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Calling the Doctor: A Qualitative Study of Patient-Initiated Physician Consultation among rural older adults

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Abstract

Objectives—Guided by Leventhal’s Self-regulatory Model and Cockerham’s theory of health lifestyles, we explore 2 questions regarding physician consultation among elderly rural adults: What symptom characteristics prompt patient-initiated physician consultation? Do participants’ accounts of responses to symptoms, including the decision to consult a physician, incorporate descriptions of change over time?

Methods—We analyze data from semi-structured in-depth interviews with 62 older rural adults.

Results—Accounts of decisions to initiate contact with physicians support prior research. Some symptoms encouraged immediate consultation; others prompted periods of monitoring and lay management. Physicians were most often contacted if changes were new, unusually severe, persisted or worsened, or failed to respond to lay treatment.

Discussion—We characterize participants' responses to symptoms as *bricolages* to highlight their construction from available materials. Incorporating the integrating concept of *bricolage* and Cockerham's emphasis on both general dispositions and symptom-specific responses represents an important extension of Leventhal's conceptualization of illness behavior, including patient-initiated physician consultation.

Keywords

Utilization of Medical Care; Illness Behavior; Rural Aging

Older adults initiate visits to health care providers for several different reasons (Musil, Morris, Haug, Warner & Whelan, 2001). For a large number of visits, adults are seeking to maintain wellness, either through preventive visits (e.g., mammogram, flu shot) or regularly-scheduled appointments to monitor previously diagnosed conditions. Other health care visits are prompted by symptoms that trigger questions for older adults regarding interpretation, treatment, or prognosis. In these instances, people seek out physicians to gain access to information or resources they need to treat symptoms and manage chronic disease. In this article we explore the dimensions of illness experience prompting patient-initiated physician consultation by older rural adults.

Variation in individual responses to symptoms is significant (Albert, Musa, Kwoh, Hanlon & Silverman, 2008; Young, 2004). For example, a frequently recurring symptom might be considered benign when viewed through the lens of a previously diagnosed condition, whereas the same symptom, experienced for the first time, might prompt professional consultation. Individuals draw on repertoires of lay knowledge and management strategies in interpreting and evaluating symptoms, in choosing among various lay treatments, and in deciding whether to consult personal networks, professional providers, or media sources (Clark, 2003; Gately, Rogers & Sanders, 2007).

When lay management strategies are not effective in ameliorating acute symptoms or flare-ups of chronic conditions, people seek to augment their treatment resources. Some talk with family members and friends (Edwardson, Dean & Brauer, 1995), and some review health-related materials in the media and the Internet (Campbell & Nolfi, 2005). Others turn to physicians for information or resources enabling them to respond more effectively to specific symptoms. These instances of lay-initiated physician contacts represent an extension of self-care behavior.

Conceptual Framework

The dominant conceptual framework in studies of physician utilization has been the Health Behavior Model developed by Andersen and colleagues (Aday & Andersen, 1974; Andersen, 1995). Critics of this model argue that more attention should be directed to the subjective experience of illness (Pescosolido & Kronenfeld, 1995) and the processes through which individuals interpret the meanings of symptoms and select treatment options (Leventhal, Halm, Horowitz, Leventhal, & Ozakinci, 2004). Leventhal's Self-regulatory Model of illness behavior (Leventhal et al., 2004) emphasizes the subjective experiences of illness that Pescosolido and Kronenfeld described. Specifically, the Self-regulatory Model posits that individuals are active problem-solvers whose responses to disease emerge from cognitive and emotional interpretations of symptoms and from assessments of the effectiveness of various coping procedures (Cameron & Leventhal, 2003). These illness representations encompass multiple dimensions, including identity, symptoms and the labels people use to define them; cause, beliefs about factors causing the symptom or condition; timeline, beliefs about disease trajectory or duration; consequences, beliefs about the impact

of the condition on everyday life; and controllability, beliefs about the extent to which the condition can be cured or controlled by personal behaviors or treatment effectiveness (Hagger & Orbell, 2003; O'Connor, Jardine & Millar, 2008). These multi-dimensional representations lead to a variety of responses, including watchful waiting, lay treatment, and consulting health care providers.

Lay management protocols, including decisions to contact physicians, are crafted by individuals through processes that in many ways parallel the emergence of health lifestyles, defined by Cockerham (2007, p. 327) as “collective patterns of health-related behavior based on choices from options available to people according to their health situations.” As with lifestyle choices, illness behaviors are constructed from resources available within the “multifaceted circumstances in which individuals find themselves” (Hendricks & Hatch 2009, p. 446). Both lay understandings of disease and repertoires of lay management strategies develop over time as people synthesize insights derived from primary and secondary socialization and from ongoing experience with illness (Cockerham, 2007). For example, rural older adults treat symptoms with home remedies learned in childhood from older relatives and made from readily available materials, such as common foods or household products (Arcury, Grzywacz, Stoller, Bell, Altizer, Chapman & Quandt, 2009). Likewise, over their lifetimes, older adults accumulate substantial experience and knowledge about their own bodies and the utility of doctors and the health care system (Haug, 1986). This accumulated knowledge is accessed each time a health-related concern arises and the individual decides whether it warrants a physician visit. Over time, people develop and elaborate strategies for treating common symptoms and managing chronic conditions, synthesizing information gleaned from past experience with illness, discussions with relatives and friends, previous physician visits, and review of health-related materials in the media and Internet (Stoller & Wisniewski, 2003). Even disease management techniques prescribed by formal providers are often modified as patients incorporate disease management into their daily lives (Wilson, Hutchinson & Holzemer, 2002).

The Self-Regulatory Model underscores the importance of moving beyond lists of symptoms and diagnoses to understanding how older adults draw on lay knowledge to evaluate and respond to symptoms (Bury, 1997). Less is known about the ways older adults use lay understandings of disease and repertoires of lay management techniques in making decisions about physician consultation. Recognizing the processes through which older adults summarize or aggregate these various inputs represents an important extension of the Self-regulatory Model. In this article, we explore decision processes leading elderly rural adults to initiate contact with physicians. Guided by the Self-regulatory and Health Lifestyle Models, we address 2 questions. First, which characteristics of symptoms lead to patient-initiated physician consultation? Second, do participants' accounts of responses to symptoms, including the decision to consult a physician, incorporate descriptions of change over time? We begin by analyzing participants' accounts of decisions to initiate contact with physicians and then discuss these findings within the context of the two research questions.

Why Rural Elders?

Rural older adults have had a distinct pattern of access to medical care compared to residents of urban and suburban communities. Historically, rural communities have had fewer physicians per person than urban communities, and older adults growing up in rural environments relied more extensively on traditional treatments (Ballance, Kornegay & Evans, 2009; Cavender, 2003; Cavender & Beck, 1995). This more limited access to medical services continues today, with the difference more pronounced among specialists than among primary care practitioners (Bell, Quandt, Arcury, Snively, Stafford, Smith & Skelly, 2005; Ricketts, 2005).

Rural residents are less likely than their urban counterparts to have supplemental private insurance coverage and are more likely to be dependent on Medicare and Medicaid as sources of payment (Colburn & Bolda, 2001; Ricketts, 2000; Hart, Salsberg, Phillips & Lishner, 2002), resulting in higher out-of-pocket medical expenditures (Wallace & Colisher, 1994). They are also disadvantaged by lower incomes, a difference attributable to lower lifetime earnings, lower income from private retirement funds, and lower Social Security payments (Coburn & Bolda, 2001; Ricketts, 2000). In addition, the distances people must travel to access medical care in rural communities are greater than in more metropolitan environments, a difference exacerbated by limited public transportation and individual financial constraints in rural areas (Arcury, Preisser, Gesler & Powers, 2005; Goins, Williams, Carter, Spencer & Soloveiva, 2005). Compounding these barriers are higher rates of chronic illness and poorer health among rural in comparison to urban populations (National Rural Health Association, 2009).

In summary, older adults living in nonmetropolitan areas manage higher rates of chronic illness than with fewer financial resources and more limited access to formal medical care than their metropolitan counterparts. They also have a history of relying on lay treatments, many based on locally available resources, for treating common conditions. Financial barriers to medical care are alleviated somewhat for older adults who become eligible for Medicare. Nevertheless, little is known about how rural older adults, with a history of limited access to medical care and reliance on lay treatment, make decisions to contact physicians in response to symptoms experienced in late life

Methods

The analysis is part of a study of complementary therapy use and health self-management among rural older adults. This component, which was designed to develop and refine instruments for a subsequent quantitative survey, uses a qualitative design based on semi-structured in-depth interviews.

Sample

Participants were recruited from three rural counties in south-central North Carolina. Consistent with previous research, the availability of physicians was lower in these counties than in the state as a whole. The number of active primary care physicians per 10,000 population in the three counties is 5.4, compared to 8.9 for North Carolina (Cecil G. Sheps Center for Health Services Research. North Carolina Health Professions Data System. Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. <http://www.shepscenter.unc.edu/hp/profiles.htm>). These counties were selected because they include large minority populations and represent variation on the urban-rural continuum (<http://www.ers.usda.gov/Data/RuralUrbanContinuumCodes/2003/>). One [County A] is in a metropolitan area with an urban population of 250,000 to 1 million, one is a nonmetropolitan county with urban population of 20,000 or more [County B], and one is a nonmetropolitan county with urban population of 2,500–19,999 [County C]. Although these counties are in metropolitan areas and contain urban areas, they remain largely rural. For example, they have relatively low population densities; although the population density for North Carolina in 2000 was 165 persons per square mile, the comparable densities for these counties are 86 [County A], 130 [County B], and 113 [County C]. Agriculture remains important in these three counties; based on the 2007 Census of Agriculture (http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/index.asp) while 27.2% of the North Carolina's land area is in farms, the comparable percentages are 24.1 [County A], 44.1 [County B], and 32.2 [County C].

The sampling strategy was designed to recruit 60 participants age 65 and older with equal numbers of African American and White women and men (15 in each cell). A site-based procedure (Arcury & Quandt, 1999) was used to implement an ethnographic sample design to recruit representative participants who reflect the range of knowledge, beliefs, and practices in a community (Werner & Bernard, 1994). Sites are places, organizations, or services used by members of the population of interest. We recruited participants from 26 sites across the study counties that served different ethnic and social groups, including, among others, congregate meals, home delivered meals, senior housing, senior centers or clubs, churches, and county social service programs. One of the project data collectors or a gate keeper at a site presented information to a group of older adults about the study who made the decision whether or not to agree to an interview. People agreeing to an interview provided contact information and basic demographic information via a sign-up sheet that was circulated during the presentation.

The guiding principle in determining sample size in qualitative research is theoretical saturation, which is reached when ongoing data collection no longer yields new information or insights (Ezzy, 2003). The sample size of 60 respondents is above the guidelines of 30–50 respondents recommended by Morse (2002) for achieving saturation in studies involving semi-structured interviews. The sampling strategy was not designed to achieve theoretical saturation for specific demographic categories or for county of residence. Rather, the rationale was to enhance the potential variation in reports of lay management among these rural older adults. A more detailed description of the sampling design is available elsewhere (Arcury et al., 2009).

Data Collection

Data collection was completed in 2007 by five trained interviewers. Before entering the field, interviewers completed several practice interviews, which were audio-recorded and reviewed with the potential interviewer by the principal investigator. Interviews were conducted at a location of the participants' choice; 58 were interviewed in their home, one in a daughter's home, one at a local restaurant, one at the dining room of subsidized senior housing, and one at a congregate meal site. Interviewers explained the project and obtained signed informed consent. Participants received a small incentive (\$10) at the end of interview. Interviews were audio-recorded and ranged in length from one to three hours. The interview guide was grounded in Leventhal's Self-regulatory Model (Cameron & Leventhal, 2003; Leventhal et al. 2004) and Kleinman's Explanatory Models of Illness (1988), the conceptual frameworks guiding the larger study, and was developed and pilot-tested by the research team. The guide focused on knowledge and use of complementary therapies for managing specific symptoms and chronic disease and on the relationship of complementary therapy use to utilization of medical care (Arcury et al., 2009). Participants were asked about how they would treat a range of common symptoms and chronic conditions without going to the doctor or using medicines prescribed by a doctor. They were asked about common household products, herbs, and over-the-counter medicines they might use as remedies and tonics. The interview guide also incorporated questions about educational and occupational history, family status, migration experience, medical care utilization, and insurance coverage. Wake Forest University School of Medicine Institutional Review Board approved the data collection protocol.

In this article, we focus on decision processes leading to patient-initiated consultation with physicians. We asked participants about the "regular doctor from whom you receive most of your health care" and "other medical doctors from whom you receive care." We asked participants to describe feelings or symptoms that "make you think you should go to see a medical doctor." We also identified all other references to physician contact that emerged anywhere in the interviews transcripts. For example, in responding to questions about

treatments for specific symptoms or chronic conditions not prescribed by physicians, participants sometimes incorporated reports of physician consultation in their answers. We analyzed these comments in describing consultation decisions, but we cannot estimate the prevalence of symptom- or condition-specific consultations, because participants were not asked directly about approaching their doctor with these symptoms or conditions.

Data Analysis

Data analysis was based on a systematic, computer assisted approach (Arcury & Quandt, 1998) using *Atlas Ti*, a program for analysis of textual and other qualitative data (www.atlasti.com). The analysis proceeded in two stages. In the first stage, interviews were transcribed verbatim and edited for accuracy. Analysis was an iterative process. Initial case summaries were developed for each participant. A coding dictionary was constructed from the initial transcript review and case summaries, and a subsample of transcripts was coded by the entire team to ensure consistent application of the coding dictionary.

Each transcript was then reviewed and coded by one member of the project team, who reviewed and revised the case summary. A second project team member reviewed the coded transcript and suggested revisions to the coding and the case summary. The coding dictionary was refined (e.g., new codes added, other codes deleted, definitions modified) through comparison, categorization and discussion of team members' interpretation of each code's properties and dimensions (Crabtree and Miller, 1999; Bernard, 2002).

In the second stage, the lead author reviewed both case summaries and complete transcripts and retrieved all segments of texts relating to medical care or physician consultation, developing a list of conditions, interpretations and situations leading respondents to initiate contact with physicians. This initial list was then elaborated and refined to produce a catalog of codes reflecting participant reports of participant-initiated physician contact. These elaborated codes, with accompanying definitions, provided the foundations for discussion at team meetings. We repeated this process of engagement with the data and subsequent team discussions until consensus was reached on coding decisions and no new insights emerged.

Following this coding process, the lead author reviewed each of the case summaries and original transcripts for dialogue that supported decision factors regarding patient-initiated physician contact. Similarities and differences across cases were noted, including differences by reported symptom characteristics. Interview quotations supporting the interpretation of textual data are presented with participant ID number as well as participant ethnicity and gender.

Findings

Participant Characteristics

The sample included 62 participants: 17 African American women, 14 African American men, 15 White women, and 16 White men. Participants ranged in age from 65 to 92 years. Fifty-seven percent (35) were married, 27% (17) were widowed, 11% (7) were divorced or separated, and 5% (3) had never married. Women were less likely to be married and more likely to be widowed than men. The plurality of participants (28 or 45%) had a high school education, with 31% (19) having less than high school and 24% (15) having greater than high school. Almost all (60 or 97%) reported at least one chronic diagnosis.

Reported Physician Contact

All participants reported some contact with a physician. Most (54 or 87%) said they had a "regular" primary care physician. Participants consulted physicians at least three or four

times a year (26 or 42%), twice a year (21 or 34%), once a year (9 or 15%), or “rarely” or “only when necessary” (6 or 10%). Over three-quarters (48 or 77%) reported taking prescription medications.

Most participants described at least one symptom that would prompt them to contact a physician. These patient-initiated visits are distinct from regularly-scheduled appointments, including both wellness visits and check-ups to monitor previously diagnosed disease. Table 1 summarizes the features of symptoms that triggered patient-initiated consultations. Although we report these features separately, they were sometimes combined in descriptions of decisions to contact a physician.

Consulting the Doctor about Chronic Conditions

Over half of the participants described appointments concerned with specific chronic conditions. Many of these were regularly-scheduled visits to monitor disease status, with hypertension and heart disease mentioned most frequently.

Although chronic conditions are often accompanied by symptoms, regularly occurring symptoms rarely led patients to initiate physician contact beyond regularly-scheduled visits. Only when participants perceived a potentially ominous change in a symptom or expressed uncertainty about the efficacy of their management strategies did they contact their doctor. For example, Participant 15 (African American man) describes his experiences in managing diabetes:

If your sugar get out of line, you'll be thirsty all the time. Want a drink of water or you want to urinate, go there and just dribble a little bit, like you think you want to let out a gallon but you don't let out but just a little dribble. In a few minutes you got that same problem again, you had a urge to go to the bathroom. When I gets like that, I stay on my sugar medication and get off anything with sugar in it.... If that don't straighten up, I take off and go to the hospital to the doctor.

He recognizes symptoms of elevated blood glucose and understands the importance of modifying his diet and taking medications. He seeks medical care only if symptoms persist despite lay management efforts. Similarly, Participant 63 (White man) describes two symptoms that would prompt him to call his doctor:

High blood pressure, higher than normal, higher than usual would be a big one or if I had excessive chest pains, because I'm known to have heart disease.

This participant evaluates higher than normal blood pressure and chest pain within the context of his prior diagnosis of heart disease in deciding to contact his doctor.

Consulting the Doctor about Acute Symptoms

Even without prior diagnoses, some symptoms resulted in patient-initiated physician contact. Most participants discussed at least one symptom that prompted them to call the doctor, but only three symptoms were linked to physician consultation by more than one-quarter of participants mentioning the symptom: urination difficulties, cold or flu, and chest pain. In the majority of cases, the decision to seek medical care was linked not to the absolute nature of the symptom but to the characteristics of the symptom and to aspects of lay management experienced by a specific individual.

Characteristics of Symptom Experience Leading to Physician Contact

Symptom Characteristic: Severity—Most participants said they would contact their physician if a symptom were severe. Severity refers to immediate impact. Sometimes participants described intolerable or intense pain. In other cases, participants reported feeling

“very sick” or too sick to pursue desired activities, as illustrated by Participant 7 (White man), who explained:

Most things – if you just leave them alone will cure their selves. I mean unless I was to really get dog sick I don’t go to the doctor for anything other than for what I have to.

Symptom Characteristic: Cause Unknown—More than one-fourth of participants reported contacting their physician when they were not sure what was causing a symptom or were unable to differentiate among several interpretations (e.g., pain as flare-up of chronic condition, onset of new condition, or the result of injury). Several pointed out that treating a symptom is difficult without knowing its origin. For example, Participant 2 (African American man) describes consulting a physician when he is unsure about what caused a skin problem:

If I don’t know if it’s poison ivy or I got problem skin or rash or something like that, I got to go to the doctor. Take it to the doctor and see what the doctor says about it. That’s what the doctor is for.

Symptom Characteristic: New or Unusual Symptom—New or unusual symptoms prompted almost half of participants to consult a physician. For example, when asked about the feelings that make him think he should see a medical doctor, Participant 36 (African American woman) replied, “Something you’ve never had before, some kind of pain you never had before.” Participant 33 (White woman) would call her doctor if she experienced an unfamiliar pain. She explained, “As old as I am and all the problems I’ve been through with my lifetime, I can pretty well guess if it’s the wrong kind (of pain).”

Symptom Characteristic: Symptom Persists or Worsens—Over half of the participants said they would consult a physician only if a symptom persisted or worsened after a period of watchful waiting or lay treatment. Persistence could be continuous, as illustrated by Participant 19 (African American man):

If I had a stomach ache say for about 2 or 3 days, I’d think it’s something I eat but after 2 or 3 days if it didn’t go away, then next thing you know I’d go to the doctor.

Other participants discussed symptoms experienced intermittently, like Participant 29 (African American woman), who would call her doctor if a symptom recurred:

I’ve got a pain in my chest that’s not been there all this time. If it don’t come back two or three times, I’m going to relax myself. Now if that pain keep coming back, it’s time for me to go to the doctor.

Symptom Characteristic: Potential Seriousness—Some symptoms were alarming, because participants interpreted them as indicators of potentially serious conditions. Concern focused on future prognosis rather than current discomfort. Chest pain as an indication of a possible heart attack was the most prevalent example. Almost half described situations in which interpreting symptoms as potentially serious prompted physician consultation, as illustrated by Participant 30 (White woman):

For anything serious, I would go to the doctor in a heartbeat.... You know something that I felt like was endangering me, I would be at his office knocking on the door.

Lay Treatment Experience and Physician Contact

Lay Management: No Knowledge of Lay Treatment—Not being familiar with appropriate treatment strategies also prompted physician consultation. Almost one-third described symptoms they did not know how to treat on their own. For example, when asked what he would do for blurred vision, Participant 38 (African American man) replied, “I would run to the doctor. I wouldn’t know what to do for that.” Participant 21 (White woman) concurs, emphasizing her decision to contact the physician if she did not have a readily available, effective intervention. As she explains, “If I have something on hand that I know will work, I’ll use it. Otherwise I’ll go to the doctor.”

Lay Management: Lay Treatment Ineffective—The first response to a symptom was often lay treatment, either self-care remedies or interventions recommended by professional providers at previous visits and prescribed as needed. When these treatment strategies were not effective, over half said they would contact their physician. For example, Participant 32 (White man) reported, “If I’ve tried everything I know and tried everything my wife knows, then it’s time to go to the doctor.”

Lay Management: Medical Doctor as Gatekeeper—Almost one-third of participants consulted physicians to secure treatment resources, such as prescription medications, for which physicians are gatekeepers. In these instances, participants believed they knew what was wrong and how the condition should be treated, but they could not access treatment resources without going through a physician. For example, Participant 20 (African American woman) interprets a fever as an indication she needs a prescription medication.

If I had a fever with a sore throat I would definitely go to a doctor. A fever to me means I have an infection, and I would be wanting to get an antibiotic.

Participant 50 (White woman) said she contacted her physician to ask for a change in medication:

I saw my psychiatrist... last week because I felt like I needed more or a different antidepressant, because I had been real down.

Discussion

Most participants described situations in which they would initiate contact with their doctor. Patient-initiated consultations resulted from perceived bodily changes interpreted as medical symptoms, but not all symptoms resulted in physician contact. As the Self-regulatory Model suggests, participants’ appraisals of the meaning of symptoms and the availability and assessed efficacy of lay treatment strategies rather than the symptom itself influenced the likelihood of patient-initiated physician contact (Leventhal et al., 2004). In making appraisals and devising responses to symptoms, participants drew on previous experience with illness, lifetimes of accumulated knowledge about traditional and conventional treatments, and information gleaned from both lay and professional consultants (Arcury et al., 2009).

Characteristics of Symptoms Leading to Patient-Initiated Physician Contact

Participants described a range of responses to specific symptoms, responses consistent with prior research. Although some symptoms prompted immediate consultation, none of the symptoms examined in this study resulted in physician contact for more than one-third of participants (Mechanic, 1995; Young, 2004). Unless symptoms were assessed as severe or potentially serious, persisted, or worsened, the initial response was usually lay treatment (Calnan, Wainwright, O’Neill, Winterbottom & Watkins, 2007; Stoller, Forster, & Pollow

1994). In these situations, participants called the doctor when they exhausted their repertoire of lay treatments and when symptoms failed to respond to treatments that had proved effective in the past (Gately et al., 2007). Participants also contacted the doctor when they did not know what was causing a symptom or were unfamiliar with possible lay treatment strategies (Stoller, Kart & Portugal, 1997). In addition, physicians were sometimes seen as gatekeepers, providing participants with access to the prescription medications they believed they needed to manage the condition themselves. Physicians can also serve as gatekeepers for referrals to specialists, prescriptions for medical equipment, or screenings for specific conditions, but none of our participants said they contacted a physician for access to these resources.

Chronic disease experience also shaped responses to symptoms. The majority of participants described regularly-scheduled appointments with physicians to monitor disease status and medication levels, but most chronic disease management occurs outside medical settings (Bodenheimer, Lorig, Holman & Grumbach, 2007). Participants had learned to recognize and manage recurring symptoms associated with diagnosed chronic conditions, and both prior diagnoses and ongoing illness experiences provided a filter through which people interpreted similar symptoms (Haug, 1986). When familiar symptoms attributed to a chronic diagnosis responded as expected, lay management efforts were reinforced and patients were unlikely to contact a physician. Patients called a physician when symptoms appeared to intensify or failed to respond to previously effective lay management (Musil et al., 2001). Some symptoms alerted participants to potentially dangerous flare-ups of their condition, as illustrated by response to chest pain. A prior diagnosis of heart disease elevated the assessed seriousness of chest pain (Lockyer, 2005) and prompted participants to seek immediate medical attention (Schoenberg, Amey, Stoller and Drew, 2005). Without a prior diagnosis of heart disease, chest pain can be attributed to more benign causes (e.g., indigestion) (Stoller, Forster, Pollow & Tisdale, 1993).

Responses to symptoms reflected a blending of accumulated lay understandings and available resources that resemble a *bricolage*, a construction put together from a variety of available materials. These constructions have been described as “opportunistic, with people making use of opportunities which were available and accessible” (Calnan et al., 2007, p. 344). Over time, people develop and elaborate strategies for managing illness, becoming very knowledgeable about the treatment regimens that work best for them (Charmaz, 2000; Haug, 1986). In managing both new symptoms and chronic disease, the older adult becomes a *bricoleur*, a “kind of professional do-it-yourself person” (Lévi-Strauss, 1966, p. 17) who blends information gleaned from multiple sources. Our use of the term *bricoleur* does not imply that participants developed the expertise of medical providers. Lay understandings are based on experiential knowledge of one’s own body but rarely encompass the skills in risk assessment, diagnosis or management of illness on which professionals base their recommendations (Prior, 2003).

Participants’ synthesis of accumulated knowledge and resources – their *bricolages* --varied across symptoms and among participants, reflecting differences in the compendia of lay knowledge and treatment resources available to different individuals. Despite this variation in symptom-specific content, most responses incorporated general guidelines that shaped the integration of interpretations, lay treatments, and physician consultation decisions. All participants reported some contact with a physician, evidence that conventional medicine was an accepted resource for dealing with disease threats. Although interpretations of some symptoms prompted immediate consultation, most symptoms generated a period of self-monitoring and/or lay treatment. Participants called the doctor if the symptom did not respond to lay management efforts. In these cases, physicians were seen as a second-stage resource, contacted when available lay resources were judged inadequate.

Cockerham's model of health lifestyles (2005) interprets such guidelines as dispositions grounded in prior experiences and social location. These dispositions to action parallel Bourdieu's (1990) concept of *habitus*, a set of guidelines that shape individual behavior by "providing a cognitive map of normative options" (Cockerham, Rütten & Abel, 1997, p. 337). Dispositions channel illness behavior along normative paths, but the specific actions, or practices as they are labeled in Cockerham's model, reflect an individual's interpretation of a particular symptom and the perceived availability and efficacy of lay treatment options. Cockerham's (2005) approach implies that *bricoleurs* choose how to respond to particular symptoms, but those choices, including patient-initiated physician consultations, are shaped and constrained by experiences accumulated over lifetimes in specific social locations.

Do participant accounts of responses to symptoms, including decisions to consult a physician, incorporate descriptions of change over time?

Our findings provide insights into both the emergence and modification of the *bricolage* over time and the influence of the *bricolage* on the decision to contact a physician. As described elsewhere (Acury et al., 2009), most participants revealed rich repertoires of health-related knowledge that included interpretations of symptoms, understandings of chronic diagnoses, strategies for treating symptoms and managing chronic conditions, and criteria for contacting the doctor. The compendia of health information and resources from which participants crafted responses to symptoms accumulated over a lifetime of illness experiences as people grew up and grew old across biographical and historical time.

Recurrence of familiar symptoms triggered previously established treatment strategies that required minimal thought, responses that Lindbladh and Lyttkens (2002) characterize as habits, i.e., non-reflective, repetitive behavior. Mild symptoms usually generated a period of watchful waiting, and familiar symptoms triggered lay treatments that had proved successful in the past. Routine treatments strategies assessed as effective are reinforced, increasing the likelihood that they will be used again in the future. In contrast, unsuccessful strategies encourage a search for other interpretations and interventions, thus elaborating and modifying the *bricolage*.

Lindbladh and Lyttkens (2002:455) contend that a "process of reflection is initiated when everyday routines that have been taken for granted are for some reason interrupted." Indeed, this is what our data suggest. Participants initiated contact with physicians when their *bricolages* proved inadequate for managing symptoms on their own. In these situations, consulting the physician addressed the immediate medical concern but also augmented the compendium of lay understandings and treatment resources available for managing future illness episodes. For example, the physician might teach additional lay management strategies; provide a new chronic diagnosis through which patients can interpret future symptoms, or provide a benign interpretation of a symptom as reflecting a self-limiting condition, lessening the likelihood that a recurrence would prompt a future consultation.

The knowledge and understandings on which people draw when confronting illness continue to develop in later life, with new information becoming part of the resources with which older *bricoleurs* devise responses to future illness episodes. For example, a *bricolage* created to cope with the first manifestations of a chronic disease can change as people monitor symptoms over time, assess the efficacy of lay management strategies, integrate advice from family, friends, and the media, and incorporate treatment recommendations from medical providers. These inputs also change over time, as people adjust even physician-prescribed treatments to make them more consistent with their lay understandings of disease, to accommodate the routines and constraints of everyday life, or to alleviate concerns about the cumulative side effects of prescribed treatments (Wilson et al., 2002;

Arcury, Bernard, Jordan & Cook, 1996; Stoller, Hund, Webster, Blixen, Perzynski, McCormick, Kanuch & Dawson, 2006).

Health Behavior, Self-regulatory and Health Lifestyle Models

The importance of the *bricolage* in shaping symptom responses has implications for both the Health Behavior and Self-regulatory Models in explaining patient-initiated physician consultations. Consistent with the Health Behavior Model, perceptions of need are important catalysts for physician consultation, but need is assessed subjectively, as people interpret the meaning of symptoms and assess the efficacy of available lay treatments. Need indicators based on prevalence or counts of specific symptoms or chronic diagnoses miss this important subjective component.

Consistent with the Self-regulatory Model, the *bricolage* of accumulated knowledge and experiences reaffirms the link between dimensions of illness representations and decisions to contact physicians. For example, symptoms assessed as severe or potentially serious, such as chest pain interpreted as an indicator of heart attack, were most likely to prompt immediate consultation, demonstrating the importance of both anticipated consequences and identity. Persistence or worsening of a symptom illustrates the timeline dimension, whereas failure of lay treatment undercuts perceived controllability. Deciding to call the doctor when the etiology of a symptom was unknown highlights the importance of causal attributions.

Paralleling Cockerham's Health Lifestyle framework, participants synthesized and assessed the efficacy of available resources in devising responses to specific symptoms. Although our analyses revealed variation both across individuals and within individuals across different symptoms, descriptions of the personally crafted responses we identify as *bricolages* also reflected general guidelines or predispositions to illness actions. Participants assessed both symptoms and the efficacy of available lay treatments in deciding whether or not to contact the physician, but the specific interpretations and treatment strategies emerged from each individual's lay expertise and accessible resources.

Integrating the notion of *bricolage* and Cockerham's theory of health lifestyles into efforts to understand illness behavior represents an important extension of the Self-regulatory Model. The Self-regulatory Model focuses on responses to particular symptoms, the micro-level health behaviors of discrete individuals generally defined as self-care (Ory, 2008). In contrast, Cockerham examines health-related behavior based on choices guided by predispositions and options available to people according to their social location. Adding the concept of *bricolage* highlights the process through which individuals draw on both collective predispositions and individual insights gained from personal experience with illness in crafting strategies for managing symptoms and deciding when to call the doctor.

Limitations and Future Research: Implications for Rural Elders

Almost all of the older rural adults we interviewed mentioned some contact with a physician, although reports of physician contact by participants in this study are below national estimates among people 65 years of age and older, of whom 94% had contacted a primary care physician and 85% were taking at least one prescription medication (National Center for Health Statistics, 2007). Most participants articulated decision criteria for calling the doctor, criteria that are consistent with existing research on lay management (Albert et al., 2008; Young, 2004) and physician consultation decisions (Mechanic, 1995; Stoller, Kart & Portugal, 1997). The absence of differences with prior studies implies a leveling of geographic differences in the general predispositions underlying illness behavior, even though specific lay treatments still reflect the availability of resources and local cultural traditions (Arcury et al., 2009).

In applying the site-based ethnographic sampling design, we selected the 26 sites to cast a wide net within the community, with the goal of providing all members of the population of interest with an opportunity to participate. However, we do not know the number of older rural adults who are managing their own health within the community but whose isolation or health impairments precluded their learning about or participating in the study. We also do not know how many community residents learned about the study but decided not to participate.

Our research design enabled us to explore participants' perspectives on physician consultation, but we cannot generalize results beyond this regional nonprobabilistic sample of rural elders. Neither can we examine differences by demographic or sociocultural characteristics of participants. Given this limitation, our findings should be considered illustrative rather than representative. The conceptual framework resulting from integrating Leventhal's Self-regulatory Model and Cockerham's Theory of Health Lifestyles emphasizes the importance of personal history and social location in understanding responses to illness, but our sampling strategy precluded comparing behaviors across these characteristics (Young, 2004).

Our three counties do not reflect the diversity of rural residence. Rural and other nonmetropolitan environments vary along a number of dimensions that can influence physician utilization, and a rural-urban dichotomy masks variation along a continuum of residential settings that is not necessarily monotonic. We encourage future researchers to explore diverse dimensions of rural environments, including population density, environmental barriers, available transportation, proximity to metropolitan areas and medical centers, economic base, regional culture, and migration patterns.

Implications

Physician utilization among elderly people has received increased attention as the prevalence of chronic disease associated with population aging raises concern about escalating costs of medical services (Barlow, Wright, Sheasby, Turner & Hainesworth, 2002). Encouraging self-care has been viewed as one strategy for containing rising expenditures, but evidence linking self-care and professional service use remains equivocal (Gately et al., 2007). Our results identify links between these two dimensions of disease management. In maintaining health and managing disease, participants drew on compendia of lay understandings and treatment strategies (Arcury et al., 2009), which we characterize as *bricolages* to highlight their construction from an array of available materials. They contact physicians when they recognize that these lay resources do not enable them to manage a specific illness episode.

Patient-initiated physician contacts are an important resource available to elderly people managing acute illness and chronic disease. Awareness of the lay constructions behind decisions to call the doctor can provide guidelines for patient education aimed at improving the effectiveness of lay management decisions (Sevick, Trauth, Ling, Andeson, Platt, Kilbourne, & Goodman, 2007). Participants' descriptions of their responses to symptoms highlight two decision points that could be effectively targeted by patient education. The first occurs when older adults must decide whether to treat (or ignore) a symptom on their own or to contact their doctor. The second involves specific lay treatment strategies. Timely and appropriate interventions are more likely when these patient decisions are consistent with best medical practice. We do not know the extent to which participants' decisions are medically appropriate. Earlier research suggests that patients appropriately assess clinical risk for symptoms that are dramatic in onset and impact on usual activities but sometimes fail to understand the potential seriousness of fairly common, nonspecific symptoms (e.g., headache, nausea, fatigue) (Stoller et al., 1994). Furthermore, although most lay treatments

are therapeutic, palliative or benign, some are contraindicated among people with potentially complicating conditions or place older people at risk for possible drug-drug or drug-alcohol interactions (Stoller et al., 1993). Whether these earlier findings apply to older rural adults today remains an empirical question.

When clinicians can ground recommendations for future consultation within patients' own understandings, they enhance the chances that patients will incorporate those recommendations in their future behaviors (Clark, 2003). Understanding the meanings and experiences older rural adults bring to managing acute symptoms and chronic disease and to deciding when to call their doctor is a prerequisite to designing and tailoring interventions to improve self-care, physician consultation decisions, and, ultimately, the quality of medical care and patient well-being (Clark, Frankel, Morgan, Ricketts, Blair, Nyland, *et al.*, 2008; Bodenheimer et al., 2007).

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Table 1

Factors Influencing Decisions to Consult Physicians Among Older Adults in Three Rural North Carolina Counties (N=62).

<u>Decision Factor</u>	<u>Counts</u>
Chronic Disease	36
Acute Symptom	52
<i>Symptom Characteristics</i>	
Severity	36
Unknown Cause	18
New or Unusual	28
Persists or Worsens	37
Potential Seriousness	30
<i>Lay Treatment Experience</i>	
No Knowledge of Lay Treatment	19
Lay Treatment Ineffective	38
Physician as Gatekeeper	10

* Counts based on all references to physician consultation, both in response to direct questions and indirectly in describing symptom and chronic disease management.