I HAVE BEEN tending people as a health-care provider, a teacher, a mentor for over four decades. I am an acupuncturist; acupuncture is the core skill I use and am licensed to practice. However, what I do day to day is largely listen, question, observe, and teach. The longer I do this, the more I am aware the core teaching is often as simple as: “Please, take a deep breath. Please, get more sleep. Please, drink more water. Please, go for a walk.” More often, the core exercise that enables better functioning of the mind, body, and spirit is mundane, very obvious, very natural, very basic, very easy for anyone to do.

I’ve taken seriously the comments made by patients over these 40 years. One of the most basic comments was made early on by a woman in England who repeatedly said things strange to my ears. When I asked, “How are you?” she replied, “I’m better in myself. Oh, yes, I still have my pains, but they don’t bother me anymore.” That’s an extraordinary concept – what is the possibility of us being
both well and not bothered by our pains?

I had a similar conversation about 25 years ago with Charlie, a patient who said to me, “You know, I never thought asthma would become my friend. But since I’ve started acupuncture, I realize I get minor symptoms of asthma long before I get the attack that usually brings me to the emergency room and puts me back on drugs. If I pay attention to those minor symptoms, I find they are alerting me I’ve not been getting enough sleep, I’ve been in upset with my family or my work, or I’ve been having too much caffeine and not eating properly. They alert me to pay attention to my lifestyle. Since I’ve been doing that and paying attention to the minor asthma symptoms, I’ve not had a single major incident.”

I’ve been struck by some studies on the effectiveness of acupuncture. A study by Claire Cassidy published in 1997 pointed out patient satisfaction was not correlated with the relief of a person’s symptoms. Patient satisfaction in that study was correlated with “I now understand how I generate my symptoms.”

Over the years, I’ve noticed the everyday comments of the people I’m serving raise questions in myself about what I thought I was doing as a “health professional.” As I’ve reflected on those comments, I’ve come to realize what I thought were the basic assumptions of my work – that I’m there to take responsibility for making people better, getting rid of their diseases, preventing death, alleviating suffering – were perhaps part of a mistaken agenda. Perhaps those assumptions were impossible.

Several years back, I was at the opening of a new public health program at Morgan State University. A panelist at the event said to the audience, “Most of us wouldn’t be here if our grandparents were dependent on modern Western medicine. It didn’t exist in their lifetime and thus wasn’t available to them. And yet, somehow we’re here. Maybe we have to recover what our grandparents knew before we get more dependent on modern technology.”

Forty years of clinical experience thus led me to question four
distinct assumptions. They are assumptions that are widely held by our culture and yet are rarely discussed as operating assumptions for our health-care system. A reexamination of these assumptions in the light of history, in the light of how our ancestors lived, and in the light of the phenomena we live with daily may have a profound impact on public policy.

For each of these assumptions there will be a case – a story – and then a statement of the assumption to be questioned.

**Story Number One: Living Fully in the Presence of Death**

When I think of our health-care system, I often think about my experience with Larry and Peg about 10 years ago. Larry was a very successful businessman who came to me after he had developed cancer. Larry’s family and friends wanted me to help him recover from the cancer. When Larry and I spoke, he had no such illusion. He wanted some more good time that summer to play golf and to live fully in his days before his death. As Larry put it, “I’ve lived a wonderful life, and I want to go on living fully. I know that I’m going to die.”

Late that summer, I received a message and a request: Larry was in the hospital with pneumonia, and would I visit him. I went to visit Larry, took a look, and saw what a physician before 1908 would have called the *signum mortis*, the signs of death. This, I thought, was much more serious than pneumonia. Larry looked like he was near his last breath.

I chatted with Larry for a while. Then I went out and spoke with the nurses, who said, “Oh, yes, we thought we were going to lose him last night.” I spoke with a wonderful resident physician who said, “You know, how long a person lives is up to God. I can tell you the chemistry of what is going on in his lungs, and it’s much more complicated than simple pneumonia because of the presence
of the cancer and the chemotherapies.” I went back and spoke with Larry. I said, “Larry, this looks much more serious.” “Yes,” he said. “I decided a few days ago that it is my time to go. As I understand it, my choice is to become a patient and be here for the next six to nine months, slowly getting weaker with more complicated tubes. I choose not to do that. I’ve lived a wonderful life. I’ve been very successful. I have a great family. I want to die living fully and not as a patient.”

I asked Larry if he had discussed his decision with his wife of more than 50 years. “No, she’s not ready to hear it yet,” he replied. “Larry, this is a pretty big decision,” I said. “I think you should share it. Could I have Peg come in, and we’ll have a conversation?” He agreed, and Peg joined us. We had a long conversation with many tears. At the end of it, Larry placed a call to a friend, who lent them a house at the beach. Larry then called their children, inviting them and the grandchildren to join him and Peg the next day for a week at the beach house. They left the hospital the next morning and joined their family at the beach. When Larry came home, he wrote letters to all his friends and spoke with them. He died within the next weeks, having lived fully these last days of his life.

What are the implications of Larry’s awareness of becoming a patient versus living fully as he comes to the moment of death? What assumptions are challenged by this lived experience of one family – the core phenomena of experience replicated every day in millions of families across the globe?

Assumption Number One: Death is a problem that should be prevented at all costs, no matter how poor the quality of life.

The first assumption that I invite you to question with me is our cultural attitude toward death – that death is an evil to be avoided.
Western medicine is predicated on death as an evil to be avoided at all costs; indeed, a large percentage of our national health-care budget is spent in the last year of life, preventing death at great expense to the individual and to the health-care system and the government, and with great added suffering to the individual and families.²

With this assumption, we largely have lost the art of dying. We have lost our understanding of the signum mortis. We have a health-care research system predicated on fighting death and with a zero success rate thus far! As one physician put it, “I have never saved a life. I have postponed the moment of death.”

The signs of death, signum mortis, are a coloring on the face and a presence in the eyes – signs most people recognize when they are in the presence of somebody who is about to die. These signs commonly were understood before they were inadvertently written out of the medical education curriculum with the publication of the Flexner Report in 1910. (Elsewhere, we will talk more about the Flexner Report.) These signs of death routinely are ignored in the modern world. Recently, however, with hospitals requiring individuals to sign papers called “advanced directives” has come an attempt to reawaken knowledge of those signs and of the art of dying (the Ars Morendi); we are being reminded of this conversation and of recovering awareness.

Pneumonia used to be known as the elderly person’s “friend.” Before the age of antibiotics, an elderly person who developed pneumonia would almost surely die from the disease. Now folks in nursing homes who are near death are given antibiotics regularly and thus enabled to suffer longer. An antibiotic is appropriate in some cases, and in others it is not. The ability of physicians and relatives to observe the signs that one is ready to die is critical. That skill is what enabled me to raise the question with Larry.

The choice Larry made had immediate implications for his family. It gave them a chance to have full and rich conversations.
and to allow the flow of the natural course of his life. We are not talking about euthanasia, and I am not talking about any intervention to hasten death. What I am talking about is allowing the natural course of the disease, rather than setting up a fight.

Larry’s decision probably saved the health-care system close to half a million dollars. If you have health-care insurance, Larry and Peg’s decision saved you money – all of us would have shared in paying for the additional nine months of Larry’s care. Consider the number of days of intensive hospital care. Think of the number of visits to doctors, of x-rays and MRIs, of the medications to slow the cancer and to restore lung function, of rehabilitation after each intensive episode. The cost of this care would have been enormous. Because of Larry’s age, those costs would have been borne by Medicare (and thus a portion of it spread to everyone who pays a Medicare tax) and, in Larry’s case, by a secondary insurer – probably BlueCross BlueShield (and thus paid by all of those who support that insurer with their premiums).

Most cultures deal with death as part of the cycle of life; and there is some evidence that the significantly lower healthcare costs in other developed nations may be due to this difference in cultural attitude: an acceptance of death as part of the cycle of life. In The Hastings Center Bioethics Briefing Book, Daniel Callahan documents the evidence that this different attitude toward death lowers costs, and he asks this question: “Should death be seen as the greatest evil that medicine should seek to combat, or would a good quality of life within a finite life span be a better goal?”

Our culture’s way of dealing with death is in contrast with something my fourth-grade teacher, Sister Jean Marie, spoke every day at the end of school. She would say, “Now, when you go home, be sure you are peaceful and loving with everyone and kiss them goodnight, because we never know who may die during the night, never know that we might not be able to make up for this day in the next day.” That wisdom about death was very much a part of
my childhood. Death was understood as part of the cycle of life in this neighborhood in New York City; it was reiterated by a fourth-grade teacher in a matter-of-fact way, not as an embarrassment. I often think if a fourth-grade teacher were to say something like that today, she might be dismissed for child abuse.

Story Number Two: Living Well with Disease

I think of Mary, the chief nurse at a major hospital, who had to retire because she had numerous diseases including lupus, high blood pressure, and diabetes. She had amazing physicians who had kept her alive and functional for many years. Finally, she got to the point where she could no longer leave her apartment and where the drug interactions were becoming quite dangerous. Mary was in a fight with her diseases and had enlisted the best of our medical care system in that fight. She was invited to speak to a group of medical students about her experience. About a year before, she had decided to see a nurse healer, Laura, who was also an acupuncturist. What she said to the medical students was, “I’m a miracle. The doctors kept me alive. They were able to contain my diseases so I could live, but I became increasingly less functional. It wasn’t until I met Laura that I began to heal; and as you can see, I’m here speaking with you. I’m able to get around. All of my diseases are under control. I’m using much less medication. I am well, including living with all my ailments.”

Assumption Number Two: Health is the absence of suffering, symptoms and disease.

One of the major assumptions in dealing with our health-care dilemma is the idea that if we do everything right, we can be
“healthy.” My mentor, Ivan Illich, taught me the real issue is that life is difficult, that life includes suffering, and that we must learn the art of suffering in order to be well and to live a “healthy life” with our families and communities. Suffering always contains teachings about the art of living. I’m intrigued that Scott Peck’s book, *The Road Less Traveled* – one of the bestsellers of the past 30 years – starts with the line, “Life is difficult.”

Where did the idea that we could be “healthy” come from? For any of us, hardly a week goes by without some small symptom coming and going; and hardly a year goes by without us having something we could bring to a doctor, an acupuncturist, or someone who might be termed a “health-care professional.” And if we look at our evening television news, we see endless ads speaking of symptoms that can be cured by magic bullets. So how did the idea arise that a human could be healthy in the sense of having no suffering, no symptoms, no disease?

Prior to the Industrial Revolution, individuals went to neighbors for help with their symptoms, people who knew herbs and various potions and ways of healing. And there were those in the community who specialized as healers and helpers, as doctors and shamans – but there was not the idea that one could be “healthy” in our modern sense of the word. Traditionally, one understood how to manage one’s symptoms and to live well with the difficulties of life.

With the invention of the factory and the paid laborer going to the factory, the idea arose one had to be healthy in order to work. The factory owner had to know who was genuinely ill and unable to work and then attempt to get that person back to work as quickly as possible; and the factory owner had to know who was a malingerer, somebody who was avoiding work. Thus slowly arose the occupation of “company doctor,” the health-care provider who helped the employee to get back to work.

The same occurred in China in the 1950s. When Chairman
Mao wanted the communes and factories in China to work at full speed, he convened the acupuncture and Chinese medicine leadership, asking them to come up with something now called *A Barefoot Doctor’s Manual* – a document designed to maximize the productivity of the workforce, enabling everyone to be active. What happened in the European factory around 1720 occurred in the Chinese commune in 1950: It became a doctrine that we must be “healthy” and that a healthy person is a productive person. So the concept of being healthy is a rather modern invention. Before that time, a human learned the art of “being well in myself,” as my English patients would phrase it in 1976.

Being “healthy” has become a certitude and a burden in our culture. Of course, we must look at the definition of being healthy. For our culture it means the absence of any impediments, of suffering, disease, or discomfort. Yet if I ask any audience, everyone agrees that life is filled with pain, suffering, and difficulties. Nortin Hadler, MD, an expert on back pain, says everyone will have back pain two or three times a year. These pains and aches are simply a part of life; if you turn them over to an expert, you move from being a person dealing with life to becoming the disempowered patient of an expert.5

It is the modern world that has created the image of the “healthy” life as not having any symptoms. Our option is to redefine health as the quality of life with which we approach our living, our suffering, and our dying (including dying from a serious disease, a process in which we can still be truly healthy). I suggest we abandon the image that if only we eat the right brown rice, take the right vitamins, visit the right healer, do the right exercise, we will have a life without symptoms.
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Story Number Three: Living Fully, No Matter What Life Delivers

Twenty-seven years ago, around 1985, I received a slip of paper regarding a patient that I was about to see; it said I was to see John Weadock, a man about age 30, who had been labeled “quadriplegic.” I observed myself thinking, “How can I be helpful to someone who is a quadriplegic? Acupuncture can help folks, but what can I possibly do for that?” I went into the room, said hello to John, sat down and asked, “How can I be helpful?” He said, “My body’s perfect. There’s nothing wrong with my body.” I thought, “This is going to be strange.” Then John said to me, “My mind is sharp as a tack. I run the computer section of a large bank in Baltimore. After I had my accident at age 15, I trained as a CPA and as a computer expert. My body and my mind are fine. I’m a little off spiritually, though. Do you think acupuncture can help?” I handed John my needles, climbed on the treatment table and said, “John, this is way out of my league.”

I knew John for the next 25 years, until he died in 2010. I learned on the first day with him the label he wore had little or nothing to do with John, the person. He had what could be called a pathology, something not functioning in a physiologically normal way. It didn’t seem to bother John; he had declared he was fine – and indeed, he was.

A number of years after I first met John (and I would see him regularly, four or five times a year for what he would call a “spiritual clearing”), he retired from the bank, decided to train himself as a high school math teacher, and became a tutor for Sylvan Learning. Then he decided it was time to get married, published personal ads, met a wonderful woman, dated, went off to Florida to get married – all in his wheelchair where he could move only his hands and his head. Never once in all the years I knew John did I hear him complain.

When John died, he was the longest surviving quadriplegic in
“Four Cherished and Destructive Assumptions”

America. Last year, one of John’s friends sent me a message about his death and told me, “John’s mother died a few months before he passed. He had promised his mother, back when he had the swimming hole accident, that she would never have to bury him.” John lived fully, embracing what life brought him.

Thus we come to the next assumption:

Assumption Number Three: An expert can diagnose us and fix us.

There was no magic fix for John’s condition, and yet he lived as if no one had ever told him he was “quadriplegic.” He decided not to be limited by the label someone put on him. John did not become his limitations; he lived fully, not expecting a fix and cure.

We all are familiar with the endless TV ads promising cures for diseases – and often we don’t even know whether or not we have the disease. For a long time I found people in ads for the “purple pill” so attractive I wanted to take that pill so I could be like them, even though I didn’t know what disease I needed to qualify for that pill.

I’m also attracted to a vacation in some of the great heart-care hospitals. The ads make them seem like such wonderful places, often encouraging me to come in for tests so I can find out if I qualify. Best of all, they often promise a happy and healthy life “ever after.” Of course, these ads tout the importance of consultation with the appropriate expert at every turn along the way, implying I don’t know how to live without an expert. The ads also endlessly remind us of the potential side effects of the “purple pill” interventions – death, all sorts of maladies, etc. – so many side effects that we stop paying attention to the serious warnings.

These ads and the responses and attitudes they engender may seem funny; we often joke about such attitudes in our casual conversations. Unfortunately, however, this is serious business. It’s
about our lives and about how we expend a lot of our national and personal treasure.

In our culture we collapse the distinction between the label of a pathology when it has become established in a person, and the state of that person – their wisdom and ability to deal with life. We have the habit of saying, “I am a cancer survivor,” or “I am an arthritic,” or “I am an alcoholic,” or “I have MS,” or “I suffer from Lyme disease.” We have begun to identify ourselves with our disease labels. In fact, many individuals find their community by joining groups to learn how best to cope with the disease that they have become. Many doctors and healers will acknowledge that when individuals identify with their labeled disease so closely, they often have no world beyond that label, and thus, if they were healed, they might lose the only community identity they have.

Disease labels are devised by the practitioners of a particular modality with a particular cultural assumption about disease. This labeling enables the practitioners to understand a particular aspect of functioning. “Arthritis,” for example, is a very specific, technical description of certain things going on in the biologic body of an individual. It is not a description of the individual. Ten individuals with arthritis will have 10 very different functionings – 10 different lifestyles, 10 different life situations.

A man called me once and asked, “Could acupuncture help with gout?” Yes, I’d seen studies that reported people with gout had been helped, but I said to the man, “I never met gout walking around by itself. It usually comes attached to a very complex individual who has other symptoms and other ailments and also has lots of life issues – from family to money to work to age. So I may be able to help you; and you may be able to manage your gout if you are stronger. You are not your gout.”

Another aspect of this conversation is a frequently noted phenomenon that being labeled with a disease can create the disease. I think of what I’ve been told about two young women:
When they were two years old, their mothers brought them to a hospital for the developmentally disabled. The mothers were told that their daughters suffered from cerebral palsy and would spend their lives in wheelchairs. One mother accepted that prognosis. The other mother said to the physicians, “You will never say that again. You will treat my daughter as a normal young woman. We will have her grow up as if there were no diagnosis.” Twenty-five years later, that young woman lives with hardly any noticeable disability.

She said that when she was about 17, a doctor slipped, mentioning to her she was a victim of cerebral palsy. She was greatly upset. Although she did have tremors that came when she was tired, she had never thought about herself as diseased – she was functioning fully. She always knew she had abilities different from those of other young people, just as every child is different from others in many ways.

There’s an underlying assumption that each pathology or disease factor in the body can be dealt with separately. Alternatively, we can deal with parts of the body in a context of understanding the ecology of the entire body. As we are learning our planet is one environmental unit with everything impacting everything, we also must be very careful the same balancing act occurs for the inner environment – the inner ecology.

This is the case of a woman in her thirties who was sent to me by her internist because she was seeing five specialists: The young woman was struggling with a gynecological problem, low back pain, constricted urination, irritable bowel, and asthma. Her physician began to worry about the interactions of the medications she was taking, and that those interactions were making her worse as they attempted to deal with each of the separate diseases. When I examined the woman from the perspective of an entirely different physiology, the perspective of Chinese medicine, I realized that her lower abdomen was extremely cold to the touch, and her upper abdomen was extremely warm. In other words, the issues of the
lower abdomen (bowel, urination, gynecological problem, and low back issues) were coming from the fact that there wasn’t enough heat in the lower body, and the asthma was being generated by an excess of heat in the upper body.

When the difference in heat in the upper and lower part of the body was pointed out to the woman, when we pointed out that most of her breathing was very shallow and that she drank a lot of cold fluids, when we taught her how to breathe more deeply and change her food habits, her body responded within a month and then continued on a healing path. At the end, viewing the woman as a whole resulted in an entirely different way of healing; in fact, the core power was within the ability of the woman to shift her daily patterns. In making those shifts, she gained power. She no longer had four or five pathologies – she had symptoms that taught her how to live well.

The way the physician dealt with each condition defined in Western medical terms was appropriate. However, viewing the woman as a whole resulted in an entirely different way of healing.

Story Number Four: Our Choices Create Our Reality

About ten years ago, I was asked to see a very successful businesswoman, one of the top executives of a Fortune 500 company related to the dot-com industry in its heyday. I was especially interested in seeing her because I was told that she had been examined by four of the top complementary doctors in the United States – names we all would know. I thought, “I’ll not only get to see the reports about the examinations by mainstream doctors, I’ll also get to see these interesting reports from complementary doctors.” However, given the circumstances, I doubted I could be of assistance.

The woman came in with symptoms one might categorize
as preliminary to multiple sclerosis. It was a severe, debilitating condition, and indeed, something to worry about. I don’t recall that she had a specific disease label at that point. MS was hard to diagnose in those days (and MS continues to be hard to define, as are chronic fatigue, lupus, or any of the degenerative diseases).

As we went along the normal course of the examination, her condition did sound very serious. Then I asked her about food. I asked what she had eaten the day before, and she said, “I had a doughnut in the morning. I worked really hard all day and then grabbed a hamburger at McDonald’s on the way home, about 11 o’clock at night.” I asked her if that was typical, and she said, “Quite often.” I then asked what time she got to bed last night. “Well, about 12:30, maybe 1:00.” What time did you get up?” “Around 6:00,” she said. “How much fluid do you drink?” “I probably don’t drink enough water, but I drink a little water and a lot of Coke.” “When was the last time you exercised?” She thought for a while and answered, “I went for a walk about three weeks ago.” Then I asked, “Did the symptoms ever go away?” Again, she thought for a while and said, “Oh, they completely disappeared for two weeks when I was on vacation in Canada with my friend last year.” “So you’re telling me you don’t get enough food, you drink hardly any fluids except for caffeine, you don’t get enough sleep, you don’t exercise, and all the symptoms went away when you went on vacation. That’s quite fascinating,” I said. “I think that perhaps instead of the $100,000 you’ve spent on all this testing, perhaps a $100,000 vacation might be the beginning of a cure. And then you can begin to look at ways to take care of yourself.” We continued in that direction.

Then I read the reports from all the complementary providers. Every single one of them had prescribed for her an herb or other remedy that was, essentially, a stimulant to keep her going. No one had picked up on the fact that she was not taking care of herself; they were more fascinated with figuring out the specialized disease.
Assumption Number Four: Our lifestyle doesn’t matter because (we believe) disease functions separately from our activities.

We have an assumption we can keep going, be extremely busy and not have enough sleep, and our body will continue to function in a relatively normal way; and if there is a complication, an expert can prescribe a chemical to make things better. We need to recognize sleep and patterns of sleep in rhythmic order are essential to a good quality of life.

A New York Times article on sleep and the marketing tactics of the “sleep-industrial complex” (the article’s title) pointed to the value of sleep: “We all might be better off if the industry sold sleep as something to be savored for its own sake....”6 Similarly, the same can be said about the value of breathing more deeply, making healthy food choices, drinking cleaner water – all the basics of life, the building blocks of wellness.

Our body is always generating minor symptoms. An example: I have five symptoms. My eyes get tired; I might think it’s dirty glasses, but eventually I notice that my eyes are tired. If I don’t pay attention to the tiredness in my eyes, keep cleaning the glasses and don’t get extra rest, then I’ll begin to have more frequent urination. If I don’t notice that I’m urinating more frequently and am thirstier than usual, the next symptom arises: restless nights and inability to sleep because I’m overly tired. If I don’t pay attention to that restlessness, then my left leg will begin to ache. My body is sending me messages about how to behave; it’s telling me to respect my leg-ache and get off the leg. However if I again ignore that warning and keep going, my left ankle will speak to me more loudly and become increasingly painful and swollen until I can no longer stand on it. This is a signal that I’ve been ignoring the wisdom of my body. Over the years I’ve learned that my body requires 36 hours of total bed rest – and then, at this point, my body will be fine.

A number of years ago, a wonderful, very creative executive
who had suddenly contracted Lyme disease was referred to me. His symptoms were so severe that he had to carry his own portable intravenous antibiotic drip system with him everywhere. The assumption was he had contracted Lyme disease in a place he had frequented for many, many years, and where there were many, many deer and deer ticks. As we explored this assumption, it turned out his symptoms – the effects of a Lyme disease infection – had begun to appear in his body at a time his wife described as the most hectic and pressured of his life. From looking at his situation and hearing many similar anecdotal stories, I suspected (and there’s no way to prove it because our research doesn’t focus on such possibilities), he probably had been infected for many years, but the infectious agent did not have power over his wellness until he came under this excessive pressure. His story teaches us that we are in a constant balancing act, and must make the assumption that we need to tend our inner wellness to cope with the constant presence of pathogens in the world.

The lesson of the executive is similar to that of children in a first-grade class: Some of them get the flu or a cold, and some do not. How do we explain that? It’s clear the answer is more than the presence of “bugs” in the classroom. Otherwise, everyone would get sick.

Conclusion

We operate as a nation from four cultural certitudes which, when examined even superficially, we all understand are nonsensical. In order to have a rational cost-quality-access structure for health care, these assumptions must be examined and new assumptions created. This process requires a major cultural shift in attitudes. Daniel Callahan, in the Hastings Institute book cited above, says, “An astonishing 40 percent of Americans believe that medical
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technology can always save their lives; many fewer Europeans share this fantasy. The old joke that Americans believe that death is one more disease to be cured is no longer a joke.”

For the sake of our grandchildren and to honor our elders, we must act wisely to shift these cultural certitudes.

NOTES

1. Medical anthropologist Claire M. Cassidy, Ph.D., designed and conducted the first-of-its-kind “Patients’ Own Words” research project, which reports what acupuncture users nationwide think of their treatment. Mainly they say it helps them stay well and understand how they are able to control their own symptoms. See the following:
   – Claire Cassidy, “In the Patients’ Own Words: Research Report, Part 2.” Meridians (Summer 1997).

2. Donald R. Hoover, Stephen Crystal, Rizie Kumar, Usha Sambamoorthi, and Joel C. Cantor, “Medical Expenditures during the Last Year of Life: Findings from the 1992-1998 Medicare Current Beneficiary Survey.” Health Services Research (December 2002; 37(6): 1625-1642). Also see:


