illness symptoms that tend to occur daily and to examine the process of making treatment decisions. This methodology has the potential for collecting a considerable amount of useful information about the daily experiences of chronic illnesses and their impact on the quality of older people's lives. For example, the diary method need not be limited to symptom responses. It could be used to identify what people do for their overall health on a daily basis, including routine preventive practices, health maintenance behavior, and the use of medications on a regular basis. As such, it can provide important information for planning health care interventions.

Thus the study reported here provides additional insight into the choices that people make between self-treatment and professional treatment, as well as a better understanding of how to use a prospective diary methodology for studying chronic illness symptoms. Further research is needed to advance our understanding of the decisions that older people make about their health care on a day-to-day basis in late life. Faced with the recurrent symptoms of various chronic illnesses, such decisions are likely to be influenced in an interactive fashion by the severity and duration of symptoms and pain, the perceived efficacy of various professional and lay treatments, and a number of other personal and situational factors.

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